

Elegant Veneered Boxes



Veneer creates striking patterns, yet construction is straightforward

BY SETH JANOFSKY

When I have a bit of time to work on a special project, I like to make a beautiful box. It's manageably small yet involves a fair amount of interesting detail work. One of my favorite designs is covered in a parquet of figured-maple squares.

I originally made boxes like these for collectors of netsuke (small carved objects of stone, wood, or ivory), but of course they can be used for just about any collection of small things.

The box itself is built much like a drawer, with tongue-and-groove joints for the corners and the bottom held in a groove. You can make everything, including the veneers, on the tablesaw.

Although conceptually simple, a parquetry pattern can be difficult to execute precisely. In theory, you could cut many squares of veneer and piece them together into a sheet. But I find advantages to cutting blocks of maple, gluing them together, and then cutting that piece into strips of parquetry that are glued into sheets.

This method keeps the veneer squares in an orderly sequence relative to the piece of wood from which they came. It creates a surface made more interesting by its display of multiple grain, figure, and color patterns. This box has three patterns at work even though it uses only one type of wood. The first pattern comes from the primary grain lines at right angles to each other in the parquetry squares, the second from the maple's fiddleback figure, the third from the difference in color between the sap and heartwood areas.

Of course, parquetry isn't the only covering for an elegant box. You also can use plain book-matched or slip-matched veneers, or you can create a unique scrollsawn marquetry design (see photo, right).

There are a number of ways to configure a box. The one described here has a top rabbeted to mate with the bottom, with the joint about two-thirds of the way up the side. I use binding—a narrow strip of white



Thinking outside the box. Leaves cut from different woods make a striking design. Master Class (p. 104) explains Janofsky's methods for assembling the leaves and fitting them into the background.

Start with the veneer



If you use a parquet pattern made up of squares, the veneer sheets you make will determine the final dimensions of the box. With plain veneer, on the other hand, you can make the box carcase first, and cut the veneer sheets to fit.

oak glued along all the edges—which harmonizes nicely with the maple veneer.

Make the sheets of veneer first

This box starts with the parquet veneer. The parquet began as a piece of figured maple about 1¾ in. thick by 3½ in. wide by 20 in. long. The quartersawn side had the most consistent figure, so it was the face that yielded the parquet pattern.

A piece this size will produce enough veneer to cover a box approximately 10½ in. wide by 15 in. long by 4½ in. tall in a pattern of 1½-in. by 1½-in. squares. The exact size will be determined by the actual dimensions of the parquet sheets and the width of the oak edging.

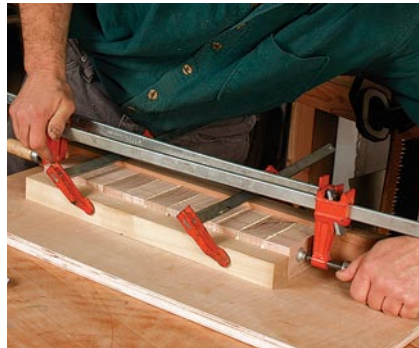
After milling the maple board perfectly flat, straight, and square, mark the working face with a long triangle that will help keep the pieces in order. Then crosscut it into two equal lengths.

Plane one piece to exactly 1½ in. thick and cut it into six blocks exactly 1¾ in. long. Set them aside, in order. Crosscut the other length (still 1¾ in. thick) into five blocks exactly 1½ in. long and set them aside, in order.

Next, intersperse the blocks into one line, one from the first set, one from the second, and so on. Rotate the blocks from the first set 90° so that all 1½-in. faces abut. You'll have a strip of 11 blocks, 1¾ in. thick, that when viewed from the edge is made from 1½-in. blocks of alternating grain.

Glue the blocks together, in order. I push them against a piece of scrap screwed to a piece of plywood or medium-density fiberboard (MDF), which helps keep them aligned while I clamp them together. Coat all the mating surfaces with glue to ensure that the pieces will hold together.

Next day, when the strip is thoroughly dry, carefully square up two faces, then



Block becomes veneer strips. Maple blocks are stacked so that the edge grain is alternately horizontal and vertical. Then they're glued and clamped in a simple fixture (left). Once completely dry, the glued-up block is ripped into strips ¼ in. thick (right).



