



William and Linda Dueck say the home-built stairway and catwalk on their Deere 787 air seeder is a lot easier to use.

Deere Air Seeder Fitted With New-Style Stairs

William and Linda Dueck tried for two years to get their Deere dealer to replace the ladder on their Deere 787 air seeder. They wanted an easier-to-use stairway and platform. They found it awkward to climb the original ladder, especially carrying a pail or tools.

Eventually they turned to local metal fabricating shop owner Todd Dennis and told him the kind of stairs and catwalk they wanted.

"I think I spent more time looking and thinking about what they wanted, than the actual time it took to build it," says Dennis. "After they brought the tank cart here, I made a lot of trips out to the yard with a tape measure before the final design was worked out."

He placed the lowest step right below the lock arm and saddle where the loading auger rests on the back corner. This was also the starting point for the original ladder so the

new step has the same 18-in. ground clearance as the original ladder. The Duecks can easily reach and lock the loading auger from this step.

The steps go up at a 45-degree angle, a 6-ft. run of 8-in. steps, reaching the platform at the right rear corner of the tank. The 8-ft. long platform goes forward along the right side of the tank. "I made the guardrails to match the height and material of the factory railing," says Dennis. "It's important to stay close to the original design features."

As a finishing touch, Dennis put a low handrail around the outside of the top lids, for the operator to grip while opening the lids and he positioned a narrow expanded metal step half-way up the tank, above the platform.

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Levi Larson used side rails from the frame of an old car to make the lift arms on his front-end loader. It's mounted on his Allis Chalmers B tractor.

Home-Built Loader For Allis Tractor

Levi Larson, International Falls, Minn., used scrap steel salvaged from the frame of an old car to build a front-end loader for his 1950 Allis Chalmers B tractor.

"I built it five years ago. It works great," says Larson.

Side rails from the car frame were used to make the lift arms. He bent them to the desired shape and reinforced them with 1/4-in. thick steel plate. He used 4 and 3-in. dia. steel pipe to make the rest of the loader and 1/4-in. thick steel to make the bucket. A pair

of 2 1/2-in. dia. hydraulic cylinders are used to raise and lower the loader and a 2 1/2-in. dia., 20-in. stroke cylinder is used to tilt the bucket, which is 28 in. wide. Five spears extend about 8 in. beyond the front edge of the bucket.

"The loader has a lift capacity of about 1,000 lbs.," notes Larson.

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'Tree Jack' Lets You Fell Trees Right Where You Want Them

Getting a tree to fall down right where you want it isn't always easy. Arlan Lothe, Adams, Wis., solved the problem by building a "tree jack" that lets him precisely control which way a tree drops.

The 76-in. long "tree jack" consists of a heavy duty screw jack attached to pieces of square tubing. A four-fingered steel "claw" is welded to the top and a 24-in. length of channel iron is welded to the bottom to serve as a base. A handle attached to the top piece keeps the jack from turning when cranking the jack.

To fell a tree, Lothe cuts a notch in it on the side where he wants it to fall. Then he sets the jack against the other side of the tree at about a 45 degree angle. Then he cuts into the tree opposite the notch, leaving about a 1 to 1 1/2-in. wide "hinge". He then extends the screw jack to push the tree over.

"It lets me fell a tree on a dime and saves a lot of time and hassle," says Lothe. "I came up with the idea when we were cutting down large pine trees for use in building a log cabin. The pines constantly got hung up as they fell in the surrounding woods. If a tree was growing off center or was loaded with branches on one side, that's the way it fell. I tried using my loader tractor to push the trees over in the direction I wanted, but in most cases I couldn't get to the tree. I needed something more mobile. I tried using several types of hydraulic and mechanical jacks, but nothing worked.

"The jack has up to 8 in. of travel. However, in most cases I only have to extend the jack about one inch - which is about the same as making three arm movements - before the tree starts to fall over. The jack



Lothe's 76-in. long "tree jack" consists of a heavy duty screw jack attached to pieces of sq. tubing. He extends the jack to push tree over.

exerts about 10,000 lbs. of force. I've used it to push over trees up to 30 in. in diameter."

Lothe is looking for a manufacturer. In the meantime, he says he's willing to build units for sale at a price of \$275 FOB.

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Ground Water Helps Heat Rural North Dakota Farm

When heating fuel prices went sky high last winter it didn't bother Don and Georgine Pollert, Litchville, North Dakota.

That's because their home is heated by an economical thermal ground water heat pump that's been saving them money for the past 20 years. Shortly after the Pollerts built their house with the heat pump system incorporated into it, FARM SHOW ran a story reporting that their heat costs were less than \$80 a month (Vol. 7, No. 2).

At the time they used an open system, pumping water from a well near the house, extracting heat from it, and discharging it into another well about 130 ft. away.

"That system worked well for several years," Don Pollert says. "Seven years ago, the discharge well wouldn't take water anymore. It overflowed and ran across the yard."

At that point, they redesigned the system to use a closed loop, pumping water through a series of underground pipes from four different wells to the heat pump and back again.

"The pump and heat exchanger we had wasn't able to work with a closed loop, so we had to replace them, too," he says. Cost of the switchover, including drilling the wells, was about \$7,000. Unlike the open loop system, though, the closed loop system should need nothing more than minor maintenance for years to come.

He says the cost of operation for the new



Don Pollert has saved thousands of dollars over 20 years by heating his home with water run through underground pipes.

system is about the same as the old one. "Our electricity costs are about \$2.40 a day during the heating season," he says. He has no other heating costs except maintenance on the system, which is virtually zero. There is a backup electric heat jacket to provide heat for the house in case the heat pump system shuts down, but Pollert says it's hardly been used.

"We're well satisfied with it, but for some reason we're still the only ones around here who use this for home heat. A couple of commercial/industrial buildings in the area are using heat pumps," he says.

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