Woodsmith PLANS

3-IN-1 BOOKCASE

TOTAL SUCCESS
SHOP TESTED
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3-IN-1 BOOKCASE

One basic design can take on different looks to match your tastes and room decor.

A bookcase makes any room more inviting. But finding a bookcase to match your room's decor can be a challenge. This project solves that problem. It starts with a basic case design. Then you give it a distinct style by adding a few finishing touches.

You'll start by building the case with simple joinery. It includes the sides, top, bottom, and one fixed shelf in the center.

After the basic case is built, you'll add design elements to create one of the three styles: country (lower left photo and page 3), Craftsman (lower right photo and page 5), or traditional (main photo and page 7).

The treatments applied to the top panels and base assemblies, as well as additional features like decorative back panels and doors, are easy to add and sure to bring character to your bookcase.

Whatever style suits you, you'll appreciate the straightforward construction and details.

▲ **Country-Style Bookcase.** *Beadboard, decorative bun feet, simple moldings, and a painted finish make a perfect combination for a country feel.*

▲ **Craftsman-Style Bookcase.** *Gentle curves on the face frame and base, along with an overhanging top supported by corbels, give this bookcase a Craftsman look.*

Building the Basic Case

The case for each bookcase is identical. So no matter which style you choose, that's the place to start. It's made up of two plywood sides; a top, bottom, and center shelf that are all the same size; and a frame and panel back. Later, a face frame will be added to the front to cover the edges.

SIDES. I started by cutting the sides to size. Once that's done, you can cut the dadoes for the top, bottom, and center shelves. Finish up with a rabbet on the back edge to hold the back panel (detail 'a').

The next step is to drill holes for the adjustable shelves. It's easier to do this now while you can still lay the workpieces side by side.
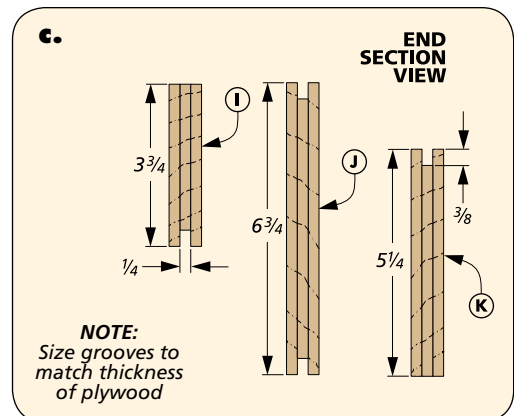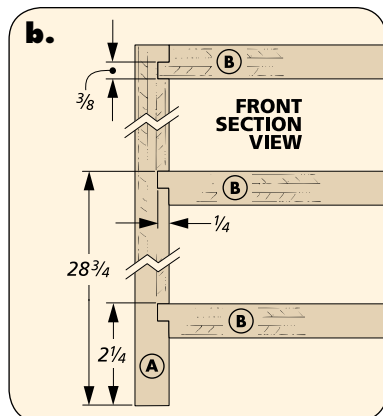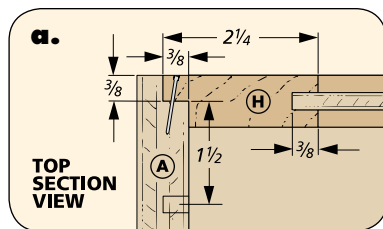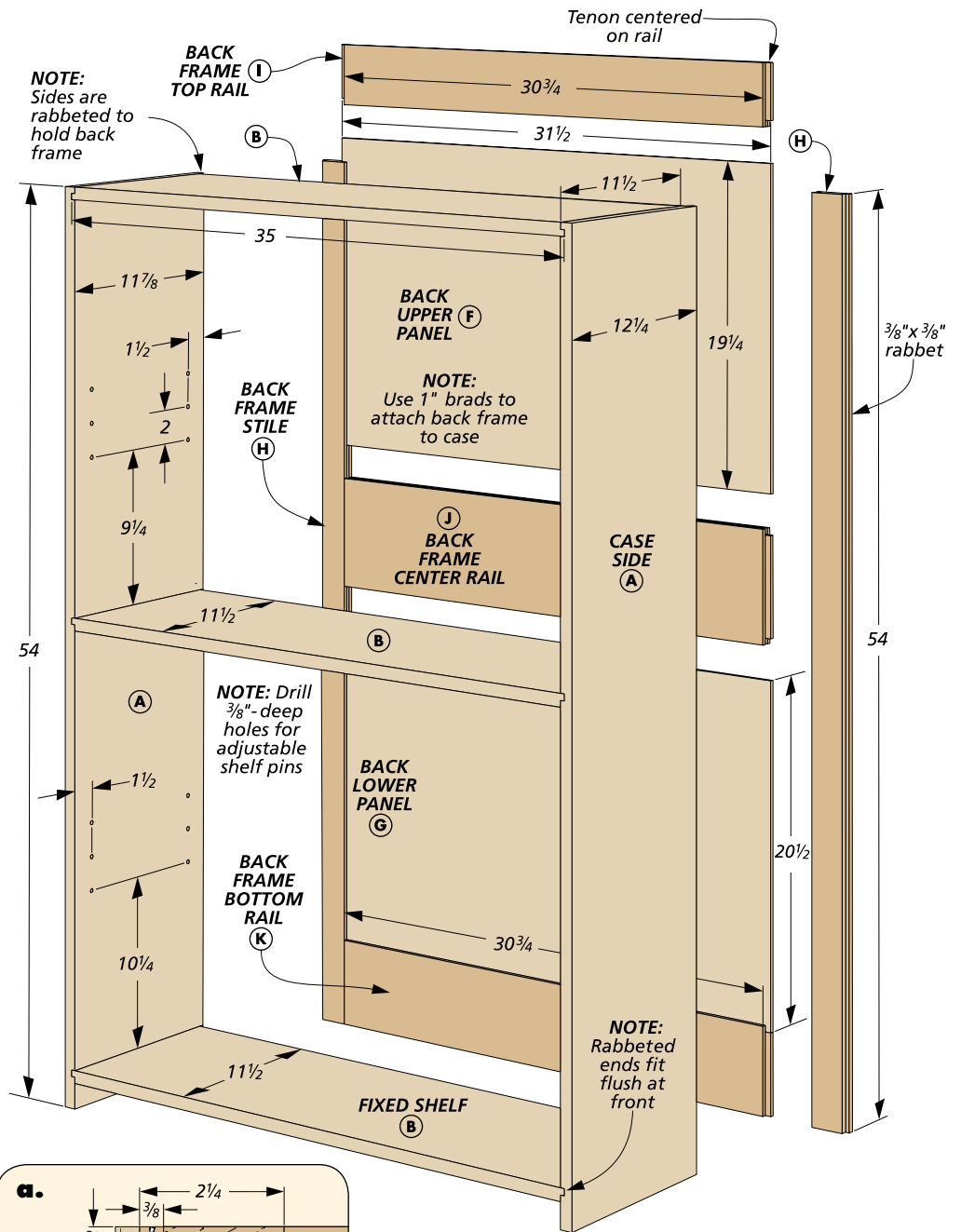
SHELVES. With the sides done, you can cut the top, bottom, and center shelves to size. These pieces are cut slightly narrower than the sides to make room for the back. Cut rabbets on the ends (detail 'b') to form a tongue to fit in the dadoes in the sides. During glue-up, these pieces will sit flush at the front, leaving a $\frac{3}{4}$"-deep recess at the back for the back frame and panel assembly.

ASSEMBLY. Once you have the three shelves and two sides ready, the assembly is pretty easy. The shelves are glued into the dadoes on the sides (detail 'b'). Then you can square up the case and apply clamps at the joints.
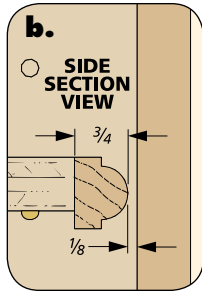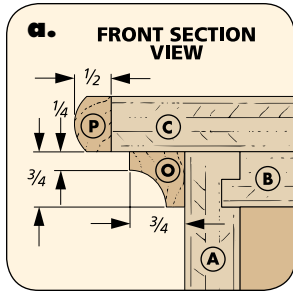
FRAME & PANEL BACK. As I mentioned, the back of the bookcase is built using frame and panel construction (drawing at right). Plywood panels fit into grooves cut in the rails and stiles, as you see in detail 'c.' (The panels for the country-style bookcase are made from beadboard.)

