Half-Blind Dovetails Cut by Hand

The craftsman's calling card

BY CHRISTIAN BECKSVOORT

Craftsmanship doesn't have to be conspicuous. We've all seen through-dovetails on a drawer front—they scream, "Look at this!" Half-blind dovetails, seen only when the drawer is pulled open, are subtler; yet when revealed they tell in an instant the story of the maker's skill, tools, and aesthetic judgment. A joint that does its job superbly, delivering beauty and strength without straining for attention—that's the essence of the half-blind dovetail on a well-made drawer. The joint brings these same attributes to casework, where it is often used to join the sides of a cabinet to the top.

Once you're comfortable making through-dovetails (for a full discussion of my technique, see *FWW* #238 and #239), cutting the half-blind is well within reach. The tails are cut in the same way as they are for the through-dovetail. It's just the pins that differ, requiring some careful sawing and extra chisel work. Let's start from the beginning of a typical drawer, and concentrate on the major differences.

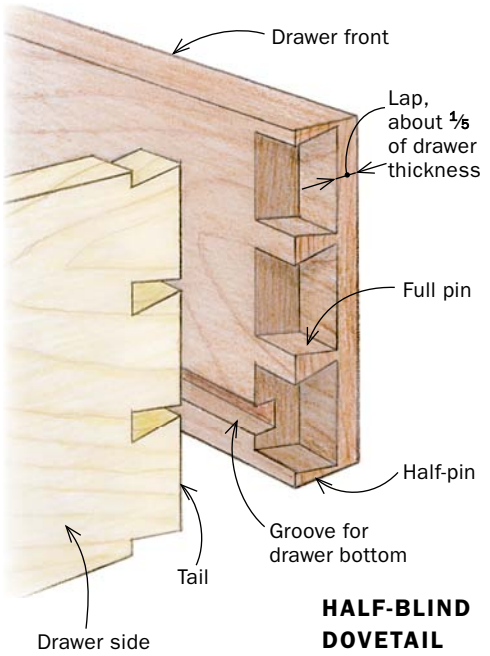
First steps in layout

Before you begin laying out the dovetails, cut the groove for the drawer bottom in the drawer front and sides. Because the ends of the tails will not be visible once the joint is assembled, the grooves in the drawer sides, like the one in the drawer front, can be cut all the way through.

The next decision is how long to make the tails—how close they will come to the outside face of the drawer front. For drawers with a ¾-in.-thick front, a rough rule of thumb is to make tails about

Photo, this page: Michael Pekovich

Start with the tails



HALF-BLIND DOVETAIL

Mark the tail length. *Set the marking gauge by eye so it cuts a line about 1/8 in. from the outside face of the 3/4-in.-thick drawer front (left). This marks the lap and determines the length of the tails. Use the same setting (right) to mark the front end of the drawer sides inside and out.*

Reset the marking gauge. *To establish the baseline for the pins, set the marking gauge so the cutter just overhangs the drawer side (above). Then scribe a line at that setting on the inside face of the drawer front (right).*

5/8 in. long, leaving a 1/8-in. lap. If the lap is much thicker than that, the joint begins to look clunky. Any thinner and there is a danger of chiseling through when you chop the sockets for the tails. If the drawer front is thicker or thinner than 3/4 in., you can apply this same 5-to-1 ratio as a guide.