The second glue-up. Veneer strips are edge-glued a few at a time (left). Old newspaper keeps veneers from sticking to the gluing jig. The strips are staggered to create the checker-board pattern.

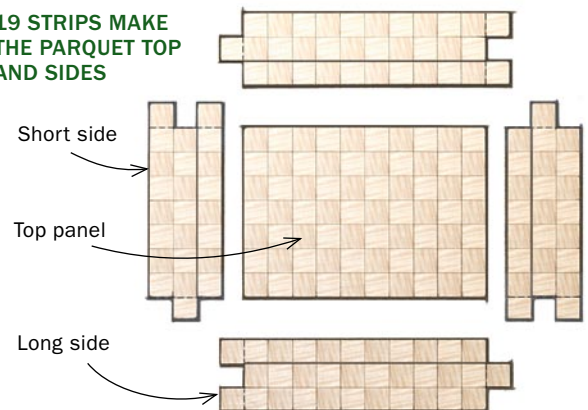


An ingenious clamp. Scrap blocks and weights keep veneer sheets from buckling (above). Wedges tapped in place between the veneer and fence provide clamping pressure.



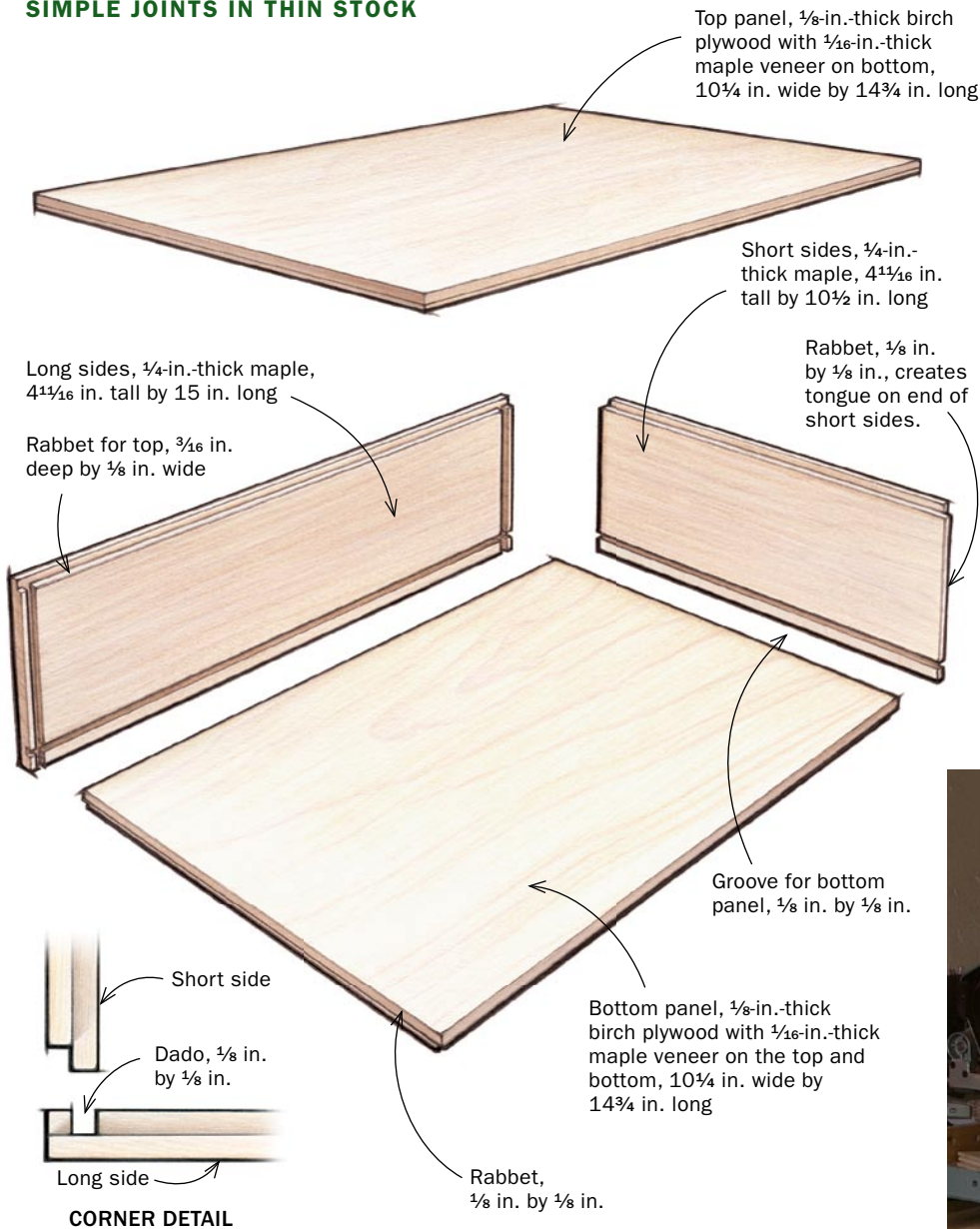
Spreading the sheets. Once the parquet panels have dried, lay them out and arrange side panels to match the grain pattern with the top panel.