Before assembling the frame, I cut the rabbet along the stiles to mate with the rabbet on the sides (detail 'a'). After assembling the frame and panels, you can glue and nail the back in place. I also fastened the center rail to the fixed shelf. This adds strength to the case assembly and keeps it square and solid.

Now that the basic case is complete, you can add the details to create the style of your choice.

NOTE: Sides are rabbeted to hold back frame

BACK FRAME TOP RAIL (I)

Tenon centered on rail

$30\frac{3}{4}$

$31\frac{1}{2}$

$11\frac{1}{2}$

35

$11\frac{7}{8}$

$1\frac{1}{2}$

2

$9\frac{1}{4}$

BACK FRAME STILE (H)

BACK UPPER PANEL (F)

NOTE: Use 1" brads to attach back frame to case

$12\frac{1}{4}$

$19\frac{1}{4}$

$\frac{3}{8}$"x $\frac{3}{8}$" rabbet

(J) BACK FRAME CENTER RAIL

CASE SIDE (A)

54

$11\frac{1}{2}$

(B)

NOTE: Drill $\frac{3}{8}$"-deep holes for adjustable shelf pins

BACK LOWER PANEL (G)

$1\frac{1}{2}$

BACK FRAME BOTTOM RAIL (K)

$10\frac{1}{4}$

$30\frac{3}{4}$

$20\frac{1}{2}$

NOTE: Rabbeted ends fit flush at front

$11\frac{1}{2}$

FIXED SHELF (B)

54

a.

$2\frac{1}{4}$

$\frac{3}{8}$

$\frac{3}{8}$

(H)

$1\frac{1}{2}$

$\frac{3}{8}$

(A)

TOP SECTION VIEW

NOTE: Back panels differ between styles. See cutting diagram on page 4 for details

b.

$\frac{3}{8}$

(B) FRONT SECTION VIEW

(B)

$\frac{1}{4}$

$28\frac{3}{4}$

(B)

$2\frac{1}{4}$

(A)

c.

END SECTION VIEW

$3\frac{3}{4}$

(I)

$6\frac{3}{4}$

(J)

$\frac{1}{4}$

$\frac{3}{8}$

$5\frac{1}{4}$

(K)

NOTE: Size grooves to match thickness of plywood

a.
FRONT SECTION VIEW
½
¼
P C
¾
¾ O B
¾
A
⅛

b.
SIDE SECTION VIEW
¾
B
⅛

TOP COVE TRIM

Country Bookcase

With its beadboard back panel, bun feet, and painted finish, the country-style bookcase (shown at left and on page 1) has a nostalgic look. Because this bookcase is painted, I chose to use relatively inexpensive poplar for the face frame, edging, and trim pieces.
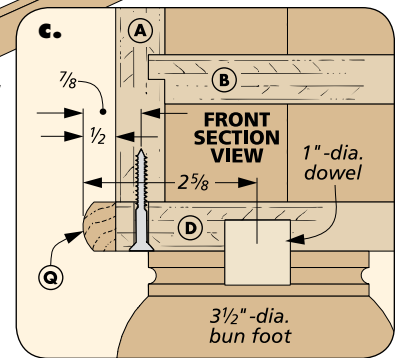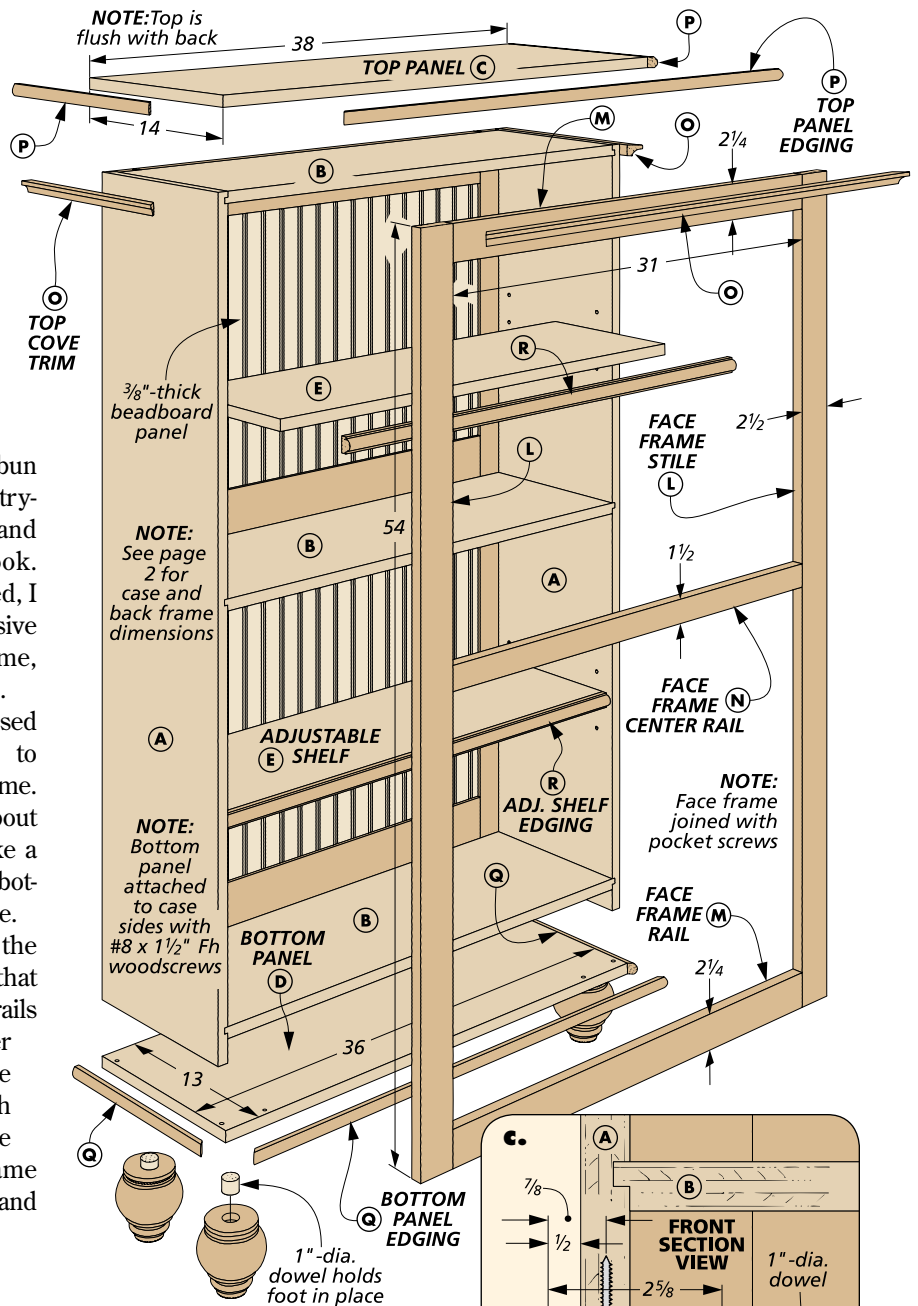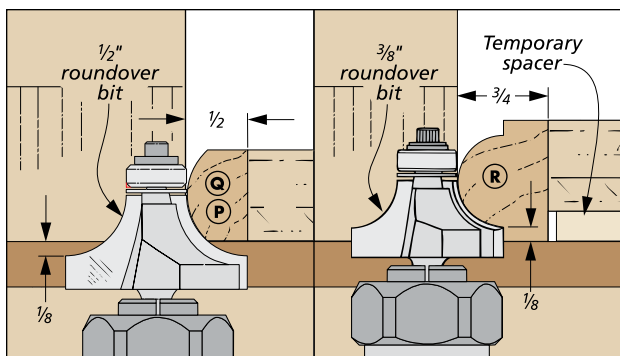
BUILD THE FACE FRAME. I used pocket-hole joinery to assemble the face frame. For more information about this easy technique, take a look at the box at the bottom of the following page.

When you assemble the face frame, make sure that the center and bottom rails are flush with the center and bottom shelves. The top rail will sit flush with the top of the case. Once you have the face frame assembled, you can go ahead and glue it to the front of the case.