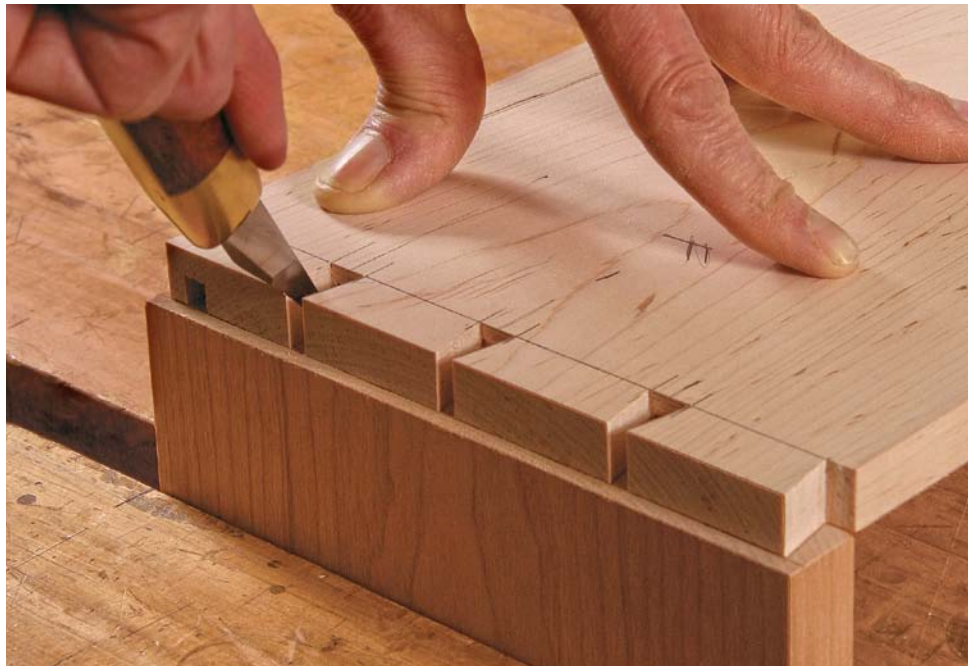
Place the marking gauge fence against the inside face of the drawer front and set the cutter by eye to leave a 1/8-in. lap. Mark both ends of the drawer front. Leave the gauge at that same setting to mark the drawer sides. Run the gauge's fence along

Lay out the tails. *Use your normal process to lay out and cut the tails in the drawer sides—they're no different than in a through-dovetail joint.*

Drawings: Kelly J. Dunton

Scribe the pins

Set up for transfer. *Place the drawer front in the bench vise, level with a scrap block. Then use the scrap block on the bench to support the far end of the drawer side. A spacer sized to the bottom groove aligns the side and front.*



Align the lap line and scribe. *Position the ends of the tails flush to the scribed lap line (above). Use a sharp knife to trace the tails onto the end of the drawer front (right).*

the front edge of each drawer side, marking both the inside and outside faces.

Now reset the gauge to the thickness of the sides and scribe a line on each end of the drawer front on the inside face. When I set the gauge for this line I let the cutter just overhang the side; that way, the pins will be slightly longer than the side is thick and they'll be easy to plane or sand flush after assembly.

With the marking gauge work finished, lay out the tails on the drawer sides and cut them just as you would for through-dovetail joints.

Transfer the tails to lay out the pins

To complete the layout, clamp the drawer front into a vise, end up and front face toward you. Set its top edge flush with a piece of scrapwood on the bench. Then place the drawer side so that its back end rests on the scrap and its front end rests on the drawer front. An effective way to keep the workpieces in register from side to side during layout is to make a small spacer and fit it to the grooves for the drawer bottom. With the spacer in place, shift the drawer side until the ends of the tails are precisely on the scribed lap line in the end of the drawer front. Place one hand on the drawer side to keep it from shifting, and use a knife to transfer the tails to the drawer front, stopping at the lap line. Then, with a square and a sharp pencil, draw lines from the knifed scribe lines down to the marking gauge baseline.

