

All About Wood Fences

By: THOMAS BAKER, This Old House magazine

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Photo: Eric Roth

Why Wood?

There are plenty of practical uses for a fence: to gain privacy, safely corral kids and pets, block wind and noise, and prevent unsupervised dips in a swimming pool. But the right fence also makes a strong aesthetic statement, improving a home's curb appeal.

Going back 400 years, the favorite residential fencing material in this country has always been wood. In 2007 alone, Americans put up 59,000 miles of it, enough to circle the globe twice, and then some. Why wood? It's inexpensive and lightweight, to be sure, but so is chain link. The main reason is that a wood fence can easily be shaped to give properties character and individuality. You can choose from dozens of styles, including linear post-and-rail and crisscrossing lattice, as well as myriad picket patterns and post-cap designs. And you can stain the wood to make it pop out or recede from the landscape as either a vibrant or subtle frame for what's behind it.

On the following slides, see some of the forms a wood fence can take, and learn the basics of buying, installing, and maintaining it. Take the time now to carefully consider your choice; if you follow our tips, you'll be looking at that fence—and enjoying it—for many years to come.

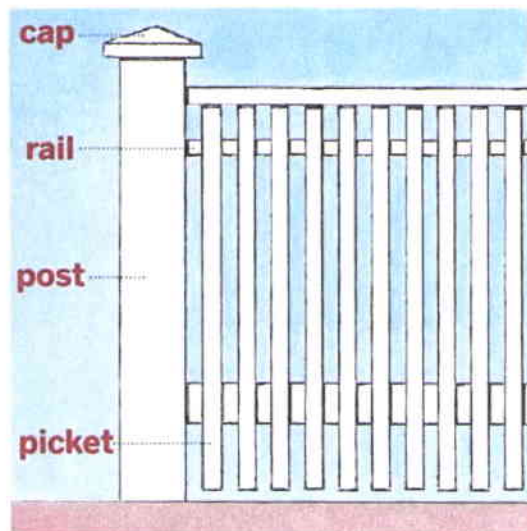


Illustration: Rodica Prata

Anatomy of a Picket Fence

Four basic components create this wood barrier.

1. **Cap:** Protects post's vulnerable end grain from the weather.
2. **Rail:** Connects the posts and supports the pickets.
3. **Post:** Supports all components; for stability, bury at least one-third of it in the ground.
4. **Picket:** Mounts vertically on rails; often has a pointed tip.

Wood Fence Vitals

How Much Do They Cost? Four-foot-tall picket panels run about \$3 to \$75 per linear foot uninstalled, depending on style and wood species. Six-foot privacy fencing: about \$4 to \$100.

DIY or Hire a Pro? Are you an accomplished DIYer with a strong back, a yen to dig, and plenty of time? Go for it! But hiring a pro gets the job done quicker.

How Long Do They Last? About 20 years, if made of rot-resistant wood. Then posts are usually the first to go; panels survive longer because they typically don't touch the ground.



Photo: Kolin Smith

How Much Maintenance? Posts should be plumbed and tamped every three years or so. If the wood has a coating, the schedule varies; clear toners and waterproofers need annual refreshing, semitransparent stains last three to four years, and solid-color stains go five to seven. Paint is not recommended.



Photo: Mark Winwood/Getty Images

Fence Types: Picket

Best for: Front yards, gardens, pool enclosures.

Usually 3 to 4 feet high, these fences are named for their widely spaced pointy-topped pickets, which discourage climbing and shed raindrops.

Similar to shown: 4-foot-tall pointed-top cove panel, about \$24 per linear foot in red cedar; [Blue Ox Millworks](#)

Fence Types: Vertical Board

Best for: Nosy neighbors, wind and noise protection.

Overlapped or butted edge to edge, tall vertical boards ensure privacy. They also block the wind, a good thing in winter but not so much in summer.

Similar to shown: 6-foot-tall shadow-box panel, about \$30 per linear foot in redwood; [Borg Fence](#)

Fence Types: Lattice

Best for: Gardens, decks, patios, pools.

Crisscrossing strips of lath obscure the view while allowing air and light to pass through. A perfect screen for climbing plants.

Similar to shown: 4-foot-tall lattice panel, about \$59 per linear foot in white cedar; [Walpole Woodworkers](#)



Photo: Ben Mathis/Getty Images



Photo: Hyjah Hill

Fence Types: Post and Rail

Best for: boundaries, enclosing fields.

