



Unroller's hinged turntable pivots 90 degrees forward or backward and has a threaded spear in the middle. The operator stands on a steel platform on one side of machine.

"IT'S BUILT TOUGH ENOUGH TO HANDLE HEAVY SILAGE BALES"

SP Bale Unroller Built From Old Car

"It works great for transporting and feeding high-moisture round silage bales inside my dairy barn," says Pierre Lafrance, Sarsfield, Ontario, about the self-propelled bale unroller he made out of a 1981 Chevrolet Chevette car.

The unroller has a hinged turntable that pivots 90 degrees forward or backward and has a threaded steel spear in the middle. The operator stands on a steel platform on one side of the machine. To operate the unroller, Lafrance tilts the turntable backward to spear a bale. He then tilts the turntable forward to raise the bale off the ground and drives into his tie-stall barn where he rotates the bale to feed it out. If the bale is frozen or hard to unroll, a hydraulically-operated, side-mount arm is used to peel off the bale as it rotates.

After he's done unrolling hay into the feed alley, he uses a fork to push the loose hay in front of the cows.

"I think the same idea would work with any car or even a pickup. A 4-WD model would be ideal because it could go almost anywhere. A front wheel drive car would probably work better than my rear wheel drive model."

He stripped the car down, keeping only the front suspension, steering gear, engine, automatic transmission, and rear end. He built a newer, shorter frame out of 2-in. sq. tubing, and then removed the driveshaft, direct-coupling the differential to the transmission. The turntable with threaded spear mounts on a hinge at the back of the frame. It's powered by a hydraulic motor that's

driven by a hydraulic pump belt-driven off the engine. He repositioned the steering system and mounted a U-joint on the steering shaft in order to bring it up vertically to the car's steering wheel. He also made up new shifter linkages, a brake pedal, and a gas pedal. A 3-lever valve next to the steering wheel is used to operate the hydraulics. There are three hydraulic cylinders - one to tilt the turntable, one to rotate it, and one to operate the side-mounted arm.

"The car's 4-cyl. gas engine has plenty of power and the automatic transmission lets me drive slowly," says Lafrance. "My 4 by 4-ft. silage bales weigh about 1,000 lbs., although I've also used it with 4 by 5 dry hay bales."

Lafrance used 1/8-in. sheet metal to make the turntable and welded a 1/2-in. dia. steel rod around it for reinforcement and so that the edges wouldn't be so sharp. He used a 2-in. dia. steel shaft to make the spear and welded steel bracing onto the turntable. The spear is supported by two pillow block bearings. To make the spear's "thread" he bent 1/4-in. dia. steel rod around the spear and spot welded it on. The turntable's hinge is formed by a steel pin that goes through two pieces of flat steel and a square steel bar.

He used 2-in. sq. steel to make the side arm's frame. The hinge is formed by a round steel shaft that rotates inside a 2-in. dia. steel pipe.

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Turntable is powered by a hydraulic motor that's driven by a hydraulic pump belt-driven off the engine. With two in-line mufflers the unit runs quiet.



Cart's 16-in. dia. unloading auger can reach down to within 3 ft. 11 in. of the ground for unloading into hopper bottom augers.

AUGER SWIVELS UP OR DOWN 45° SO YOU CAN LOAD INTO BOTH TRUCK AND AUGER HOPPERS

New-Style Grain Cart Unloads High Or Low

"Our new 800-bu. grain cart is equipped with an unloading auger that swivels 45 degrees up or down, allowing it to reach up to 13 1/2 ft. high or down to within 3 ft. 11 in. of the ground. Works great for unloading grain into hopper bottom augers as well as trucks," says Jack Degelman, Degelman Industries, Regina, Sask.

The pto-powered "Shuttlekart" has a 12-in. dia. auger along the bottom of the hopper that feeds into the 16-in. dia. unloading auger up front which is fitted with a hydraulic cylinder that pivots it up or down.

"A 10-in. dia. spout on the end of the unloading auger restricts grain flow to reduce spillage," says Degelman. "Grain can be unloaded at a rate of 200 bu. per minute,

allowing you to unload a full cart in only 4 minutes. The amount of grain flowing into the auger inside the hopper is controlled by a hydraulic-controlled apron. Lowering the shield all the way down completely closes off grain flow to the auger so that even with a cart full of grain there's no load on the pto when you start it."

Options for the cart include a tarp and weigh scale.

Price of the Shuttlekart had not been determined at press time.

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"Tumbling" Parts Cleaner Made From Hot Water Tank

Carl Fountain, Hill City, Kan., used a 30-gal. hot water tank to make a "tumbling" parts cleaner that's powered by a 1/2 hp electric motor.

The 19 in. dia., 4 ft. long tank mounts on an old 3-wheel welding cart.

"I used mostly junk parts so it didn't cost much to build. Commercial units sell for over \$1,000," says Fountain, who uses the cleaner to remove dirt and grease from old alternators and generators that he rebuilds for sale.

He flattened one side of the tank where he cut a 12 by 18-in. hole and welded 1 1/2-in. angle iron frame around it. He used 1/4-in. thick sheet metal to make a lid which bolts onto the frame with six bolts. Rubber stripping forms a seal between the lid and frame. He welded a stub shaft onto each end of the tank and added self-centering bearings that mount on steel flanges off an old Deere combine. The flanges bolt onto channel iron uprights at each end of the welding cart.

The electric motor bolts onto a platform on the cart and belt-drives a gear reduction box equipped with a 2 1/2-in. dia. pulley. The gearbox belt-drives an 18-in. dia. pulley mounted on one of the stub shafts on the tank. A timer switch off an old clothes dryer controls the length of clean-



ing time.

"It takes 10 to 30 minutes to clean all the parts depending on how clean the solvent is," says Fountain. "About 30 to 40 lbs. of small nuts, bolts, nails and staples remain permanently in the tank to provide rubbing action against the parts. I keep about 10 gal. of solvent in the tank which makes about 30 revolutions per minute. If it went any faster all the parts would be thrown to the sides of the tank and stay there instead of tumbling around. If it went slower there wouldn't be enough cleaning action."

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