



An Introduction to Veneering

Simple techniques and common tools produce stunning panels for doors, box lids, and more

BY THOMAS R. SCHRUNK

Veneering has an image problem: Woodworkers see it as difficult; non-woodworkers consider it inferior to “solid wood.” Both perceptions are untrue. As with many woodworking procedures, the steps of veneering are easy to master and, with practice, you can produce beautiful results. Veneering opens up a world of exotic and beautiful woods such as burls and crotches, many of which would be difficult and prohibitively expensive to use as thicker lumber.

As an introductory project, we'll veneer a plywood panel that can be inserted in a frame to form the door to a cupboard or bedside cabinet, or the lid for a box. The frame means there is no need to veneer the panel edges. And because it is not solid wood, the panel can be glued into its groove, strengthening the assembly. This is especially helpful with router-made cope-and-stick joinery, which has limited strength on its own.

Select and prepare the veneer

Start with a core of $\frac{3}{16}$ -in.-thick birch plywood an inch wider and longer than the final size. After it is veneered and cut to size, it will fit into a $\frac{1}{4}$ -in.-wide groove.

If you don't have a local supplier, try mail-order and online veneer sources (see p. 65). For this project, I selected some attractive cathedral-grain cherry for the outside, or face, of the panel, and quartersawn cherry veneer for the back side. You must veneer both sides to prevent the plywood from warping. The back veneer need not be the same species, but the grain direction should be the same as the face veneer.

Book-matching shows off figure—You could use a single piece to veneer the panel, but a more interesting

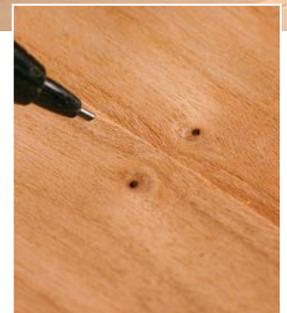
Choose and orient the veneer



Veneer opens the door to many species of exotic woods. Many decorative and exotic woods are prohibitively expensive or difficult to find as solid lumber.



A perfect match. When orienting veneer for a book-matched panel, overlap the two sheets (above) until you find the best place to make the joint. Identifying marks on the wood (right) are a great help in achieving perfect vertical alignment.



Wavy veneers are easy to flatten

The unique figure of burls and crotches puts them among the most sought-after veneers, but a drawback is that they often arrive wrinkled and curled. Before you can use them, you must flatten them.

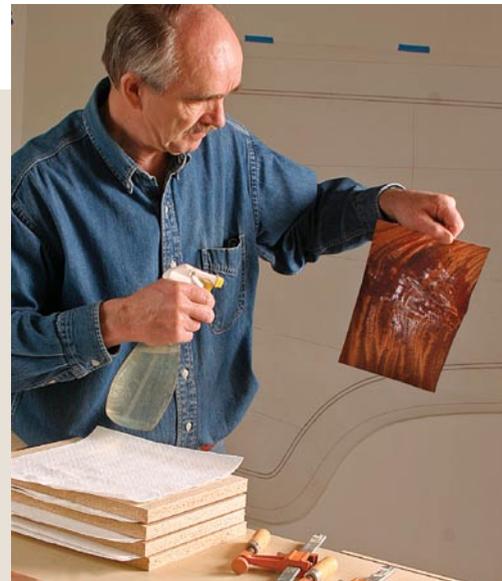
LARGE PIECES ARE DAMPENED AND CLAMPED

If the veneer is highly contorted and brittle, lightly spray the front and back with a flattening solution. I use three parts water, two parts white glue, one part glycerin (available at drug stores), and one part denatured alcohol. This solution keeps the veneer flatter for longer than water alone, but it fills the pores, which will color differently from the wood if a stain is applied (so use water if you plan to stain the wood). After wetting the surface, place the veneer between paper towels and clamp between 3/4-in.-thick particleboard or MDF cauls. Change the towels after 10 minutes, after 30 minutes, then every few hours until the veneer is dry.