19 STRIPS MAKE THE PARQUET TOP AND SIDES



Construct the box carcase

SIMPLE JOINTS IN THIN STOCK



Small, simple joints. Use the tablesaw to cut the joints for the box carcass. Begin by making a $\frac{1}{8}$ -in.-deep dado in the long side pieces (left). With the same fence and blade-height settings, cut the mating rabbets in the short sides (right).

rip and plane the piece to exactly $1\frac{1}{2}$ in. thick. Now it's ready to be sawn into veneer strips $\frac{1}{16}$ in. thick. This box uses 19 strips of veneer: seven for the top and three for each side and end. I prefer to use a well-tuned tablesaw with a clean, sharp, thin-kerf blade because it makes a cleaner cut than a bandsaw.

With the strips of parquet stacked in the order they came off the saw, glue them together edge to edge several at a time. I use a fixture consisting of an MDF base and two fences. To keep the strips from buckling, I hold them down with exercise weights. And to apply clamping pressure, I tap opposing wedges in place between the last strip and one fence. As I glue up the strips, I offset every other one by one square to produce the checkerboard parquet surface. The extra squares will get trimmed away later. To assemble large sheets of veneer, you'll have to move one of the fences.

If you've done your work neatly, the veneer sheets will need just a little light



Open the box. This is the final step in assembling the box carcass. Progressively deeper cuts on the tablesaw separate the bottom section from the top.

Apply the veneer



Begin veneering at the top. Liberal amounts of blue tape hold a veneer sheet securely in place on the top of the carcass.

sanding or scraping to make sure there's no dried glue on the surfaces.

The parquet determines the box size

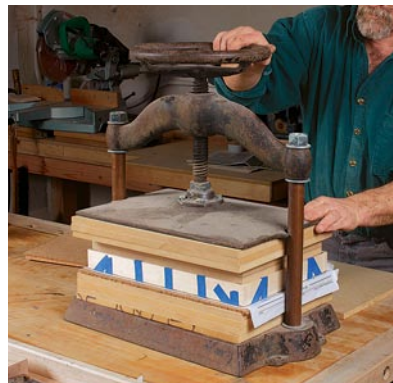
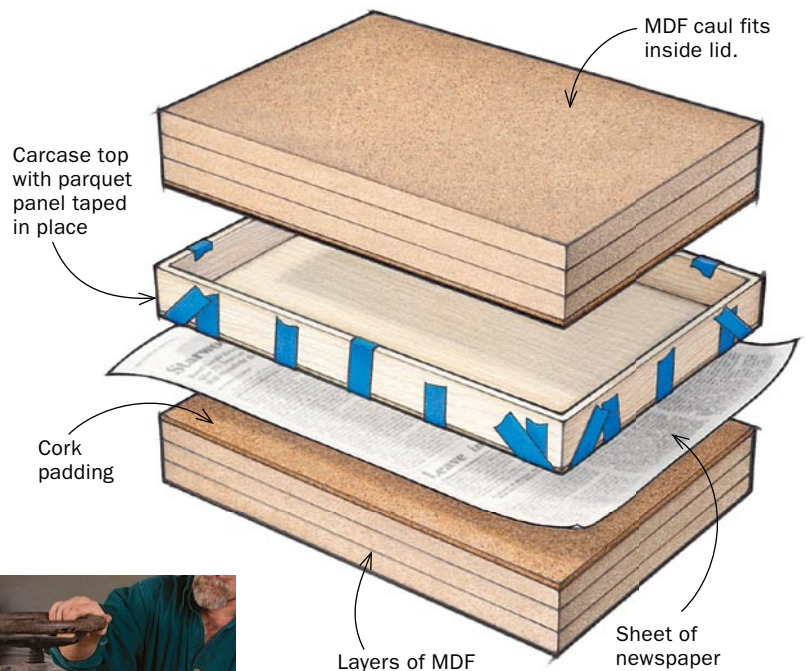
The box carcass is very straightforward— $\frac{1}{4}$ -in.-thick solid maple with tongue-and-groove joints for the corners, a groove to hold the bottom panel, and a rabbet to house the top panel. For a box of this size, both the top and bottom panels should be veneered with a core of $\frac{1}{8}$ -in.-thick birch plywood for dimensional stability.