This inexpensive fence, traditionally used for penning livestock, also makes a bold demarcation between properties.

Similar to shown: 4-foot-tall paddock fence, about \$8.25 per linear foot in treated southern yellow pine; [Capital Fence](#)



Photo: Matthew Benson

Fence Types: Louver

Best for: Pools, decks, parking pads, patios.

Vertical louvers or staggered boards afford privacy when viewed straight on but allow airflow and open views from the side.

Similar to shown: 6-foot-tall open-louver panel, about \$21.50 per linear foot in redwood; [Bay Area Fence & Deck, Inc.](#)

Which Wood?

A. Southern Yellow Pine: A thrifty choice that has to be treated to resist rot and insects and to remove sap. Knotty. Shown: 4-inch-by-4-foot French Gothic picket, about \$3.70 per linear foot; [The Home Depot](#)

B. Douglas Fir: This strong, northwestern softwood is stable and sap-free in clear, vertical-grain cuts. Less rot resistant than red cedar and redwood. Shown: 2½-inch-by-3-foot Acorn picket, about \$29 per linear foot; [Blue Ox Millworks](#)

C. Redwood: Premium western softwood that's stable and sap-free. Clear grades like this are costly. Shown: 2½-inch-by-3-foot Windsor picket, about \$37.50 per linear foot; [Blue Ox Millworks](#)



Photo: Courtesy of Bay Area Fence & Deck, Inc.



Photo: Ted Morrison

Which Wood?

D. Eastern White Cedar: Grows from New England to Minnesota. Stable and sap-free with small, tight knots. Shown: 1½-inch-by-4-foot Nantucket picket, about \$27.50 per linear foot; [Walpole Woodworkers](#)

E. Cypress: From southern swamps, this tan relative of redwood is stable and sap-free. Can have small, tight

knots. Shown: 3-inch-by-4-foot Gothic picket, about \$17.50 per linear foot; [Duluth Timber Co.](#)

F. Western Red Cedar: A Pacific Northwest wood with superior rot and insect resistance. Stable and sap-free. Shown: 1½-inch-by-4-foot Illinois picket, about \$6.50 per linear foot; [endola's Fence Company](#)

What's whitewood? A catchall term for inferior species of spruce, pine, and fir used in cheap fence panels. Unless treated to deter rot and insects, they have about half the life span of woods that are naturally rot resistant.



Photo: Ted Morrison

Man-Made Materials: Vinyl

Hollow PVC posts and rails reinforced with metal or wood inside.

Pros: Warranties from 20 years to lifetime; needs only an occasional wash.

Cons: White and shades of beige only; has a plasticky sheen; gets brittle and cracks with age.

Cost: about \$12–\$50 per linear foot for 6-foot-tall uninstalled panels

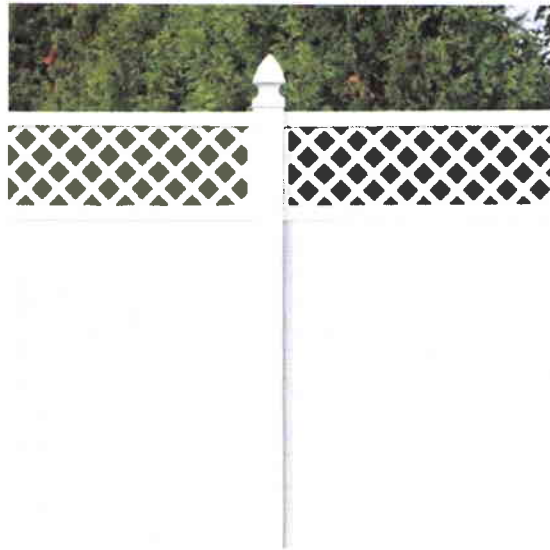
Man-Made Materials: Wood Composite

Boards made of a sawdust and plastic blend with solid wood posts and rails.

Pros: Warranties from 20 to 25 years; comes in a variety of woodlike colors.

Cons: Posts must be set in concrete every 6 feet, which means extra digging and installation expense.

Cost: about \$15–\$50 per linear foot for 6-foot-tall uninstalled panels



Man-Made Materials:



Ornamental

Steel, aluminum, or fiberglass made to resemble wrought iron.

Pros: Lifetime warranties on fiberglass and aluminum, 10 to 20 years for steel; paint it any color, strong.

