



# Choosing Door Hinges

Hardware is not an afterthought, but an important design decision

BY ROBERT J. SETTICH

**B**uilding fine furniture and cabinets is exacting and time-consuming work. Even in a shop bursting with machinery and labor-saving gizmos, it's easy to spend dozens, even hundreds, of hours on a project.

After investing all that energy, it doesn't make sense to slap on just any set of door hinges. Treat hardware as an afterthought and that's how it will look. Instead, hinges should be part of a design from the moment you begin to sketch ideas.

Reference books, catalogs, and fine furniture in magazines are all good sources of information. Make a conscious effort to train your eye by critiquing the hardware whenever you look at a piece of furniture: Is it period-appropriate, does it provide the right action, does it draw too much or too little attention to itself?

The right set of hinges will blend seamlessly with form and will maximize function. A mismatch, on the other hand, can muddle your project's personality. Here are some of the most common hinges for hanging doors in fine furniture and cabinets.

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# Butt hinges are versatile

**M**ortised butt hinges are the simplest and most familiar type—you will find them on entry and passage doors in most homes. Smaller versions swing doors in cabinets, upright jewelry chests, and clock cases. The hinge leaves are set into mortises in the door and carcase.

Butt hinges come in a variety of finishes and styles to match all types of period furniture. Their versatility comes from an unobtrusive design that is just visible enough to be decorative if so desired.

Mechanically speaking, there are two essential points to remember about butt hinges. First, the center of rotation is at the midpoint of the hinge pin. In standard practice, you position the hinge's centerpoint slightly past the edge of the door and the edge of the carcase. Second, the diameter of the hinge's barrel determines the maximum combined depth of the mortises for the hinge leaves. Many beginners think the leaf thickness sets the mortise depth, but this approach can lead you astray, especially if your hinge has thin, stamped leaves. It's a good practice to make the mortise slightly shallower than the maximum depth to prevent the hinge from becoming bound, a condition where the hinge edge of the door strikes the carcase, preventing the door from closing fully.

Butt hinges are challenging to fit because a typical installation involves mortising for both leaves. Combine that problem with the need for a consistent reveal around the door's perimeter, and you have a job that demands careful workmanship.

**Simple and familiar.**  
Mortised butt hinges can be showy or literally blend into the woodwork.

## Choose your finish.

Polished brass might look best on a formal Colonial piece, while antiqued metals are better suited to more relaxed styles, especially country pieces. Try brushed nickel or chrome for contemporary pieces.

## LOCATING HINGES

Align the hinges with the door rails or space them equally inward by any distance that pleases the eye. But keep the hinge's midpoint no more than 3 in. from the door's top or bottom. Position the centerpoint of the hinge pin about  $\frac{1}{32}$  in. past the door and case.

## INSTALLATION TIP

**Cut mortises in the case first.** Then shim the door into place and use a marking knife to transfer the hinge locations to the door.

## LOOK FOR QUALITY

**A well-made hinge is sturdy and silent.**

Precisely fit hardware shouldn't rattle when you shake it. Look for hinges that are extruded or milled from solid brass. Thin, stamped hinges cost less but don't meet the same standards for fit and finish.

**A few helpful tips.** The decorative possibilities for butt hinges range from no ornament at all, to a simple ball tip, to fancier shaped finials. If you're seeking historical accuracy, check museum pieces that have the original hardware or consult drawings—either sketches by the original designer or measured drawings made as part of a preservation project. If you're the designer/builder, choose hardware that will complement the form, not compete for attention.



# Surface-mounted hinges install easily

H-L HINGE



BUTTERFLY HINGE



STRAP HINGE



**Hand-forged iron hinges are genuinely rustic.** In H, H-L, butterfly, and strap styles, they're ideal for colonial reproductions.

**M**ounted directly to the front face of the cabinet and door, hinges of this type are useful in period reproductions, especially those of rustic early American furniture.

Strap hinges can provide some structural support on large board-and-batten doors by spanning several of the vertical boards and helping to hold them together.

The narrow profile of an H hinge (see photo, top right) makes it especially suitable for doors with narrow stiles or otherwise limited surface area for securing a hinge. An H-L hinge is similar to the H hinge but needs more mounting space and will support more weight.

