

Templating Techniques

Fit finished parts into tricky spaces, with no gaps and no risk

BY STEFAN STRAKA

When a finished part needs to be fit to a single surface—be it a crooked wall or a bumpy fireplace—a carpenter or cabinetmaker will “scribe” the part, transferring the contours of the adjoining surface directly onto the part before removing the waste for a gap-free junction. I covered this topic in a recent article, “Perfect Scribing,” in *FHB* #310.

But when that part bumps up against two or more surfaces at once, it’s risky to transfer their shapes directly to the workpiece and start removing waste from that valuable material, hoping all of the edges end up perfect at once and that the part

STRIP TEMPLATES

FOR COUNTERTOP OVERHANGS AND CUTOUTS

Even with seemingly straightforward finishes like island countertops, a template can help dial in overhangs and offsets while accurately positioning cutouts—for a sink, rangetop, or other penetrations. Here, I used a strip template to lay out the sink opening and lock in the overhangs on a white-oak countertop, which I then cut and finished in the shop.

I start by measuring and cutting template strips to length. I chop the ends of the strips at a slight angle so they meet at a point to create sharp inside and outside corners. It's important to exercise care when gluing the strips together, as the shape you create is the one you will be cutting out on your finished parts. Hot-melt glue cools to a semirigid state in just a few seconds, and any tension or movement after the glue goes on can weaken the joints, rack the template, or pull the strips away from their mating surfaces. On the most important intersections, I hold the strips in place a bit longer after gluing to ensure they don't shift.

Working on top of the cabinets, I templated the perimeter of the countertop and then added more strips to stiffen the assembly and mark the sink cutout. I included location marks for aligning the finished countertop, and I marked the corner-radius dimensions on the template. After a once-over to confirm that the template was accurate, I transferred the outline to the countertop; cut it, routed it, and sanded it to size; and applied a finish before bringing it to the site for installation.

BUILD THE TEMPLATE

After assembling the island cabinets and temporarily installing the sink, build a strip template that marks the countertop perimeter with overhangs and the sink cutout, making notes and location marks on the strips.



CUT THE PERIMETER Transfer the perimeter shape to the countertop slab, and trim the edges with a track saw.



MARK AND CUT OUT THE SINK

After marking the edges of the sink cutout on the slab, cut away the waste with a jigsaw before attaching temporary fences at the layout lines and routing the finished opening with a bearing-guided bit.



EASY INSTALL

The countertop can be finished in the shop and then brought to the job site for installation. Transferring the location marks on the countertop and sink from the strip template ensures an accurate reveal around the sink and even overhangs around the island.

lands where you want it to. The classic example is a countertop being fit into an enclosed three-sided space.

In these cases, finish carpenters make a template—using cheap, thin materials—and first fit the template into the space before transferring its shape to the part being installed. This usually incorporates scribing as well, which is why I covered that topic first.

Getting all of the fitting done on the template before committing to your finished material removes most of the risk. Once the template fits perfectly, you can transfer its shape to the workpiece and cut away the waste with confidence, knowing you'll get a seamless fit. In many cases, the templating process also helps me identify problem areas I might have otherwise missed.

Two ways to build a template

When the finished part needs to fit against more than two surfaces or overhang an object perfectly, or if it includes multiple cutouts, I form a template from strips, pressing them against the outside of the space and hot-gluing them together at the corners. If the surfaces are curved or otherwise irregular, you can scribe and fit the strips independently before gluing them together.

With just two adjoining edges to fit—which is the case with the floating shelves shown on pp. 56-57—I generally use a single panel of thin material as a template, scribing its edges individually.

For both strip and one-piece templates, you can use whatever thin sheet goods you have lying around—anything from 1/8-in. door skin to 1/4-in. MDF. There are packs of templating strips available for purchase, but I make mine from waste pieces of the same types of material, ripping 2-in.-wide strips that I bundle up for later use. For gluing, an inexpensive craft hot-glue gun will do the job, but I've recently started using a cordless construction-grade gun for convenience.

Templating includes scribing

To capture irregularities on the mating surface, you usually have to scribe the template stock so you can transfer the profile to the finished material later. I use a few different scribing tools, but my favorite is the Thingamejig from

STRIP TEMPLATES

FOR FITTING THREE

This set of floating shelves needed to fit into a very irregular space where two cabinets meet a drywall corner and create four surfaces for fitting. This was a perfect situation for a strip template. Because these shelves were attached by screwing through the sides of the cabinet, rather than being placed on brackets, there was no built-in way to hold the template strips at the right level, so I attached temporary cleats to the cabinets to support the strips as I assembled the templates. I attached them from the back side of the cabinet sides, using the same screw holes I would later use to attach the shelves.