Cons: No privacy; all posts set in concrete; steel rusts.

Cost: Starts at about \$25 per linear foot for aluminum or fiberglass; about \$16 for steel.



Buying Options

Get off-the-shelf panels, build your fence from scratch, or let a pro do the work.

Prefab: A DIYer can find ready-to-install panels at home centers, lumberyards, and fence suppliers. Home centers tend to have the best prices; fence suppliers usually have better quality woods and the biggest selection of designs. The downside: Fence panels, typically 8 feet long, are heavy and unwieldy, and it might take several trips to move all the material to your property. On grades that slope more than 1 foot in every 8, there'll be large, irregular gaps at the bottom.

Assemble it yourself: Building a fence the old-fashioned way—stick by stick with wood from a lumberyard or fence supplier—gets you a custom barrier that follows uneven terrain. Your choices of woods and styles are limited only by your budget. This is also the most time-consuming option and will cost more than prefab panels because you pay a premium to purchase wood by the piece. Use these handy formulas to calculate how many panels and posts you'll need:

- $\text{Distance between two corners (in feet)} \div 8 = \text{Number of panels in a single fence run}$
- $\text{Number of panels} + 1 = \text{Number of posts in a single fence run}$

Hire it out. Having a professional do all the heavy lifting and digging is the fastest and easiest way to get a fence installed—and the most costly. Pros offer the widest choice of stick-built styles, as well



Photo: Allison Chui

as panel fencing, and can create almost any design you dream up. If your property is sloped, they can even customize panels to follow the grade.



Photo: Matthew Benson

Designs: Crossbuck

A series of X's fills the gap between the top and bottom rails. A ball-shaped detail on the post cap and where the crosspieces intersect adds a touch of formality.

Similar to shown: 4-foot-tall fence in stained white cedar, about \$38 per linear foot for uninstalled panels; [Elyria Fence Inc.](#)



Photo: Courtesy of Arbor Fence Inc.

Designs: Basketweave

Thin horizontal boards bent around vertical spacers create attractive shadow lines with gaps between each course to permit airflow. Must be built on-site.

Similar to shown: 6-foot-tall fence in redwood, about \$30 per linear foot for uninstalled panels; [Arbor Fence Inc.](#)

Designs: Wall Topper

Orderly pickets perched atop an existing stone wall create pleasing contrasts between light and dark, and smooth and rough. Posts fit over steel pipe anchored in the stone.

Shown: 4-foot-tall Westchester picket panel in stained white cedar, about \$75 per linear foot for uninstalled panels; [Walpole Woodworkers](#)

Designs: Privacy

Roof structures add Asian flavor to tall vertical-board panels and protect post tops from the elements.

Similar to shown: 6-foot-tall custom redwood panel, about \$46 per linear foot for uninstalled panels; [Pacific Circle, Inc.](#)



Photo: Courtesy of Walpole Woodworkers



Photo: Barbeau Engh/California Redwood Association

Designs: Wattle

Weaving flexible twigs over vertical shoots turns an inexpensive, sustainable resource into a rustic-looking fence. Left natural, wattle lasts about eight years.

Similar to shown: 6-foot-tall hurdle-style panel in willow, about \$17 per linear foot for uninstalled panels; [Master Garden Products](#)



Photo: Courtesy of Master Garden Products

Fence Etiquette 101

"Good neighbor" fences look great on both sides. But for fences with visible posts and rails on the back and tidy boards on the front, be sure to face the framework toward your house. Out-facing framing is unsightly and makes the fence easy to climb, compromising your security and privacy.

How High Should a Fence Be?

Decide based on how you plan to use your fence.

Corralling kids or pets: Three to 4 feet prevents wandering but is low enough to leave the view intact and to chat with neighbors.

Enclosing a pool: Code requires 4 feet, minimum. The maximum space between pickets is 4 inches.

Maintaining privacy: Six feet, maximum. Many communities require a permit and engineering plans for anything higher.

Controlling deer: Seven feet discourages casual browsers, although persistent bucks can clear 15 feet.



Photo: Everett Collection



Photo: Courtesy of Walpole Woodworkers

How to Anchor a Post

Soil: *TOH* landscape contractor Roger Cook sets posts on a 6-inch base of ¾-inch crushed stone to encourage drainage. Then he fills around posts with the soil from the holes, minus the topsoil, and packs it down every 6 inches. In sandy soil, he mixes in gravel so that it will pack more firmly. In clay soil, which doesn't drain well, he packs only gravel around posts.