BASE

Before starting on the top, I turned the unit upside down and worked on the base. Working on the base first gives you a solid structure to work from later when you attach the top.

The first part of the base is just a piece of plywood with bullnose

NOTE: Top is flush with back
38
TOP PANEL C
P
P
P
TOP PANEL EDGING
14
B
M
O
2¼
31
O
R
E
FACE FRAME STILE
L
L
A
2½
54
B
A
1½
FACE FRAME CENTER RAIL N
ADJUSTABLE SHELF E
ADJ. SHELF EDGING R
R
NOTE: Face frame joined with pocket screws
⅜"-thick beadboard panel
NOTE: See page 2 for case and back frame dimensions
A
NOTE: Bottom panel attached to case sides with #8 x 1½" Fh woodscrews
B
Q
FACE FRAME RAIL M
2¼
BOTTOM PANEL D
BOTTOM PANEL EDGING
36
13
Q
Q
1"-dia. dowel holds foot in place
Q

c.
A
B
⅞
½
FRONT SECTION VIEW
1"-dia. dowel
2⅝
D
Q
3½"-dia. bun foot

edging attached. So that's where I started. After cutting the panel to size, I added ½"-thick hardwood edging and mitered the corners. At the router table, I routed a bullnose profile on the edging, as illustrated in the first drawing at left. Once that's completed, you can locate and drill the dowel holes for attaching the bun feet. Then it's just a matter of attaching the assembly to the case bottom.

After the bottom is attached, you're ready to add the feet. This is a simple task since you've already drilled the holes for the dowels. A little glue is all you need to fasten the feet in place.

Now you can turn the bookcase upright and work on the top panel. The weight of the case will act as a clamp for the feet.

TOP PANEL

The top panel on the case is even easier to build than the base. It's just a piece of plywood with the same bullnose edging added to the front and sides that you used on the base. To fasten it to the case, a little glue and a few clamps are all you need.

½" roundover bit
½
Q
P
⅛

⅜" roundover bit
Temporary spacer
¾
R
⅛

You'll have to watch that the top doesn't move out of position as you tighten the clamps.

The final step is to add cove molding around the top just under the top panel (detail 'a,' page 3). To make this molding, I used a cove molding bit in the router table. I routed the profile on a wide blank and then ripped it free on the table saw.
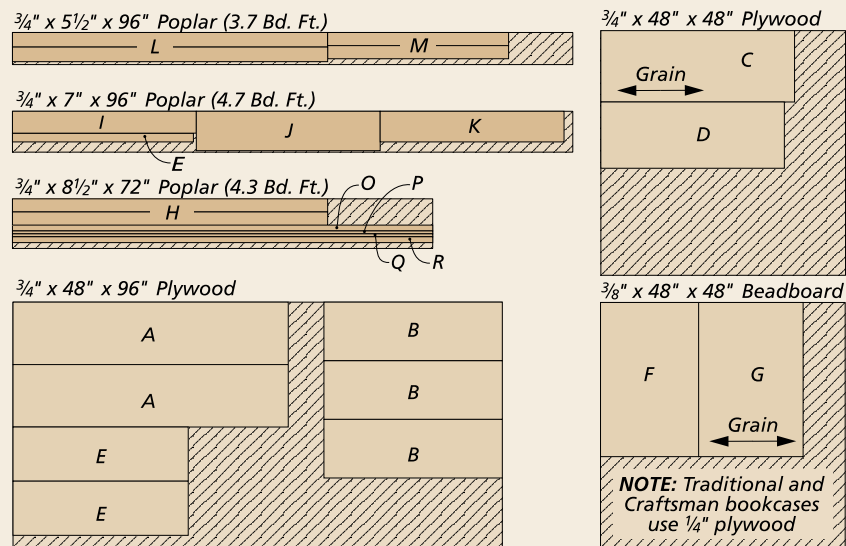
ADJUSTABLE SHELVES. All that's left to complete the bookcase is to add the two adjustable shelves. If you take a look at detail 'b' on page 3, you'll notice that the trim on the front of them is a little different than the bullnose trim you used earlier. But the procedure is the same. You'll rout the profile after gluing the hardwood edging to the shelf, using a spacer under the shelf while routing (right drawing at the bottom of page 3).

FINISH. I decided to use a "two-tone" finish for the bookcase. I painted the beadboard panels a lighter shade than the rest of the case for a unique look. The colors are listed in Sources on page 9.

MATERIALS, SUPPLIES & CUTTING DIAGRAM

A	Case Side (2)	$^3/_4$ ply. - $12^1/_4$ x 54
B	Case Fixed Shelves (3)	$^3/_4$ ply. - $11^1/_2$ x 35
C	Top Panel (1)	$^3/_4$ ply. - 14 x 38
D	Bottom Panel (1)	$^3/_4$ ply. - 13 x 36
E	Adj. Shelf (2)	$^3/_4$ ply. - $10^5/_8$ x $34^3/_8$
F	Back Upper Panel (1)	$^3/_8$ ply. - $31^1/_2$ x $19^1/_4$
G	Back Btm. Panel (1)	$^3/_8$ ply. - $31^1/_2$ x $20^1/_2$
H	Back Frame Stiles (1)	$^3/_4$ x $2^1/_4$ - 54
I	Back Frame Top Rail (1)	$^3/_4$ x $3^3/_4$ - $31^1/_2$
J	Back Frame Center Rail (1)	$^3/_4$ x $6^3/_4$ - $31^1/_2$
K	Back Frm. Bottom Rail (1)	$^3/_4$ x $5^1/_4$ - $31^1/_2$
L	Face Frame Stiles (2)	$^3/_4$ x $2^1/_2$ - 54
M	Face Frm. Top/Btm. Rails (2)	$^3/_4$ x $2^1/_4$ - 31
N	Face Frame Center Rail (1)	$^3/_4$ x $1^1/_2$ - 31
O	Top Cove Trim (1)	$^3/_4$ x $^3/_4$ - 72
P	Top Panel Edging (1)	$^3/_4$ x $^1/_2$ - 72
Q	Bottom Panel Edging (1)	$^3/_4$ x $^1/_2$ - 72
R	Adjustable Shelf Edging (1)	$^3/_4$ x 1 - 72

- (4) Bun Feet
- (8) $^1/_4$" Shelf Pins
- (12) $1^1/_4$" Pocket-Hole Screws
- (7) #8 x $1^1/_4$" Fh Woodscrews
- (4) 1"-dia. x 1" Dowels

$^3/_4$" x $5^1/_2$" x 96" Poplar (3.7 Bd. Ft.)

$^3/_4$" x 7" x 96" Poplar (4.7 Bd. Ft.)

$^3/_4$" x $8^1/_2$" x 72" Poplar (4.3 Bd. Ft.)

$^3/_4$" x 48" x 96" Plywood

$^3/_4$" x 48" x 48" Plywood

$^3/_8$" x 48" x 48" Beadboard

NOTE: Traditional and Craftsman bookcases use $^1/_4$ plywood
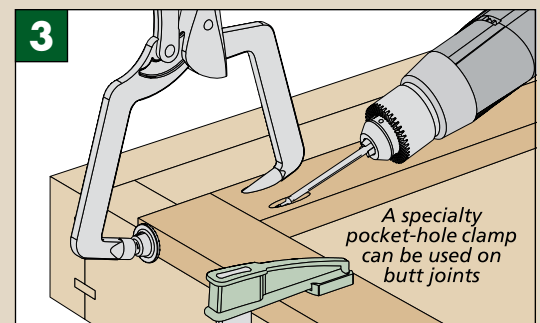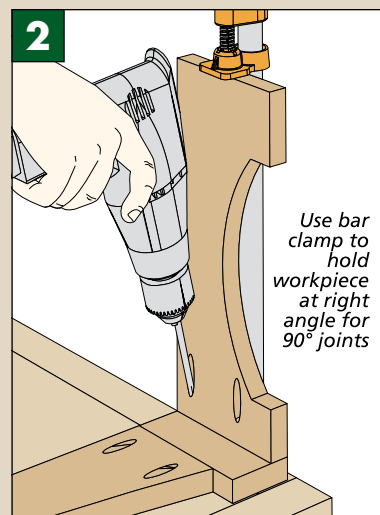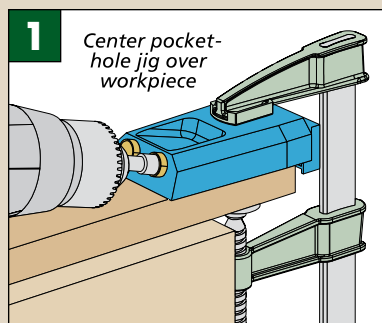
HOW-TO: POCKET HOLE BASICS

