

A Shop on Top

Raising the garage roof creates space for a second-story shop

BY PAUL H. BRESKIN

For a good many years, I was able to get by with my three-car garage doubling as a workshop. And while all the shuffling of cars and woodworking machines made that shop far from a perfect arrangement, it provided enough space to satisfy most of my woodworking needs.

Eventually, though, as I spent more time in the less-than-ideal confines of a garage, I began to recognize the many advantages of a stand-alone shop. But there was a problem: I didn't have room on the property to expand outward. That's when I realized my dedicated shop could be had by adding a second story to the garage. Although some might consider the solution unorthodox, it provided me with an additional 800 sq. ft. of open space to devote entirely to my shop.

Like any major building project, this one came with an assortment of challenges. For starters, the foundation needed major modifications to meet building-code requirements related to the added weight of a second story. Also, because the second floor had to support a 16-in. joister that weighs more than 1,800 lb., the floor joists had to be 2x14 lumber placed 12 in. on center, instead of



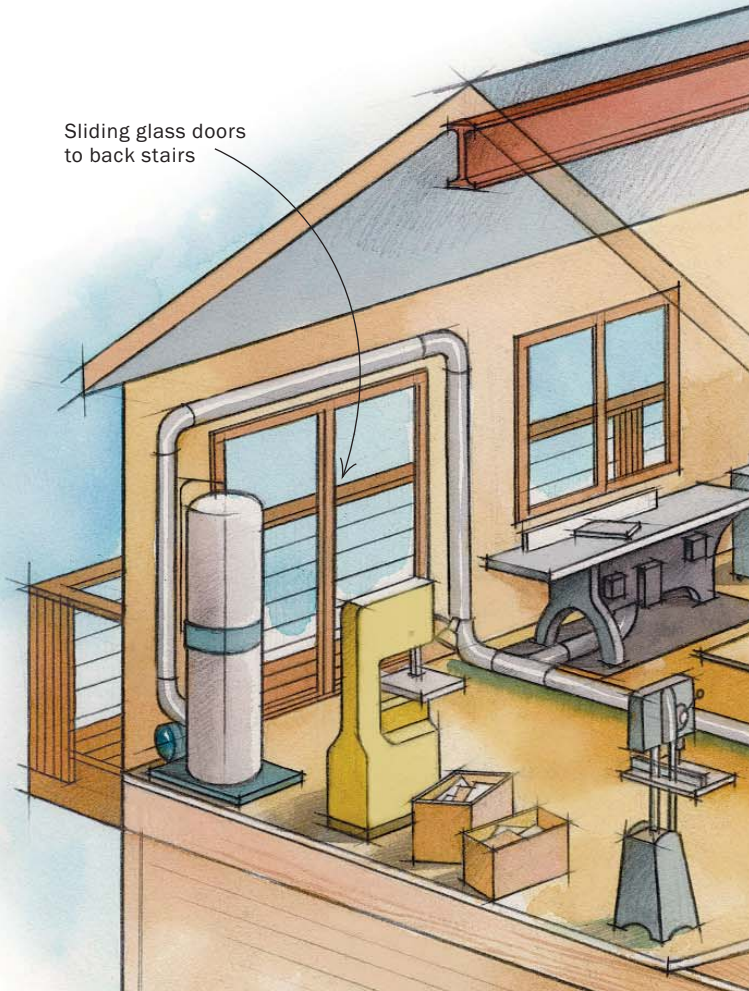
BEFORE

A WELL-DISGUISED WORKSHOP

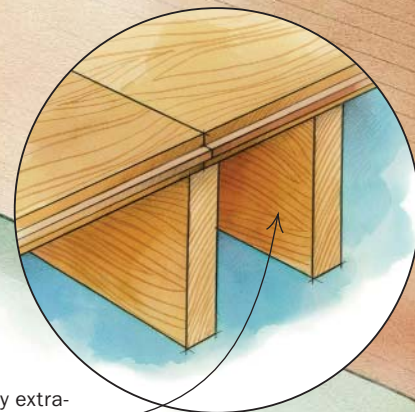
In need of room for a shop but lacking space on his property to build one, Breskin looked up rather than out. His single-story, three-bay garage (above) was expanded skyward (right), producing space for an 800-sq.-ft. shop that blends comfortably with the design of his home.