Saw and chisel to define the pins

With half-blind dovetails, you can only saw about halfway down the pins. I begin by clamping the drawer front at about a 45° angle in my vise, which makes the cut more comfortable and the end lines more

Photos, except where noted: Jonathan Binzen

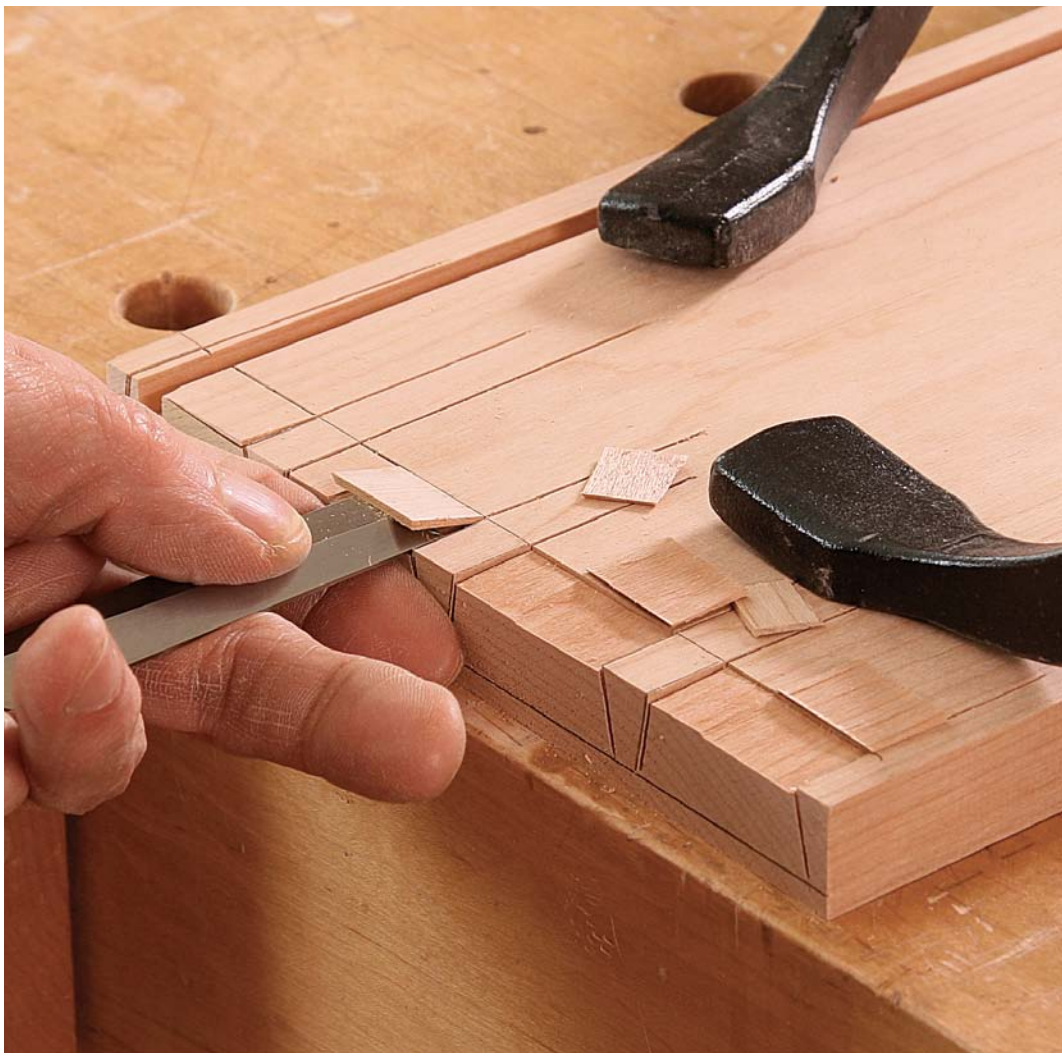
Saw and chop the pins

Careful kerfing. *With the drawer front at 45° in the vise, saw along the cheeks of the pins until you reach the two scribed lines.*

It's familiar at first. *Start chiseling half-blind pins as you would through-pins. Place the chisel right in the scribe line (above) and begin with light mallet blows. Then pare out a shallow chip (below). The next mallet blows will be harder and the chips thicker.*

visible. Then I saw on the waste side of the lines. If you don't mind "running sawlines"—kerfs that extend past the baseline and are visible inside the drawer—you can define 75% to 80% of the socket with sawkerfs, making the chiseling decidedly easier. Many period cabinetmakers used this approach, including quite a few Shakers; I usually don't. Instead, I accept the more difficult chiseling in exchange for a clean look inside the drawer.

