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Bill Krier
Editor in Chief, WOOD magazine

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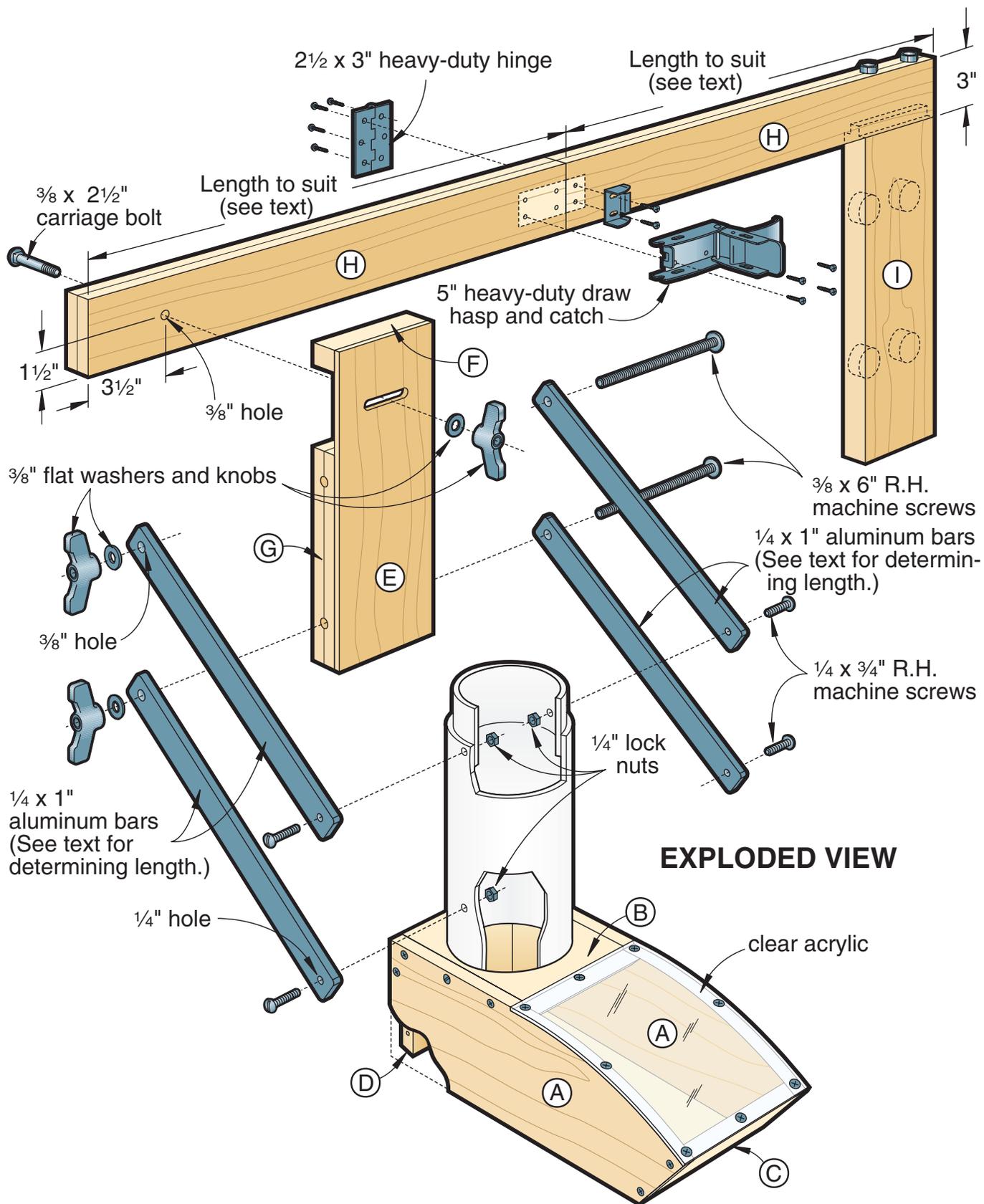
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Tablesaw Dust Collector

with bonus Tablesaw Hold-downs

This tablesaw dust-collector hood is effective as well as convenient. The big window lets you see your cut at all times, and neither the hood nor its support will impede your sawing.



Safety Warning: Do not remove a factory-installed blade guard to install this accessory. We've designed this dust-collector hood for those who do not have the blade guard provided by the saw's manufacturer. You must use feather boards in conjunction with this hood; we show you how to build those on page 14. In use, adjust the height of the hood over the saw table to suit the thickness of the stock you're sawing, and tighten the wing knobs. We like to set the height to the thickness of the material plus 1/4".

Measure before you begin

Before you begin construction, take a few measurements so you can fit the accessory to your tablesaw. Refer to the Exploded View and Tablesaw Extension Mounting drawings.

1 To determine the length of the support arm (H), measure from the right end of your saw's table extension to the center of the blade. Add 5 1/2", and divide the total by 2. Round the result to the nearest 1/8". This dimension will be the length of each part H.

2 Install a spacer or spacers on the underside of your saw's table extension, if necessary, to provide an attachment surface for the mounting bracket (J). If your fence has a back rail, locate I and J to clear it.

The rabbeted top end of the upright (I) needs to stand 17 1/2" above the saw table's surface, so measure from the bottom surface of the spacer (which will be the top of part J) to the top surface of the table. This distance plus 17 1/2" equals the length of part I.

Build the hood body first

1 Cut two pieces of stock for the Hood Sides (A) to the dimensions shown in the Bill of Materials. Temporarily fasten them together face to face, aligning the edges. (We did this with double-faced tape.)

2 Photocopy the full-size pattern for the hood side, found on pages 12 and 13. Adhere the pattern to the stacked blanks.

3 Bandsaw slightly outside the pattern line; then sand the parts to shape.

Bill of Materials

Part	Finished Size			Mati.	Qty.
	T	W	L		
A hood side	1/2"	4"	12 3/4"	BP	2
B hood top	1/2"	4 1/2"	6 1/4"	BP	1
C hood front	1/2"	3 5/16"	4 1/2"	BP	1
D hood back	1/2"	3 1/2"	4 1/2"	BP	1
E bracket panel	1/4"	4 1/4"	11 3/4"	BP	1
F bracket cleat	3/4"	1 1/4"	4 1/4"	B	1
G bracket body	1 1/4"	4 1/4"	8"	LB	1
H support arm	1 1/4"	3"	*	LB	2
I upright	1 1/4"	5 1/2"	*	LB	1
J mounting base	1 1/4"	5 1/2"	12" **	LB	1