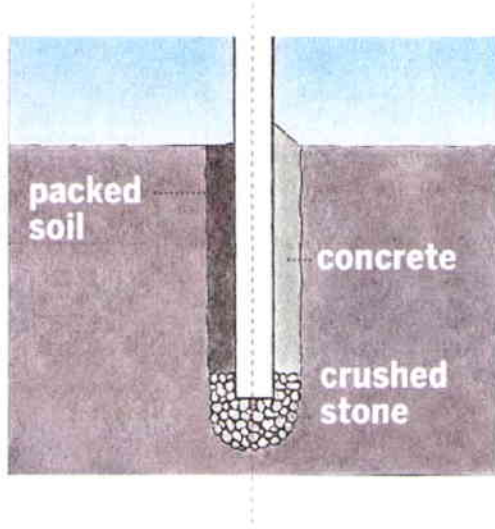


Illustration: Rodica Prato

Concrete: Roger uses concrete only for gateposts or when rock stops him from digging deep enough, one-third of the post's length. Concrete is costly—each post requires two or three \$5 bags—and slow, as posts must be braced until the concrete sets.

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How to Install a Picket Fence

Skill Level Moderate
 Depends on length of fence and hardness of soil.

about 2 hours for each 8-foot section with two posts

\$25 to \$35 for 3x8-foot section of cedar picket fencing



There are few things as warm and welcoming as a white picket fence. A properly built and installed fence can beautify a home's landscape, define property lines and add a modicum of security. Building a fence from scratch, even a short fence, takes quite a bit of time and requires an arsenal of woodworking tools.

Fortunately prefabricated fencing sections make it much easier for the average homeowner to install their own fence. The preassembled fencing panels come in a wide variety of sizes and styles, including picket, stockade, and square spindle.

The hardest part of any fence installation is digging the postholes. The level of difficulty, not surprisingly, depends on the fence length and hardness of the soil. For a short fence, use a manual posthole digger. However, if you've got more than a dozen or so holes to dig, consider renting a gas-powered posthole digger.

Tools for This Project



Level



Gibbs posthole digger, for digging 10-inch-wide holes 32 inches deep



Mason's line



7-foot tamping bar (or a 6-foot 2x4)



Shovel



7-foot digging bar, use flat end to cut roots; pointed end to pry out rocks



Drill/driver, for screwing through posts into rails



Circular saw, for trimming posts and panels, if necessary



Tarp, to hold soil dug from postholes



Tape measure

Supplies You Will Need

1. FENCING

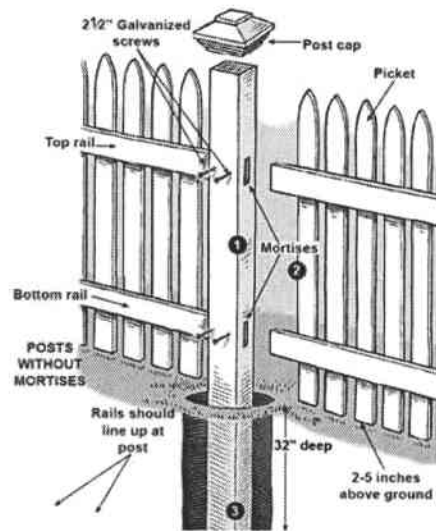
2. FENCE POSTS

3. 2 1/2-INCH GALVANIZED SCREWS

for attaching fence rails to posts

4. WOOD WEDGES FOR PROPPING PANELS IN A LEVEL POSITION

Overview



WARNING: Before you start digging, make sure to call 888-258-0808 to have all buried utility lines located and marked.

Click "enlarge this image" to view illustration labels.

Step by Step



At the first post location, dig a straight-sided 10-inch-diameter hole as deep as possible with a shovel. Watch out for wires, pipes drains, and sprinkler lines.

Finish excavating to 32 inches deep with a Gibbs posthole digger, which can maintain a 10-inch hole diameter all the way down.

Use a digging bar to loosen rocks and cut roots; discard any rocks larger than a billiard ball.

Tip: Spread a tarp to catch excavated soil.

Set a post in the hole. (If the post has mortises, adjust its height so the bottom of the pickets will be 2-5 inches above the ground.)

