

Hallway MIRROR

This weekend project features beautiful wood, invisible hinges and simple joinery.

My front hallway is the most heavily traveled, and usually the most cluttered, space in my home. Keys are tossed here and there, notes are scattered and the mail keeps getting lost. Tired of misplacing small but important items, I found a decorative way to keep everything together and organized. No more misplaced bills and no more lost keys.

This hallway mirror presented me with the perfect opportunity to display some highly figured English sycamore I had recently acquired. The design is simple yet elegant, allowing the wood to shine. It is the first thing people see when they enter my home.



PROJECT REQUIREMENTS

Materials

4 bd. ft. of 5/4 figured English sycamore, about \$120, but a minimum order calls for 7 bd. ft. enough to build two hallway mirrors, about \$210

Tools

Tablesaw
Planer
Jointer
Biscuit joiner
Drill press
Router

Hardware

No. 7 x 1-in. trim-head screws
Two barrel hinges
Two mounting brackets
Six glazier points
Four brass pegs
Felt pads
Mirror
Cost about \$160 for one

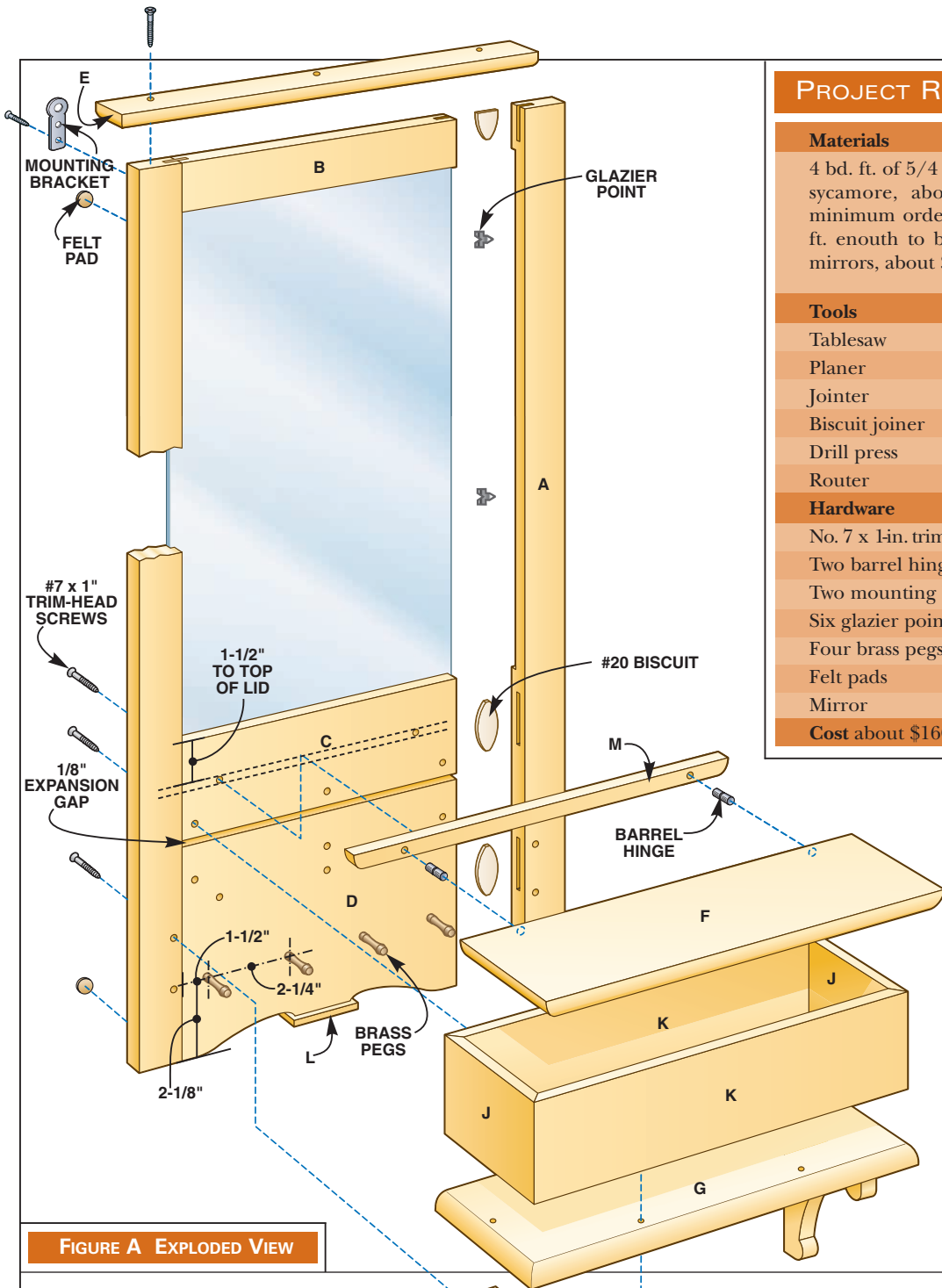
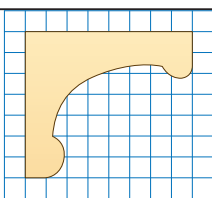