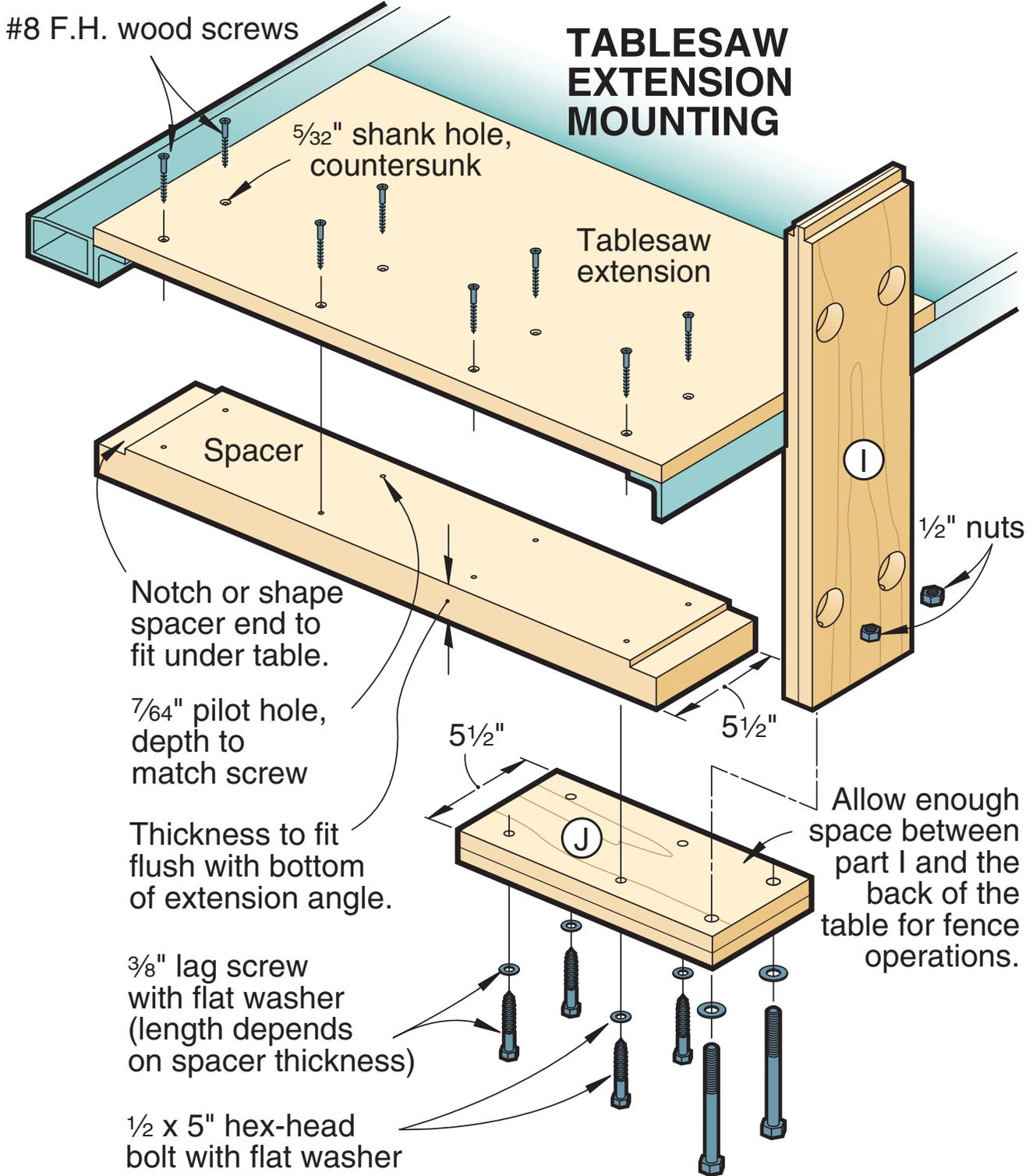
*To determine length, see *Measure before you begin* in text.

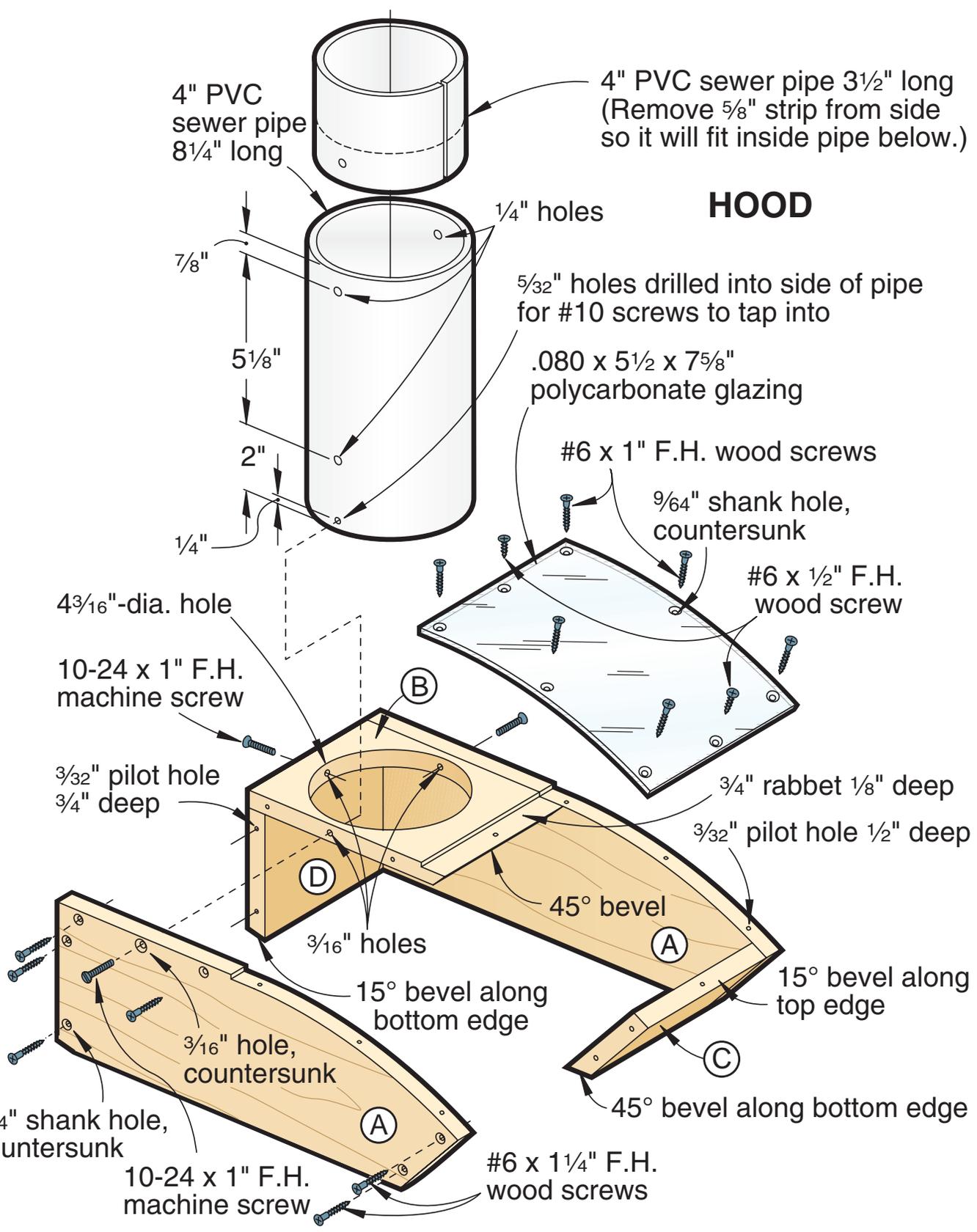
**Length can be altered to fit your saw.

Materials Key: BP—Baltic birch plywood; LB—laminated birch; B—birch

Supplies: 6x1/2", 1", and 1 1/4" flathead wood screws; 10-24x1" self-tapping flathead machine screws; 1/4-20x3/4" roundhead machine screws and lock nuts; 3/8-16x2 1/2" carriage bolt; 3/8-16x6" roundhead machine screws; 3/8" flat washers; plastic knobs with 3/8-16 thread; 1/2-13x5" and 8" hexhead bolts with nuts; 1/2" flat washers; .080"-thick polycarbonate glazing; 4" PVC sewer and drain pipe; 1/4x1" aluminum bar stock; 2 1/2x3" heavy-duty hinge with screws; 5" heavy-duty draw catch with screws.

TABLESAW EXTENSION MOUNTING





4" PVC sewer pipe 8 1/4" long

4" PVC sewer pipe 3 1/2" long (Remove 5/8" strip from side so it will fit inside pipe below.)

HOOD

5/32" holes drilled into side of pipe for #10 screws to tap into

.080 x 5 1/2 x 7 5/8" polycarbonate glazing

#6 x 1" F.H. wood screws

9/64" shank hole, countersunk

#6 x 1/2" F.H. wood screw

4 3/16"-dia. hole

10-24 x 1" F.H. machine screw

3/32" pilot hole 3/4" deep

3/4" rabbet 1/8" deep

3/32" pilot hole 1/2" deep

45° bevel

3/16" holes

15° bevel along bottom edge

15° bevel along top edge

3/16" hole, countersunk

45° bevel along bottom edge

9/64" shank hole, countersunk

10-24 x 1" F.H. machine screw

#6 x 1 1/4" F.H. wood screws

Drill six $\frac{3}{4}$ " holes and a $\frac{3}{16}$ " one where indicated. Separate the parts, and remove the pattern.

4 Cut the hood top (B) to size. Mark the center for the $4\frac{3}{16}$ " hole, where shown on the Parts View drawing on *page 9*. Using a circle cutter and drill press, bore the hole, sized for 4" PVC sewer and drain (S&D) pipe. (This pipe, available from home centers, is smaller than 4" Schedule 40 PVC pipe.)