START WITH THE OUTER STRIPS

Attach the template's outer strips to the temporary cleats with a few dabs of hot glue, holding them firmly against the cabinets as the glue sets. For curved surfaces, the strips can be scribed and fit individually.



ADD THE OTHER SIDES Apply a liberal amount of hot glue to the joints, and hold them firmly together as the glue hardens. Give the glue an extra minute or so to set before popping the template off of the dots of glue holding it on the cleats.

OR MORE EDGES



TRANSFER THE SHAPE Apply painter's tape to the shelf material in the areas where it will be cut, align and clamp the template in place, and use a sharp knife to cut through the tape, being careful to keep it tight to the template edges.



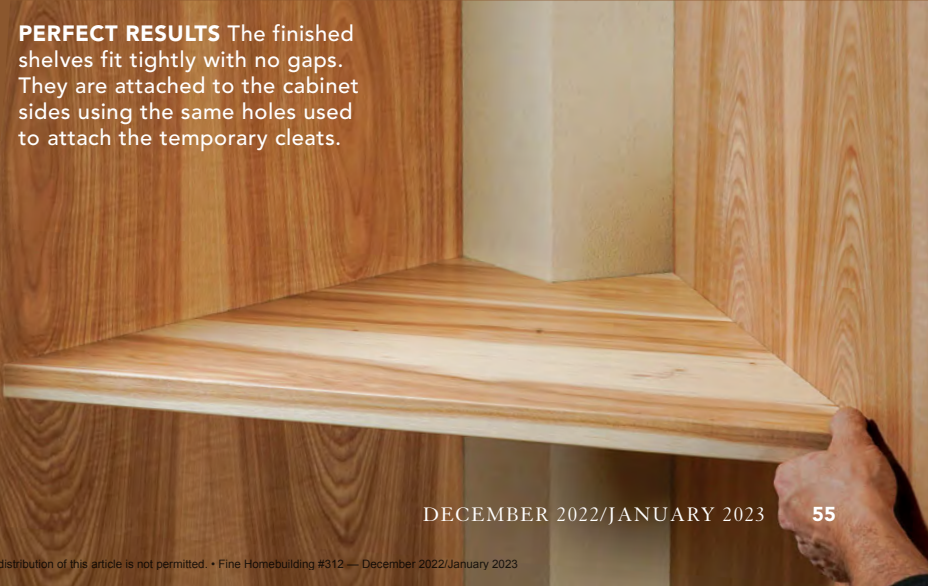
SAW TO THE LINES Peel away the tape on the waste side of each line, and start trimming the outside edges of the shelf.



CUT THE INSIDE CORNERS Make fine, accurate cuts with a Japanese-style pull saw (a jigsaw or bandsaw would also work), making sure to keep the cuts square—or just slightly back-beveled—as you follow the tape lines.



CHECK THE FIT Sit the shelf on the temporary cleats to check the fit along all four surfaces. Refine the fit as needed, using a power planer, belt sander, or sanding block.



PERFECT RESULTS The finished shelves fit tightly with no gaps. They are attached to the cabinet sides using the same holes used to attach the temporary cleats.

SIMPLE ONE-PIECE

FOR FITTING TWO EDGES

Specialty Tools. While other tools will work, the Thingamejig marks with a built-in knife, creating a more precise line.

To make that knife line much more visible, I first apply brightly colored painter's tape to the edge of the template (and the finished workpiece), then slice the tape with the Thingamejig and peel away the waste. Once the template is fit perfectly to the space, it's easy to position it on the finished piece and transfer the shape for cutting. I often add notes or marks to the template to indicate things such as its proper location on the finished piece, the radius of a corner, or an area for back-beveling.

To transfer the shape of the template to the workpiece, I also use bright-green painter's tape and a sharp cutter. In this case, it's a utility knife, run against the edge of the template. Apply just enough pressure to cut the tape. Pushing down too hard can cause it to follow the grain of the part below and pull away from the template.

To trim both the template and the finished part, I tend to use similar tools. I generally start with a track saw for the main cuts, as a belt sander tends to create too much dust, making it hard to see the line. On thick finished workpieces, I often follow with a power planer to get even closer to the line. After that I use a block plane or sanding block to adjust for fine irregularities.

