Three Decorative Joints

Emphasize the outlines with contrasting veneers and splines

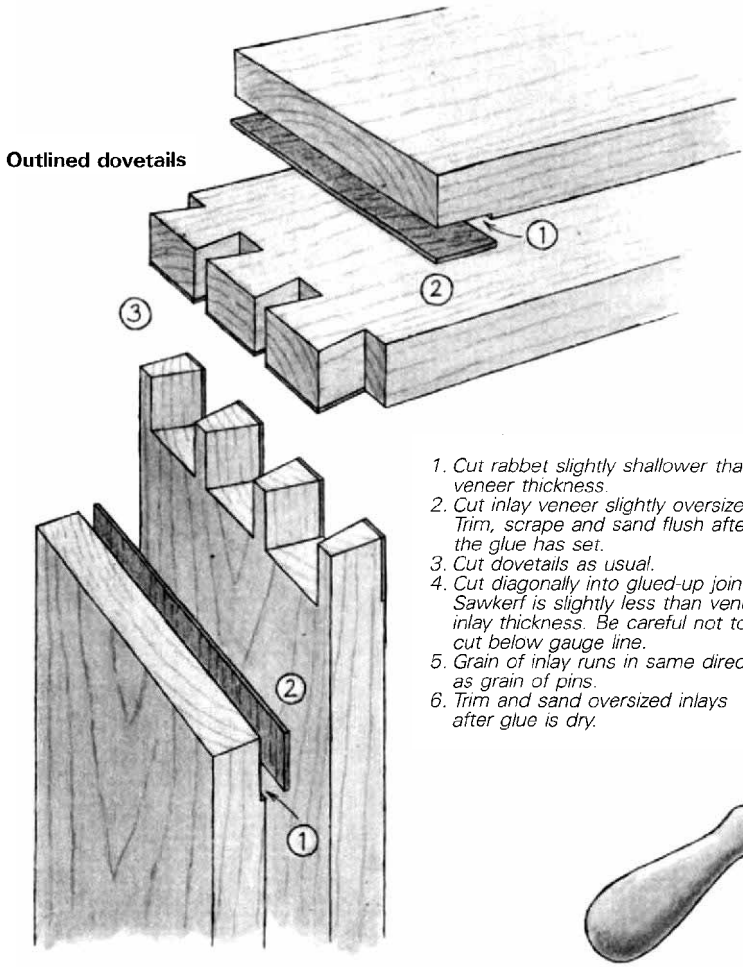
by Tage Frid

I've been a craftsman and designer for 53 years and a teacher for more than 30, but I'm still learning. My students keep me on the ball by always asking questions. I experiment to come up with new ideas and simpler or better ways to do things. Students usually don't ask for help until they are in trouble. By then they have a big investment in time and materials, and we have to figure out some way to fix the mistake so it does not stick out like a sore thumb.

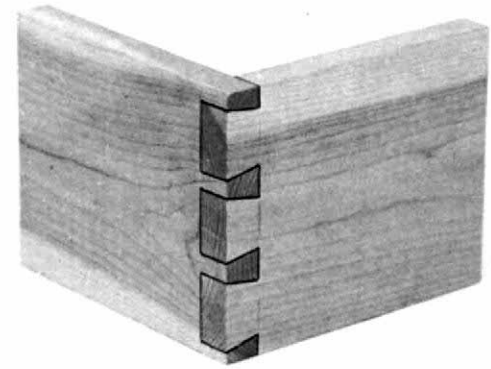
Dovetails are difficult for the beginner, and I have many times shown how to fix a badly fitting dovetail by inserting a piece of veneer. When I thought more about this trick, I realized you could outline the whole joint with veneer of a different color for a nice decorative effect. The technique also works on other joints, such as the mortise-and-tenon slipjoint. Another kind of decorative joint is a three-way miter where the strengthening splines are also emphasized in a contrasting wood. This is an attractive joint for framed cabinets, tables and stools. Here is how to make these three joints.

Outlined dovetails—The joint is laid out, cut and fit in the same way as a regular through dovetail. The veneer inlay that will outline the base of the pins and tails is glued onto the inside face of the mating pieces before the joint is cut. The rest of the outlining is done after the joint is glued together. Gauge the usual depth-lines around the ends of both pieces. To house the inlay, cut shallow rabbets up to the gauge line on the inside face of each piece. If you cut the rabbet on the tablesaw, set the blade as high as the gauge line (the thickness of the dovetailed pieces). Then set the fence to cut the rabbet slightly shallower than the thickness of the veneer.