SMALL PIECES CAN BE IRONED

A household iron can be used to flatten small pieces and works well on burls. Place the veneer on a nonporous surface such as melamine. Beginning at one end, move the iron slowly up the veneer, covering the heated veneer with another piece of melamine to prevent water vapor from escaping. The lignin in the wood plasticizes at around 180° and the layers of melamine keep it flat as it cools.

With both methods, keep the veneer clamped until use.



Wet the veneer. Lightly mist both sides of the wrinkled crotch veneer and sandwich it between paper towels and MDF cauls. Stack these sandwiches and clamp the whole package.



Iron the veneer. Slowly move a medium-hot iron (no steam) across the veneer to temporarily plasticize the wood. Immediately cover it with a piece of melamine to keep it flat as it cools.

Create an invisible seam

1. Cut veneer carefully



With the veneer secured under a sandpaper-backed ruler, make a series of light cuts until the waste is separated.

TOOLS OF THE TRADE

STRAIGHTEDGE

A long, thick straightedge is needed to cut the veneer for seaming pieces together.

BLUE 14-DAY TAPE

This tape has a stronger adhesive than the 60-day kind.

VENEER TAPE

This moisture-activated adhesive tape is very thin so as not to telegraph into the wood when the veneer is pressed.

UTILITY KNIFE

A knife with a sharp, non-retractable blade works best for cutting thin veneers.

2. Sand the cut edges



Sanding ensures a perfectly straight surface and impedes finish entering open pores in the wood and creating a dark line when finish is applied. Square aluminum tubing makes a good sanding block.

way to present some veneers is to take sequential leaves from the same log, and flip one piece over like the page of a book to form a mirror image, a process known as book-matching.

Compare the two pieces of veneer to find the location of the best match, and then lightly mark the cut line with a No. 2 pencil on the first piece. When cutting veneer, a self-healing mat used for fabric works well, but you also can cut on a piece of medium-density fiberboard (MDF). For most veneer I use a utility knife with a fixed blade (it is less wobbly than a retractable-blade knife) and I change blades frequently. I hold down the veneer with a 2-in.-wide aluminum rule with P80-grit sandpaper stuck to the back to prevent slipping. Make a light scoring cut, then four or five cuts of moderately increasing pressure until the cut is complete. Lay the freshly cut piece over the second piece of veneer, mark the exact matching line, and cut it, too.

The next step is to sand the mating edges of the pieces. Place one piece on the workbench with the cut edge hanging over the bench by about $\frac{1}{8}$ in. Place a metal straightedge on top of the veneer, even with the edge of the workbench. Sand the cut edge with a sanding block, gently moving it with even, horizontal strokes. I use a square section of dead-flat aluminum with P180-grit sandpaper stuck to one side, but you could use two bits of plywood glued into a T. Stop when you see sawdust all along the cut. Repeat with the mating half.

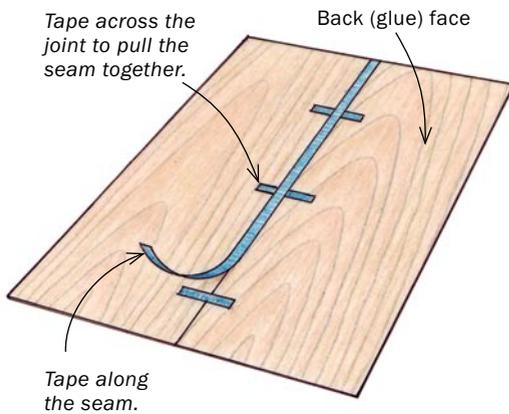
Sanding the cut has a second benefit: On many book-matches, the joint shows up as a dark line called the “glueline.” It is the result of liquid finish getting into open pores. When the cut is sanded, however, the pores tend to become plugged with fine dust that the finish has trouble penetrating. With practice, the glueline will be almost invisible.