5 Saw or rout a $\frac{3}{4}$ " rabbet $\frac{1}{8}$ " deep on the top of part B where shown. Then saw the front end to a 45° bevel.

6 Cut the front (C) to size. Saw, sand, or plane bevels on the top and bottom edges. (See the Hood drawing.)

7 Cut the hood back (D) to size. Bevel the bottom edge.

8 Clamp parts A, B, C, and D together. Then, guiding through the holes in the sides (A), drill pilot holes for #6x1 $\frac{1}{4}$ " flathead wood screws. Drill and countersink the $\frac{3}{16}$ " hole through the back (D), and countersink the screw holes in the sides (A). Unclamp the hood body assembly, apply woodworker's glue to the joints, and drive in the wood screws.

Build the adjustable bracket

1 Cut the bracket panel (E) to size.

2 Form a $\frac{3}{8}$ " slot where shown. To do this easily, install a fence on your table-mounted router and set stops on it, as shown in the Routing the Bracket Slot drawing on *page 7*.

3 Cut the cleat (F) to size. Glue it to the face at the top end of the panel (E), as shown in the Bracket drawing.

4 Laminate stock for the bracket body (G), support arm (H), upright (I), and mounting base (J). (We laminated $\frac{3}{4}$ "-thick birch, and planed it to $1\frac{1}{4}$ " thick, taking equal amounts from each side.) Cut parts G, H, I, and J to size.

5 Mark centers on one edge of the bracket body (G) where shown. Using a drill press for accuracy, drill a $2\frac{5}{16}$ " hole at each mark.

6 Complete the sliding bracket by gluing the bracket body (G) to the panel (E) where shown. Position one section of the support arm (H) between the body (G) and the cleat (F) as a

spacer. (To provide clearance for smooth sliding, stick a strip of masking tape to each edge of the support arm as temporary shims.) Remove the support arm before the glue dries.

Now, for a supporting structure

1 Drill two $\frac{1}{2}$ " holes through the support arm (H), centered on the edge near one end. The Support drawing shows their locations. Use a drill press for accuracy.

2 Drill a $\frac{3}{8}$ " hole near the end of the other half of the support arm, where shown on the Exploded View drawing. Verify the hole's distance from the bottom of the arm (H) by placing the bracket assembly on the arm. The slot and the hole must coincide.

3 Bore $\frac{1}{2}$ " bolt holes into the ends of the upright (I), where shown on the Parts View drawing on *page 10*. The holes in the top must mate exactly with those in the support arm (H), as shown in the Support drawing.

To locate and drill the holes accurately, clamp the drilled arm to the upright, as shown in the illustration A on *page 8*. With a $\frac{1}{2}$ " bit chucked in a portable drill, guide through the holes in the arm to start the holes in the upright. Drill as deep as you can with the arm in place. Then remove the arm, and drill the holes to the depth specified, as shown in the illustration B on *page 8*. Drill both ends of part I this way.

4 Bore $1\frac{1}{2}$ " holes in the face of the upright to intersect the bolt holes, shown on the Parts View drawing. A Forstner bit and drill press will do the job easily.

5 Rout a stopped groove in the underside of the support arm (H), at the end with the $\frac{1}{2}$ " holes, as dimensioned on the Support drawing.

Make the cut with a $\frac{1}{2}$ " straight bit chucked in a table-mounted router. Position a fence to center the bit on the edge of the arm (H), and clamp a stopblock to it to stop the cut $5\frac{1}{2}$ " from the end. Cut the groove in several progressively deeper passes.

6 Form a tenon on one end of the upright (I) to mate with the groove in the arm. To do that, saw or rout

$\frac{3}{8}$ " rabbets $\frac{1}{2}$ " deep on the end, as shown in the Support drawing.

7 Finish-sand the wooden parts and assemblies. Mask the groove in the arm (H) and the tenon on the upright (I); then apply a clear finish. (We applied two coats of Aqua ZAR water-base polyurethane, sanding between coats with 220-grit sandpaper.)

Attach the support to your saw

1 Cut the mounting base (J) to size. Using the drilled support arm as a template, drill two $\frac{1}{2}$ " bolt holes through one end where shown. Drill appropriate screw holes in the part, and attach it to the spacer under the saw table extension.

2 Bolt the upright to the mounting base with two $\frac{1}{2}$ x5" hex-head bolts and nuts, as shown.

3 Join the two support arm halves (H) with a heavy-duty hinge on the back, as shown in the Exploded View drawing. Install a heavy-duty draw catch on the front.

4 Attach the assembled arm to the upright with two $\frac{1}{2}$ x8" hex-head bolts, as shown in the Support drawing. Slide the bracket assembly (E/F/G) onto the arm, and install a $\frac{3}{8}$ x2 $\frac{1}{2}$ " carriage bolt, washer, and knob or wing nut, as shown in the Exploded View drawing.

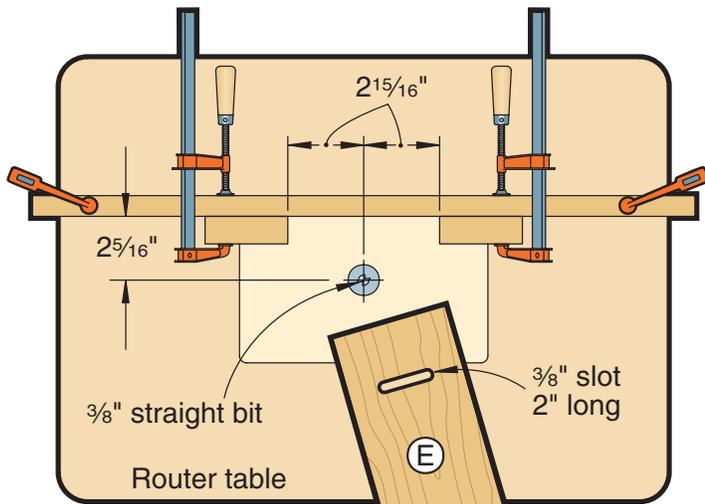
Add the plastic parts to the hood

1 Cut a $5\frac{1}{2}$ x7 $\frac{3}{8}$ " piece of .080"-thick polycarbonate glazing material, such as Lexan. This is a stronger plastic than standard acrylic glazing, and less likely to break on impact. Drill and countersink screw holes, where shown on the Hood drawing.