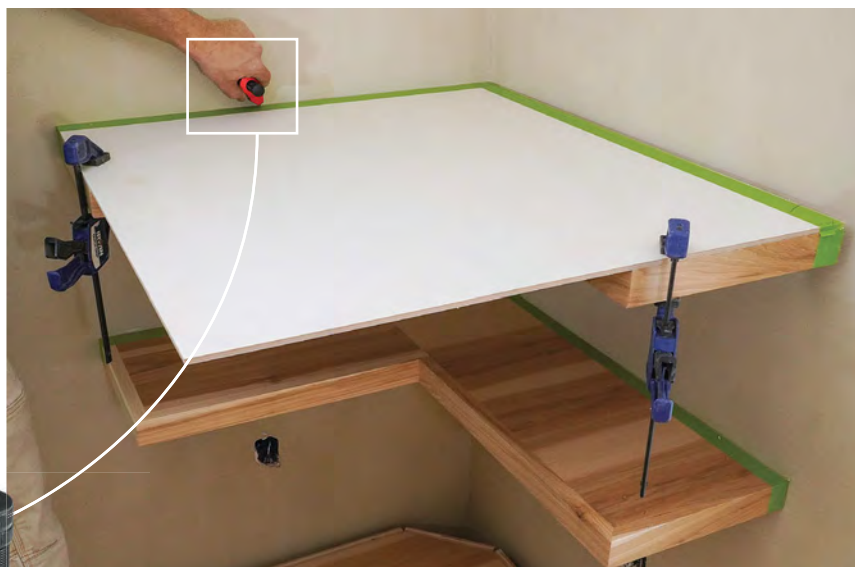
Once the final piece is shaped, I do a dry fit and occasionally remove a little more material. You can even re-scribe individual edges at this point. But be careful not to remove too much material here. Once your reference lines are gone, it's easy to create compounding problems with the fit or to accidentally move the piece away from its desired position.

Even at relatively straightforward junctions, I find myself templating rather than measuring. It's almost always faster in the end, and I get peace of mind and perfect results. □

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One common templating situation is when a countertop or shelf touches two walls. Between framing irregularities and drywall mud, such "square" corners are usually anything but. The floating corner shelves here needed to be fit to two walls, so I made a one-piece template out of a single panel of 1/4-in. MDF—the perfect material for templates. The first step is making the templates the same dimensions as the shelves.

With any templating job, you want to scribe or build the template as close as possible to the position of the finished piece to be sure you're capturing the irregularities at that specific location. For countertops, this is straightforward: The template rests on the cabinets below. It was easy for these corner shelves, too; I just slid the shelves temporarily onto their brackets and clamped the template panels on top of them to scribe their back edges. The brackets, made from welded steel, are hidden behind the drywall (Floating Countertop Wall Bracket from IronSupports.com).



ATTACH THE TEMPLATE AND SCRIBE

After pushing the shelf onto its supports as far as it will go, align the template with the outer edges, clamp it, and then scribe the wall-facing edges, setting your scribing tool for the largest gap. While a pencil-based scribing tool will work, here I'm using my preferred tool, the Thingamejig by Specialty Tools (\$73), which marks with a sharp knife.

PRECISE, HIGHLY VISIBLE LINE

After cutting a fine line in the tape, peel away the waste side to make the line easy to see on any surface.



TEMPLATES



CUT TO THE LINE I use a track saw to cut close to the tape line, repositioning the track and making multiple cuts to follow slight curves, before switching to a variety of other tools to creep up to the line. I finish up with a sanding block.



CHECK THE TEMPLATE'S FIT Place the template back in position to look for gaps at the walls, and refine the fit as needed.



TRANSFER THE SHAPE Realign the template with the outside edges of the shelf, and clamp it in place. Run a sharp utility knife along the edges to cut through the painter's tape on the shelf below. To hug the template closely, keep the knife vertical and don't press harder than you have to.



TRIM THE SHELF Peel away the waste side of the tape, and then use a track saw to work your way up to the line. A variety of tools work for refining the fit; I typically switch over to a power planer (shown at left), a belt sander, and/or a sanding block. On parts like these, with their ends visible, keep your scribed cuts square to avoid obvious gaps.



CHECK THE FIT AND INSTALL THE SHELF Make any additional refinements before permanently installing the shelf; individual edges can even be rescribed lightly if necessary.



To create the slots hidden inside these thick shelves, I routed cavities in each of the plywood layers before gluing them together and edging them with solid wood. A similar technique was covered in "Floating Shelves on Display" (*FHB* #247).