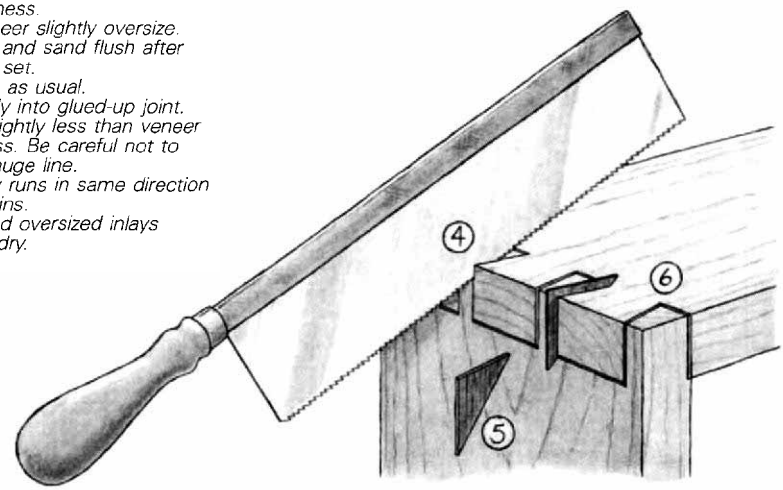
The grain of the veneers should run in the same direction as the grain in the pieces to be dovetailed. It's easier to trim the inlay flush after the glue has set than to fit it perfectly before. So cut the veneer slightly oversize. Be sure the joint is perfectly tight where the end grain of the veneer meets the solid wood, especially on the pins piece because the veneer will be visible on both edges. Glue and tape the inlay in place



1. Cut rabbet slightly shallower than veneer thickness.
2. Cut inlay veneer slightly oversize. Trim, scrape and sand flush after the glue has set.
3. Cut dovetails as usual.
4. Cut diagonally into glued-up joint. Sawkerf is slightly less than veneer inlay thickness. Be careful not to cut below gauge line.
5. Grain of inlay runs in same direction as grain of pins.
6. Trim and sand oversized inlays after glue is dry.



Dark veneer inlays outline the pins and tails of this decorative joint.



Drawings: Roland Wolf

and clamp it tight. When the glue has dried, lightly scrape and sand the inlay flush.

Now cut and glue up the dovetails. The veneer will line the base of the pins and tails. To add the veneer that will complete the outlining of the joints, saw diagonally along the line of the joint between tails and pins. Use a saw that cuts a little thinner than the thickness of the veneer inlays, and be sure the sawcut doesn't go below the gauge lines. Cut triangular pieces of veneer for the inlays. Orient the cuts so that when the pieces are glued in, their grain will run in the same direction as that of the pins. To fit the inlay pieces in the thinner sawkerf, you need to compress them a little by hammering them or by squeezing them in a steel vise.