Figure the exact dimensions based on a top 10 squares long and 7 squares wide, with sides that are 3 squares tall. The oak binding is approximately $\frac{1}{8}$ in. thick. So the carcass should be the same width and length as the top veneer sheet; make the carcass $\frac{3}{16}$ in. taller than the side veneer panels, mainly to account for material sawn away when the box is cut open.

Because the finished sheets may be slightly larger or smaller than their nominal size, measure the sheets before cutting the pieces for the carcass. Don't assume the sheets will be an exact multiple of $1\frac{1}{2}$ in.

Glue plain $\frac{1}{16}$ -in.-thick maple veneer to both faces of the bottom panel, but only to the inside face of the top panel. Once the veneers have dried, rabbet the bottom panel to create a $\frac{1}{8}$ -in. tongue around the edge, which will fit in the groove cut in the sides. Cut all the grooves and rabbets on the

CAULS PROVIDE EVEN PRESSURE WHEN CLAMPING



A box-sized caul. The top is clamped in an antique book press while the glue dries. A caul, made of layers of medium-density fiberboard (MDF) with cork padding on one face, provides even pressure. If you don't happen to own an antique book press, a pair of cauls and lots of clamps will do nicely.



Veneer the sides. The sides of the top and bottom sections are veneered separately. The T-shaped jig, clamped into a bench vise, supports the workpiece and also serves as a clamping caul.

Bind the box



Grooves for binding. With top and bottom sections taped together temporarily, Janofsky cuts a shallow rabbet into each corner to hold the binding—thin strips of white oak.

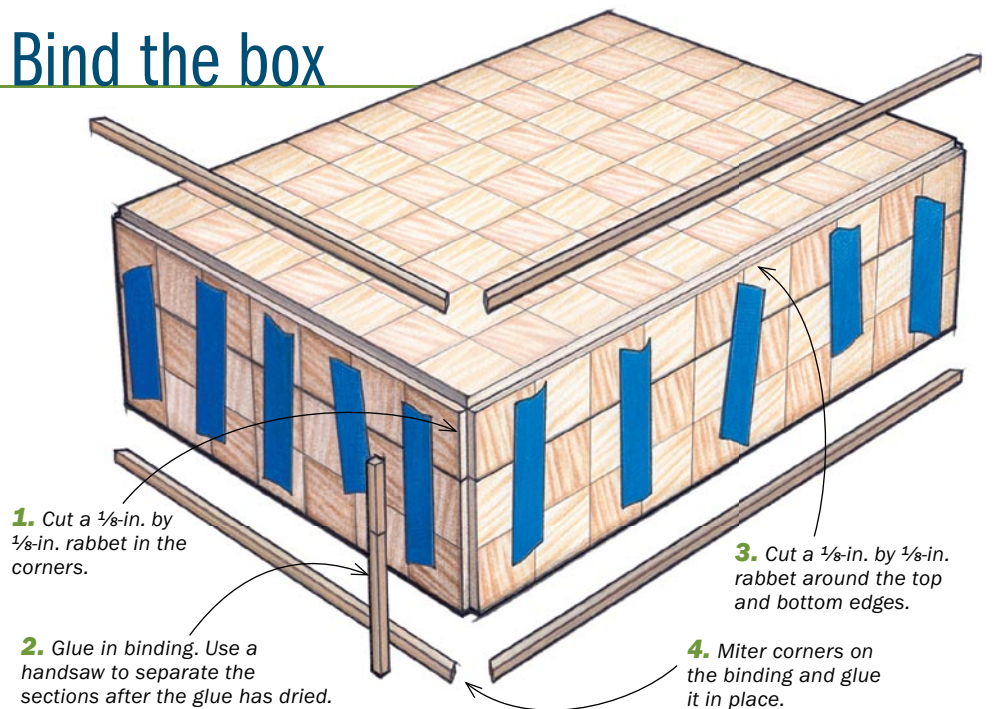
tablesaw. After all the pieces are cut, sand and finish inside surfaces with shellac and wax.