H-L hinges are sold in pairs, with one mounted near the bottom of the door and the other near the top. The hinge pairs are mirror images of each other, not identical.

Butterfly hinges have a pronounced decorative effect, mimicking a pair of spread wings.

Two great virtues of surface-mounted hinges are easy installation and predictable results. There's no tedious gauging, mortise cutting, or trial fits, so you eliminate the time and labor associated with all of

those processes. There's slightly more to the installation process than slapping the hinges onto the wood and drilling pilot

holes, but frankly it's not much more complicated than that.

Eliminating the machining steps also dramatically reduces the possibility of surprises. You directly set the reveal of the door before installing the hinges, so there's virtually no guesswork involved.

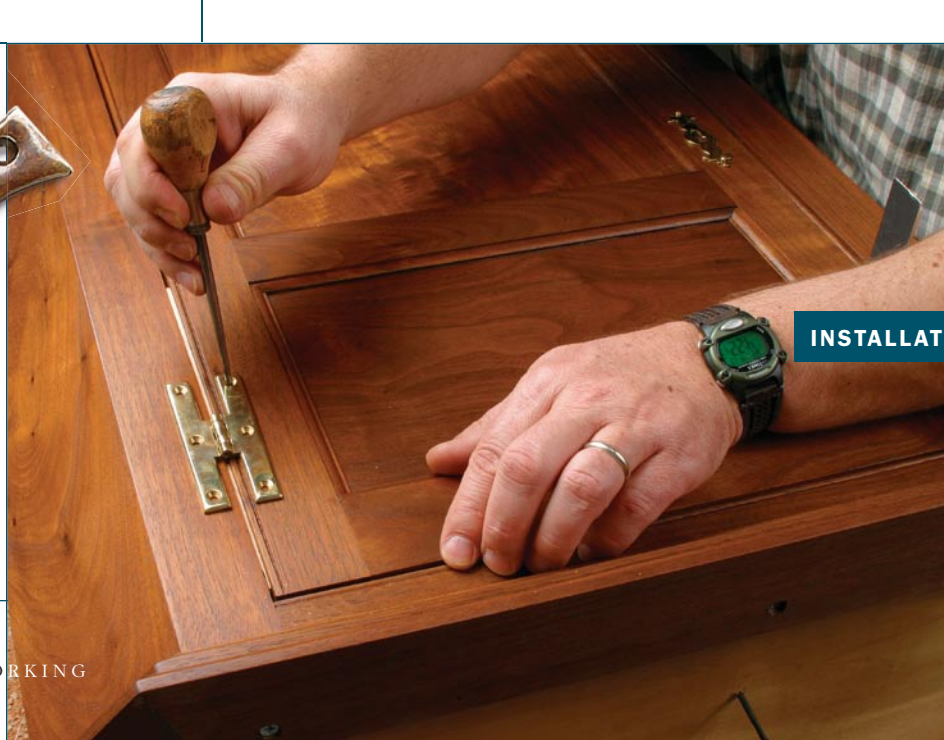
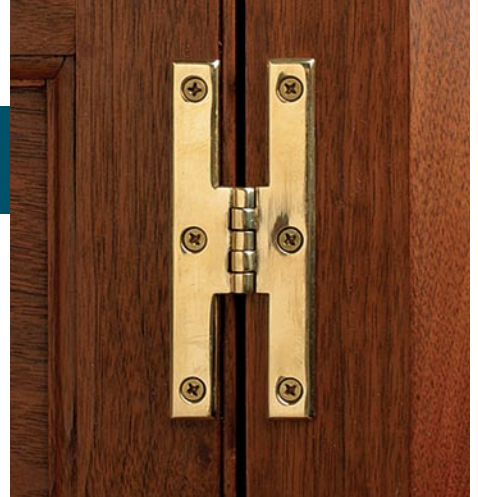
**A greater emphasis on looks.** Highly visible surface-mounted hinges come in a wide range of styles especially suitable for period furniture.

## LOOK FOR QUALITY

**Scrimp here and you won't be able to hide it.** You can easily ruin the authenticity of rustic furniture with hinges that look factory made. Hand-forged hardware is costlier, but it's sturdier and looks right in a way that glossy, stamped-metal hinges from the hardware store can't match.

## INSTALLATION TIP

**Shims help set the reveal.** Use shims to hold the door in place while setting the reveal and locating the hinge placements.



