



Simple Homemade

Scaffolding

Safe to use and inexpensive to build, A-frames and a couple of planks beat working from a ladder

BY MIKE GUERTIN

Whether you work on houses for a living or just enjoy doing projects around your home, chances are you need to work up in the air sometimes. Staging, or scaffolding, is available for rent, but for what it costs to rent a 5-ft. section of scaffolding for one day, you can build a set of A-frames in no time at all. Not only are A-frames great for staging, but they are a versatile tool. I've used them for everything from sawhorses to temporary porch supports. And when the job is done, A-frames fold up for easy transport and storage.

Consistency is the key to building A-frames

The A-frames are simply a pair of ladders connected at the top of the legs with carriage bolts. But the ladders have to be identical to fit together, and to open and close smoothly.

For consistency, I build the A-frames on a table or a sheet of plywood supported by sawhorses. The surface becomes a template to lay out the ladders. Before I begin to lay out the ladders, I drill holes in all the 2x4 legs for the carriage bolts that serve as hinges. By aligning and drilling all the legs at once, I eliminate the chance of measuring the legs differently and the holes not lining up.

Then I align one leg with the edge of the plywood and snap a chalkline parallel to that edge to locate the second leg. To make sure the ladders are identical, I use the same edge and chalkline for each one and screw the legs to the plywood temporarily before I build the ladder.

To finish, I fasten the spacers and crossbars to the legs. I glue all the parts and tack them down with staples or nails for quick assembly.

Then I screw the spacers and crossbars to the legs. Screwed-together A-frames are stiffer and last longer than A-frames that are nailed.

The two ladders are connected with carriage bolts. It doesn't make a difference if the frames are stacked with the legs to the left or to the right of one another, as long as the crossbars face the outside. A washer between the legs improves the opening and closing action. □

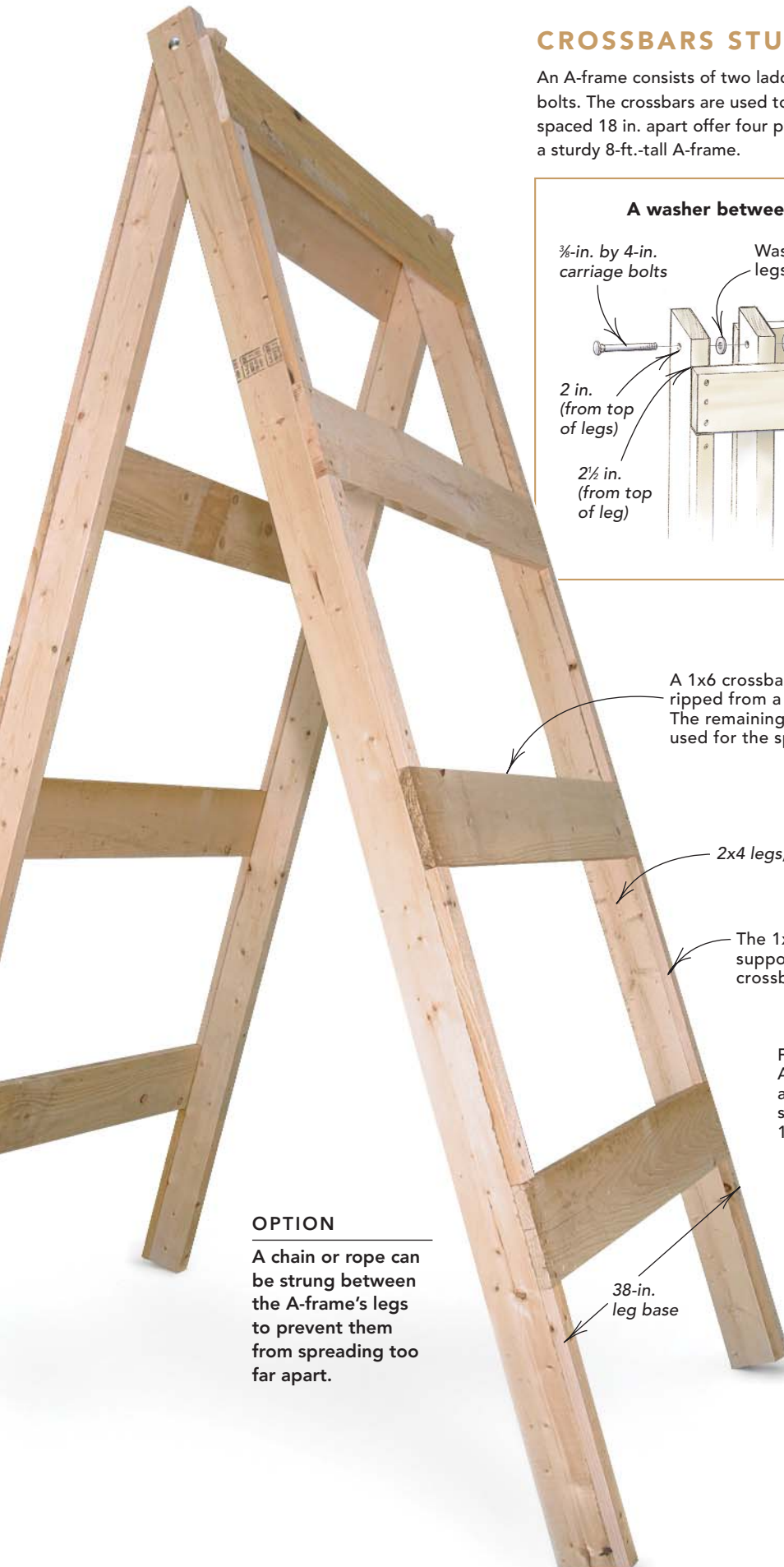
Fine Homebuilding contributing editor Mike Guertin lives in East Greenwich, R.I. Photos by Brian Pontolilo.