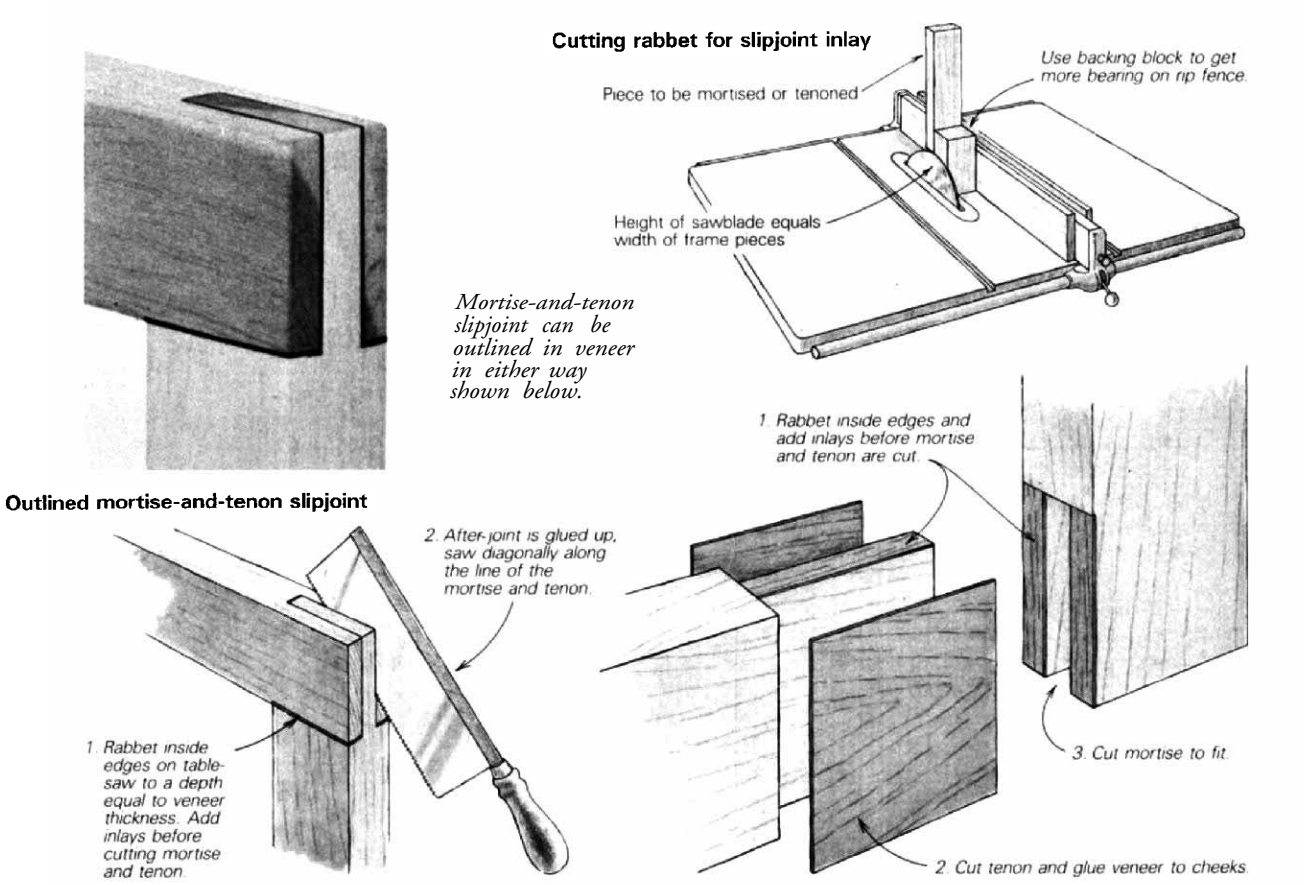
Now put some glue in the kerf—not on the veneer. Rub it into the sawcut, using your finger to force it in deep. Slide the veneer into the kerf. It will pick up moisture from the glue and swell for a perfect fit. When all the inlays have been inserted and the glue has dried, cut off the veneer with a sharp chisel and finish-sand.

Outlined mortise-and-tenon slipjoint—This joint can also be decorated with inlay, in the same way as dovetails are. Before you cut the joint, rabbet the inside edges of each piece for veneer. If you cut the rabbet on the tablesaw, use a backing block for more bearing surface against the fence. Flush off the glued-on veneer, then cut and glue up the joint as usual. To complete the veneer outline, saw diagonally down the line between tenon and mortise. Cut veneer triangles slightly larger than finished size, and compress them to fit the kerf. Rub in glue as for the dovetail; you can use a mechanics' feeler gauge to get the glue all the way in. Slide the veneer in, trim it and finish-sand the joint when the glue is dry.