**Polished or antique brass gives a more refined look.** Styles range from simple H hinges to more ornate variations.

# Knife hinges are strong and discreet



**Straight knife hinges (top) are almost entirely concealed.** Offset hinges show a little bit more metal, but allow a door to open as wide as 270°.

**A**nother popular type of mortised hinge, knife hinges show less metal than a butt hinge and make for a narrow, nearly unbroken reveal around a door. Many makers of contemporary furniture favor them for this reason. They are great for cabinets and for freestanding armoires or entertainment centers.

The hinge gets its name from an action that opens and closes like a jackknife. Because they carry a door's weight at the top and bottom, instead of at the sides like a butt hinge, knife hinges are less likely to sag. But because the mortises must be cut before the piece is assembled, they are trickier to install.

Knife hinges come in a couple of basic types. A straight knife hinge is usually used for doors that overlay the case sides. Offset knife hinges, with L-shaped leaves, can be used to make inset doors swing 180° or allow doors at the edge of a carcass to open 270°, ideal for entertainment centers or other applications where you want the opened door to rest against the side of the case.

The offset designs are sold in handed pairs, meaning that you must specify whether they are meant for a right- or left-hand door.

**Low-profile hardware.** Unobtrusive and hard-working knife hinges are popular with contemporary furniture makers.

## INSTALLATION TIP

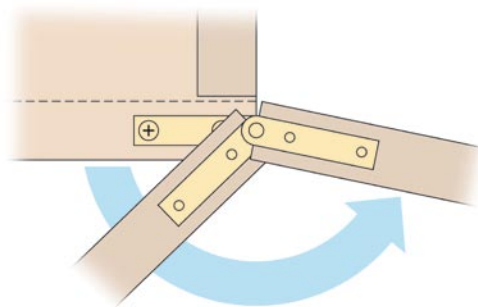


**A drill bit makes a handy spacer.** To set the hinge's pivot center just beyond the end of the door, use a drill bit that measures slightly larger than one-half of the pin's diameter.

## OPENING OPTIONS

### STRAIGHT HINGES

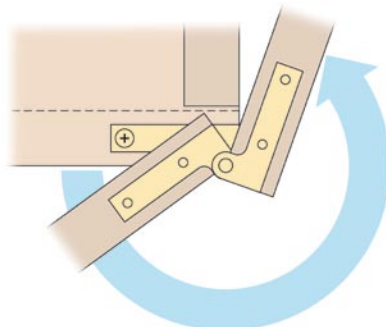
This style is used primarily for doors that overlay the case sides, allowing them to open 180°.



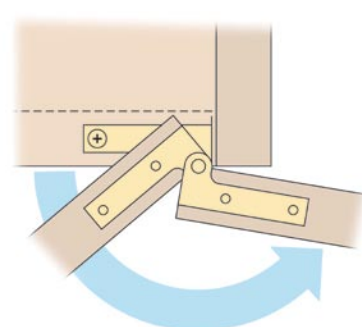
OVERLAY DOOR

### OFFSET HINGES

These hinges give overlay doors more freedom, allowing them to swing nearly 270° and rest against the outside of the carcass. They also can be used on inset doors, allowing them to swing 180°.



OVERLAY DOOR



INSET DOOR



# Euro hinges simplify door-to-carcase adjustments

**F**or hardware that doesn't show at all from the outside, especially in kitchen cabinetry or other built-ins, Euro-style cup hinges are the high-end. But mention Euro hinges, and many woodworkers will act as though you're speaking a foreign language. Even though this style has been around for a long time, widespread misconceptions prevent many people from enjoying its advantages.

One myth about cup hinges is that you have to build sterile, frameless cabinets in order to use them. In fact, you'll find models that work with virtually any cabinet style, including traditional face-frame construction with inset doors. Another legend states that you'll need to tap your life savings for the drilling and installation equipment. The truth: You can get great results with a drill press or handheld drill, and jig prices start at the cost of a pizza.

Each hinge consists of two parts. Connected to the door is a hinge arm with a cup-shaped mounting plate that sits in a round mortise. The arm's other end attaches to an adjustable mounting bracket screwed to the carcase.

