

Easy-To-Make Wood Wheels Give Hand Cart A Unique Look

Larry Williams needed a way to get his handcrafted muskets and other items into various trade shows. He wanted something just a little bit different.

So he built a coffin-size hand cart that can carry a couple hundred pounds of stuff. He fitted the cart with homemade wood wheels.

The box is 24 by 18 in. and 6 ft. long. Two 2 by 2-in. runners run the length of the box. At the center of each side, he attached a metal plate with holes drilled in it to support an axle.

To make the wheels, Williams started by cutting out two 22-in. circles from some excess plywood. He then cut four 8-ft., 2 by 6-in. boards into 2-ft. chunks. He laid them out flat on a smooth surface and applied liquid nail to one side. He pushed them tightly together and squared up the edges. He then

laid the plywood circle down on the glue and then screwed it down with sheetrock screws.

The second step required reversing the process, applying glue to the other side of the plywood and then covering it with 2 by 6's. After trimming the 2 by 6's where they stuck out beyond the rounds, even more screws were used, this time in a pattern.

Williams then began work on hubs. He located the center of each wheel and drilled holes for hubs. Each hub consists of a piece of pipe sized to fit the hole without any play. A piece of steel plate was then welded to each end of the pipe and bolted to the wheel.

To make the cartwheels even more traditional looking yet, Williams cut four wooden cleats, which he nailed in place. These gave the wheels the authentic appearance of



Larry Williams built this coffin-size hand cart and fitted it with homemade wood wheels.

wooden wheels held together by the cleats.

"The wheels were easy to make, and they work great," says Williams.

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Home-Built Log Processor

Wood processors don't come cheap at \$30,000 or more. When you've got a part-time firewood business, that's hard to justify. Lewis Legge figured he could build his own using parts put together from a multitude of different sources. He can now cut up and split two cords per hour, working with logs from 4 to 22 in. in diameter.

"I saw a picture of one and got an idea of how they work and what they do," he says. "It took me about a year to gather all the parts, about two months solid to put them together, and about \$7,000 out of pocket."

What Legge got for his efforts was the "Wood Butcher". Everything is hydraulically powered, and each step is controlled separately by a manually activated control.

Legge says his best investment was in a home study course on hydraulics. "I bought it to learn more about the subject, and I know it saved me time and money simply by not overbuilding," he says.

His plan called for two separate hydraulic systems. A saddle tank off an old semi-tractor serves as oil reservoir. One pump came off an old highway truck and does 25 to 30 gpm at 2,500 psi. A second pump pulled off a tractor puts out 25 to 30 gpm at 1,500 psi.

"With these two pumps, you need that big a reservoir just to keep the oil cool," he says, noting that a rule of thumb is a gallon of reservoir volume for every gallon pumped.

The 366 Chevy engine came off a wrecked truck, and trailer axles came from an old horse trailer. While most of the orbit motors and other parts were picked up used, Legge did buy a new hydraulic-powered chain saw bar, chain and sprocket.

"It is a very aggressive 3/4 pitch saw used on tree harvesters," he explains. "I built the oiler to supply the bar as I wanted something

that would pump old axle grease. It's nice and sticky."

Legge rigged up a hydraulic cylinder as a pump for bar oil. Using a spring on one end of the cylinder as a trigger, he set it so pulling the lever to activate the saw would also activate the cylinder. He had removed the rod, but retained the piston action. Instead of rod, the piston pulls axle grease into the cylinder through a check valve as it's retracted. On the return, it pushed grease out and onto the chain and bar.

The "Wood Butcher" sits on a frame made from I-beams. Wood is split on another I-beam that's 12 in. deep by 10 in. wide and powered by a 5-in. ram.

Logs are set on a table fabricated from 2 by 4-in. tubing, which also creates a channel for the chain on which the logs ride. The chain is old elevator chain from a Massey 21A combine. Logs are carried to a trough with a green ash bed and more paddle elevator chain that conveys the logs to the chain saw. Separate orbit motors power each set of chains.

A flexible rod hanging in the path of the log signals to Legge that the correct length has been reached for sawing. A small hydraulic cylinder moves the chain saw into position and down through the log while a high-speed orbit motor powers the chain.

When the chunk falls into the splitting box, Legge can adjust the splitter with one cylinder before activating the 5-in. ram.

The large hydraulic pump supplies the chain saw and the splitter, while the smaller one handles all the individual orbit motors and cylinders.

"There is a chunk going through the splitter about every 10 seconds," says Legge, who says all the time and effort was well worth it. "Bending over logs with a chain saw is a fate



Lewis Legge built this log processor for about \$7,000.



Log processor is powered by a Chevy 366 engine that came off a wrecked truck. It drives a hydraulic-powered chainsaw bar.

worse than death. This thing handles every kind of tree from cottonwood to ash and cedar."

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Deere Garden Tractor Cab

Raymond Nance, Springfield, Ohio, made a cab for his 2001 Deere 335 garden tractor so he can work in comfort when clearing snow during the winter.

The cab is made entirely from galvanized sheet metal and has a single door and big plexiglass windows on all sides so the driver has a great view. The plexiglass windows are screwed into metal frames from the outside so they can be easily removed if they ever crack or break.

He used angle iron to make the cab's frame, which bolts onto metal brackets on the tractor. By removing a wing nut, he can slip the front of the cab off so he can raise the hood. Foam rubber around the fenders keeps cold

air out of the cab. "With sheet metal doors and plastic windows, the cab is lightweight. In fact, by removing four bolts one person can use a chain to lift the cab straight up and off in almost no time at all," says Nance.

L-shaped brackets on back of the tractor support a set of weights.

"The cab doesn't have a heater, but the windows are big enough that sunlight helps heat up the cab during the winter. The main thing is that it keeps the wind off me," says Nance.

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