

# A Carpenter's Lumber Rack

A two-level welded-steel rack boosts even a small truck's carrying capacity and pops out easily when you don't need it

BY GARY WILLIAMS

**I**ll tell you a secret: I'm not a contractor. I'm a technical editor by day, and the main job of my little green Toyota pickup is to get me to the office and home again. But by night and on weekends, I'm a woodworker with lumber that needs to be toted in one direction and finished projects that need to be hauled in another.

The typical store-bought lumber rack cantilevering over the cab could certainly handle the job for a part-time guy like me, but I never wanted one. There is just something that bothers me about the idea of driving 300 miles a week with a big iron structure rattling around over my head.

And there are practical considerations. Because I've specialized in church furniture, I'm often called on to build something odd-size—a tall cross, a pulpit or a big altar—that's equally awkward to load. Over the years, I've tried a variety of vehicles: vans, station wagons, even a mini-motor home with an unusual back end that opened up like a giant hatchback. The least practical for carrying lumber longer than about 8 ft. is the mini-pickup truck. If you have one, you know what I'm talking about: Sheets of plywood don't fit between the wheel wells and don't quite span them either; boards longer than the bed dangle over the tailgate and wag in the breeze. But small trucks make more economic sense for someone like me. Clearly, if I was going to have a small truck, I needed to figure out the best lumber rack.

## Requirements for a sturdy frame that can be altered easily

I wanted the rack to carry both lumber and plywood with equal ease. For those long boards, all I really needed were two horizontal beams, approximately 4 ft. long, spaced roughly 6 ft. apart and just high enough so that a thin board hanging over the cab could droop a bit and not bang the roof.

I knew that loading full sheets of plywood on the rack could be inconvenient at best



**Two-level rack has sturdy construction and a flexible design.** Simple construction and adaptability make this rack ideal for a small truck. Removing the lower bars or the entire rear unit gives options when hauling large loads.

and downright painful at worst. The plywood would have to go in the bed. But then there was the pesky wheel-well problem. My solution to this issue, a pair of cross beams just above wheel-well height, immediately created another problem: They'd be in the way when it came time to deliver a big finished cabinet.

Obviously, the lower cross beams would have to be removable and not have any projections sticking into the cargo area to scratch a fresh finish. And speaking of removable, what about when there's a tall cabinet to be delivered? Any overhead beams were going to be a nuisance in this situation; if I made every crosspiece removable, I'd end up with a bolted-together contraption that

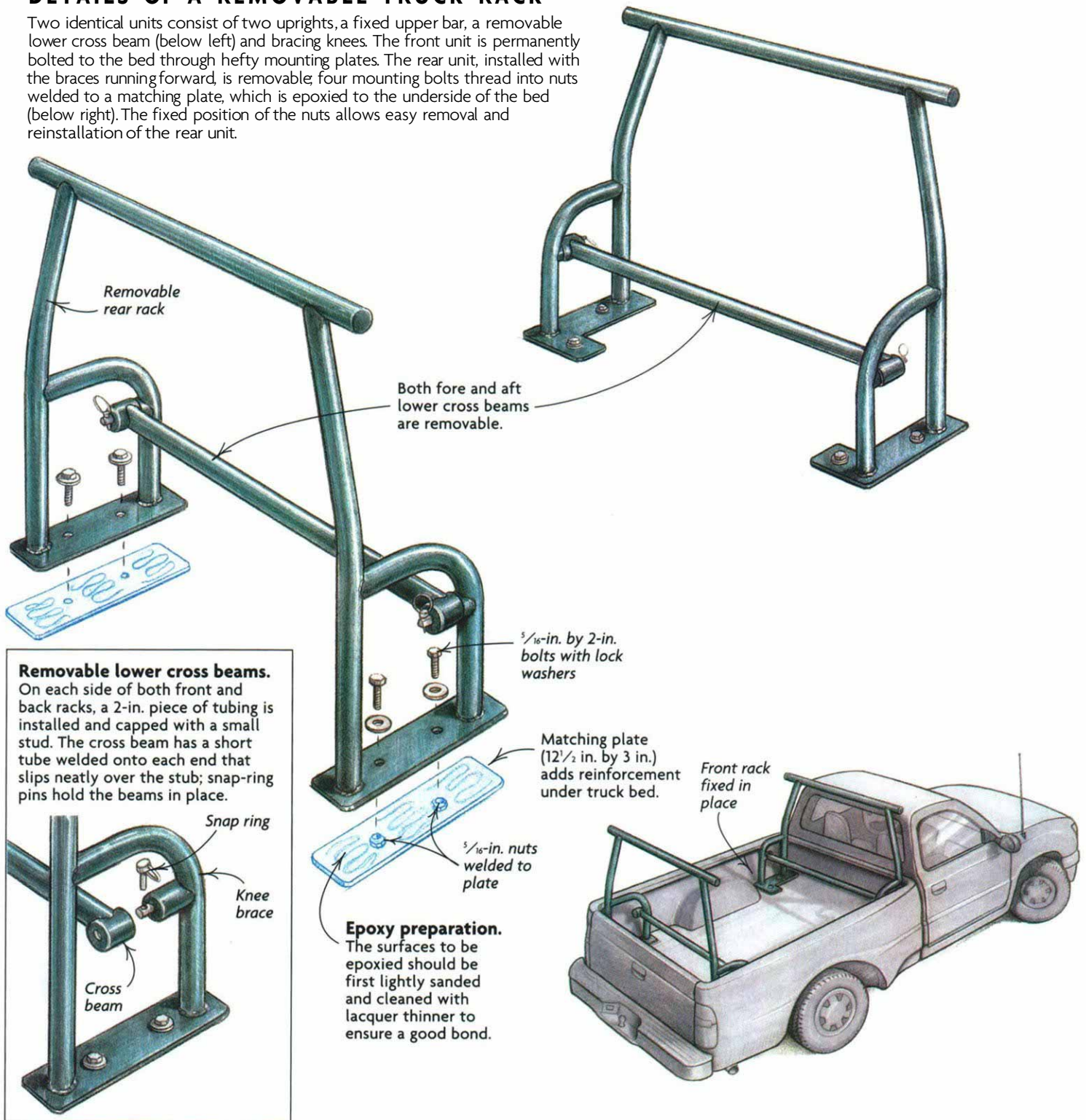
would surely rattle. I finally hit on the idea of making the rear rack removable and started my design.