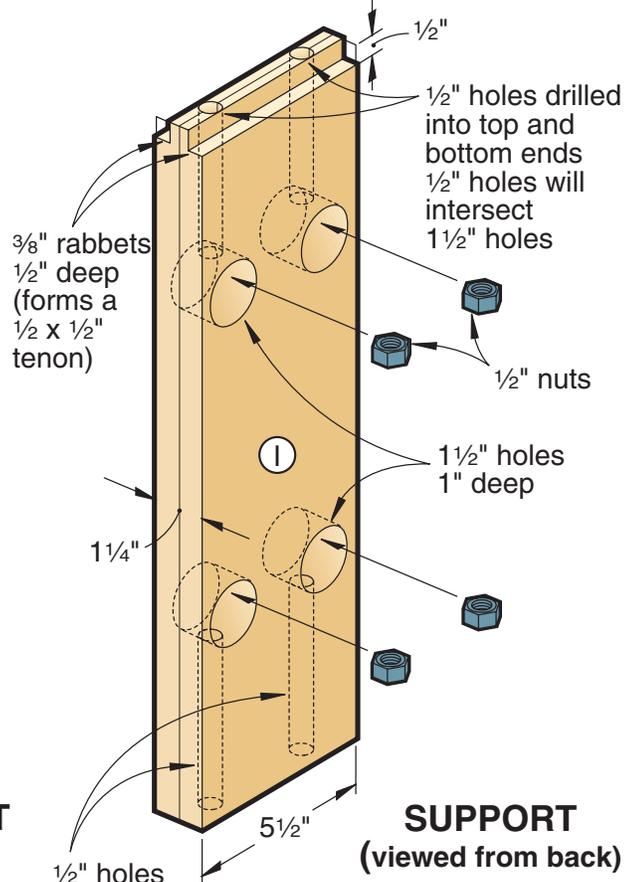
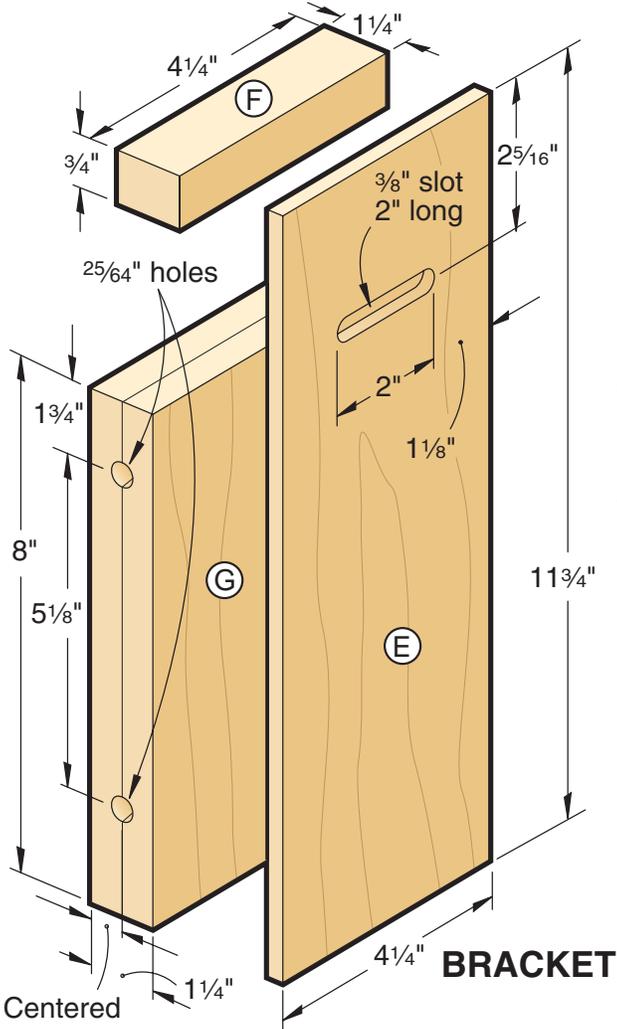
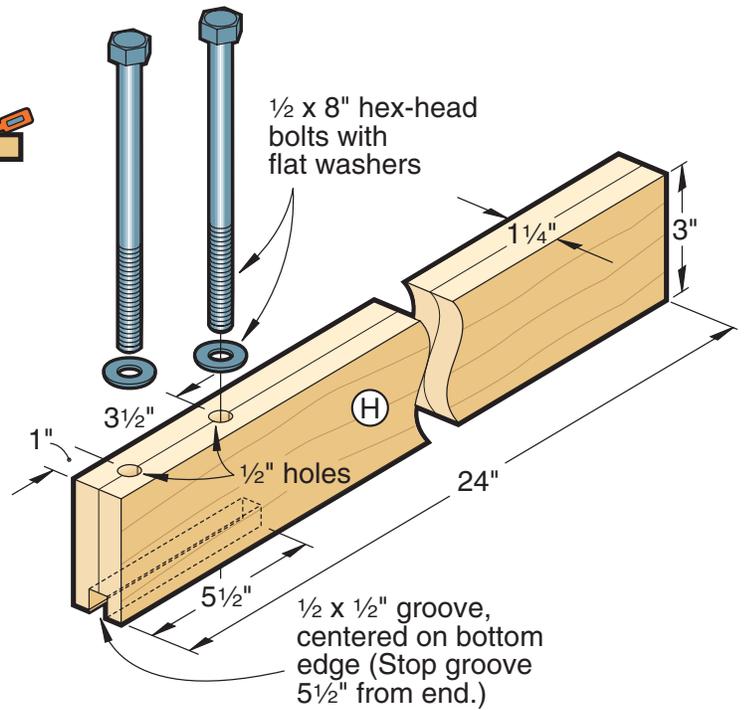
2 Drill pilot holes in the hood body, guiding through the screw holes in the plastic piece. Attach the plastic with screws as shown.

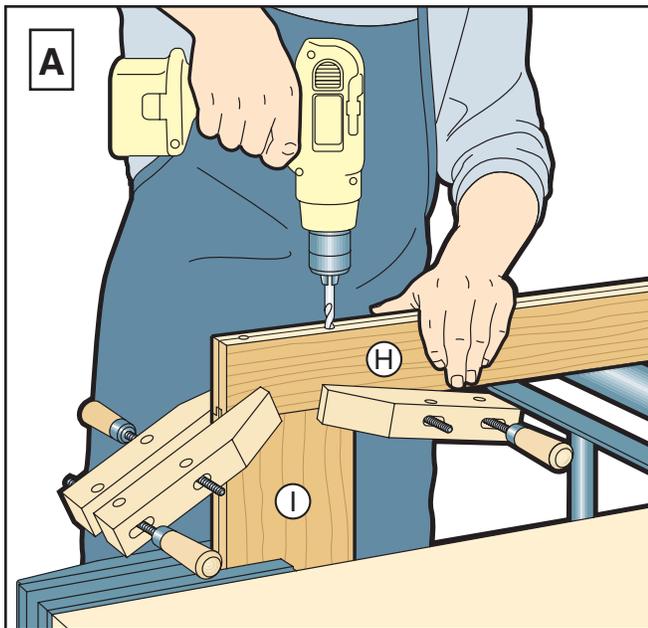
3 Cut one $8\frac{1}{4}$ "-long and one $3\frac{1}{2}$ "-long piece of 4" PVC S&D pipe. Cut out a $\frac{3}{8}$ "-wide strip along the axis of the shorter piece, as shown in the Hood drawing. Slide this piece $1\frac{3}{4}$ " into the other, and tape it temporarily.

4 Drill $\frac{1}{4}$ " holes through the pipe where shown. For best results, support the pipe on a V-block on your



ROUTING THE BRACKET SLOT





A Clamp the support arm (H) to the upright (I). Then guide through the holes in the support arm to locate the mating holes in the upright. Drill as deep as you can.

drill-press table. Align the holes along the pipe's axis, and make sure the holes on opposite sides are directly across from each other.

5 Temporarily insert the pipe into its hole in the hood. Tape it in place.

Connect the hood to the support

1 Determine the length for the four parallel aluminum bars that will link the hood to the support. To do this, place the hood on the saw table, centered from front to back over the blade slot, as shown in the illustration C at *right*.

Measure the center-to-center distance between the uppermost $\frac{1}{4}$ " hole in the pipe and the top $\frac{3}{8}$ " hole through the bracket body (G). Add 1" to this dimension; the result will be the length of the aluminum arms.

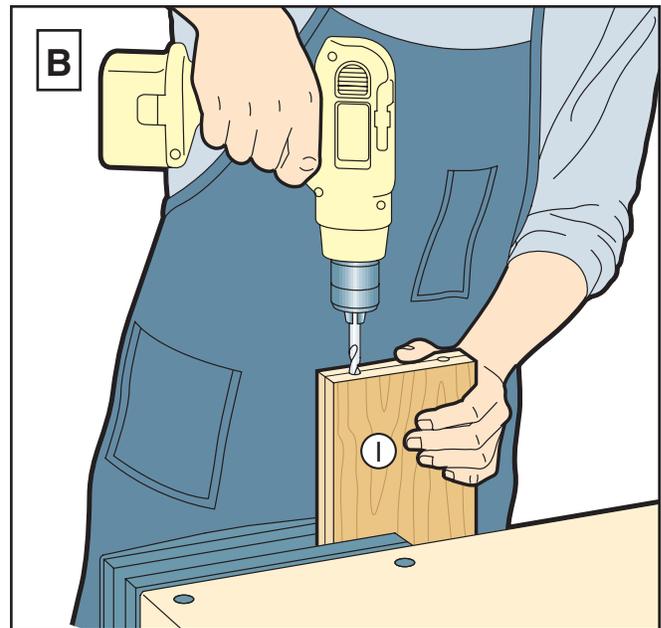
2 Cut four pieces of $\frac{1}{4}$ "-thick aluminum 1" wide to that length.

3 Drill bolt holes in the arms. To do this, stack the arms, and tape them together. On the top piece, centerpunch a mark $\frac{1}{2}$ " from each end and centered. Then, with a drill press, drill a $\frac{1}{4}$ " hole at one end and a $\frac{3}{8}$ " hole at the other. Separate the parts.

