

Bale Unroller Built From Combine Final Drive

A Nebraska farmer says he's come up with an inexpensive way to make his own round bale unrollers. He uses junked final drives salvaged from old combines.

"They work just as good as commercial bale unrollers and cost much less," says Roland Hemmann, Amherst, Neb., who so far has built 15 of the 3-pt. mounted bale unrollers for farmers in his area.

Hemmann cuts off a final drive from one side of the axle leaving a 5-in. long stub and then welds the assembly to a frame that lets him mount the unroller on a 3-pt. hitch. He then bolts a hydraulic motor onto the 3-pt. frame and couples it to the splined final drive stub shaft that previously connected up to the combine's transmission. The hydraulic motor is powered by the tractor's remote outlets. He bolts a 42-in. long spear onto the hub of the final drive where the wheel originally mounted, using the same wheel rim bolt holes. He uses a hydraulic lever in the tractor cab to operate the motor and unroll bales on-the-go.

"They work great. I've had very few complaints," says Hemmann. "I sell them for \$350 to \$400 whereas similar commercial bale unrollers cost up to \$1,200. I buy the final drives from dealers for about \$50. I salvage the hydraulic motors from old center pivot irrigation systems to help keep the cost down. Another advantage is that my bale unrollers don't have any chains or sprockets where they can get tangled up. The bale can be unrolled in either direction by simply reversing direction of the hydraulic lever.

"I built it after a friend needed a bale unroller and asked me if I could build one cheap. I saw a junked out final drive from an old combine and figured that if it was strong enough to handle the weight of a



combine, it would be strong enough to unroll a bale. Most of the final drives I use are from International 101 and 303 combines or from Deere 45, 55, and 95 models. However, final drives from even the smallest combines will work. Final drives from newer model combines may be too heavy for the 3-pt. hitch. I make most of my unrollers for Cat. II 3-pt. hitches, but I can also make them for quick hitches. By unbolting the base of the spear and bolting on a wheel rim equipped with an adapter, the bale unroller can be converted to a wire unroller. A car wheel rim works fine for unrolling or rolling up electric fence wire while a combine wheel rim works good on bigger wire."

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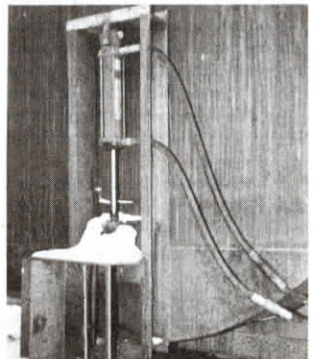
Slurry Wagon Built From Old Fuel Tank

"There are a lot of old fuel tanks around that can be had for the taking because of environmental concerns. This is a great new use for them," says Harlan Anderson, Cokato, Minn., who turned an old underground fuel tank into a 4,000 gal. slurry wagon.

"Commercial slurry spreaders have become so expensive they're difficult to justify financially. Several years ago I was involved in a salvage effort of a trucking terminal and a number of underground tanks needed to be disposed of. I kept a 6-ft. dia., 30-ft. long tank which was made out of heavy thick-walled steel.

"We cut off half of the tank and installed a baffle inside. Then we closed it up by welding an end on to it. A loading port was installed on top of the tank as well as a sliding gate valve at the back end. A hydraulic cylinder opens and closes the gate and manure is spread by 5 stainless steel fins as it pours out of the tank by gravity.

"We built a frame from scratch to carry the tank and fitted it with two large 28 by 26-in. tires. We decided to use two large wheels rather than smaller tandem ones because we had noticed that the larger single wheels on our grain cart seemed easier to pull in soft fields than the small tandem wheels on other equipment. The



single wheels are also easier to turn.

"Four steel straps hold the tank in a saddle on the frame. When the tank rusts out, we'll just remove the straps and set in a replacement tank. I think we'll be able to get all the tanks we need in the future as aging gas stations and truck terminals replace their old tanks. This design works great because the only moving part is the slide gate so there's virtually no maintenance. It cost less than \$5,000 to build and we can remove the slurry tank in the fall to install a grain box for harvest."

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Front-Mount Disk Gang Levels Out Plowed Ground

A Wisconsin farmer says he's come up with an inexpensive way to smooth out the ride when he makes the first pass on fall plowed and chisel plowed ground the first time over in the spring. He mounted the rear half of an old disk on front of his 4-WD tractor.

Jeff Steinacker, who farms near Hortonville, salvaged an old Massey Ferguson 12-ft. disk equipped with 20-in. blades. He cut the rear gang off and narrowed up the frame so it's just wide enough to level the ground ahead of the tractor tires.

"It lets me go faster and cover more ground," says Steinacker, who pulls a 45-ft. field cultivator behind the tractor. "It also saves wear and tear on the tractor,

especially on the steering and hinge joints."

Steinacker used 2 by 2-in. sq. steel tubing to build a hitch to mount the disk on the tractor. A single-acting 8-in. hydraulic cylinder raises and lowers the disk. A pair of lift chains run through pulleys at the front of the tractor. A "pusher" frame runs from the main disk frame to the front rear end of the tractor.

Steinacker also replaced the disk's single seal bearings with triple-sealed bearings to keep dirt out.

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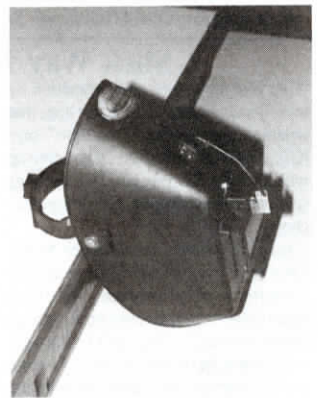
"No-Hands" Welder's Helmet

A simple movement of his chin automatically opens or closes the visor on Dwight Alley's homemade battery-operated welder's helmet. "It's a lot easier than raising the entire hood with my hand and it lets me keep both hands on the job for faster, more accurate welding," says Alley, of Moro, Ore.

He cut a square hole in the top of the helmet and mounted a servo motor (borrowed from a remote-control airplane). A rod connects the servo motor to a metal bracket mounted on the visor. A 4.8-volt battery is mounted inside the top of the helmet and a microswitch is mounted at the bottom.

Alley lowers his chin to activate the microswitch which retracts the rod to hold the visor in the closed position. When he's finished welding he lowers his chin again and the lid opens up.

"It takes the servo motor only one second to open or close the lid. I drilled three holes in the bracket on the visor so that I can adjust how far the visor will open or close. I've used the helmet frequently



during the past year and only had to recharge the battery once," says Alley, who notes that wiring from the battery to the microswitch is held in place by small clips. He spent \$47 to make the helmet.

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