When it came time to assemble the face frames for these bookcase, I turned to pocket-hole joinery. This fast and easy technique is a reliable way to join two workpieces together without a lot of fuss.
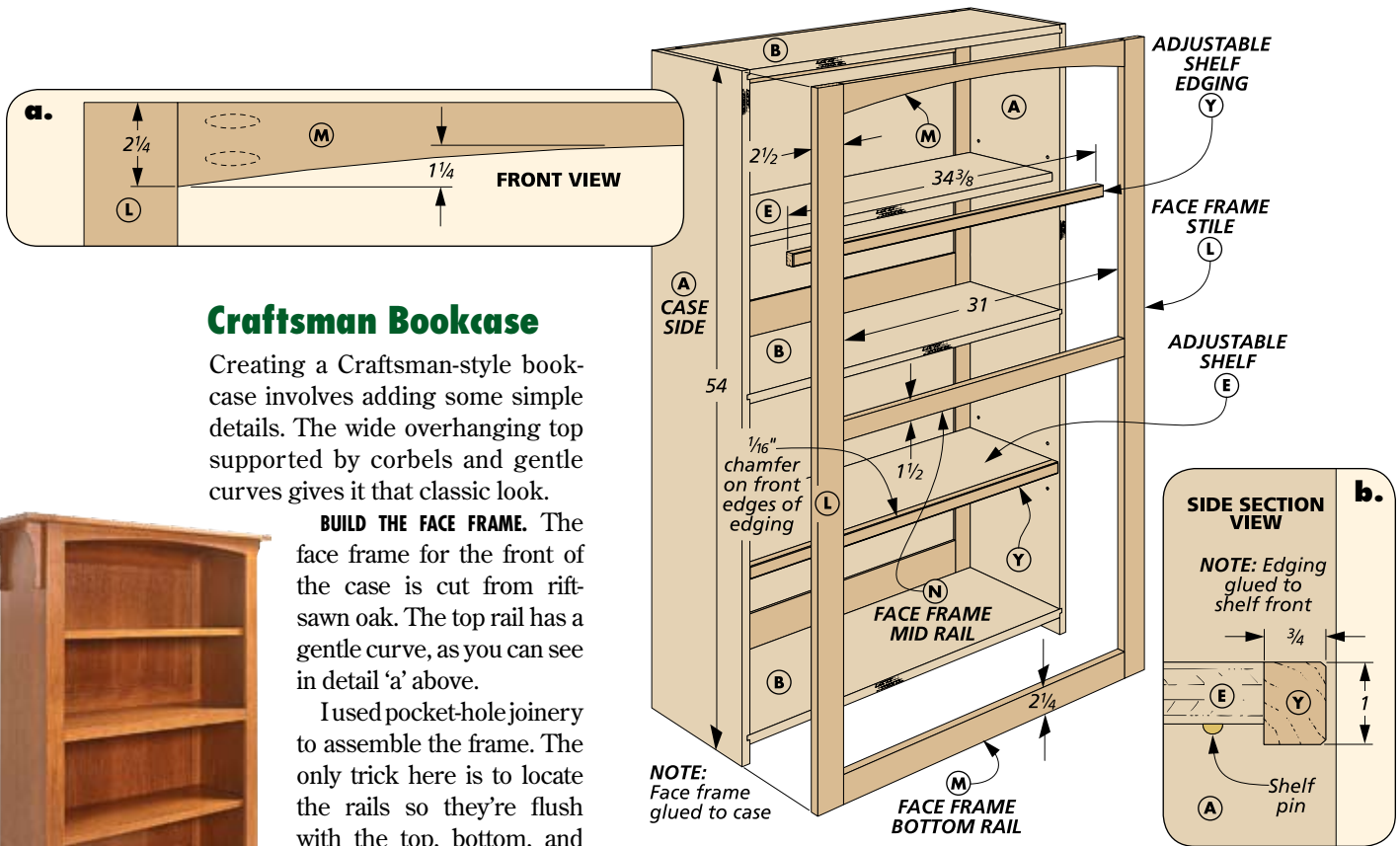
The principle is simple. The pocket-hole jig allows you to drill a hole at the correct angle, and a stop collar on the drill bit controls the depth of the pocket hole (depending on the thickness of the workpiece you're drilling). It's just a matter of clamping the jig on the workpiece and then drilling the holes, as illustrated in Figure 1.

You can clamp the workpieces together a couple of ways. A conventional clamp works fine for holding the joint tight as you drive the screws (Figure 2). Figure 3 shows a clamp made specifically for the task. One side of the clamp has a "peg" that fits inside a pocket hole.

1 Center pocket-hole jig over workpiece

2 Use bar clamp to hold workpiece at right angle for 90° joints

3 A specialty pocket-hole clamp can be used on butt joints

a.

$2\frac{1}{4}$

$1\frac{1}{4}$

FRONT VIEW

Ⓜ Ⓛ

Ⓑ

Ⓐ
CASE SIDE

$2\frac{1}{2}$

$34\frac{3}{8}$

Ⓜ

Ⓐ

Ⓔ

31

54

Ⓑ

$1\frac{1}{2}$

$\frac{1}{16}"$ chamfer on front edges of edging

Ⓛ

Ⓝ

Ⓨ

Ⓑ

FACE FRAME MID RAIL

$2\frac{1}{4}$

Ⓜ

FACE FRAME BOTTOM RAIL

NOTE: Face frame glued to case

ADJUSTABLE SHELF EDGING
Ⓨ

FACE FRAME STILE
Ⓛ

ADJUSTABLE SHELF
Ⓔ

b.

SIDE SECTION VIEW

NOTE: Edging glued to shelf front

$\frac{3}{4}$

Ⓔ Ⓨ

1

Ⓐ

Shelf pin

Craftsman Bookcase

Creating a Craftsman-style bookcase involves adding some simple details. The wide overhanging top supported by corbels and gentle curves gives it that classic look.

BUILD THE FACE FRAME. The face frame for the front of the case is cut from rift-sawn oak. The top rail has a gentle curve, as you can see in detail 'a' above.

I used pocket-hole joinery to assemble the frame. The only trick here is to locate the rails so they're flush with the top, bottom, and center shelves. Then glue it to the case assembly.

TOP PANEL

The top panel of the bookcase is made up of plywood with two "breadboard" ends and hardwood edging on the front. It's attached to corbels with dowels. The drawings at the top of the following page show how it's put together.

CORBELS. I worked on the corbels first. This way, I could lay the finished top over the corbels to locate the dowel holes to fasten the top.

After cutting the corbel blanks to rough size, I drilled the dowel holes. I did this while the blank was still square. Then you can shape them on the band saw. Finally, rout the chamfers on the edges before gluing the corbels to the case.