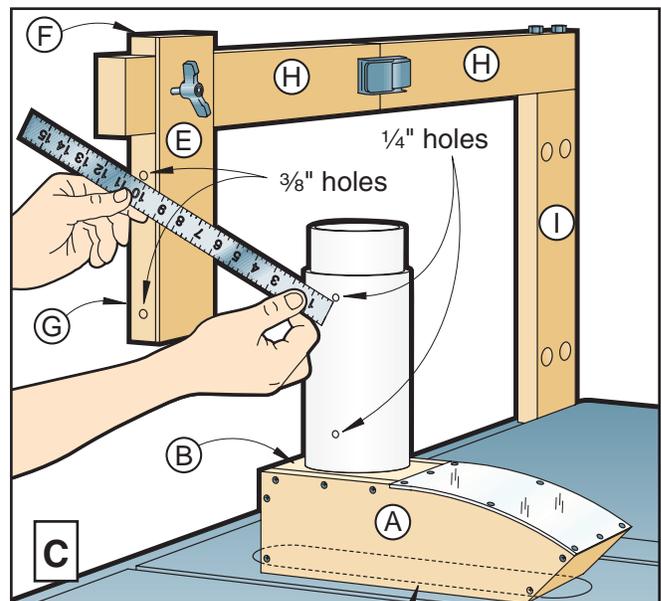
4 Bolt the ends with the $\frac{1}{4}$ " holes to the pipe assembly, as shown in the Exploded View drawing. Attach the other ends to the bracket, as shown.

5 Insert the pipe into the hole in the hood, making the end of the pipe flush with the inside surface of the hood top (B). Align the hood on the saw table; then drill $\frac{5}{32}$ " pilot holes in the pipe, guiding through the three $\frac{3}{16}$ " holes in the hood.

Drive a 10-24x1" flathead machine screw into each hole. The screws will tap their own threads in the plastic pipe, so nuts aren't needed.



B Remove the support arm to finish drilling the holes in the upright (I) to the specified depth. Take care to keep the holes straight.



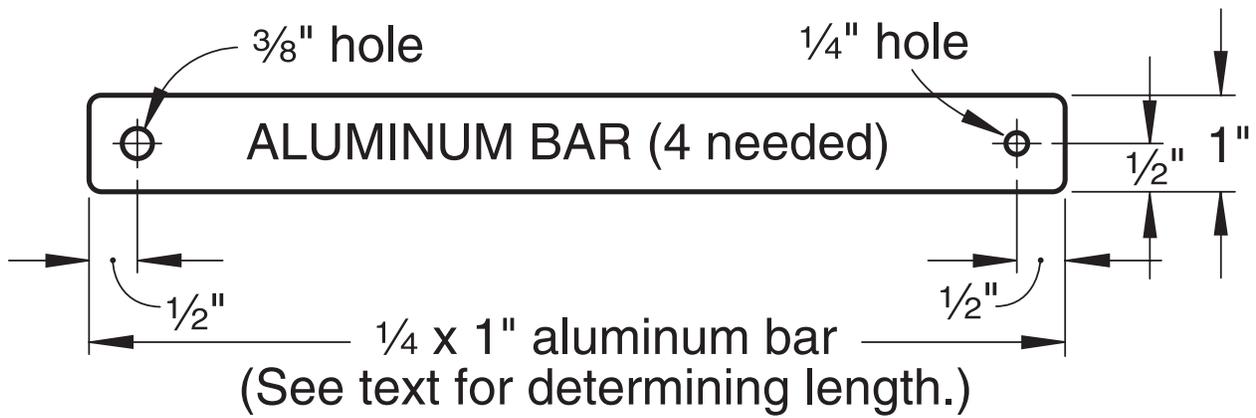
C Center the hood assembly over the blade slot and center the bracket assembly behind the outlet pipe when measuring the length of the aluminum arms.

Now, start collecting dust

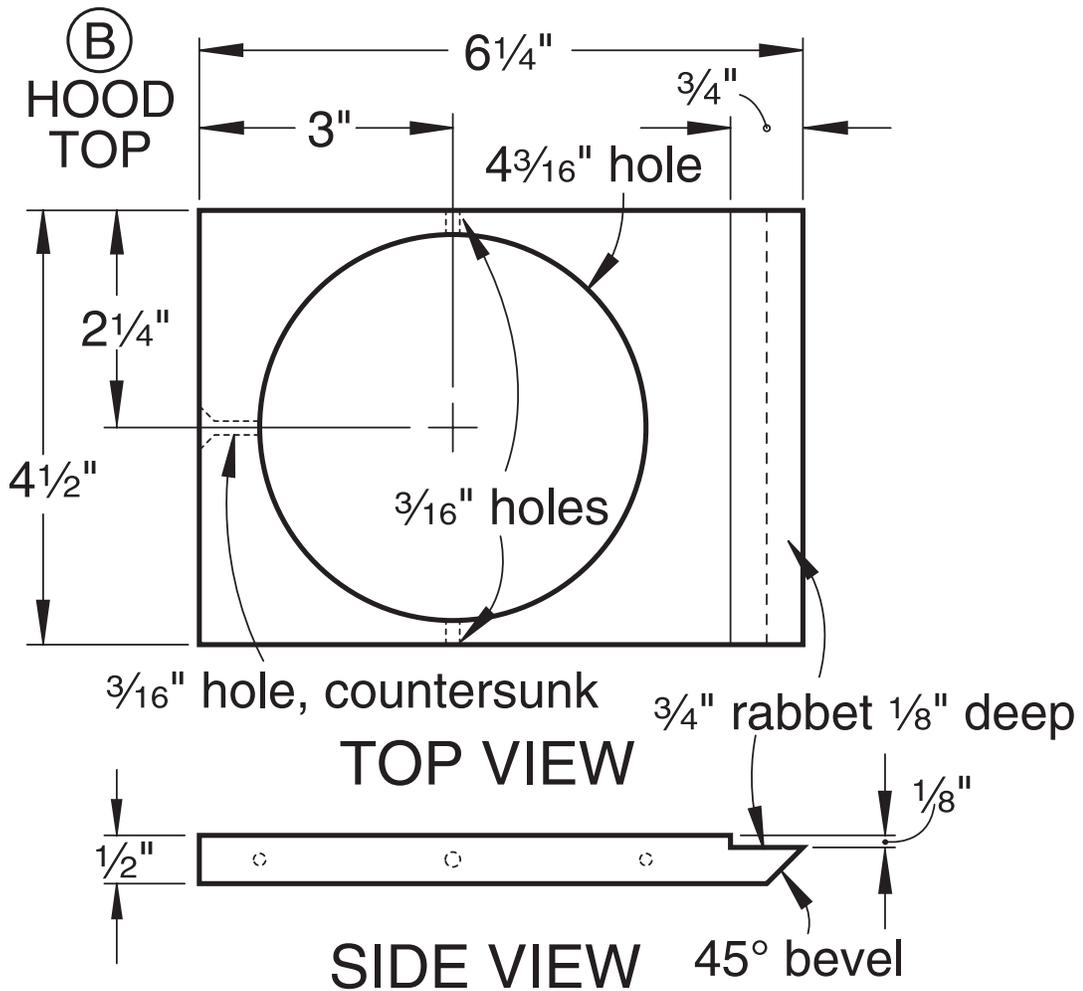
1 Connect a flexible hose from your dust collection system to the pipe on the hood. Clamp it for security.

2 In use, center the dust collection hood over the blade, raise it to slightly clear the workpiece, and tighten the knobs. Slide it to one side or the other as necessary for best vision.