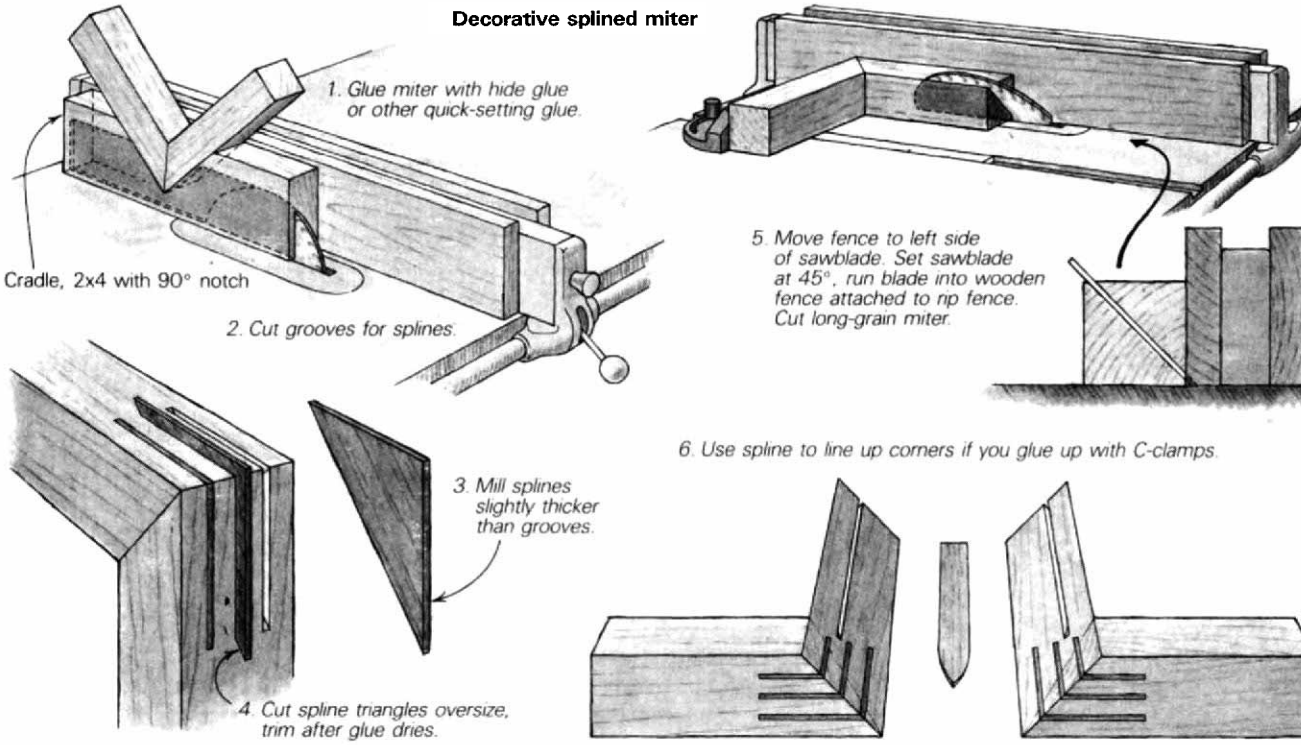
A surer, easier way to make this joint is to glue the veneers on the two cheeks of the tenon before the joint is put together. Rabbet and veneer the inside edges of the two pieces as before. Then cut the tenon and glue the veneer onto its cheeks. Allow for the veneer thickness when laying out the tenon thickness. Cut the mortise to fit the veneered tenon and glue up the joint as usual. For dovetailed or slipjointed pieces made of thicker wood, the inlay could be thicker too.

Decorative splined miters—There are other ways besides a veneer outline to emphasize joints. A strong, decorative and quite simple joint to make is the splined miter frame, as shown on the next page. I made this three-way miter frame joint with wood that is square in section. For demonstration, I made only one corner joint—in a table you might have four, in a cabinet, eight (one at each corner of a cube). Glue together the joints of the mitered frames. I use hot hide glue because it sets fast. Next, cut the grooves for the decorative splines. If you cut the grooves for the splines on a tablesaw, use a cradle to hold the piece at a 45° angle to the table. I cut a notch in a 2x4 to make a cradle. For strength and decoration I put in several splines.

Clean up the surfaces after the glue has dried, then bevel or miter one side of each frame along its length so they will



Three variations of the decorative splined mitered joint. Piece with angled faces, at right, is the most difficult of the three to make.



fit together. You can do this with a hand plane or with the tablesaw. With the tablesaw, mount a piece of wood on the rip fence, tilt the blade to 45° and run the blade slightly into the wooden fence. Use trial and error to find the right setting of blade and fence. You can leave a $\frac{1}{32}$in. shoulder on the mitered piece, to bear against the fence beyond the sawcut. Plane this shoulder off before gluing up, or lose it later by rounding the edge. Don't stand directly behind the blade when you make this cut—the waste can be thrown backward.