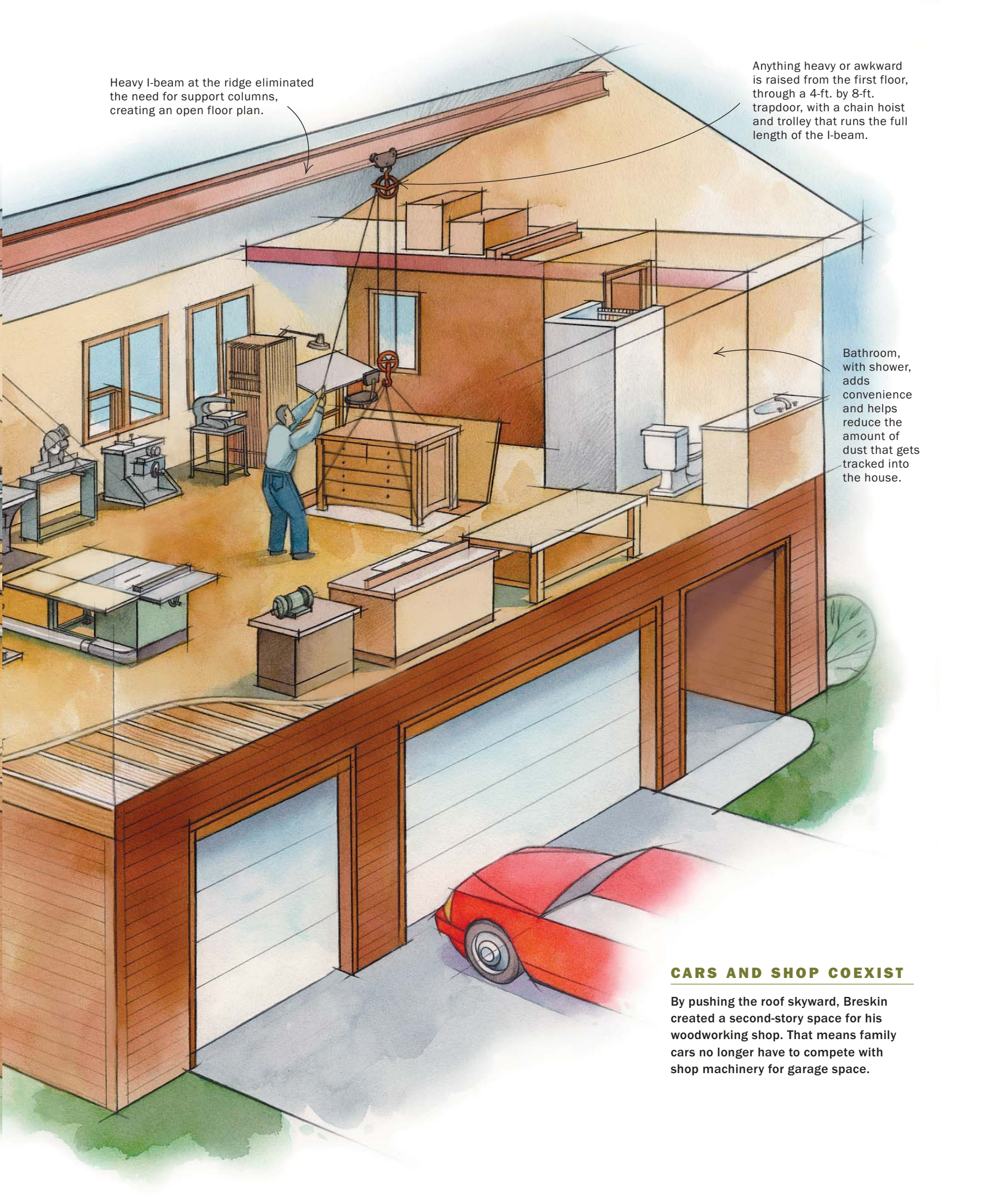
AFTER



Sliding glass doors to back stairs



To help carry extra-heavy loads from shop equipment, Breskin used 2x14 floor joists and 1¼-in.-thick tongue-and-groove plywood flooring.