## Making a template from the truck

For aesthetics, I wanted the uprights to follow the silhouette of the cab, so I traced the cab itself. I propped up a piece of particleboard in the front of the bed, just behind the cab, made sure it was level and perpendicular to the bed, and struck the angle of the cab side on the board with a pencil. I also marked it approximately 2 in. above the highest point of the roof for the crossbar. Back in the shop, I drew the full upright on this board, marking where the fore and aft knee braces join, right at bed height.

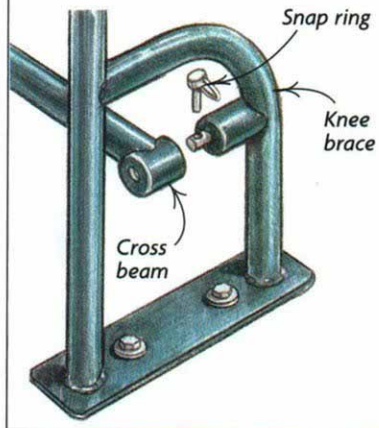
## DETAILS OF A REMOVABLE TRUCK RACK

Two identical units consist of two uprights, a fixed upper bar, a removable lower cross beam (below left) and bracing knees. The front unit is permanently bolted to the bed through hefty mounting plates. The rear unit, installed with the braces running forward, is removable; four mounting bolts thread into nuts welded to a matching plate, which is epoxied to the underside of the bed (below right). The fixed position of the nuts allows easy removal and reinstallation of the rear unit.



### Removable lower cross beams.

On each side of both front and back racks, a 2-in. piece of tubing is installed and capped with a small stud. The cross beam has a short tube welded onto each end that slips neatly over the stud; snap-ring pins hold the beams in place.



### Epoxy preparation.

The surfaces to be epoxied should be first lightly sanded and cleaned with lacquer thinner to ensure a good bond.

I also noted the wheel-well height and added a couple of inches when I specified the height for the removable lower bars. The crossbars overhang 4 in. on each side to give back the width that's been sacrificed in the interest of matching the slope of the cab.

With my dimensioned drawing and particleboard pattern in hand, I went to Mike's Metal Works in El Cajon, California, just

the kind of place you need for a little custom job such as this one. Mike Hancock and his crew don't build steel skyscrapers, and they aren't a sculpture boutique. They just fabricate things with steel rod and plate and tubing. Happily for me, they happen to specialize in lumber racks. Mike gets the credit for the nifty way of mounting the removable lower bars.

The finishing touch to the aesthetics was also functional. I had the rack powder-coated, a durable baked-on protective coat that will far outlast paint. The entire bill for the rack was about \$300.

Gary Williams is a technical editor from Lakeside, California, who also builds custom furniture. Photo by the author.