

“Lazy Susan” Turntable For Hopper Bottom Bins

Unloading grain from hopper bottom bins into 5-gal. buckets can be backbreaking work, because you have to continually bend over to place buckets under the center of the bin. Kenneth Swindle, Sarcocixie, Mo., solved the problem by putting together a “lazy susan” turntable like you’ll often find in kitchen cabinets.

The turntable bolts to the side of the concrete pad under a bin and holds up to 10 buckets at a time.

“It eliminates the need to get down under the bin. I just set the buckets on the turntable, rotate it to fill, and then rotate it back out to bring the filled buckets back out to me. There’s much less back strain when lifting a bucket next to you than lifting one under the center of the bin,” says Swindle.

An 18-in. long piece of 1 1/8-in. dia. pipe extends about 1 in. above the concrete. A 1-in. dia. shaft on the bottom of the 4-ft. dia. turntable fits into it. Curved pieces of strap iron welded to the top of the turntable hold each bucket in place.

“It takes only about two seconds to fill each bucket,” says Swindle. “I use the bin to hand feed weaned calves. It cost me less than \$50



“Lazy susan” turntable bolts to side of concrete pad under bin and holds up to 10 buckets at a time. “There’s much less back strain when lifting a bucket next to you than lifting one under the center of the bin,” says inventor Ken Swindle.

to build. My turntable works faster than using a load-out auger and is also safer because there are no turning shafts or augers to get caught in.”

The idea was a finalist in the National Farm Bureau invention contest.

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Home-Built Drywall Jack

Putting up drywall on a wall or ceiling can be quite a job, especially if you have to work by yourself. Harry Scott solved the problem by building his own drywall jack.

“It’s a real time saver,” says Scott, of Walsenburg, Colo. “I came up with the idea because I was building an 18-ft. dia. round fruit cellar and had to put up the 7-ft. high ceiling by myself. I had to do a lot of scribing work to get all the panels to fit. My home-made drywall jack let me take my time and do the job right, without straining myself.”

The jack rides on four small castor wheels and consists of an adjustable, 1 1/4-in. length of thin wall sq. tubing that fits inside a length of 1 1/2-in. sq. tubing. The inside tube has holes drilled into it to match the teeth on a sprocket that’s operated by a hand-operated crank. An angle iron frame welds to the top of the adjustable tubing and a 2 by 4 frame screws to the top. To put up a sheet of drywall on a ceiling, Scott places the sheet on top of the wooden frame. A pair of 2 by 4’s with metal brackets at the bottom hang down from one side of the frame and are used to place sheets along walls.



“My home-built drywall jack is especially useful on 12-ft. long sheets of drywall, which are almost impossible for one man to put up,” says inventor Harry Scott.

“It’s especially useful on 12-ft. long sheets which are almost impossible for one man to put up,” says Scott. “My total cost was less than \$165. Comparable commercial jacks sell for \$500 or more. I put a positive lock brake on the jack so it won’t accidentally ratchet back down.”

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Powered Snowblower Spout

Dan Woodworth uses a 3-pt. mounted snowblower to clear his long driveway in snowy northern Michigan. The snowblower originally came equipped with a hand-operated crank to change the direction of the blower spout. But after he put a cab on his tractor he could no longer use the crank. So he replaced it with a small 12-volt DC winch, which he can control from the cab.

He bolted the winch on top of the blower and ran a cable from the winch around the spout. A 7/16-in. bolt with a 1/2-in. pipe on it is used to guide the cable. A 12-volt switch in the cab is used to control the winch.

“It works slick. I can flip the switch forward or reverse to move the spout in the desired direction. It took only a few hours to rig up. I spent about \$150 on parts, most of which I bought new at a local farm supply store,” says Woodworth.

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He installed a small 12-volt DC winch, which he can control from the tractor cab.



Dan Woodworth replaced the hand-operated crank on his 3-pt. snowblower with an electric winch he controls from the cab.



Trevor Shute used a 10-in. squirrel cage exhaust fan and a 4 hp Briggs & Stratton engine to build trailer-mounted leaf blower. He pushes it ahead of his riding mower.

Giant Leaf Blower Cleans Yard Fast

Trevor Shute, Guelph, Ontario, used a 10-in. squirrel cage exhaust fan and a 4 hp Briggs & Stratton engine to build a trailer-mounted leaf blower that cleans leaves like nothing you’ve ever seen.

Shute pushes the unit ahead of his Massey Ferguson riding mower. “I use it to clean leaves off my 2-acre lawn each spring and fall,” says Shute. “The blower runs at about 3,000 rpm’s so it has a lot of force. It’ll blow pine cones off the yard, and we also use it to clean sand and salt off our asphalt driveway.”

He mounted the blower and engine on a frame that he made from 2-in. sq. tubing. It rides on three 10-in. pneumatic castor wheels.

The discarded exhaust fan came from a recently renovated cafeteria. The fan was originally operated by an electric motor that belt-drove the fan at 600 rpm’s, which was too slow for use as a yard blower. So he removed the motor and replaced it with the Briggs & Stratton engine. The engine chain-drives the fan via sprockets and a double roller chain. He used small steel shims to get the engine to line up perfectly with the blower

shaft and then bolted the two units together. He then made up a throttle cable that runs back to the tractor.

He used two pieces of 1-in. sq. tubing to build a hitch that connects the blower assembly to the tractor. The two pieces mount parallel to each other, with a bolt inserted through each piece and into brackets on front of the tractor. The two bolts serve as hinges and allow the blower to follow the contour of the ground.

The last step was to paint the entire assembly Massey Ferguson red.

“I start on one side of my lawn and just go back and forth,” says Shute. “The leaves eventually end up in an adjacent field. The castor wheels make the unit easy to steer, and it turns quite short. I got the idea one fall as I was using an electric leaf blower to clean up leaves on our lawn. I got tired of raking and blowing and carting off the leaves and realized there had to be a better way.”

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Photo shows three flat plate collectors mounted on back of Verburg’s shop. He plans to add six more collectors soon.



New Kind Of Flat Plate Solar Collector

An Alberta farmer-inventor says he’s come up with a new design for flat plate solar collectors that he says eliminates the biggest problem people have had with solar heating systems in the past.

Harold Verburg says a typical closed-loop system continuously circulates an anti-freeze solution through the collector panels. The problem is that it’s hard to shut them down in the summer since the fluid is continuously exposed to the sun. When the anti-freeze fails, it becomes acidic and somewhat sludgy, and can damage components. So, many people set up solar panels based on what they need in the summer, not the winter.

Verburg came up with a new “drainback” idea that allows fluid to drain out of the collector when the pump stops. “This eliminates the stagnation of the fluid. It also eliminates freezing of the fluid during winter when the pump stops. The biggest advantage is you can

add as many collectors as required for the winter load and not be concerned with getting rid of all the excess heat generated in the summer. The system is self limiting and requires virtually no maintenance. And, we can use distilled water which is cheaper and less of a hassle to use.”

The drainback system is electronically controlled, connected to thermostats. Verburg heats his shop and domestic hot water.

He has ten 4 by 8-ft. panels on his shop wall that heat the 3,000-sq. ft. building. A 12-gal. drainback tank is located inside the building.

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