FIGURE A EXPLODED VIEW

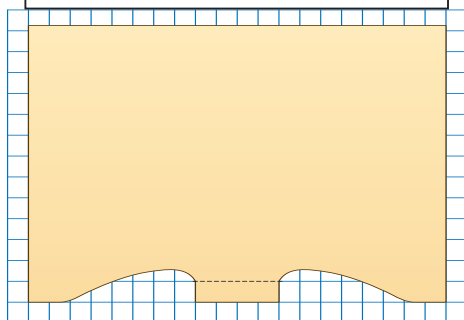
FIGURE B BRACKETS



□ = 1/2 in.

Use a photocopier to enlarge Figure B and Figure C images 400 percent and then 115 percent to make a 1/2-in. grid.

FIGURE C BOTTOM RAIL CUTOUT



□ = 1/2 in.



1 Before making any cuts, lay out the pieces to maximize the wood yield. Build visual harmony into the project by laying out the box sides end to end so the grain flows around the box when it is assembled.

MATERIALS AND CONSTRUCTION

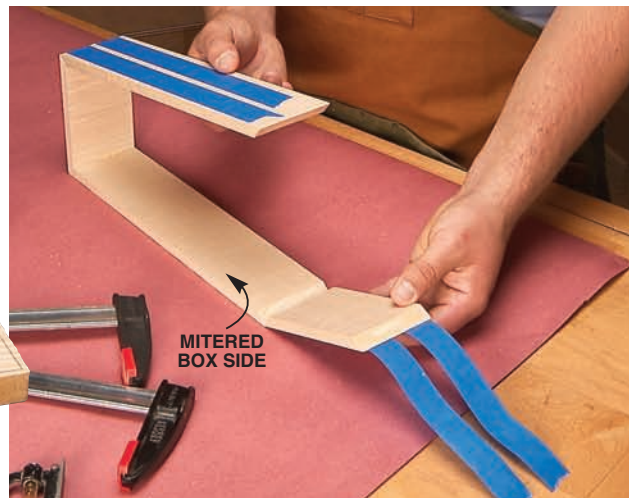
The frame is constructed with quick, easy biscuit joinery. Trim-head screws are used to attach the brackets, the lidded box and the cap piece on the frame. I chose these screws because their tiny heads are less visible and less prone to splitting thin parts, such as the brackets. Screws also allow the entire project to be disassembled for easier finishing.

Hidden barrel hinges give the box a clean, seamless appearance and allow the lid to double as a shelf. Solid brass pegs add beauty to the mirror and are perfect for hanging keys. The large mirror stands ready for a last-second glance before I walk out the door.

This project would also look great built with some straight-grained oak or pine, but I went all out and used figured English sycamore. The supplier requires a minimum purchase of \$200 (roughly 7 bd. ft.). This is double the amount of lum-



2 Join the frame parts using biscuits. On the narrow top rail, offset the slot so the biscuit protrudes out the top of the frame. It can be trimmed off later and completely covered by the top.



3 Position the box parts on two strips of masking tape. Spread glue and fold the pieces together. Use the overhanging tape to strap the last miter together. Square the box and snug the miters together with clamps.

ber needed to build one project, so I simply decided to build two and give one as a gift. You can also combine your order for this project with other wood to reach the \$200 threshold (see Sources, page 43).