MATERIALS, SUPPLIES & CUTTING DIAGRAM

A	Case Sides (2)	$\frac{3}{4}$ ply. - $12\frac{1}{4}$ x 54
B	Case Fixed Shelves (3)	$\frac{3}{4}$ ply. - $11\frac{1}{2}$ x 35
C	Top Panel (1)	$\frac{3}{4}$ ply. - 14 x 35
D	Bottom Panel (1)	$\frac{3}{4}$ ply. - 13 x 36
E	Adj. Shelf (2)	$\frac{3}{4}$ ply. - $10\frac{5}{8}$ x $34\frac{3}{8}$
F	Back Upper Panel (1)	$\frac{1}{4}$ ply. - $31\frac{1}{2}$ x $19\frac{1}{4}$
G	Back Bottom Panel (1)	$\frac{1}{4}$ ply. - $31\frac{1}{2}$ x $20\frac{1}{2}$
H	Back Frame Stiles (2)	$\frac{3}{4}$ x $2\frac{1}{4}$ - 54
I	Back Frame Top Rail (1)	$\frac{3}{4}$ x $3\frac{3}{4}$ - $31\frac{1}{2}$
J	Back Frame Center Rail (1)	$\frac{3}{4}$ x $6\frac{3}{4}$ - $31\frac{1}{2}$
K	Back Frame Bottom Rail (1)	$\frac{3}{4}$ x $5\frac{1}{4}$ - $31\frac{1}{2}$
L	Face Frame Stiles (2)	$\frac{3}{4}$ x $2\frac{1}{2}$ - 54
M	Face Frm Top/Btm. Rails (2)	$\frac{3}{4}$ x $2\frac{1}{4}$ - 31
N	Face Frame Center Rail (1)	$\frac{3}{4}$ x $1\frac{1}{2}$ - 31
O	Bottom Panel Edging (1)	$\frac{3}{4}$ x $\frac{1}{2}$ - 72
P	Base Side Stiles (2)	$\frac{3}{4}$ x $2\frac{1}{2}$ - 5
Q	Base Front Apron (1)	$\frac{3}{4}$ x 4 - 31
R	Base Sides (2)	$\frac{3}{4}$ x 5 - $12\frac{1}{4}$
S	Base Back Apron (1)	$\frac{3}{4}$ x 5 - $34\frac{1}{2}$
T	Base Front Cleat (1)	$\frac{3}{4}$ x 1 - $34\frac{1}{2}$
U	Base Back Cleat (1)	$\frac{3}{4}$ x $2\frac{1}{2}$ - $34\frac{1}{2}$
V	Corbels (4)	$\frac{3}{4}$ x 2 - 8
W	Top Panel Edging (2)	$\frac{3}{4}$ x $\frac{1}{4}$ - 35
X	Top Panel Ends (2)	$\frac{3}{4}$ x 4 - $14\frac{1}{2}$
Y	Adj. Shelf Edging (1)	$\frac{3}{4}$ x 1 - 72

- (8) $\frac{1}{4}$" Shelf Pins
- (20) $1\frac{1}{4}$" Pocket-Hole Screws
- (18) #8 x $1\frac{1}{4}$" Fh Woodscrews
- (4) $\frac{1}{2}$"-dia. x $\frac{3}{4}$" Dowels

$\frac{3}{4}$" x $5\frac{1}{2}$" x 96" Rift Sawn Red Oak (3.7 Bd. Ft.)
L P S

$\frac{3}{4}$" x $5\frac{1}{2}$" x 96" Rift Sawn Red Oak (3.7 Bd. Ft.)
M H

$\frac{3}{4}$" x 7" x 96" Rift Sawn Red Oak (4.7 Bd. Ft.)
I N J K
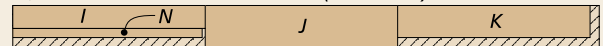
$\frac{3}{4}$" x 7" x 72" Rift Sawn Red Oak (3.5 Bd. Ft.) O W
Q T Y U

$\frac{3}{4}$" x $5\frac{1}{2}$" x 72" Rift Sawn Red Oak (2.8 Bd. Ft.)
R R V V X X
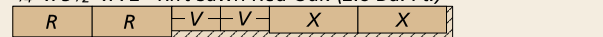
NOTE: See page 4 for plywood cutting diagram

TOP PANEL. Like I said earlier, the top panel is plywood. After it's cut to size, cut the slots on both ends to accept the tongues on the end pieces (detail 'b' at right). Then attach the front and back edging to hide the slots, and trim it flush.

The panel ends are pretty simple. Two rabbets form the tongue that fits the groove in the top panel. Trim the tongue back on the ends to fit behind the edging (detail 'c'). Now you can glue the rails to the plywood panel.

Complete the case by attaching the top. I used a dowel center for locating the holes in the top. Then glue and clamp the top to the corbels, as shown in detail 'a.'

