

## Cordwood Crane Fills Wood Furnace Fast

Darrell Inkster and his wife Cathy have an easy way to load large chunks of wood into their outdoor furnace. Their double-jointed "cordwood crane" with a 17-ft. reach can swing a piece of wood in a 240° arc.

The crane consists of an 8-ft. upright with a 2-part boom. A 9-ft. boom section attaches to the upright with a swivel point made from 2 wheel hubs. A second section, about 8 ft. long, hinges to the first section with a similar set of hubs. A 12-volt winch is mounted at the far end of the boom.

"I fabricated the upright out of 4 by 4-in. sq. steel tubing reinforced on either side by 2-in. wide steel strap," says Inkster. "The strap is bridged over short pieces of 2 by 2-in. sq. steel tubing to give the upright more strength."

Inkster hinged the boom at about a 7-ft. height. He notched the 4 by 4 enough that he could mount the swivels for the first section of boom, a 1/8-in. thick, 2 by 6-in. rectangular tube.

"I used trailer wheel hubs with axle stubs to make the swivels," explains Inkster. "I cut out steel plates somewhat tear-dropped shaped with holes drilled to mount them to the hubs with lug nuts. With the beam and hubs inside the notch, I welded the stubs to the outside edge of the upright 4 by 4."

Inkster used a second set of hubs for the swivels that connect the two boom sections.

He welded the stubs to the end of the first section after mounting steel plates to the hubs with lug nuts. The plates were then welded to the two long, 2 by 2-in. sq. steel tubes that comprise the 8-ft. boom arm.

Inkster has the upright secured to a tree near his outdoor furnace. A length of chain runs from the top of the upright to a point about 2 ft. from the end of the 2 by 6 boom arm to give it support. He also attached a 1/4-in. thick, 3-in. wide steel strap the length of the second arm, bridging it slightly to give it more strength.

A 12-gauge electric cable runs the length of the boom to connect the winch with a solar panel charged 12-volt battery. A second cable with a control switch lets Inkster and his wife run the winch.

"Once the winch lifts a big chunk of log off the ground, we can walk it over to the furnace like a loaf of bread," says Inkster. "We set it down on the roller table and shove it into the furnace."

The winch has a capacity of 1,500 lbs. Inkster designed the boom to handle loads between 500 and 800 lbs. While it has a radius of 17 ft., the winch can be let out to drag chunks of wood from a greater distance.

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Darrell Inkster and his wife Cathy wanted an easy way to load large chunks of wood into their outdoor furnace. So they built this double-jointed "cordwood crane" with a 17-ft. reach and the ability to swing a piece of wood in a 240 degree arc.



Crane consists of an 8-ft. upright with a 2-part boom (left). A section with a 12-volt winch mounts at end of boom.

## Beer Keg Wood Splitter

At first glance it appears that Robert Ingerson might be having a little too much "fun" splitting wood. The Russell, Penn., man has a beer keg attached to his wood splitter.

Ingerson laughs that he doesn't drink, but he does have fun building useful things, and the 24-in. keg is there because it makes a very practical hydraulic fluid reservoir.

"It's great because it's stainless steel and has an internal baffle, and it holds a lot of oil, keeping it cool," Ingerson says.

He used a hole saw to make the top hole larger for a cap to fill the keg with hydraulic fluid. He removed the tap and made that hole larger to add a fine mesh screen and plug fitting. Then he drilled a new hole in the side of the keg to add a nipple for another filter.

The 17 hp Wisconsin 2-cycle engine that starts with a hand crank came off an old

baler. He made the front wedge out of an old locomotive shaft and purchased the 8-in. steel beam, car axle and tires ("donut" tires) from a local junkyard. Ingerson purchased a two-stage pump, and his son built the fuel tank.

The splitter has a 24-in. hydraulic cylinder for Ingerson to easily split 18-in. long blocks of wood, which fuels a wood boiler to heat his home with in-floor heat.

With a ring on the front hitch for a pentahook, Ingerson doesn't have to get off the tractor to hook up the splitter on his 3-pt. hitch to transport it.

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A beer keg attached to Robert Ingerson's wood splitter makes a practical hydraulic fluid reservoir. "It's great because it's stainless steel and has an internal baffle. It holds a lot of oil, keeping it cool," he says.



Steel plate attaches on front of rear-end rototiller. Brandt tills a long strip with the tiller in the ground and the plate up in the air. Then he puts it in reverse, lifts the tiller and goes backward to smooth out the soil. Pointed blade on front digs a seed furrow.

## Tiller Attachments Create Flat Seedbed, Furrow

"I've had this Sears rear-end tiller for years. It works great and always starts.

"My problem was getting a smooth seedbed for planting. After I tilled I would have to rake the surface to get it smooth. So I hit on the idea of attaching a piece of steel plate to the front. It's a little wider than the tiller. I made a bracket to hold it on front, using the long bolt that held the front weight to hook to.

"Now I till a long strip with the tiller in the ground and the plate up in the air. Then

I put it in reverse, lift up on the tiller and go backward, smoothing the soil flat. I added a pointed piece of steel on front to dig a furrow for planting as I made the seedbed. Depending on what I'm planting I can adjust the furrow point for wide or narrow rows and how deep it runs."

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## Heavy-Built Broadfork

"I have not used a tiller in my garden for the last 5 years, ever since I made my own broadfork," says Gary Boor, Osseo, Wis. "It worked so well my sister and brother each wanted one. I decided to make a few extras to see if anybody else would want one.

"The fork is 58 in. tall and 20 in. wide. The teeth are diamond-shaped for more strength and less weight, and are 12 in. in length. They're welded in place so that the welds double as a foot grip. The one-piece handle is the first one I've ever seen on a broadfork and it really gives it a lot of extra strength. The top crossbar is curved forward so it's in front of the user when standing on the fork and working it into the ground. It allows the user to fully grasp the fork comfortably at any angle from vertical to horizontal.

"The fork weighs between 21 and 22 lbs. and will work the soil 12 in. deep, which is deeper than most tillers. It's also easier on earthworms.

"I use it on 3 garden plots that are 25 by 50-ft. each. They sell for \$150 each plus shipping."

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Broadfork measures 58 in. tall and 20 in. wide and has 12-in. long, diamond-shaped teeth.

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