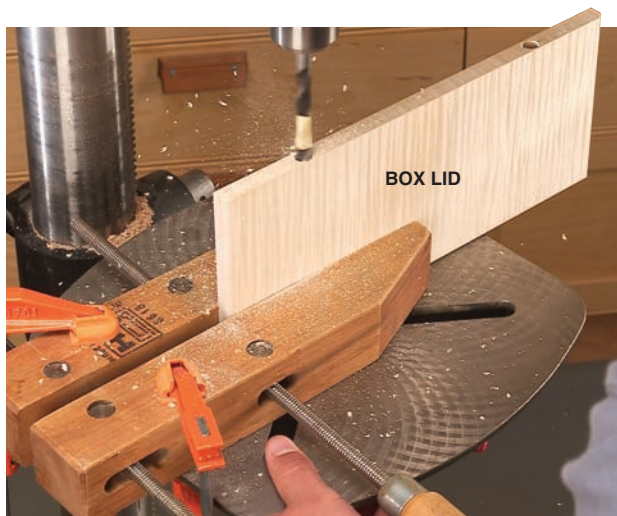
BUILD THE FRAME

1. Lay out the project parts on rough lumber (Photo 1). The wood gets resawn so you only need to lay out pieces for one mirror to make two. Planning before cutting allows you to match color and grain patterns and maximize the yield, which is especially important on precious wood. Lay out the brackets together on a piece of wood large enough to be planed and jointed before you cut them out.

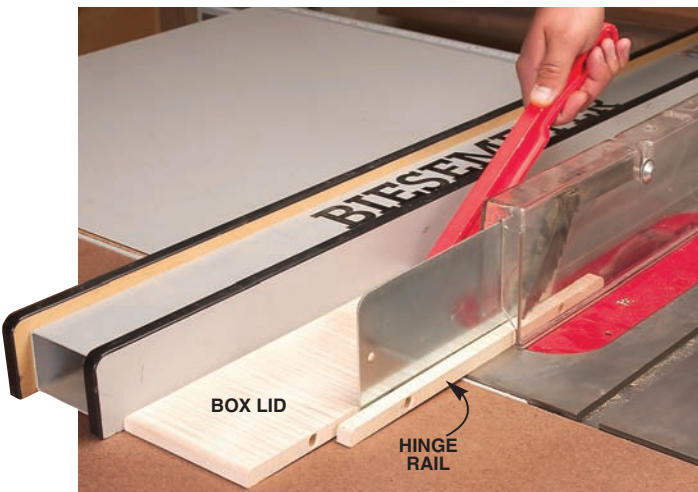
2. Cut and mill all the parts. I opted to use 5/4 stock because it minimizes waste and can be resawn into thinner pieces.



4 Screw the assembled box sides to the frame and build the rest of the box on the frame. Using this approach, it's easier to get the box lid and bottom to fit tightly against the mirror frame.



5 Drill holes in the box lid for the barrel hinges. Barrel hinges can be fussy to install. In this case, predrilling the hinge holes in the box lid and then ripping the hinge rail guarantees perfect alignment.



6 Rip the hinge rail from the box lid. Because the hinge rail will be cut from the box lid (see Step 13), the holes must be 1/8 in. deeper than the length of the hinge to account for the stock the table saw blade removed.



7 Place the hinges in the holes of the hinge rail. Tighten the screws just enough so the hinges can move in and out with pressure but do not slide freely.

3. Enlarge the pattern (Fig. C, page 40) to full size and trace it onto the bottom rail (D). Rough-cut the pattern on a bandsaw and then smooth the final shape on a sanding drum or a spindle sander. Trim off the waste piece.

4. Mark and drill the holes for the brass pegs on the bottom rail using a drill press (Fig. A, page 40).

5. Make the decorative cap (L). Ease the cap's edges and glue the cap to the bottom rail.

6. Join the frame pieces (Fig. A) using biscuits. Leave a 1/8-in. gap between the middle and bottom rails for cross-grain expansion. Offset the top rail slot so the biscuits hang out the top edge (Photo 2). Trim the biscuits flush after the glue has set.

7. Route a rabbet for the mirror around the back side of the frame. Square the corners using a chisel.



BRASS PEGS

8. Attach the top (E) to the frame. Shape the front and side edges with a 1/4-in. round-over bit, and screw the top in place (Fig. A).

BUILD THE BOX

9. Miter the box sides (J, K) on a sliding miter saw or with a miter gauge on the table saw.

10. Glue up the box (Photo 3). As long as the miters have been cut correctly, the box will fold up easily and the tape will hold the pieces together. Place the box in a framing square to nudge the box square and use a clamp to tighten the joints, if necessary.

