

Holding Bin Has An Underground Hopper

Arvin De Cook needed a wet corn holding bin to feed his grain dryer. He built his own 4,800-bu. bin out of two 18-ft. bins that were given to him by a neighbor. Instead of putting the bin up on a hopper bottom, he set the bin on a concrete cone buried underground.

"I put the entire bin up for less than \$1,000," says De Cook, of Sully, Iowa. "A new above-ground hopper bottom bin of comparable capacity would have cost \$10,000 or more. What's more, with an underground cone, the bin stands only 25 ft. tall so I didn't need a new auger to reach the top of it.

"To build a conventional hopper bottom bin, I would have needed a concrete foundation to set the legs on anyway. So I asked myself, why not dig a hole, make a concrete cone, and set it underground?"

A circular concrete footing was poured first and the bin's bottom ring was anchored to it. The footing extends about 2 ft. above ground. A 12-in. dia. plastic aeration tube runs around

the perimeter of the footing. Dirt was removed from the center to form a cone-shaped hole. Then an unloading auger was inserted through the bottom ring of the bin and into the bottom of the hole. Concrete was then poured over the auger tube to form a 40-degree sloped cone. The unloading auger carries grain to an elevator leg that feeds the dryer.

A series of 4-in. dia. aeration tubes hang down over the sloped sides of the cone. The tubes hook into the 12-in. dia. aeration tube. The bin's roof and seven more rings were put together and attached to the bottom ring.

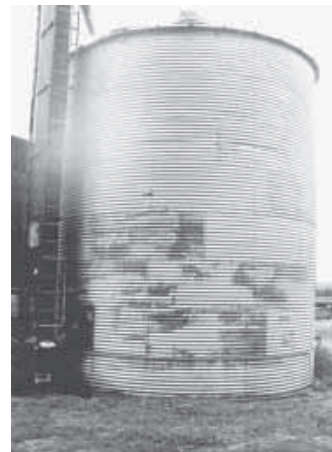
"I built it several years ago and it has been trouble-free," says De Cook. "Sometimes during harvest I'll fill it 25 or 30 times. One advantage of the design is that it maximizes storage space. When you use a bin with a flat floor, the corn empties out until it will no longer flow down into the center of the bin. But there's still about 1,500 bu. along the bin walls. You can keep refilling the bin and add



Above photo shows aeration tubes that extend down into cone. Elevator leg next to bin, right, carries grain to dryer.

more grain on top of that 1,500 bu. But if you only have a small 4,800-bu. bin like mine, you're losing about one third of the bin's capacity. Because of the underground cone, my bin empties out completely. And because the hopper is made of concrete, it'll never rust.

"An underground cone like mine might not be practical on a large bin, because the hopper would have to be much bigger. But it



works great with a small holding bin," notes De Cook.

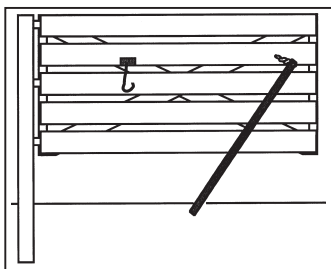
Contact: FARM SHOW Followup, Arvin De Cook, 9658 Hwy. F 62 E, Sully, Iowa 50251 (ph 641 594-3438).

Simple Gate Holder

"Here's a simple gate holder that will keep a gate from swinging shut when you want to drive through," says Donald Bunch, Aberdeen, Miss.

"A piece of pipe is tied on near the end of the gate with a piece of chain or wire. And a hook is mounted near the center of the gate to hold the pipe up when not in use. When you want to hold the gate open, you swing the pipe down onto the ground to wedge it open."

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To hold gate open, swing the pipe down off hook and wedge against the ground.

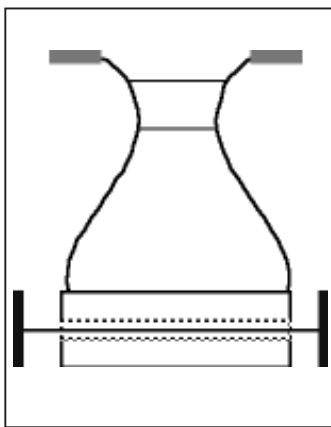
Magnetic Floor Sweeper

Marcel Pekerek, Foley, Minn., made a portable magnetic floor sweeper by mounting the magnet from an old grinder-mixer on wheels, allowing him to quickly pick up nails and small pieces of metal over a large area.

He bolted a 2 by 4 lengthwise on top of the magnet and then attached a 1/2-in. dia. metal rod lengthwise on top of the board, leaving 3 in. of rod extending beyond each end of the board. Two push-type lawn mower wheels fasten to the ends. Then he bolted a lawn mower handle to the board.

"It worked great for picking up nails after we shingled our house, and our neighbor used it for picking up metal after they cut up a bunch of scrap iron," says Pekerek. "I built it out of material I already had. Commercial models like mine sell for \$50 to \$100."

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Sweeper picks up nails and scrap iron.

Pint-Size Tractor Drills 12-In. Holes

Gene Sanders' 14-hp lawn tractor doesn't look like much but Sanders found the Power King tractor has plenty of power to dig 12-in. postholes. And rigging up the tractor to handle a full size posthole auger cost Sanders less than \$200.

"I picked up an old Deere 12-in. auger for \$50, added a hydraulic cylinder to the 3-pt. hitch on the Power King for added lift, and picked up an old automotive 3-speed transmission," recalls Sanders. "I did have to shorten the 3-pt. arms on the auger about a foot to fit the tractor."

The 3-speed transmission serves multiple purposes. The tractor didn't have a pto, but it did have a 5-in. dual V-belt drive pulley with electric clutch. Sanders ran the belt to a

second pulley on a pto shaft he mounted under the tractor. Because he had to reverse the pto shaft direction, Sanders bolted the 3-speed to the frame and connected it to the shaft. A second shaft ran from the transmission to the post hole auger.

"To start digging, I put the pto transmission in reverse," explains Sanders. "If I get hung up on a rock, I just put it in first gear and draw it out of the hole."

Although the pto speed is less with the garden tractor than it would be with a full size tractor, digging has been no problem. With four 200-lb. weights on the front of the tractor, Sanders can put over 1,000 lbs. of downward pressure on the auger using the 3-pt. hitch.



A bank of 4 valves controls the center section and each wing. Plastic guard prevents drifting and holds flowers out of herbicide's path. Left wing in photo is up.

No-Drift Sprayer Keeps Lawn Weed-Free

"We have a lot of flowerbeds in our yard and we haven't had any damage to them since I built a custom spray bar for my lawn tractor about 5 years ago," says Roger Arney. "Because the spray bar is in the front, it's easy to see exactly where the herbicide is being applied. Herbicide placement is so accurate I only have to use half the recommended amount most of the time."

The spray bar is controlled by a 4-bank valve that controls the center section, each wing, and there's a complete shutoff," says Arney. "A plastic spray guard prevents drifting and also holds flowers out of the

herbicide's path. In narrow areas the side wings fold in to the sides. The plastic shield is flexible so that obstructions or uneven ground don't bother it.

"After two years of spraying I only need to do selected spots. I can cover a couple of acres in an hour," he says. "The sprayer was so successful that I've started doing the town's football field and a 10 acre park."

Arney would like to find a manufacturer. He has blueprints and a complete parts list.

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Rigging up tractor to handle posthole auger cost less than \$200.

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