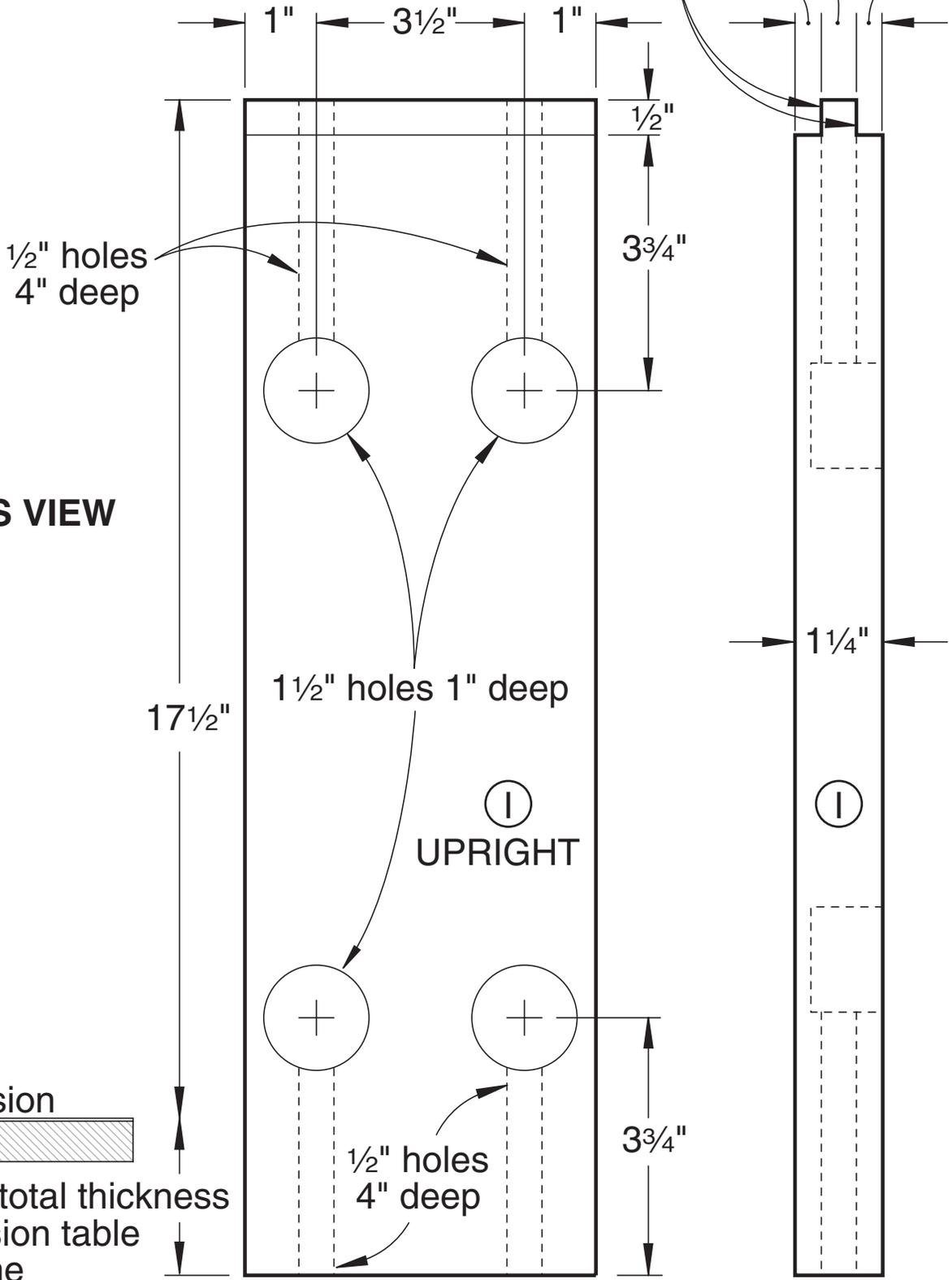
3 To swing the hood out of the way for blade changes and such, just release the draw catch. You could add a hook and eye or bullet catch to the arm to secure the folded section. 🛠️



PARTS VIEW



3/8" rabbets 1/2" deep
(forms a 1/2 x 1/2" tenon)



