

# Designing Boxes

The creative process  
is easier when you  
understand the options

BY DOUG STOWE

I've been making boxes for over 30 years. Indeed, I've made thousands of them and I hope to make a few thousand more in the years to come.

I can't cover decades of box-making knowledge in a single article, but I can share some of the things I consider when designing a box—wood, corner joints, lid, bottom, feet, pulls, and dividers. Armed with a few good options for each element, you'll have no trouble designing all sorts of beautiful boxes on your own.

Box making appeals to me for many reasons. I enjoy the process of design. And because boxes come together more quickly than many other woodworking projects, I have more opportuni-

ties to try new designs and learn new woodworking techniques. Consider, too, that you can make a box from bits of lumber left over from larger projects, so wood costs are minimal.

Not only can they be beautiful to look at—masterpieces in miniature—but boxes are perfect for storing everything from jewelry to stamps, and keepsakes to odd change.

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## Online Extra

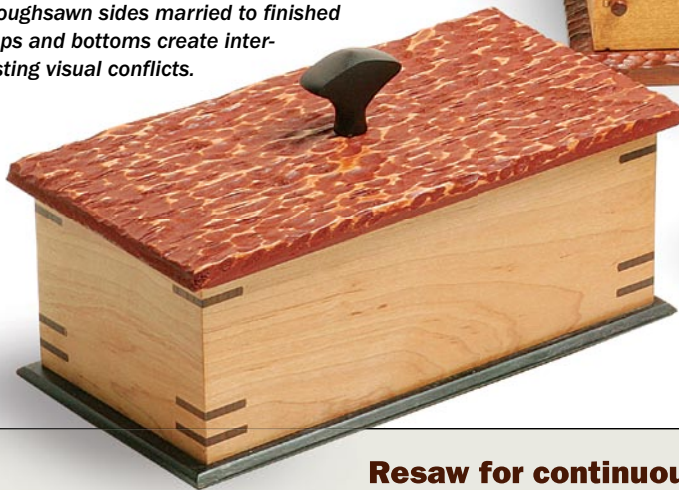
Watch a video of Stowe resawing and mitering wood at [FineWoodworking.com/extras](http://FineWoodworking.com/extras).





**Mix the woods.** Stowe often makes the sides and top from two different woods, playing with the contrast in color and grain.

**Vary the texture.** Don't be afraid to explore different textures. Knots, knotholes, and live edges accentuate the natural look of the wood. Rough-carved surfaces encourage both looking and touching. Roughsawn sides married to finished tops and bottoms create interesting visual conflicts.

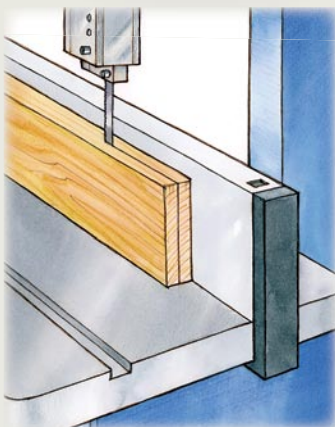


## Contrast adds interest

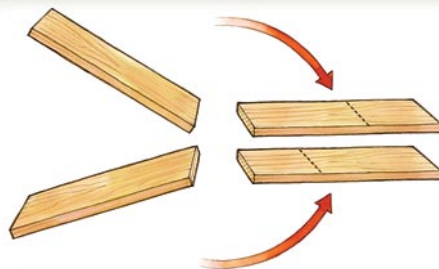
Unlimited design possibilities open up when you vary the texture and color of the wood or introduce contrasting materials such as stone, metal, or fiber.

## Resaw for continuous grain

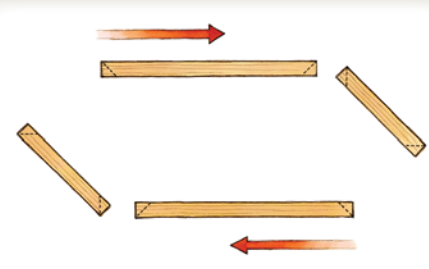
I like small boxes to have thin sides, in proportion with the overall scale. Rather than running stock through a thickness planer and wasting a lot of beautiful wood, I get thinner stock by resawing. Resawing also means I can get all of the parts for a box from a single board, with matching grain at all four corners.