Tape the matching veneers together—The side of the veneer that will be visible is referred to as the show face, while the back

3. Tape both sides with blue tape



Apply blue tape to the visible side of the veneer to temporarily hold the pieces together, then flip the veneer over and tape the back (below).



side is the glue face. To lock in a symmetrical alignment, place the veneers together, show face up, and join them with pieces of blue tape. Flip the veneer over and put 3-in. to 4-in.-long strips of blue tape across the joint spaced every 3 in. to 5 in., pulling and stretching the tape so that it acts like a clamp. Then place an additional piece all along the joint and press it down firmly. Now turn the veneer over to the show face again and remove the blue tape used for alignment. The veneer tape you are about to apply is thin enough not to imprint the veneer when it is in the press. Its adhesive is moisture activated. You can use a wetted sponge or you can simply lick the tape, but practice first on a piece of scrap veneer. Too little or too much moisture and the tape won't stick. Put veneer tape all along the joint. When the tape is dry (about 5 minutes) you can place the core on top of the veneer and cut the veneer to size with a utility knife. Finally, remove the blue tape from the back side.

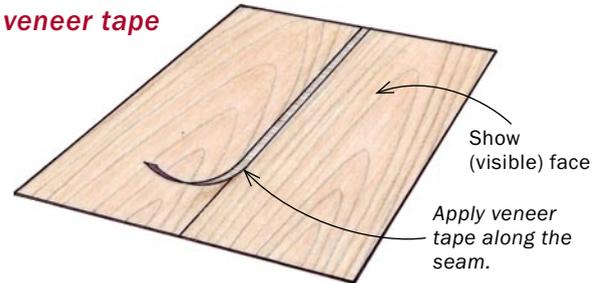
Veneer both sides of the panel at the same time

Because the veneer will begin to curl as soon as the glue makes it wet, you should have the clamping method prearranged to allow you to work quickly. If you're new to veneering, I'll assume



4. Retape the show face with veneer tape

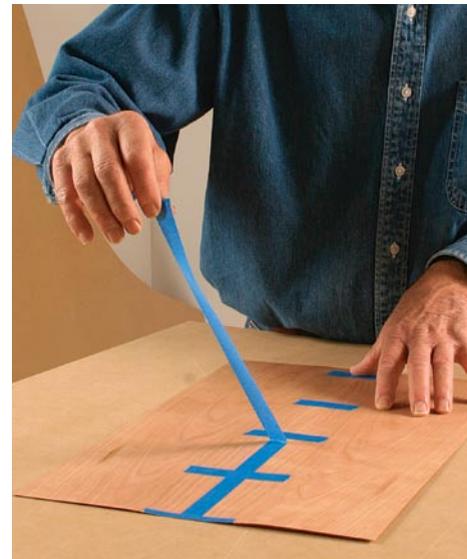
Flip the veneer and remove the blue tape from the show face only. Then apply a single strip of veneer tape.



5. Trim veneer to size and remove the blue tape



Place the plywood core on the taped pieces of veneer and cut around the core. Before pressing the veneer, remove the temporary blue tape from the glue face of the veneer.



