

"BIG SNAKE" HANDLES SIX AT A TIME

Slick Way to Haul Big Round Bales

By Don McCabe

Building a "better mousetrap" is a never-ending process when it comes to handling hay bales.

Gary Woerman, Oakland, Neb., may just have the latest innovation: The "big round bale snake" for handling big, round bales.

When empty, it looks more like a flat-bed trailer minus the floor. But this simply designed, 38-ft. rig, with few moving parts, can load and unload up to six big round bales in nothing flat, all by just one operator.

It's designed to be pulled by a tractor, on a two-point hitch, or by a pickup, with a goose-neck hitch, for over-the-road hauling. Behind a pickup, the bale snake and its load move smoothly down the highway without any problems.

Woerman, a 28-year-old with a graduate degree in ag engineering from the University of Nebraska, designed the bale snake last summer after watching his father, Marion, pick up scattered big round bales with a forklift attached to a small tractor. "He didn't always have the time to remove all the bales before the next hay cutting," Woerman says. "I figured there had to be an easier way."

There is now, in the form of Woerman's prototype hay snake. He's applied for a patent and has received approval for a patent-pending classification.

Woerman, who has moved to Illinois to take a job with International Harvester, and his father have been negotiating with a local manufacturer to make the hay snakes.

The main components, and the key to the operation of the hay snake, are two 6-in. dia., heavy-duty pipes (see accompanying photo) that both lift and carry the load. An axle and wheel are attached to each pipe, and mounted to each wheel is a 20-in. recapped truck tire. Just forward of each wheel is a brace pipe which keeps the main pipes from spreading.

Operation is as simple as the design. Rotation of the pipes in one direction by a hydraulic cylinder causes the pipes to rise up on their wheels. Rotation of the pipes in the opposite direction allows the pipes to settle back to just above the ground, which twists the wheels out at an angle of about 45°. "It's like two augers pivoting toward each other," is how Woerman describes the pipe action.

The main pipes do not move laterally in or out in either the lifting or lowering phase, so the distance between them remains the same. The main pipes are spaced just far enough apart to carry the bales.

You can pick up either one bale or any number of bales up to the maximum number allowed.

"When the bales are already aligned for me," Woerman says, "I can back into them, lift them and take off in about 30 seconds. And it's a one-man job."

To unload, you lower the snake to



Photos courtesy Nebraska Farmer

"Snake" shown backed under six bales. Activating the cylinder will twist the main pipes outward, pulling the wheels upright to lift the entire rig.

ground and simply pull it out from underneath the bales.

Without the gooseneck hitch, the bale snake is 31 ft. long. With the hitch, the rig is 38 ft. long. These main pipes extend to about 2 ft. back of the wheels. From that point, another slightly smaller diameter pipe, with an end that angles outward and upward, fits into each of the larger pipes.

The snake, according to Woerman, can carry five 5-ft. by 6-ft. or six 5-ft. by 5-ft. big bales.

For the largest round bales, the main pipes are spaced 54 in. apart. That spacing can be adjusted downward to 48 in. when smaller round bales are used.

For long hauls, the goose-neck attachment for a pickup is the best bet. "You'll need only the tractor if you only move bales from field to farmstead or vice versa," Woerman says.

When taking the snake and its load down the road, Woerman attaches a chain across the back of the last bale to make sure it doesn't slide out.

When using the pickup, a second cylinder is required, this one on the gooseneck hitch, to raise and lower the front end of the snake so the entire snake rises and falls at the same rate. With a tractor, the two-point hitch accomplishes this same task.

It's a 3,000-lb. rig without the gooseneck hitch. With that hitch,



"Snake" lowered to the ground, ready to be backed into the line of six bales pictured above.

which is attached with only three bolts, the snake weighs about 3,400 lbs.

To make the prototype, Woerman spent about \$2,500 for materials and labor. A welder in Oakland pieced it together for him. Another \$500 was spent to make the gooseneck hitch. Manufacturing plans have not progressed far enough yet to determine a selling price.

For more information, contact: Marion Woerman, Rt. 1, Oakland, Neb. 68045 (ph 402 685-5905).

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Gooseneck attaches to the "Snake" with just three bolts at locations indicated by arrows.

TILT TO PROVIDE ACCESS TO ENGINE

Fenders For "MFWD" Tractors

First on the market with tilt-down front fenders for mechanical front-wheel drive tractors is K and M Mfg., Renville, Minn.

The all-metal (14 ga.), Mud-Guard fenders keep mud and dirt from messing up the cab and windshield, plus they add class and style to the tractor. They're equipped with a step for climbing onto the tractor, and a hinge which allows them to be tilted forward and out of the way in seconds to provide unobstructed access to the engine.

Mud-Guard fenders are stationary in that they mount independent of the front wheels and don't steer with the wheels. However, they're adjustable in and out to match narrow (30-in.) or wide (40-in.) spacing of the front wheels.

Available in matching colors for most MFWD tractors, the fenders retail for \$495 per pair.

For more information, contact: FARM SHOW Followup, K and M Mfg., Box 409, Renville, Minn. 56284 (ph 800 328-1752; in Minnesota, call 800 992-1702).

"GRAIN SENTRY"

Combine Hopper Alarm

"Grain Sentry" is a new combine bin sensor and light that warns you when the bin is full and about to overflow.

"The Grain Sentry benefits combine operators who can't see clearly into their combine's grain tank, or operators who do a lot of night harvesting. It lets you concentrate on other things besides how full the bin is," says Bob Walton, production manager for Walton Rebuilding, Delphi, Ind.

The 3% by 4½ in. pressure sensitive grain sensor bolts to the side of the bin at whatever height desired. As grain pushes against the sensor, a light on the steering column in the cab lights up.

Walton says the Grain Sentry works with all crops and fits any combine. Marketed through John Deere dealers, or factory direct, it sells for \$49.75.

For more information, contact: FARM SHOW Followup, Walton Rebuilding, R.R. 4, Box 113, Delphi, Ind. 46923 (ph 317 564-2990).