Next make a groove in the mitered side for a hidden or blind spline, using the tablesaw or an electric router. The joint is long-grain to long-grain, so this spline is not for strength but for getting the corners to align if you glue up using clamps. If instead you wrap strips of inner-tube around the joined pieces, stretching it as you go, the corners will align and the spline won't be necessary. I have also used $\frac{1}{2}$in. surgical tube; it's inexpensive and works better.

You can round off the corners, as in the photo, top center, before gluing up. I shaped the curves on a disc sander and dry-fit them to make sure they lined up at the joint.

For an interesting effect, you can put an angle of about 15° on the faces of the frames, as in the photo, top right. This joint is more difficult to make. Before gluing the frames together I ripped one face of each piece at a 15° angle. These bevels all should be on the front faces (in the same plane). You can use the same kind of tablesaw setup as for ripping the miters. These cuts must be very accurate. Finish-sand these faces before mitering and gluing up each frame. Then cut the sawkerfs and glue in the splines.

Next miter a long-grain side of each frame and cut the groove for the positioning spline if you are gluing up with clamps. Then rip the outside faces of each frame (that is, where the decorative splines appear) at 15° and finish-sand them. Finally, glue the two frames to each other. I like this joint and am going to use it in a frame-and-panel cabinet—when I get the time. □

Tage Frid is a contributing editor to this magazine, and the author of Joinery: Tools and Techniques *and* Shaping, Veneering, Finishing, *available from The Taunton Press.*

Bermudan dovetailing

by James Bump

Bermuda is a lovely semitropical island about 600 miles off the Georgia coast. Today it is a center for tourism, international banking and a couple of "country club" military bases. I was surprised to find, on this 20-square-mile paradise, a distinctive tradition of cabinetmaking. From the 17th century, Bermudan craftsmen carried on an individual style of decorative, cogged dovetail uncommon in either Britain or America.

Settled in 1609 by shipwrecked British sailors, Bermuda has been a British colony ever since. Early accounts cite plentiful supplies of timber as the island's only natural resource. Its cedar trees were used in furniture, in musical instruments, and in the Bermuda sloop, this seafaring community's lasting contribution to shipbuilding.

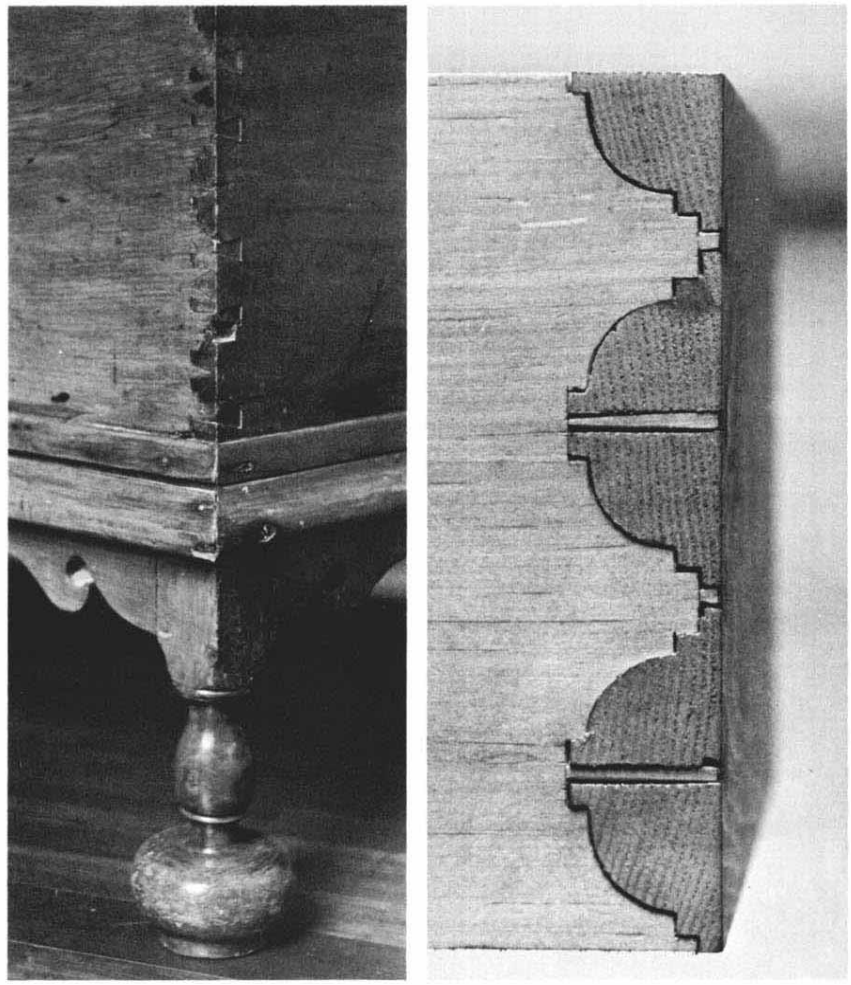
Bermudan ornamental dovetailing evidently had its origins in medieval Moorish workshops. It then spread to Spain and finally to Bermuda. To my knowledge, fancy dovetailing was used in Bermuda only for chests-on-frame. Early island cabinetmakers used Bermuda cedar *(Juniperus bermudiana),* now blighted and struggling against near-extinction. Today, Bermudan craftsmen import what they call Virginia cedar. Both cedars are aromatic, close-grained and knotty, and they finish to a gorgeous red-brown color.