Glue the box sides together as neatly as possible with the bottom installed; I use a simple jig of scrapwood to hold it square while it dries. When it's dry, plane or sand the corners perfectly flush and clean. Finally, glue the top panel in place.

Applying the veneer

With a smaller box, I sometimes apply the veneer to the surfaces before cutting the top from the sealed box. But this box is too large for that because the sides and top will bow under the clamping pressure if not supported on the inside. So, after identifying exactly where you want the top to separate from the bottom, stand the box on edge on the tablesaw and cut through all four sides, making several light cuts until the pieces separate. It's a good idea to mark the parts to keep their orientation.

Then begin applying the veneer. I start with the top of the box. Spread the top with glue and tape the veneer in place securely. Hold the assembly in a press with a cork-faced caul on the inside of the top, or with cauls and clamps on both sides.



1. Cut a $\frac{1}{8}$ -in. by $\frac{1}{8}$ -in. rabbet in the corners.

2. Glue in binding. Use a handsaw to separate the sections after the glue has dried.

3. Cut a $\frac{1}{8}$ -in. by $\frac{1}{8}$ -in. rabbet around the top and bottom edges.

4. Miter corners on the binding and glue it in place.



Corners first. Binding strips are glued into the corner rabbets and held with tape. Janofsky uses a Japanese handsaw to separate the sections after the glue has dried.

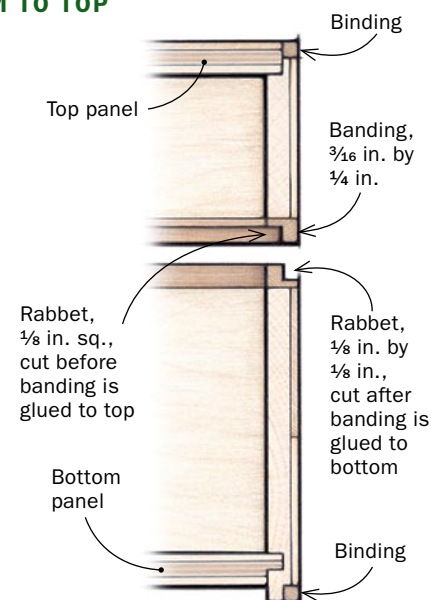


Top and bottom next. Rabbets are cut in the top and bottom for mitered pieces of binding. These pieces are cut slightly oversize, then planed flush.

OPPOSING RABBETS LOCK BOTTOM TO TOP



A rabbet meets its mate. Banding, mitered and glued to the lip of the bottom section, will mate with similarly rabbeted banding on the top section. Make a series of light cuts to sneak up on a tight fit.



When the top has dried, glue the veneer to the sides, first on the top and then on the bottom. Try to keep the parquet squares aligned as perfectly as you can where the top meets the sides and ends. For this part of the work, I use a sort of upside-down caul that clamps into my bench vise and another caul clamped on the inside of the sides.

Binding the box

The last major job entails applying the binding strips to all of the corners and edges, and also the edges where the top joins the bottom. The latter will incorporate two small rabbets that key the halves of the box to each other.