1. On the bandsaw, resaw stock to produce a pair of book-matched halves.



2. Open the halves to put the resawn surfaces on the outside of the box. Cut at the dotted lines to create four sides.



3. Then miter the ends and assemble the box as shown for continuous grain around all four sides.



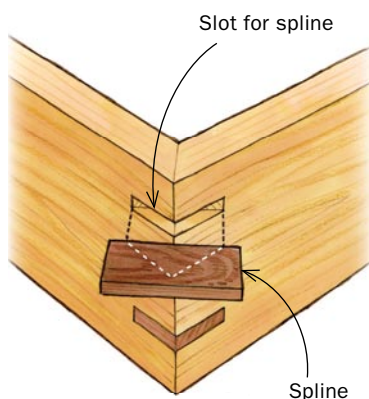
## Choose corner joints early on

Most corner-joint options are more than strong enough to hold together a relatively light box. And joints with minimal strength, like butt joints and miter joints, are easily reinforced. So, most times, I base my choice of corner joint on appearance rather than strength.

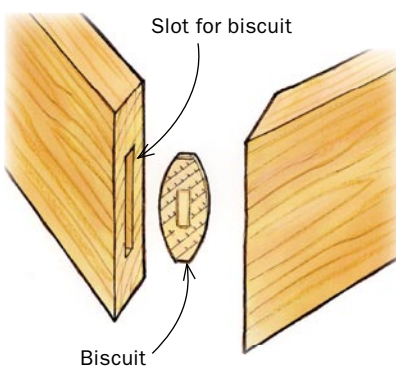
Splined miters add interest to the corners, especially when the splines are made from a wood that contrasts with the box sides (left). A hidden, vertical spline works well if you don't want to disturb the appearance of the grain as it wraps around the corners. If the stock is thick enough, you can make the job a little easier by substituting biscuits for splines (center). A more rustic appearance can be had by adding dowel pins to a rabbet joint (right).



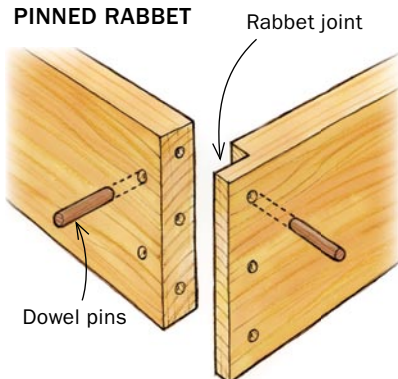
**SPLINED MITER**



**BISCUITED MITER**



**PINNED RABBET**



## Traditional favorites

The classic dovetail joint (left) never goes out of style. Feel free to vary the dovetail angle and spacing to get the look you want. Finger joints (right) are also eye-catching, and easy to make on the tablesaw using a shopmade crosscut jig.





**Rounded disk.** A single countersunk screw driven through the bottom of the disk secures it to the corner of the box.

## Don't overlook the feet

Add feet to a box and you immediately create a different look. Feet can be as unassuming as small, rounded disks (top left). You also can make feet simply by cutting away some of the bottom edge of each side (bottom left), or mounting the box to a mitered base frame with the bottom edge cut away (top right).

Sometimes, to give a box a more balanced look, I make an oversize bottom (bottom right) that gives the look of a continuous molding around the perimeter. Generally, I simply round over the edges of this base, and attach it with screws to the bottom edge of the sides. Oversize holes for the screw shanks allow the base to expand and contract in width due to seasonal changes in humidity. Counter-sink the screw holes so they sit just below the surface.



**Cutaway base frame.** Cutting away the bottom edge of a base frame also produces feet.



**Cutaway sides.** By cutting away the bottom edge of the sides, the box effectively ends up with four feet.



**Oversize flat bottom.** An oversize flat base creates the look of a molding around the bottom of the box.



## Dividers and trays add versatility

Some boxes become more useful when you add dividers or trays. A box I make for holding stationery (left) has a sliding tray with three routed recesses for stamps and paper clips, plus a groove to hold a favorite writing pen. My jewelry box (below left) has a fully divided bottom with additional dividers in a sliding tray. A keepsake box (below right) has a mix of six small and three large compartments.