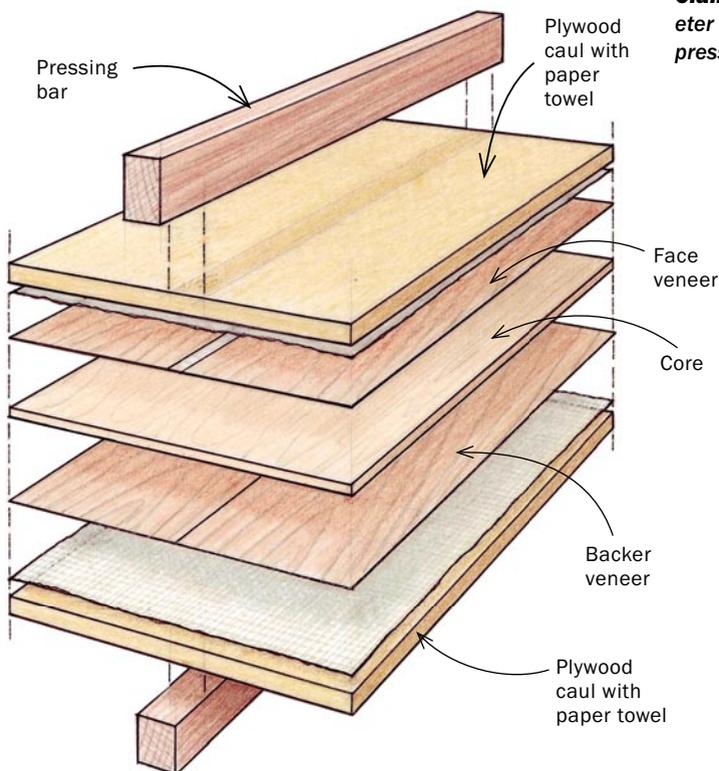
Glue and trim the panel



Glue the veneer. With clamps and cauls ready to go, apply yellow glue to one side of the plywood core and spread it with a short-nap roller.



Glue-face down. When you place the veneer on the glued core, make sure that the show face with the veneer tape is face up. The back-side veneer also is applied now.



Clamping press. Schrunk spaces clamps around the perimeter of the panel, and then uses a pair of pressing bars to add pressure at the center where the clamps can't reach.

that you don't have a vacuum pressing bag, but for panels like these, C-clamps, pressing bars, and plywood work just as well. I begin by placing a couple of 4-in.- to 5-in.-tall support blocks on the bench to support the workpiece and allow clamps and bars to pass underneath. On this I place a caul of $\frac{3}{4}$ -in.-thick plywood or particleboard and a single layer of paper towels, both cut to the same size as the panel. These towels will absorb moisture as the glue evaporates and will prevent the cauls from bonding to any glue squeeze-out. If the towels stick to the panel, any residue can be sanded away later.

There are a number of specialty veneer glues available, but I use standard yellow glue for most work. It's important to coat the entire surface evenly. I pour the glue onto the core, never the veneer, and spread it with a short-nap roller, 3 in. to 4 in. wide. This type of roller should apply the proper amount of glue, leaving the surface lightly wetted and evenly glistening. Starting out, one usually applies a bit too much glue; try a practice piece first.

Glue one side of the core and place it onto the backer veneer, then apply glue to the front of the core. Set it on the lower caul and paper towel, and place the face veneer over it, glue face



Tape tames tearout when cutting the panel. Apply masking tape to the back face along the line that will be cut on the table saw (above). Cut the panel to fit the frame with the show face up (above right).

down. Add the paper towel and the upper caul, and you're ready to press. You may want to put blue tape over the edge of the veneer near the corners to prevent "squirm" or slippage of the veneer as it is clamped.

I use clamps spaced every 3 in. to 4 in. around the perimeter, which exert good pressure in a 4-in.-dia. to 5-in.-dia. circle. If the workpiece is wider than about 9 in., you should add one or more pairs of pressing bars to apply pressure where the clamps can't. The bars are 2-in. to 3-in.-wide boards with convex profile of around 1/8 in. per foot on the contact edge. Leave the veneer clamped for at least six hours, preferably overnight.

Sources of Supply

CERTAINLY WOOD

www.certainlywood.com

716-655-0206

CONSTANTINE'S

www.constantines.com

800-443-9667

ROCKLER

www.rockler.com

800-279-4441

Cut the panel to size, then sand it

With the veneer dry, the next step is to cut the panel to the frame. To minimize tearout, I cut the panel show-face up with blue tape applied to the back along the lines to be cut.

Some like to remove the veneer tape with a scraper or to lightly moisten it and peel it off. I prefer to begin sanding with P120-grit paper on a random-orbit sander until the tape is sanded away, and then move up the grits until

I get to P220. Be sure to sand the back panel in the same way; you will finish it identically so that you'll have an equal moisture barrier on both sides to prevent warping. Use caution near the edges to avoid sanding through the thin veneers. Wet the surface with mineral spirits to see that no veneer tape or adhesive is left, then glue the panel into the frame and apply a clear finish. □



Sand away the tape. Use a random-orbit sander to remove the veneer tape and to prepare the surface for finishing.



Strong and beautiful. Because it is not solid wood, the veneered panel can be glued into the frame to strengthen the assembly.

Tom Schrunk works with exotic veneers in Minneapolis, Minn.