Adjustability is one area where cup hinges really shine. Many models can be aligned to micrometer accuracy in three axes: side/side, up/down, and in/out. Instead of hoping that nobody notices the door alignment in your cabinets, you'll start dragging people off the street to proudly point out the even reveals.



**An open-and-shut case.** Euro hinges lend a clean look to a cabinet's exterior (top) but can't do the same for the inside. What they lack in looks, they make up for in adjustability.

## INSTALLATION TIP

**Avoid guesswork with a template.** An inexpensive jig makes it easy to locate and seat a cup hinge.



## SOURCES OF SUPPLY

Quality cabinet hinges are available from a number of woodworking-supply stores and specialty hardware dealers. Here are some good places to start.

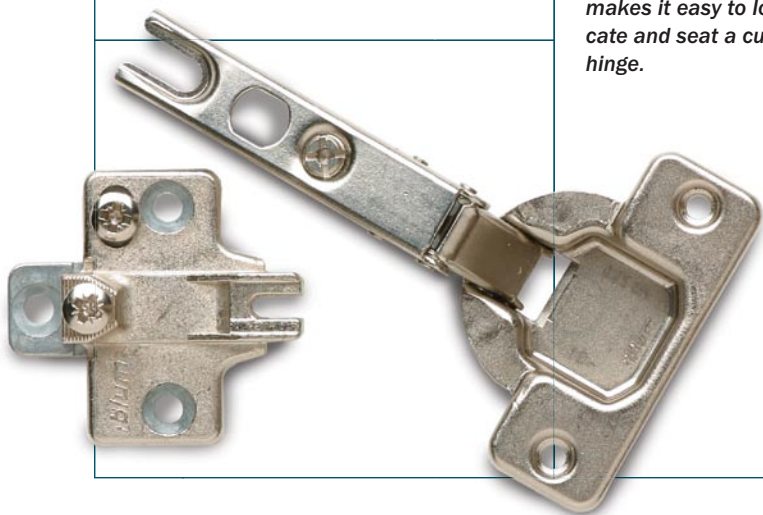
**BALL AND BALL** [www.ballandball-us.com](http://www.ballandball-us.com)

**HORTON BRASSES INC.** [www.horton-brasses.com](http://www.horton-brasses.com)

**LEE VALLEY** [www.leevalley.com](http://www.leevalley.com)

**ROCKLER WOODWORKING SUPERSTORE** [www.rockler.com](http://www.rockler.com)

**WHITECHAPEL LTD.** [www.whitechapel-ltd.com](http://www.whitechapel-ltd.com)





# Specialty hinges

**S**ome hinges simply swing while others—as they say in jazz—really swing. The hinges in this assortment are distinctive for their decorative looks or for their unique mechanisms. Some are appropriate for a specific period or style of furniture. Others serve a special function such as easy door removal or allowing a door to swing open 270°. In choosing any hinge for your own work, consider how you want the piece to look and how it should function. Study the hardware on similar pieces in catalogs and magazines. Above all, begin

thinking about hardware from the outset of your design process for hinges that match your work seamlessly.



**FICHE HINGE**

**Rustic good looks.** A fiche hinge requires some tricky mortising, but fits the character of French country furniture.

**Ready for lift-off.** A pair of these hinges allows easy removal of doors for repair or transportation.

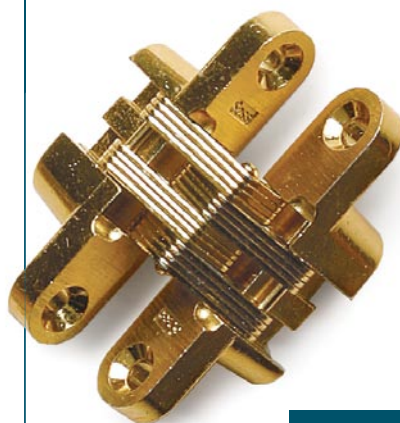


**LIFT-OFF HINGE**



**RAT-TAIL HINGE**

**A unique period look.** A rat-tail hinge, in hand-forged iron, is ideal for colonial-style cabinets.



**SOSS HINGE**

**Out of sight.** A Soss hinge requires two deep mortises, but disappears when the door is closed.



**FOLDBACK HINGE**

**A smooth, wide swing.** Foldback hinges provide a clean look and allow doors to open 270° to rest against the case sides.