**It pays to plan.** If you're building a box for a specific use, plan any dividers and trays early in the process. Their size, number, and location will have a lot to do with the ultimate size and shape of the box.







**Two-part lid.** Stowe used shop-made wooden hinges here. The hinge pins are brass.

**Sliding.** You open and close the top on this pencil box by sliding it.

**Rabbeted lift-off.** Gravity holds this lid in place. A rabbet around the underside of the lid keeps it centered.

## Lid choices abound

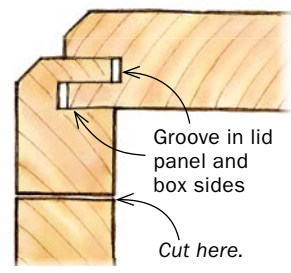
Design possibilities soar when you start thinking about the lid. Choices include two-part lids (top left), sliding lids (center left) and rabbeted lift-off lids (bottom left).

Lids can be made from a single piece of solid wood or some variation of a frame and panel. I commonly use an overlapping raised panel that locks into the sides of the lid (below right).

Space inside the grooves allows room for wood movement caused by seasonal changes in humidity. To allow that movement, it's important not to glue the panel in place.



RAISED PANEL



**Sawn off.** The top, bottom, and sides are assembled, then the lid is cut off about 1 in. below the top edge.

## A pull can push the envelope

A well-designed pull looks good while making it easier to open a box. Shown here are some of my favorites. There are as many possibilities as there are types of boxes, so don't restrict yourself to only these designs. Add a little imagination and soon you'll be inventing your own.



**Turned.** Small lathe turnings make wonderful pulls. A single brass screw holds each one in place.



**T-shaped.** This profile quietly invites the thumb and forefingers, and is good for heavier lids.



**Fan-shaped.** Rounded and softened edges give this pull a delicate look that works nicely with lightweight lids.



## Hinges, from hidden to handmade

Sliding and rabbeted lift-off lids can become awkward to use when boxes get around 12 in. square or bigger. At that size, I generally find that hinged lids work better.

Depending on the box design, there are several hinge types that I commonly use. Each type adds a distinctive look.



**Wood.** Shopmade hinges add to the handmade appeal. The flat version (above) is screwed from the bottom. Wood pins secure an L-shaped hinge (right).



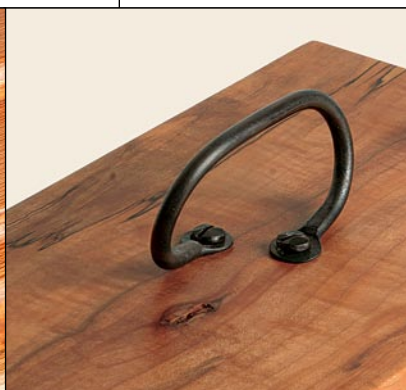
**Leather.** Three pieces of leather—two end pieces and a center piece—are secured with brass tacks to create a unique hinge.



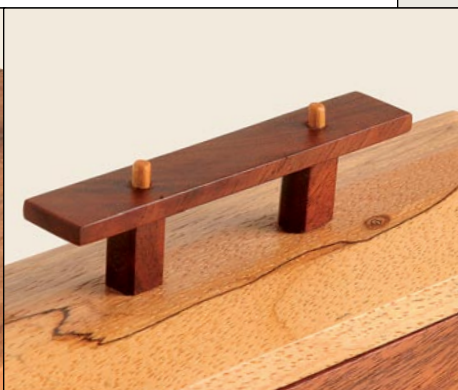
### Specialty hinges

A butt hinge (left) with a built-in stop at 95° lets the lid tip back enough to keep it from falling closed ([www.brusso.com](http://www.brusso.com)).

Barbed hinges (below) slip into thin kerfs. They need no screws and are almost invisible ([www.rockler.com](http://www.rockler.com)).



**Bent-wire.** A single bent wire gives a unique look. This one is from Horton Brasses ([www.horton-brasses.com](http://www.horton-brasses.com)).



**Flat.** Flat stock doweled to a pair of posts adds an Asian flavor. Scale the size up or down depending on the box dimensions.



**Front-mounted.** Mounted to the front of a hinged lid, the pull serves as a lifting point.



**Live-edge.** The natural curve of a live edge works perfectly as a lift for some boxes.