Plywood makes a good worksurface. Draw layout marks to help position the legs, and screw them to the plywood temporarily while you glue and nail the crossbars. The author adds screws later for a stronger connection.

CROSSBARS STURDY THE A-FRAME

An A-frame consists of two ladderlike structures that are connected at the top with carriage bolts. The crossbars are used to support planks and strengthen the legs. The 38-in. crossbars spaced 18 in. apart offer four possible plank elevations and create a wide-enough leg base for a sturdy 8-ft.-tall A-frame.



A washer between the legs allows the A-frame to open and close

$\frac{3}{8}$ -in. by 4-in. carriage bolts

Washers allow the legs to swing easily.

The nut should not be cranked too tight.

2 in. (from top of legs)

$2\frac{1}{2}$ in. (from top of leg)

The top rungs should be $\frac{1}{2}$ in. lower than the bolts. Higher, and the frames don't open; lower, and they open too far.

A 1x6 crossbar is ripped from a 1x8. The remaining $1\times\frac{1}{2}$ is used for the spacer.

2x4 legs, 8 ft. long

The $1\times\frac{1}{2}$ spacers support the crossbars.

Folded for storage, A-frames occupy about the garage space of an old 10-speed bike.

38-in. leg base

OPTION

A chain or rope can be strung between the A-frame's legs to prevent them from spreading too far apart.

SCAFFOLD-GRADE PLANKS OFFER SAFETY AND SUPPORT

Full 2x10 wood scaffolding

2x10 LVL

Douglas-fir 2x12

The plank that you stand on is just as important to your safety as the scaffolding supporting it. A scaffolding plank should be capable of supporting four times the weight it will bear. Framing lumber may look similar to acceptable planks, but it is not safe for use as a scaffolding plank. OSHA-rated metal scaffolding platforms, engineered-wood platforms, and scaffold-grade wood planks are available at most lumberyards. Always inspect scaffolding planks for cracks, splits, and irregularities before you use them.

continued

Reader Response

Scaffold plank is no LVL

In the article “Simple Homemade Scaffolding” (*FHB* #160, pp. 86-87), you showed a photo of different scaffold planks and identified one as an LVL plank. That was not an LVL plank. It’s a laminated scaffold plank and looks like a LeeLite Scaffold Plank (www.leestructuralwood.com). LeeLite is made in Canada, of Canadian spruce lumber, with glued butt joints on the sides and glued finger joints at the ends. It is a very good product, but it is not an LVL.

—DOUGLAS A. HOLMAN
via email



That’s not an LVL. It’s a laminated scaffold plank.