

# Made It Myself

(Continued from previous page)



## Utility Tractor Built From Airplane Mover

"It works great for sweeping windrows into piles and for plowing snow. I use it all year long," says Grover Thompson, Alliance, Neb., about his home-built 4-WD, 4-wheel steering "haysweep" which he built from a junked-out Coleman mover designed to tow military airplanes.

Thompson paid \$700 for the 1950's-era Coleman and installed a 90 hp 4-cylinder Izuzu diesel engine as well as a 4-speed Chevrolet transmission and the transfer case from an M37 Army 3/4-ton pickup. To harvest loose hay, Thompson mounted a 12-ft. wide home-built haysweep in front. It's equipped with 8-ft. long teeth which allows him to "sweep," or push, windrows into large piles. He then uses a Caterpillar equipped with a home-built forklift to dump the piles into a steel cage on wheels.

"It works fast and with 4-WD and 4-wheel steering it can get around much better than a conventional tractor equipped with a commercial push-off haysweep," says Thompson, who made the "Fuzzmobile" with the help of his friend "Fuzzy" Weare. "It goes up to 50 mph on the road and the diesel engine is fuel efficient. Many ranchers in our area mount haysweeps in front of old trucks or M37 army pickups and reverse the transmission rear axles for 4-WD, but their rigs don't have as much power or weight as mine and they don't have 4-wheel steering. The 4-WD and the large 11.00 by 20 tires work great on our soft sand and in our meadows. The haysweep pushes piles of hay up to the cage. A hydraulic cylinder controls up and down movement of the sweep. It takes about 12 piles to fill a cage which we use to form stacks. When we've filled the cage up with hay we open up the back side and pull the cage away from the stack. In the fall we use a 7-ton stack mover to move the stack to the yard for feeding."

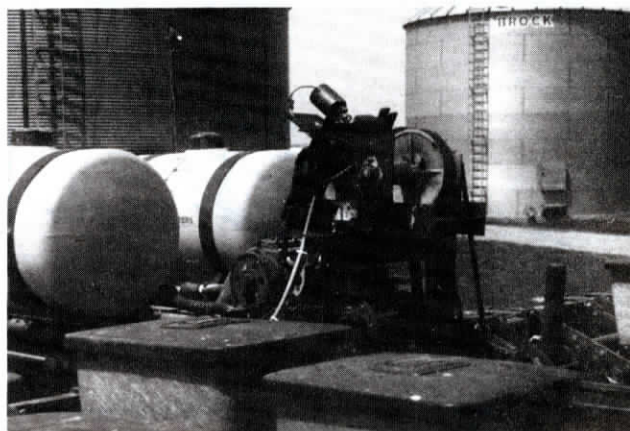
In the winter Thompson installs a cab and replaces the haysweep with a 9-ft. wide snowplow made by Diamond Mfg.,



Lewiston, Maine. The hinged, two-section snowplow can be set to plow in a V-shape pointing forward or backward, in a straight angle, or diagonally to either side. All adjustments are made hydraulically right from the cab. "The snowplow really comes in handy for feeding cattle," says Thompson. "I use it to clear a path through snow as I pull a pellet cake feeder and ear corn dump wagon. Both the cake feeder and dump wagon are also operated hydraulically from the cab, allowing me to feed pellet cakes and ear corn on the ground on-the-go."

Grover and his brother Harold modified a Caterpillar 920 wheel loader, equipping it with a home-built forklift to lift piles of loose hay and dump them into the 17 ft. sq., 11-ft. high cage. They installed dual tires and turbocharged the engine, then used 3 by 6-in. steel tubing to extend the loader arms 6 ft. They built a 12-ft. wide "push-off" haysweep equipped with 9-ft. long teeth and mounted it onto the extension arms. A hydraulic cylinder pushes the rear end of the haysweep forward to push hay off the teeth. "The Caterpillar can lift four times as much hay as a tractor equipped with a commercial push-off haysweep and it can lift it much higher, up to 18 ft. By pulling four pins we can remove the haysweep and replace it with a bucket."