Heavy I-beam at the ridge eliminated the need for support columns, creating an open floor plan.

Anything heavy or awkward is raised from the first floor, through a 4-ft. by 8-ft. trapdoor, with a chain hoist and trolley that runs the full length of the I-beam.

Bathroom, with shower, adds convenience and helps reduce the amount of dust that gets tracked into the house.

CARS AND SHOP COEXIST

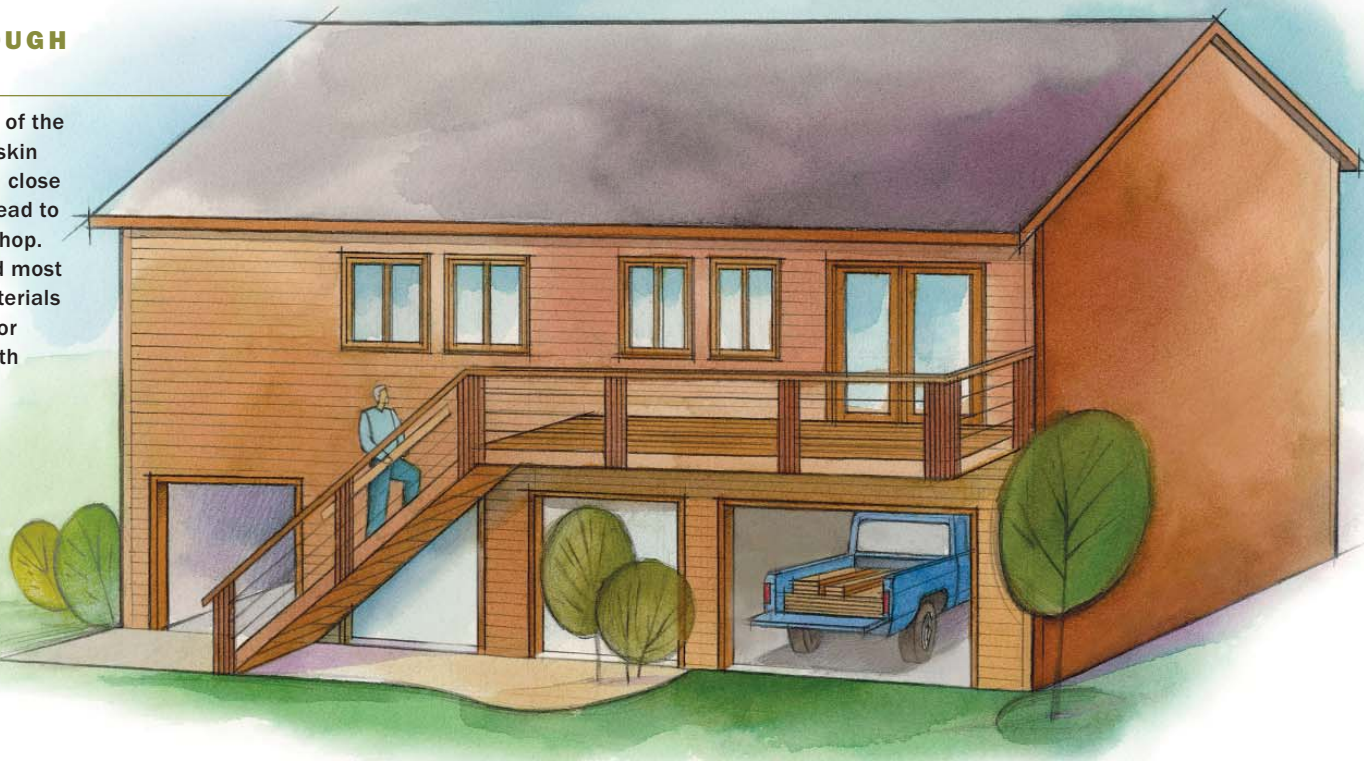
By pushing the roof skyward, Breskin created a second-story space for his woodworking shop. That means family cars no longer have to compete with shop machinery for garage space.