BASE ASSEMBLY

The case rests on a base that's assembled using pocket-hole joinery. A plywood panel and cleats hold the base to the shelf unit.
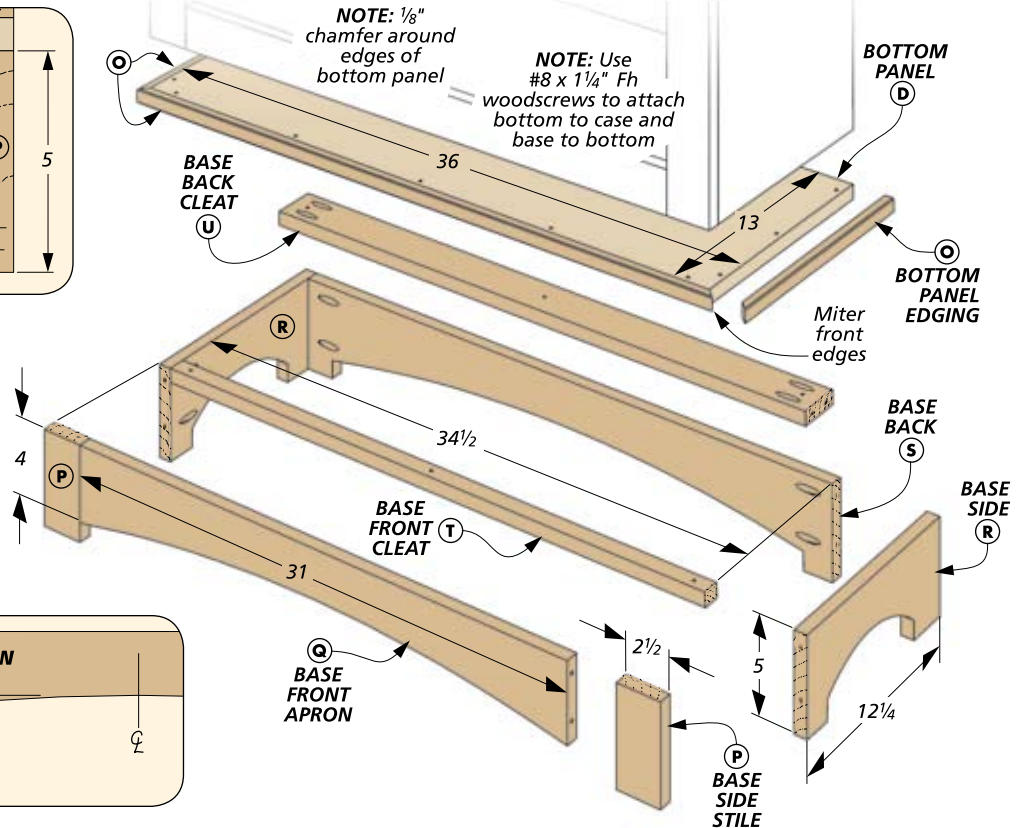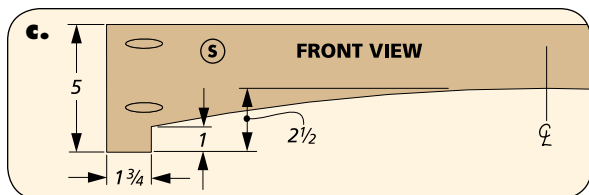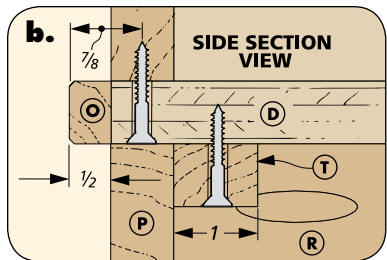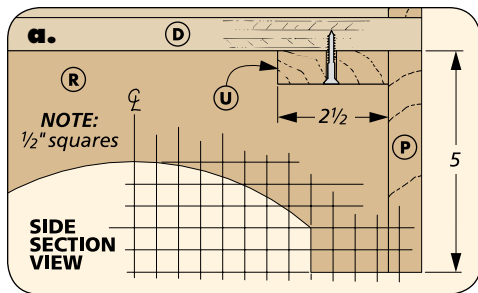
BOTTOM PANEL. I started on the base by cutting the bottom panel to size. Then apply the mitered edging to the panel and trim it flush. A small chamfer routed on the top and bottom of the edging will finish it up (detail 'b' below). Use screws to attach the bottom panel to the case.
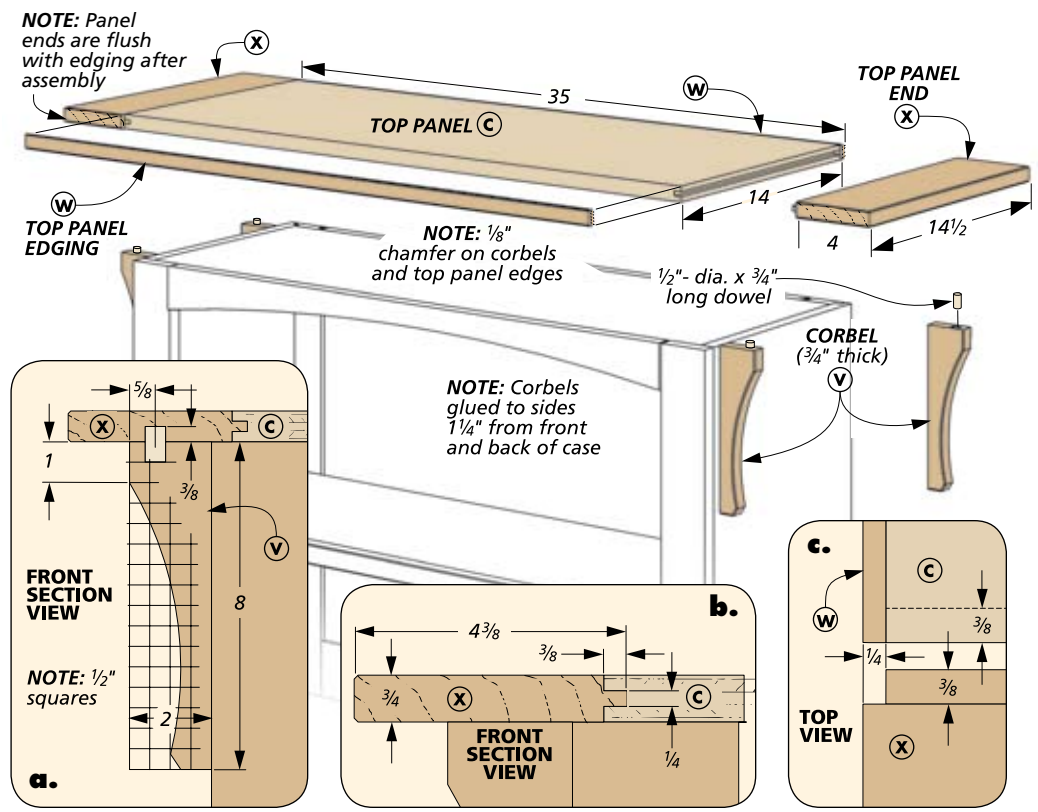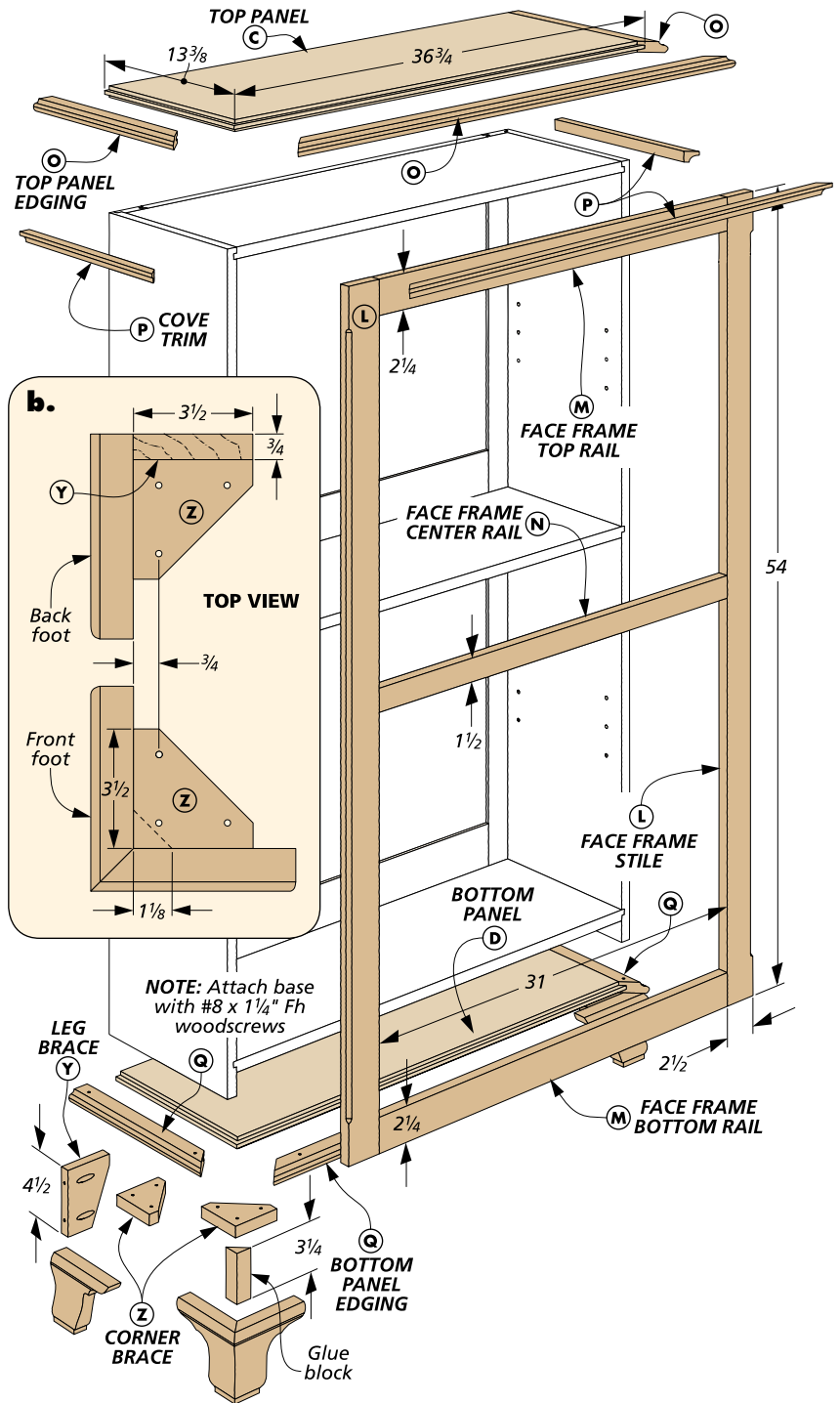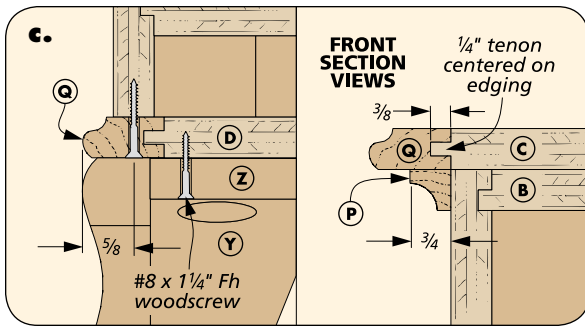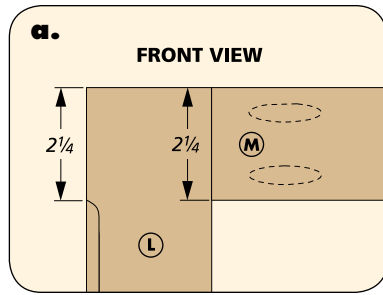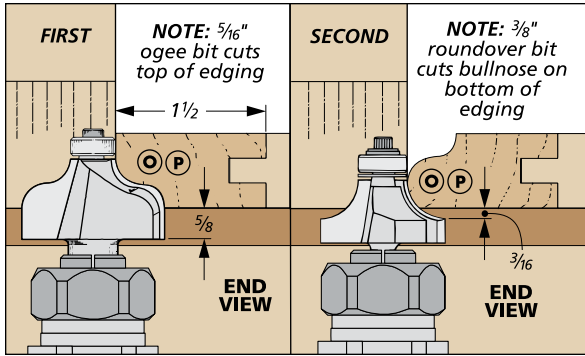
LEG ASSEMBLY. From there, I moved on to the leg assembly, which consists of six pieces. I started at the front with the arched apron piece (detail 'c' below) and side stiles. The sides are cut and attached to the front piece, and then the back is added. Once the leg unit is complete, you can attach it to the base panel using cleats at the front and back (details 'a' and 'b' below).