Let's get to the chisel work. It's different than with through-dovetail pins, since you have to stop partway down and can't chop through from both faces, but the main techniques are largely the same. Start with a series of light chisel chops directly in the scribe line. Then remove a thin chip of waste by paring from the front. Once that shallow shoulder is established, the next chops along the baseline can be much harder and deeper. Follow those by removing thicker chips. The waste pieces are now wider than the top and must be split before removing. If you've stopped the sawcuts at the marking-gauge lines, then you'll have to pare in along the cheek of the pin. Continue chopping and paring all the way to the lap line. Last, place the chisel directly into the scribed lap line on the end of the drawer front, and pare all the way to the back of the socket. The



TIP

SPECIAL ACCESS

A fishtail chisel, with its flared tip, helps sever the fibers in the acute corners where neither the sawkerf nor the bench chisel could reach.

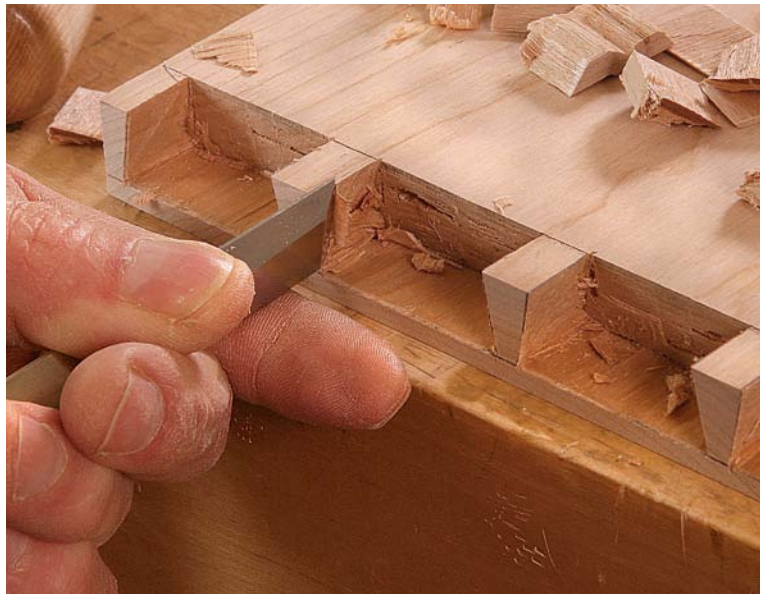
bottom of the socket is not a glue surface, and it can slope gently downward if you like. This creates a space at the inside corner for glue and wood crumbs to collect and ensures a tight fit at the outside.

The inner corners need special attention, and a fishtail or skew chisel is helpful there (see photo, above). If the grain runs severely downhill, extra care must be taken so the waste doesn't break through all the way to the front face. Here a skew chisel or knife can be used to pare from side to side, instead of front to back.

Assembly

After both sides are chopped and cleaned (and the through-dovetails to connect the drawer back are cut), dry-fit the four pieces. Rub graphite on the leading edges of the tails to check for tight spots, then pare the pins to fit. Glue, clamp, and check the diagonal dimensions. Once the glue is dry, sand or plane the slightly protruding pins flush with the drawer sides. When you've installed the bottom and fit the drawer, you can push it into the drawer pocket where it belongs—until something's needed and your craftsmanship is brought to light. □

Contributing editor Christian Becksvoort cuts his dovetails in New Gloucester, Maine.



Work to the lines. *When chopping to the lap line, take the last chips with the chisel right in the scribe line (above). A slight downward angle is acceptable, as this is not a glue surface and the incline will ensure a tight joint at the outside. Then clean the cheeks (left). Use the plane of the sawkerf to guide the chisel in paring the rest of the pin's cheek.*

Knock it home. *When the joint is fitted, the pins should be slightly proud of the drawer side. After assembly, plane them flush.*