PARTS VIEW

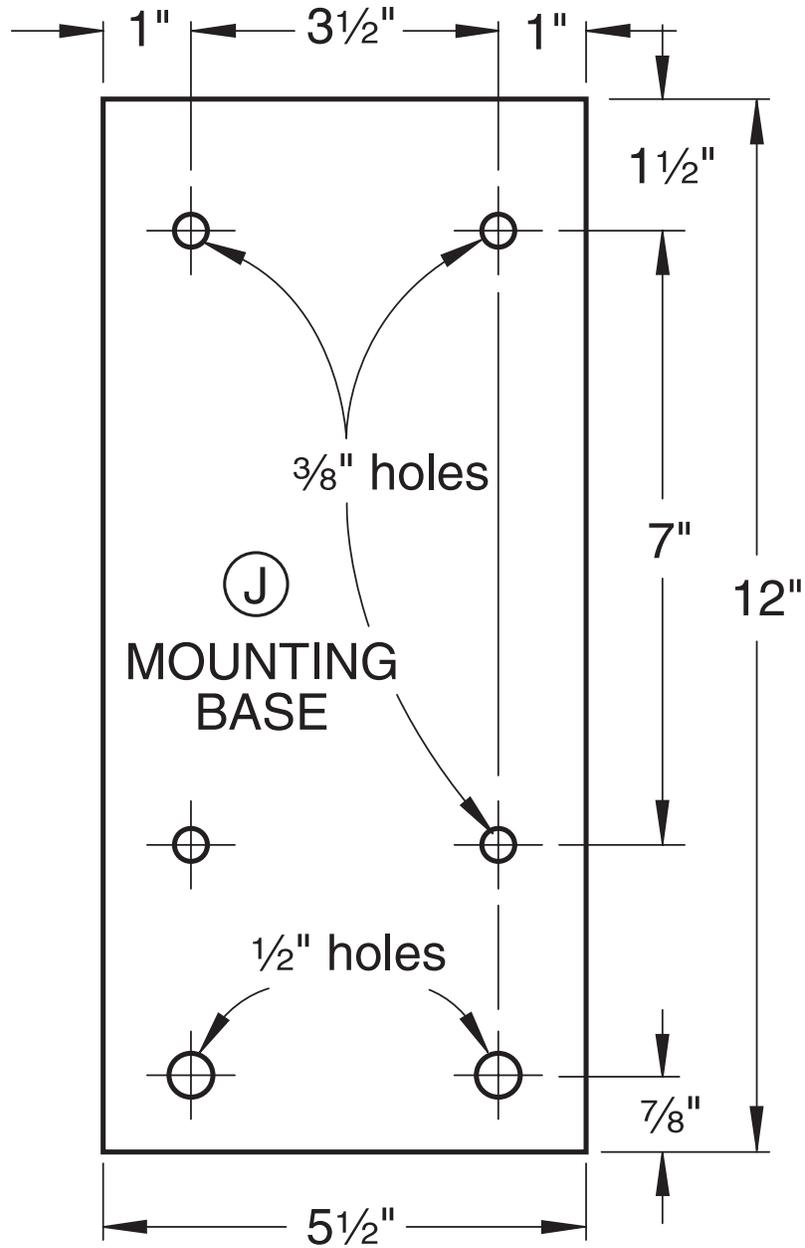


Extension
Equal to total thickness
of extension table
plus frame

FRONT VIEW

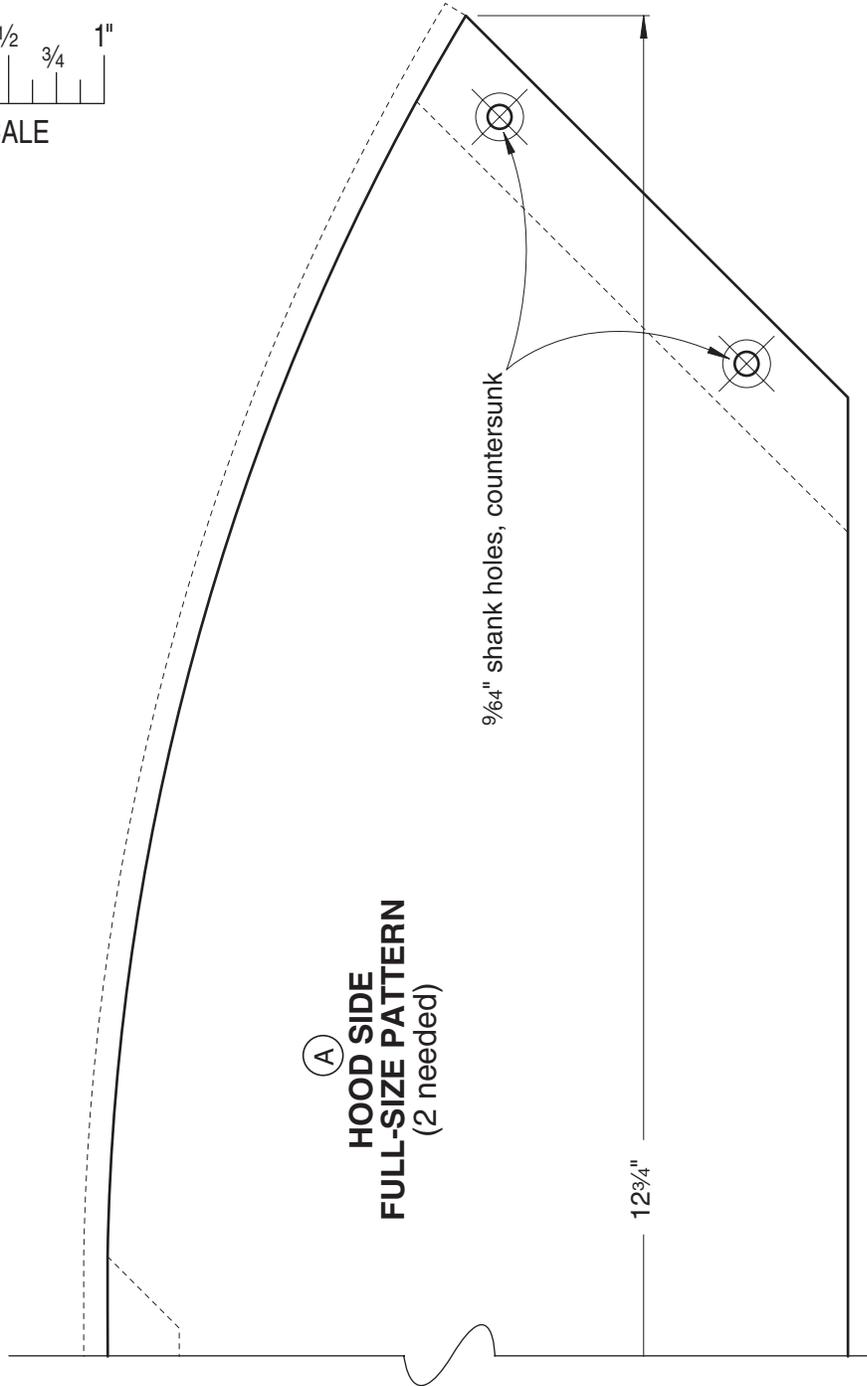
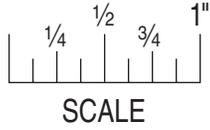
SIDE VIEW

PARTS VIEW



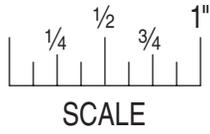
TOP VIEW

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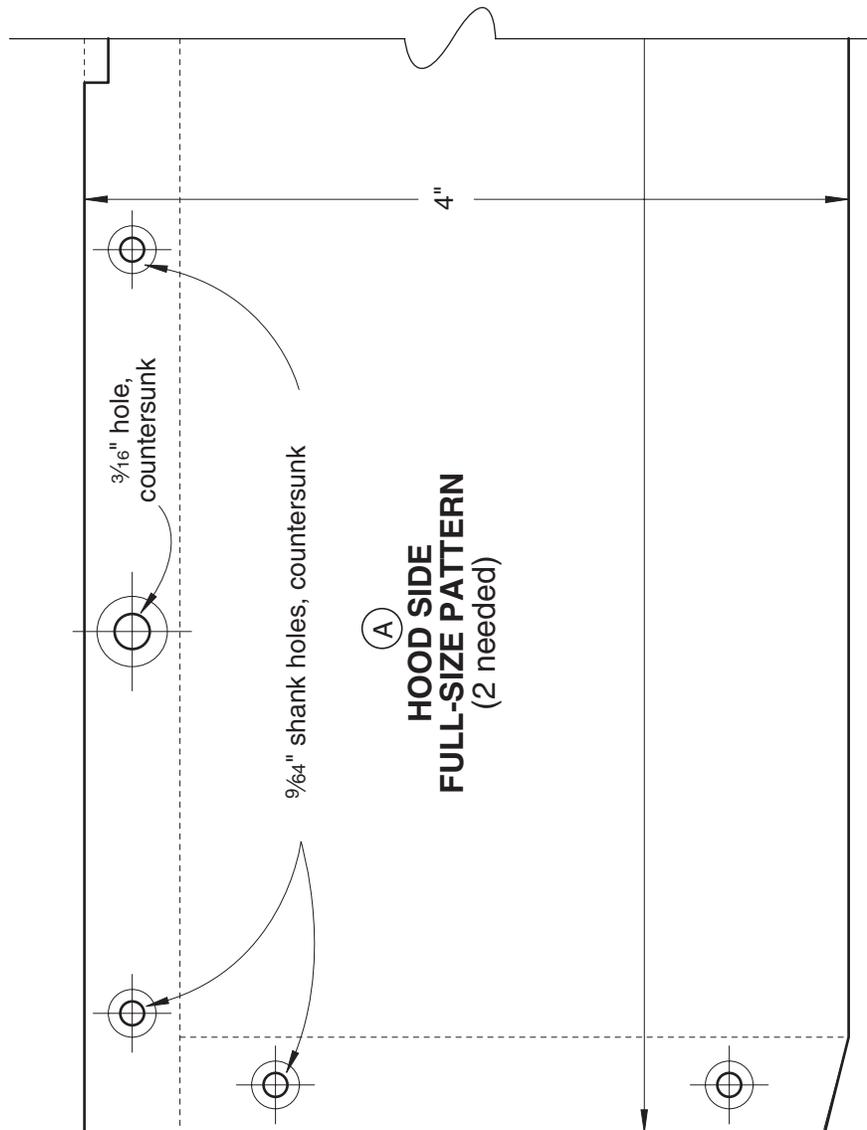


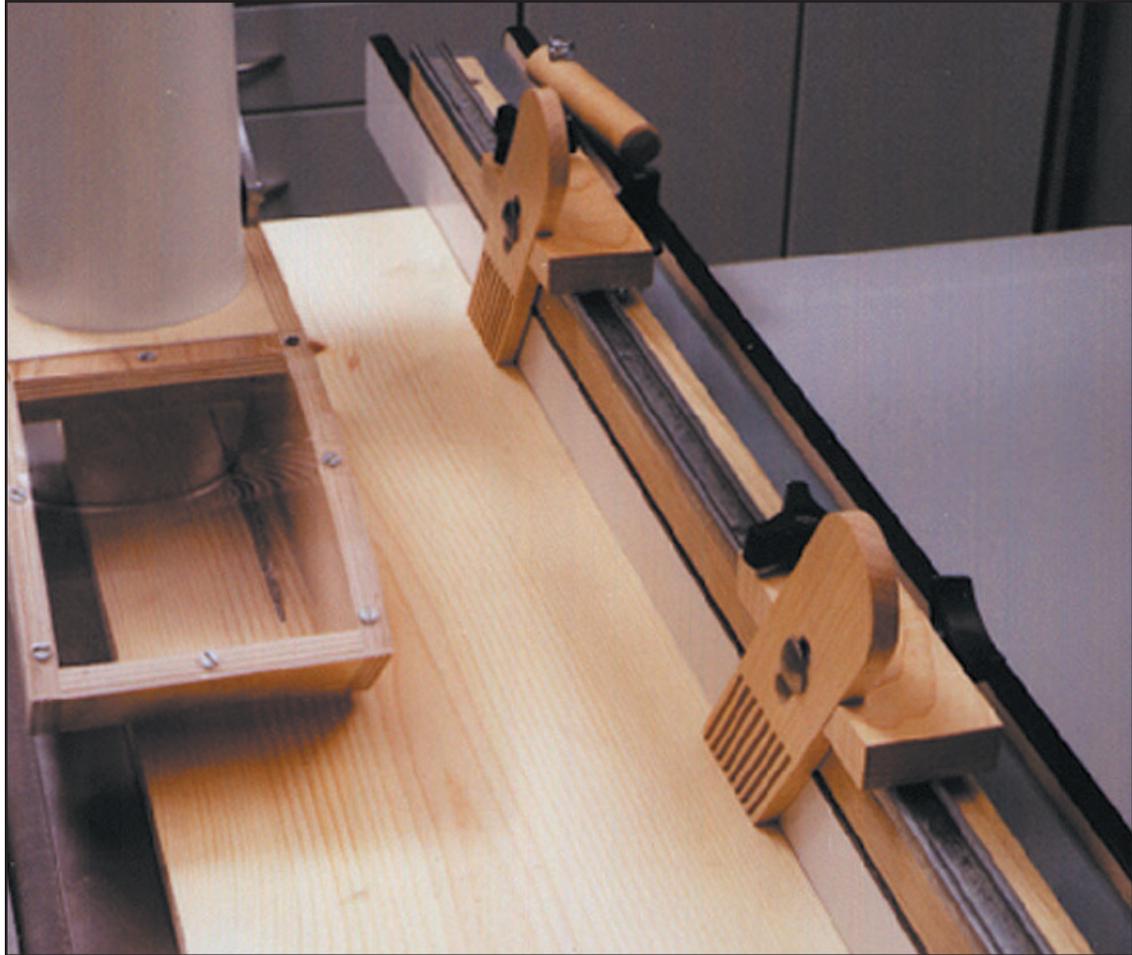
Join here to pattern on *page 13*.