ADJUSTABLE SHELVES. All that's left to do now is build the adjustable shelves. I added ¾"-thick hardwood edging to the front edge to hide the plywood and give the shelf some added strength. Then it's time to apply the finish.

NOTE: Panel ends are flush with edging after assembly

TOP PANEL ⓒ

35

14

TOP PANEL EDGING

TOP PANEL END Ⓧ

4   14½

NOTE: ⅛" chamfer on corbels and top panel edges

½"- dia. x ¾" long dowel

NOTE: Corbels glued to sides 1¼" from front and back of case

CORBEL (¾" thick) Ⓥ

FRONT SECTION VIEW

NOTE: ½" squares

5/8   Ⓧ   ⓒ   1   3/8   Ⓥ   8   2

a.

b. FRONT SECTION VIEW   4⅜   3/8   ¾   Ⓧ   ⓒ   ¼

c. ⓦ   ⓒ   3/8   ¼   3/8   TOP VIEW   Ⓧ

a. NOTE: ½" squares   ⓓ   Ⓡ   Ⓤ   2½   Ⓟ   5   SIDE SECTION VIEW

b. SIDE SECTION VIEW   7/8   Ⓞ   ⓓ   ½   Ⓣ   Ⓟ   1   Ⓡ

c. FRONT VIEW   Ⓢ   5   1   2½   1¾   ₵

NOTE: ⅛" chamfer around edges of bottom panel

NOTE: Use #8 x 1¼" Fh woodscrews to attach bottom to case and base to bottom

BOTTOM PANEL ⓓ

Ⓞ

36

BASE BACK CLEAT Ⓤ

Ⓡ

13

BOTTOM PANEL EDGING   Ⓞ

Miter front edges

BASE BACK Ⓢ

BASE SIDE Ⓡ

4   Ⓟ   34½   BASE FRONT CLEAT Ⓣ

31   Ⓠ   BASE FRONT APRON   2½   5   12¼

BASE SIDE STILE   Ⓟ

FIRST — NOTE: 5/16" ogee bit cuts top of edging — 1 1/2 — 5/8 — **END VIEW** — O P

SECOND — NOTE: 3/8" roundover bit cuts bullnose on bottom of edging — 3/16 — **END VIEW** — O P

a. **FRONT VIEW** — 2 1/4 — 2 1/4 — M — L

c. **FRONT SECTION VIEWS** — 1/4" tenon centered on edging — Q — D — Z — Y — P — C — B — 3/8 — 3/4 — 5/8 — #8 x 1 1/4" Fh woodscrew

b. **TOP VIEW** — Back foot — Front foot — 3 1/2 — 3/4 — 3/4 — 3 1/2 — Z — Y — 1 1/8

TOP PANEL C — 13 3/8 — 36 3/4 — O — O

TOP PANEL EDGING — O — **COVE TRIM** P — P — **FACE FRAME TOP RAIL** L — 2 1/4 — M — **FACE FRAME CENTER RAIL** N — 54 — 1 1/2 — L — **FACE FRAME STILE** — **BOTTOM PANEL** D — Q — 31 — Q

LEG BRACE Y — 4 1/2 — NOTE: Attach base with #8 x 1 1/4" Fh woodscrews — Q — 3 1/4 — **BOTTOM PANEL EDGING** — **CORNER BRACE** Z — Glue block — 2 1/2 — **FACE FRAME BOTTOM RAIL** M — 2 1/4

Traditional Bookcase

For a more refined look, the traditional-style bookcase is built from cherry plywood and hardwood. Bracket feet, molded top edging, and raised-panel doors add to the overall appeal.

FACE FRAME. The face frame for this bookcase is pretty straightforward. You just need to position the rails so they're flush with the three fixed shelves.

The pieces are cut to size and then assembled with pocket-hole joinery. I routed a stopped chamfer on the outside edge of the stiles (detail 'a' above). With that done, go ahead and glue the face frame to the case.

BASE

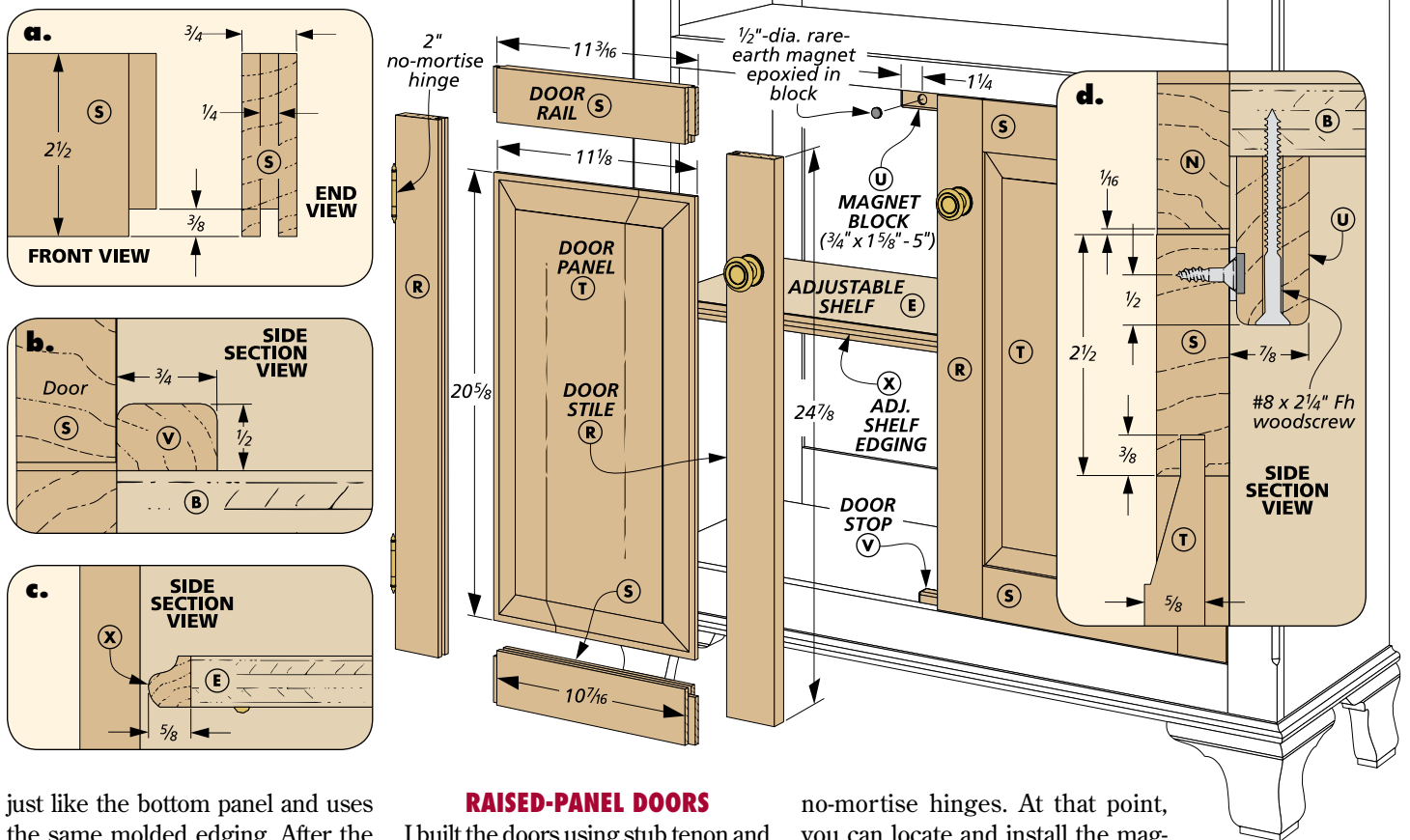If you look at the drawing above, you'll see how the base is assembled. While it may look like there are a lot of small parts, it's not difficult. The base starts with a plywood panel. Then purchased legs are added (refer to Sources on page 9).

The first step is to cut the plywood panel to size and cut the tongues for the edge molding. After you've glued the molding blank to the panel, you can shape it on the router table in two passes, as you see in detail 'c' and the upper left drawings. Now you can attach the panel to the bottom of the case and start on the legs.