Add 8 inches of soil to the hole. Check post for plumb with a level held against two adjacent sides.

When the post is plumb, compact soil tightly around it with a tamping bar.

Add 8 more inches of soil to the hole. check post again for plumb and tamp around it. Repeat until hole is filled.

Tack a mason's line to the post's outside face, 5 inches above the ground.



Measure from the post to where the fence's first corner will be. Drive a stake into the ground there. Wrap the line around it 5 inches above the ground; pull tight.

Measure out from the post the length of the first panel and mark the spot with a screw.

At the mark, dig another 10-inch-diameter posthole. Offset it enough so that the post's face will touch the line.

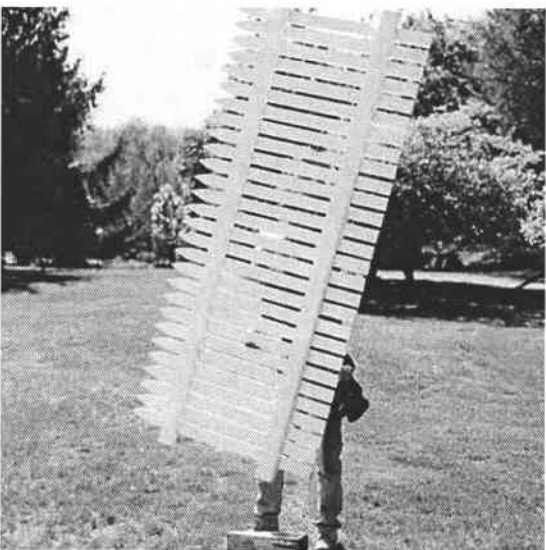


Slide the panel's rails into the post's mortises.

Prop up the panel's far end with wood wedges. Adjust them until the top rail is level.

On posts with no mortises, prop the panel so the top rail is level and the picket bottoms nearest the post are 2 to 5 inches off the ground. Screw rails to post.

If the picket bottoms at the far end are between 2 and 5 inches above grade, go to Step 6. If they're not in this range because the ground slopes, go to Step 5.



Lift the panel vertically and lightly drop the end of the bottom rail on the ground or a wood block.

Turn the panel end-for-end and drop the end of the top rail in the same spot.

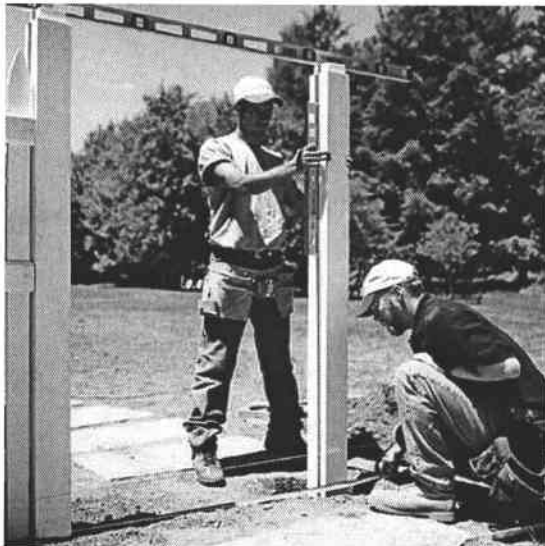
Repeat on both ends until the panel "gives".

Refit the rails to the post, then rack the panel so the pickets are vertical and their bottoms are 2 to 5 inches off the ground. Prop up free end with a wood wedge.

With the panel propped in place, put the next post into its hole so its front face touches the mason's line. For mortised post, adjust its height and slide rails into mortises.



Adjust post side to side so picket-to-post gap equals picket spacing.
Fill hole, as in Step 2. Check post and pickets for plumb.
Secure each rail with 2 1/2 inch screws.
Repeat Steps 3,4, and 6 until fence is complete.



Install first gate post (see steps 1 and 2) at end of panel.
Measure out the width of the gate, plus 1 1/2 inches. dig the hole for the second gate post at this mark.
Plant second gate post. Fill, tamp, and check for plumb.
Double-check the distance between posts and make sure the post tops are level with each other.
Install next fence panel to stabilize second gate post.



Use wedges to prop up and level the gate between the posts. Line up its pickets with those on adjacent panels.
Leave 3/4-inch gp between gate and post on each end.
Screw hinges to post and gate.
Remove wedges, check gate swing, and attach latch.
Nail caps onto post tops.