Each cabinetmaker in Bermuda probably had his own individual designs for dovetailing. I made my own and found that templates were necessary. I cut the joint like a lap dovetail, the tails cut through, the pins blind. This leaves material for decoration on both pieces, which I shaped with a fretsaw, chisels and files. Test-fitting the joint is nearly impossible. The two boards have to be cut accurately before they will fit together at all.

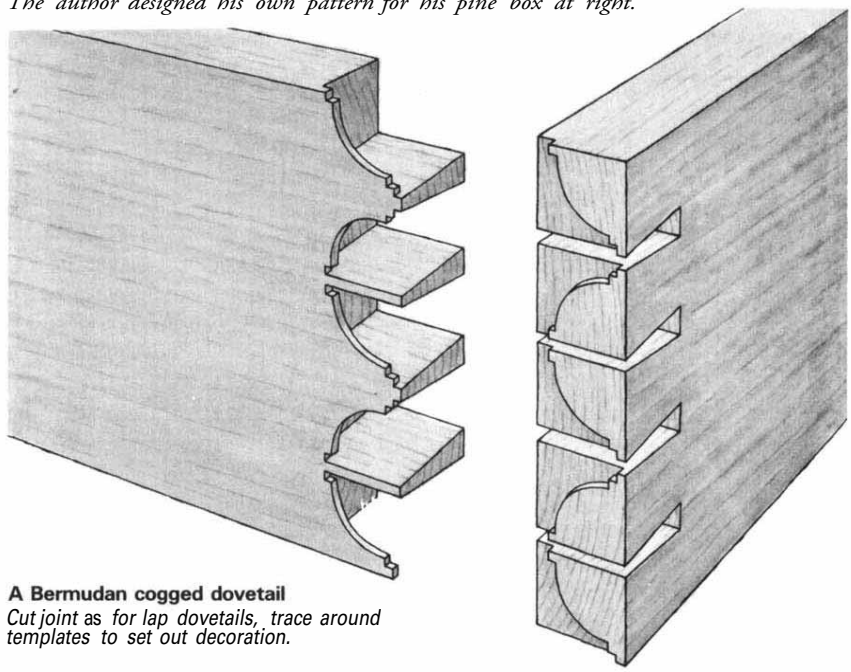
Since there is so much room for error in the first attempts, I used pine to make my dovetails. I am a lutemaker, not a cabinetmaker, and I struggled a bit with the joint. Someone handy with dovetails should have no difficulty.

Bryden Bordley Hyde's fine book on Bermudan furniture, *Bermuda's Antique Furniture and Silver,* published by the Bermuda National Trust, shows examples of this sort of work. You can get it from the Maryland Historical Society, 201 West Monument Street, Baltimore, Md. 21201. □

James Bump lives in Hampden, Mass.



The early Bermudan chest-on-frame at left displays two patterns of cogged dovetail. The author designed his own pattern for his pine box at right.



A Bermudan cogged dovetail
Cut joint as for lap dovetails, trace around templates to set out decoration.

Photos: J. Bump, Don Eaton; drawing: Roland Wolf