Cut the rabbets on the tablesaw. At the same time, rip the small pieces of binding. (In case you were wondering, “binding” means a trim piece that fits in the corner where two veneer sheets meet; “banding” means trim along the edge of veneer.) To allow for any small variations, make the bindings slightly oversize. Once they’re glued in, they can be planed flush.

When the corner bindings are in place, cut a rabbet all around the top and bottom for the binding there. These cuts also will trim the ends of the corner bindings. I like to cut and fit the pieces for the opposing sides of the box, mitering the joints with a small handsaw and shooting the miters with a block plane. Once I’ve glued these in place, I fit the binding in the remaining sides.

The bandings at the junction of the top and bottom are a bit more complicated. First, make a rabbeted banding about $\frac{3}{16}$ in. thick by $\frac{5}{16}$ in. wide and glue it to the underside of the top so that the rabbet faces the inside of the box. Miter the ends.

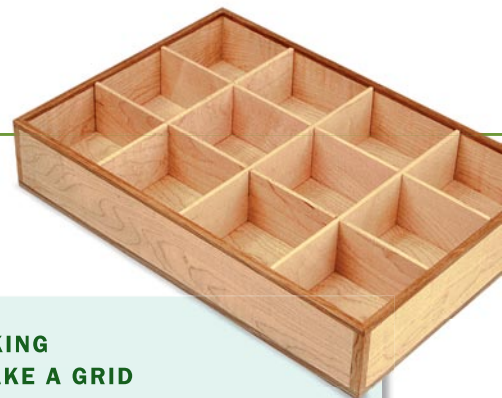
Then glue more $\frac{3}{16}$ -in. by $\frac{5}{16}$ -in. banding onto the top of the lower part of the box. These pieces are rabbeted after they’ve been mitered and glued in place. I make the rabbet on the tablesaw, using a flat-toothed blade. Make a series of shallow cuts until the banding just mates with the rabbet in the top. If possible, leave it a bit tight to allow for final sanding and fitting.

The hard part is over. On a box like this, it’s a pleasure to sand the surfaces and edges to a fine polish that invites the touch of a finger and brings out the patterns created by the wood’s figure and colors. The final finish can be as simple as a couple of coats of Danish oil and a coat of wax buffed to a high luster. □

Seth Janofsky is a woodworker in Alameda, Calif.

Two ways to fill a box

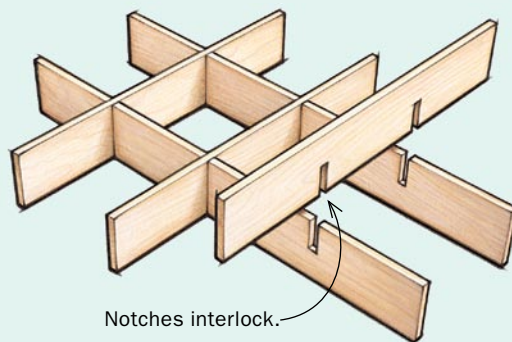
The interior of a box can range from a simple grid to complex, partitioned trays. Here’s how I make two common interior fillers:



THE SIMPLE PARTITION

To make a grid, mill stock to slightly more than $\frac{1}{8}$ in. thick. Using a crosscut sled and a stop block, cut several pieces to fit snugly across the length and width of the box. Then, still using the sled and a stop, cut several notches halfway up each piece. Finally, slide the pieces together.

INTERLOCKING PIECES MAKE A GRID



Notches interlock.

THE TILL

A simple tray, or till, serves as the registration between the two halves of the box. Put mitered edge-banding about $\frac{3}{16}$ in. thick on the top and bottom sections where they meet. Then, using $\frac{1}{4}$ -in. stock, make a tray that fits inside the lower section; use edge-banding, as on the box itself. Cut a groove about $\frac{3}{16}$ in. wide and $\frac{1}{8}$ to $\frac{1}{4}$ in. deep around the perimeter of the tray, aligned so that the edge of the groove just meets the edge-banding around the top of the tray. Into the groove miter a ledger, made from $\frac{3}{16}$ -in. by $\frac{1}{2}$ -in. strips of the same wood as the bindings.

TRAY ALIGNS THE TOP AND BOTTOM