11. Attach the box to the frame (Photo 4, Fig. A).

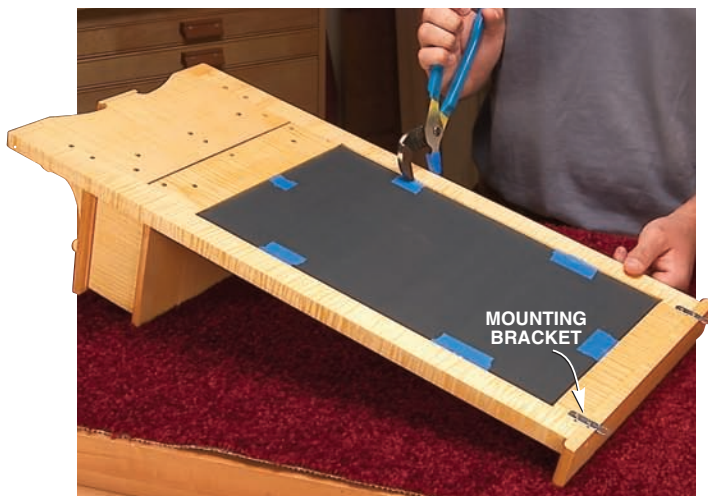
12. Drill holes for the hinges in the box lid (Photo 5). Secure the lid in a hand-screw clamp to make sure the holes are drilled straight, and clamp everything to the table so nothing moves.



8 Use playing cards to set the gap between the lid and hinge rail. The perfect fit has a nominal gap between the lid and hinge spacer but allows the lid to close completely. If the lid does not close completely, double up the cards.



9 Disassemble the project's parts—except for the frame—to sand and finish. Every other piece can easily be sanded and finished individually, nearly eliminating the need to work in tight corners.



10 Secure the mirror with glazier points. Place tape below each point and on the pliers' jaws to prevent scratches. Stick a few felt pads on the back of the frame to keep the frame from rubbing against the wall.

13. Cut the hinge rail from the box lid (Photo 6) by ripping a strip, through the holes, 1/2 in. from the back edge of the box lid.

14. Screw the hinge rail to the frame and the box bottom to the box sides and frame (Fig. A).

15. Shape the brackets (H) from the pattern (Fig. B, page 40). Rough-cut the design on the bandsaw and sand each bracket smooth. Screw the brackets to the frame and to the box bottom (Fig. A).

INSTALL THE BARREL HINGES

16. Install the barrel hinges in the lid first and then place

the hinges in the holes of the hinge rail (Photo 7).

17. Set the hinges using thin spacers, such as playing cards (Photo 8). Place the cards between the lid and the hinge rail and lightly push down on the lid. Gently open the lid and tighten the setscrews. The lid should close tightly with only a slight gap between the lid and hinge rail.

ADD THE FINISHING TOUCHES

18. Disassemble the project and finish (Photo 9). After everything is finished, reassemble the project.

19. Add the mounting brackets and pegs and install the mirror (Photo 10). Hang and enjoy.

BARREL HINGE



Cutting List			
Overall Dimensions: 27-3/4" x 14" x 6"			
Part	Name	Qty.	Material Dimension
A	Frame stile	2	Sycamore 3/4" x 1-1/2" x 27-1/4"
B	Top frame rail	1	Sycamore 3/4" x 1-1/2" x 10"
C	Middle frame rail	1	Sycamore 3/4" x 3" x 10"
D	Bottom frame rail	1	Sycamore 3/4" x 6-5/8" x 10"
E	Top	1	Sycamore 1/2" x 1-3/4" x 14"
F	Box lid	1	Sycamore 1/2" x 5-3/8" x 12-3/4"
G	Box bottom	1	Sycamore 1/2" x 5-1/4" x 12-3/4"
H	Bracket	2	Sycamore 7/16" x 4" x 3-1/2"
J	Short box side	2	Sycamore 3/8" x 2-3/4" x 4-7/8"
K	Long box side	2	Sycamore 3/8" x 2-3/4" x 12"
L	Decorative cap	1	Sycamore 1/4" x 7/8" x 2-3/8"
M	Hinge rail *	1	Sycamore 1/2" x 1/2" x 12-3/4"

*Cut from box lid (F)

Sources Lee Valley, (800) 871-8158, www.leevalley.com 10-mm concealed barrel hinge, #00H35.10, \$4.20 ea. No. 7 glazier points, #86K08.02, \$2.25 for 50. Rigid zinc-plated steel hanger, #00S06.10, \$1.60 for 10. Brass necklace hanger, #01B12.01, \$3.25. • Talarico Hardwoods, (610) 775-0400, www.talaricohardwoods.com 5/4 figured English sycamore, about \$30 per bd. ft., minimum order of \$200 (7 bd. ft.). • McFeely's (800) 443-7937, www.mcfeelys.com No. 7 x 1-in. finish-head screws, #0710-TSO-C, 100 for \$3.40. • Home center or hardware store Mirror, about \$8. Tube of silicon, about \$6. Antiscratch felt pads, 50 for about \$4.