ASSEMBLE THE LEGS. Although the legs are purchased, a few modifications are needed. You'll need to cut an additional brace for each back leg, as shown in the drawing above, and attach it with pocket screws. I also made corner braces for all four legs, as shown in detail 'b.' Once the legs are assembled, you can attach them to the base with screws through the corner braces.

TOP PANEL. The next thing you have to work on is the top panel. It's made

Diagram a (FRONT VIEW / END VIEW)

a.

3/4

2 1/2

1/4

Ⓢ

Ⓢ

Ⓢ

3/8

END VIEW

FRONT VIEW

Diagram b (SIDE SECTION VIEW)

b.

SIDE SECTION VIEW

Door

3/4

1/2

Ⓢ

Ⓥ

Ⓑ

Diagram c (SIDE SECTION VIEW)

c.

SIDE SECTION VIEW

Ⓧ

Ⓔ

5/8

Center exploded diagram

2" no-mortise hinge

DOOR RAIL Ⓢ

11 3/16

11 1/8

1/2"-dia. rare-earth magnet epoxied in block

1 1/4

DOOR PANEL Ⓣ

20 5/8

DOOR STILE Ⓡ

MAGNET BLOCK (3/4" x 1 5/8" - 5") Ⓤ

ADJUSTABLE SHELF Ⓔ

Ⓡ

24 7/8

Ⓧ ADJ. SHELF EDGING

DOOR STOP Ⓥ

Ⓢ

10 7/16

Ⓢ

Ⓣ

d.

Ⓑ

Ⓝ

1/16

Ⓤ

1/2

Ⓢ

7/8

2 1/2

#8 x 2 1/4" Fh woodscrew

3/8

SIDE SECTION VIEW

Ⓣ

5/8

Body text

just like the bottom panel and uses the same molded edging. After the top is completed, go ahead and glue it to the case. Cove molding adds the finishing touch, as you can see in detail 'c' on page 7.

ADJUSTABLE SHELVES. With the top in place, you can add the adjustable shelves. Like before, you'll rout the same profile on the edging. Take a look at detail 'c' above.

RAISED-PANEL DOORS

I built the doors using stub tenon and groove joinery (detail 'a'). Cut the rails and stiles to final size, and then work on the joinery before making the raised panels.

RAISED PANELS. To make the panels, I used a vertical raised panel bit in a router table.

After the doors are assembled, go ahead and install them using no-mortise hinges. At that point, you can locate and install the magnet block and the door stop (drawing above). The last step is to install the magnet washer on the door frame to align with the magnet.
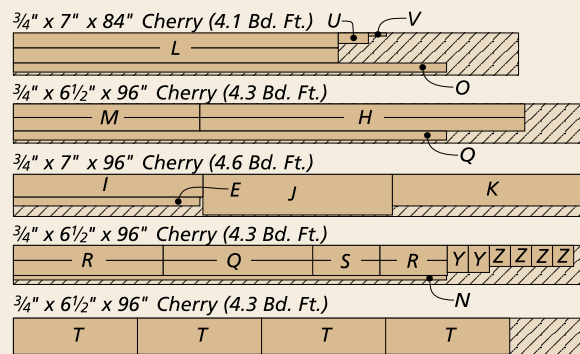
As you can see, turning a basic bookcase into a classic piece of furniture that will be appreciated for generations is all in the details — no matter what the style.

MATERIALS, SUPPLIES & CUTTING DIAGRAM

A	Case Sides (2)	3/4 ply. - 12 1/4 x 54
B	Case Fixed Shelves (3)	3/4 ply. - 11 1/2 x 35
C	Top Panel (1)	3/4 ply. - 13 3/8 x 36 3/4
D	Bottom Panel (1)	3/4 ply. - 12 1/2 x 34 7/8
E	Adj. Shelf (2)	3/4 ply. - 10 3/4 x 34 3/8
F	Back Upper Panel (1)	1/4 ply. - 31 1/2 x 19 1/4
G	Back Bottom Panel (1)	1/4 ply. - 31 1/2 x 20 1/2
H	Back Frame Stiles (2)	3/4 x 2 1/4 - 54
I	Back Frame Top Rail (1)	3/4 x 3 3/4 - 31 1/2
J	Back Frame Center Rail (1)	3/4 x 6 3/4 - 31 1/2
K	Back Frame Btm. Rail (1)	3/4 x 5 1/4 - 31 1/2
L	Face Frame Stiles (2)	3/4 x 2 1/2 - 54
M	Face Frame Top/Btm. Rails (2)	3/4 x 2 1/4 - 31
N	Face Frame Center Rail (1)	3/4 x 1 1/2 - 31
O	Top Panel Edging (1)	3/4 x 1 1/2 - 72
P	Cove Trim (1)	3/4 x 3/4 - 72
Q	Bottom Panel Edging (1)	3/4 x 1 1/2 - 72
R	Door Stiles (4)	3/4 x 2 1/2 - 24 7/8
S	Door Rails (4)	3/4 x 2 1/2 - 11 3/16
T	Door Panels (2)	5/8 x 11 1/8 - 20 5/8
U	Magnet Block (1)	3/4 x 1 3/4 - 5
V	Door Stop (1)	3/4 x 1/2 - 3
X	Adj. Shelf Edging (2)	3/4 x 5/8 - 34 3/8

Y	Leg Brace (2)	3/4 x 4 1/2 - 3 1/2
Z	Corner Brace (2)	3/4 x 3 1/2 - 3 1/2

- (8) Shelf Pins
- (12) 1 1/4" Pocket Screws
- (13) #8 x 1 1/4" Fh Woodscrews
- (2) 2" No-Mortise Hinges
- (2) 1 1/4" Bronzed Knobs
- (2) 1/2"-dia. Rare-Earth Magnets

- (2) #6 x 1/2" Fh Woodscrews
- (2) 1/4" Washers
- (2) Front Leg Assemblies
- (2) Back Legs

Cutting diagram

3/4" x 7" x 84" Cherry (4.1 Bd. Ft.) U — V

L

O

3/4" x 6 1/2" x 96" Cherry (4.3 Bd. Ft.)

M   H

Q

3/4" x 7" x 96" Cherry (4.6 Bd. Ft.)

I   E   J   K

3/4" x 6 1/2" x 96" Cherry (4.3 Bd. Ft.)

R   Q   S   R   Y Y Z Z Z Z

N

3/4" x 6 1/2" x 96" Cherry (4.3 Bd. Ft.)

T   T   T   T

NOTE: See page 4 for plywood cutting diagram

Project Sources

Most of the materials and supplies you'll need to build these bookcases are available at hardware stores or home centers. For specific products or hard-to-find items, take a look at these sources and part numbers.

I should also mention that manufacturers and retailers periodically redesign or discontinue items. So, you'll want to gather all the materials and supplies you need before you get started. It's easy to adjust dimensions or drill different-sized holes to suit your hardware.

HARDWARE. Of the three bookcases, only the traditional one requires special hardware. The needed items can be obtained from *Lee Valley*. This includes two oil-rubbed bronze ring knobs (02W11.11); two pair of 2" finial-tipped, no-mortise hinges (00H52.22); two $\frac{1}{2}$" rare-earth magnets (99K31.03); two $\frac{5}{8}$" magnet cups (99K32.53); and two $\frac{5}{8}$" magnet washers (99K32.63).

SPECIALTY BITS. To rout the raised panels on the cherry bookcase, I used a *Timberline* bit (420-30) made by *Amana* that I purchased at the *Woodsmith Store*.

BOOKCASE FEET. The feet for the country and the traditional bookcases came from *Classic Designs by Matthew Burak*. For the country bookcase, I used the *Newport* bun foot (461-BF). The traditional bookcase uses *Queen Anne* feet (481-F and 481-B).

FINISHES. The three bookcases have different finishes to match their styles. The country bookcase was painted with *Benjamin Moore's Misted Fern* and *Woven Jacquard*.

The Craftsman bookcase was stained with a mixture of two parts *Wood Kote* cherry stain to one part dark oak *Jel'd Stain*.

The stain applied to the traditional bookcase was a blend of three parts *ZAR* cherry stain with one part *Wood Kote* cherry *Jel'd Stain*.