Contact: FARM SHOW Followup, Grover Thompson, HC33, Box 22, Alliance, Neb. 69301 (ph 308 762-1356).

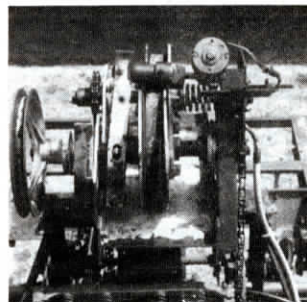


## Variable Speed Planter Rate Control

"My variable speed planter control allows infinitely variable population changes from 19,000 to 35,000 seeds per acre," says Gene Myers, New Richmond, Ind., who built his own planter control with the help of Merle Verden, mechanical engineer and consultant from Crawfordsville, Ind.

Key to success of Myers' plant population control is a pair of variable speed pulleys salvaged from a New Holland combine. The pulleys mount one ahead of the other on a platform above the planter transmission. The planter drive chain runs up to a sprocket that turns the front pulley. Power is transmitted to the rear pulley by a belt. The rear pulley drives a sprocket that chain drives the planter sprocket cluster via a new drive sprocket that mounts on the end of the original sprocket cluster, which is left intact and is used as part of the planting drive train. Myers can change planter rate on-the-go with an electric-powered linear actuator connected to the front variable speed pulley. Controlled by a switch in the cab, the actuator moves one of the sheaves on the split pulley to change speed of the pulley and also of the output drivechain down to the planter. Holding the switch in the "up" position increases the planting rate according to the length of time the switch is held. Holding it "down" decreases the planting rate.

"I wanted an inexpensive population rate changer offering infinite changes for my highly variable soils," says Myers, who has used the unit to plant about 1,600 acres. "Most commercial population changers allow only two settings, high and low, and they cost up to \$3,000. My unit cost only \$800 to build and it allows me to plant anywhere from 19,000 to 35,000 seeds per acre. Without making changes on the sprocket cluster originally used to make population rate changes. My goal is to plant and fertilize according to soil grid maps. Varying the population by soil type instead of planting at one rate



boosts yields and also saves money on seed. If anything ever goes wrong with the planter control I can simply remove the add-on equipment and reinstall the original drive chains. I carry them on the tractor with me."

The linear actuator that controls the speed of the variable speed pulleys is equipped with adjustment stops that let him change plant population at will within the 19,000 to 35,000 population range. There's a 5-second delay before the monitor in the tractor cab shows a change in population rate. To obtain a faster reading, Myers and Verden attached a pointer to a lever bolted to the linear actuator that they can see from the tractor. "Glancing at the position of the shift lever gives me an approximate estimate of the planting rate before the planter monitor has time to respond," notes Myers."

Verden says the planter control, designed to use on a Deere 7000 planter, could also be adapted to White Field King planters, which use a similar type of population drives. "I doubt if it'd work on an IH Cyclo planter."

Myers says the unit cost \$800 to build and is willing to custom build units.

Contact: FARM SHOW Followup, M.L. Verden, 4 Del Mar Drive, Crawfordsville, Ind. 47933 (ph 317 362-1471) or Gene Myers, Rt. 1, Box 132, New Richmond, Ind. 47967 (ph 317 275-2714).

## "Slow Down" Drive Wheel For Sweep Augers

When Kansas farmer and machine shop operator Max Day got tired of replacing the drive wheels on sweep augers in his grain bins, he sat down and designed a "slow down" wheel with a compact 126:1 gear reduction drive.

"It's 5 in. in dia. and 4 1/2 in. long and can be adapted to fit any existing sweep auger. It was a challenge to design be-

cause it consists of 4 sprockets and two pieces of double chain. It's a compact, self-contained unit," says Day, who notes that the wheel walks the auger slowly around the bin rather than spinning in its tracks which kicks up dust and wears out the wheel.

"I have one in a 90-ft. bin on a 45-ft., 7-in. dia. auger sweep auger. It works

great," says Day, who's begun selling the wheel assembly for \$88. Fits any sweep auger.

Contact: FARM SHOW Followup, Max Day, Day's Welding & Repair, 315 W. 6th., Washington, Kan. 66968 (ph 913 325-3268).