ACCESSING A SECOND-STORY SHOP

Gravity is not your friend in a second-floor shop, as the biggest challenge is getting tools and materials topside. But thanks to some clever planning, Breskin has two good ways to get heavy stuff upstairs.

DRIVE-THROUGH DELIVERY

A door in the back of the garage allows Breskin to unload material close to the stairs that lead to the second-story shop. Small projects and most run-of-the-mill materials can be carried up or down the stairs with little difficulty.



A DOOR IN THE FLOOR

When heavy or awkward items can't be moved easily up or down the outside stairs, a trapdoor in the shop floor provides the best way in or out. The trapdoor is located directly under the I-beam, and with the aid of the hoist, all sorts of heavy items can be hauled up or down through the opening.



Watch it
on the Web

To see the author's winch system in use,
go to www.finewoodworking.com.



the more common requirement of 2x12 lumber placed 24 in. on center. I also had to use 1¼-in.-thick tongue-and-groove plywood for the floor, instead of the normal ¾-in.-thick plywood.

Support posts always seem to get in the way in a woodworking shop. To avoid having any, I substituted an 8-in. by 16-in. steel I-beam for the typical wood ridge beam. The I-beam also served as a place to mount a chain hoist with a trolley. The trolley lets me run the hoist along nearly the full length of the shop.

To help contain shop noise, I insulated the floor, ceiling, and walls. Now, as long as the windows are closed, I can work in the shop any time of the day or night without bothering my neighbors.

Compressors are noisy, and mine is no exception. To give my ears some relief, I installed the compressor below the shop, in the garage. I use the same area for lumber storage.

The exterior of the shop, including the windows, was designed to complement the look of the house. A lot of natural light bathes the shop, thanks to a generous number of windows, plus a sliding glass door and three skylights. To help minimize noise, all of the windows, doors, and skylights are double-paned.

Thanks to all of the glass, I rarely need to have lights turned on during the day. Keep in mind, though, that windows have one drawback: They reduce wall space. And walls are great places to hang tools or mount storage cabinets. In my shop, the walls are constructed of pine boards installed horizontally. Not only does the pine give the shop an appropriate look, but it's also a surface that readily accepts screws, nails, and pegs to hang tools.

A 6-ft. by 8-ft. bathroom, complete with a toilet, sink, and shower, occupies the northwest corner of the shop. The shower lets me clean up quickly at the end of the day before heading back to the house. The sink is more than just a place to wash my hands; it's also a brush-cleaning station and an area to sharpen edge tools with my waterstones.

My Southern California location means I don't have to worry about heating the shop, but I do have to keep it cool. Toward that end, I mounted a 16-in. by 16-in. squirrel-cage fan high on the east wall to exhaust warm air to the outside. However, because the fan pushes such a large volume of air when it runs, I need to keep one of the windows open a crack; otherwise, the airflow would be reduced considerably. Thanks to a built-in thermostat, the fan goes on and off as needed to keep the temperature under control.

At the end of the day, for safety's sake, I want to be able to shut off power to all of the electrical outlets with one switch. A separate subpanel makes that possible.

I've been in my upstairs shop for a few years now. Any doubts I might have had about the sense of building up have long since disappeared. The shop is bright, spacious, and comfortable. And the distant views of Malibu and Catalina Island I gained from my second-story vantage point aren't hard to take, either. □

Paul H. Breskin, an amateur woodworker for 50 years, has studied with such notable furniture makers as Ian Kirby, James Krenov, Sam Maloof, and John Nyquist. He lives in Southern California.



A shop with elbow room. Much of the appeal of the shop can be traced to the more than 800 sq. ft. of floor space, plus lots of natural light and ventilation.