To ensure full-sized patterns are correct size, your printer should be set to print at 100% (not fit to page). Measure full-sized patterns to verify size.



Join here to pattern on *page 12*.





Tablesaw Hold-Downs

Boards of feather work wonders together

When we designed the tablesaw dust-collection hood, we knew we also had to replace the saw's anti-kickback pawls built into the original blade guard. Whether you build our hood or leave your saw's guard intact, you'll appreciate the additional stock control and safety provided by this feather board system.

Build a pair of feather board assemblies using the drawing on *page 15* as a guide, and attach the mini-channel to the mounting rail (which you may need to modify slightly to suit your fence). Align the mounting rail flush with your fence's face, drill pilot holes in the rail where shown, and mark their locations on the top of the fence. Drill and tap a hole to accept a #10-32 machine screw at each mark, then

attach the rail assembly to the fence.

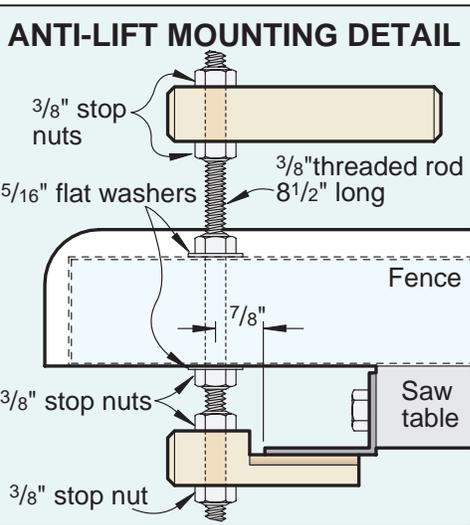
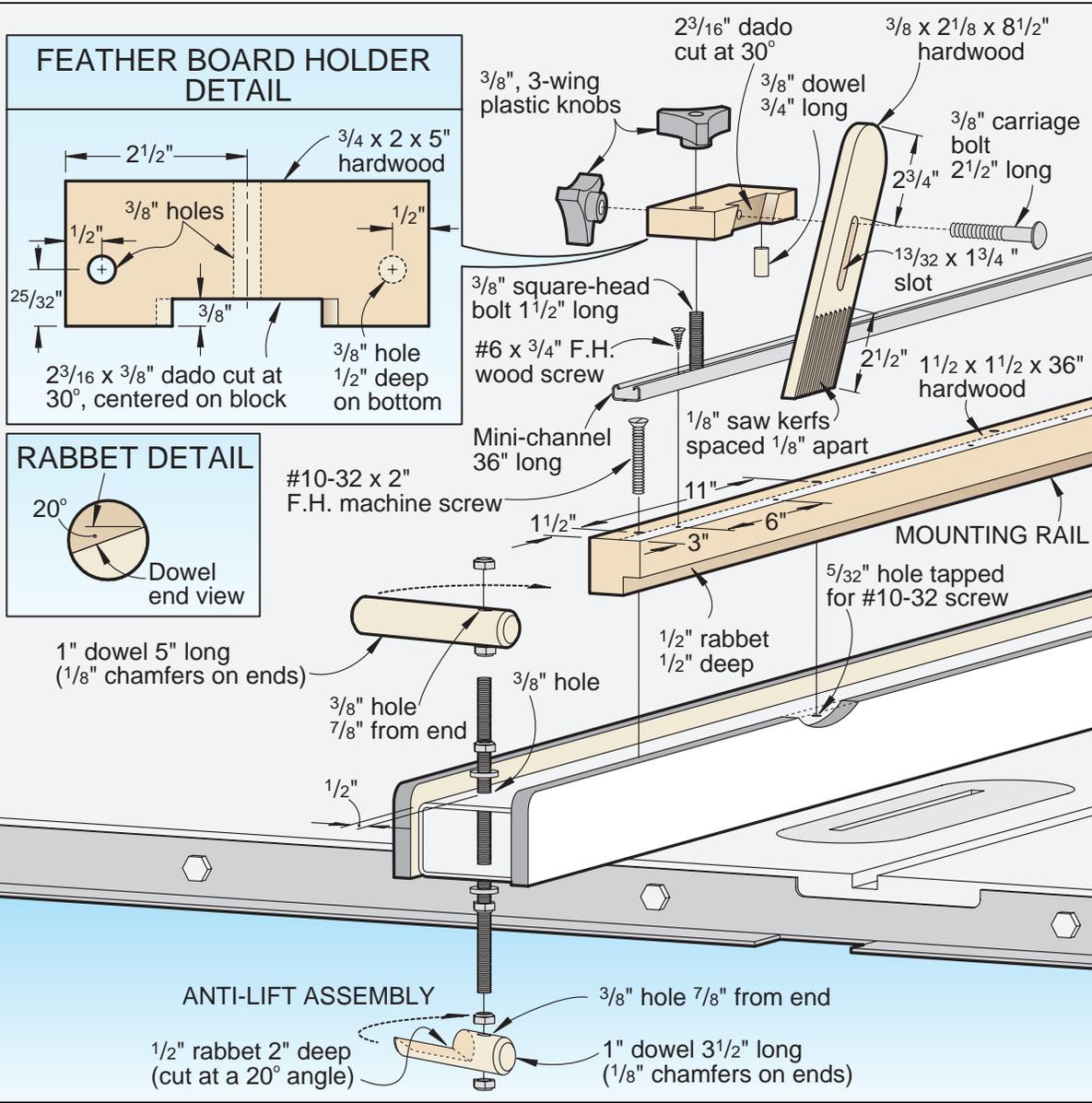
If your fence locks down at the back of the table, you won't need to add the anti-lift assembly shown in the drawings. However, a fence that locks only at the front will raise at the rear without this mechanism. To cut the 20° rabbet, rip the dowel 2" down its center. Lay the dowel on your drill press table, oriented as shown in the Rabbet Detail drawing, and bore the 3/8" hole to accept the threaded rod. 🪚

Produced by Marlen Kemmet
 Project Design: Jim Downing
 Illustrations: Kim Downing; Lorna Johnson, Roxanne LeMoine; Brian Jensen
 Photographs: Steve Uzzell
 Graphic Design: Jamie Downing
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Buying guide.

Hardware. Knobs, square-head channel-bolts, and mini-channel for a pair of feather boards. Kit no. TS-FB, \$16.95 plus shipping in U.S. (add \$2.85 for three additional knobs to fit the dust-collection hood). Schlabaugh and Sons Woodworking, 720 14th St., Kalona, IA 52247. Call 800/346-9663 to order.

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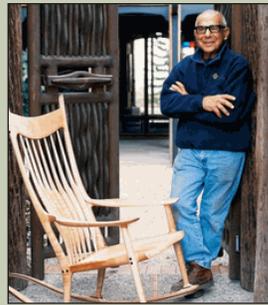
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