

Do It Yourself

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Steam-Bending Wood

From "[Ask DIY](#)"

episode ADI-707 -- [More Projects »](#)

Q: I'm interested in steam-bending some wood to make a rocker. How do I do this?

A: (Bruce Johnson, *Ask DIY* Woodworking expert) Steam-bent wood (**figure A**) is much stronger and less likely to break than wood that has been cut across the grain. The process isn't all that difficult for the do-it-yourself woodworker .



Figure A

You'll need a steam chamber, which is easy to make out of metal, wood or PVC pipe (**figure B**). It should be no longer than the piece of wood you'll be steaming.



Figure B

1. After you have the steam chamber, drill a 1/2" hole in the bottom and insert one end of a length of 1/2" copper tubing (**figure C**); also drill a second hole on the top of the pipe.
2. Set the pipe up on two blocks of wood with the copper tubing at the bottom and the second hole at the top. (Attach two smaller blocks of wood to each end of the blocks to hold the pipe in place. The blocks will lift the pipe so that it's higher than the source of steam (**figure D**)-- a very important consideration, since the steam will condense and the resulting water must be able to run back down into the source .
3. Don't place the wood directly on the surface of the chamber: use two small blocks of scrap wood placed on the floor of the chamber to raise the wood so that the steam can completely surround it.
4. Cap both ends of the chamber (**figure E**). Don't glue the caps -- you want them to come off easily in the event that steam builds up in the chamber.
5. Place a cork in the top opening (**figure F**). If the steam builds up,



Figure C



Figure D

it will "pop its cork" and you'll know that you need to cut back on the heat.

6. The steam source is a hotplate and a flea-market teakettle. I drilled a 1/2" hole through a length of wooden dowel (**figure G**) that fits in the teakettle's spout, and inserted the free end of the copper tubing into the hole.
7. When everything is attached, turn on the heat and the steam will travel from the kettle into the dowel and then into the chamber, where the wood is waiting to be bent. Leave the wood in approximately one hour for every inch of thickness. (You'll have to experiment -- this rule varies according to the type of wood you use.)
8. Wearing gloves for protection, remove the ends from the chamber and check the flexibility of the wood.
9. When the wood has reached the point where you can make it bend, remove it from the chamber and take it to your forming table (I made one using a piece of plywood on which I've drawn and marked with blocks of hardwood the curve I need (**figure H**) -- screw the blocks in place but leave them loose enough to turn, so they can adjust with the wood).
10. Place the board on the plywood (**figure I**), curved around the blocks, and clamp in place, starting with the middle clamp (**figure J**). Leave until the wood is completely dry -- when it has returned to its natural color.



Figure E



Figure F



Figure G



Figure H



Figure I

Q: I have a wooden privacy fence. Some of the boards are warped . Can I replace individual boards, or do I need to replace entire sections?

A : Yes, you can, but I'm more concerned about the condition of the rest of the boards -- if some are warping, the others are likely to follow suit. Here are two things you can do:

1. Put an exterior finish on the fence to control the amount of moisture that's getting into the wood.

2. Look at how the boards are attached to the fence. If they're just nailed on, consider replacing the nails with galvanized screws. They will help prevent warping.



Figure J

Q: What type of wax should I use after cleaning my wood floors? I want a nice shine, but I don't want slippery floors .

A: I'm not a big fan of wax, but if you have to apply it, apply only a thin coat, let it set up for 5 to 10 minutes, then buff off the excess. (It's the excess that makes the floor slippery.) And don't wax the stairs!

Q: I have trouble removing the pencil marks left in the wood after I make my saw cuts. What 's the best way to remove them?

A: If you want to try an eraser, don't use the one on the end of a pencil -- it will smear the marks and rub them into the wood . Instead, try a good-quality art eraser -- the rectangular pink kind. Sandpaper doesn 't work -- it pushes the graphite from the pencil lead deeper into the wood. My suggestion is lacquer thinner applied with a rag. Rub it in -- be persistent -- and it will dissolve the graphite.

RESOURCES:

Making Bentwood Trellises, Arbors, Gates and Fences

Model: 158017051X

Author: Jim Long

Making Bent Willow Furniture (The Rustic Home Series)

Model: 158017048X

Author: Brenda and Brian Cameron

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