

FARM SHOW

**“Made
it
Myself”**

Some of the best new products we hear about are “made it myself” innovations born in farmers’ workshops. If you’ve got a new invention or favorite gadget you’re proud of, we’d like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so, where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors?

Harold M. Johnson, Editor



Photo courtesy Des Moines Register and Tribune

“Mini” Semi Is Exact Replica Of Real Thing

“It’s something I always wanted to do,” says Jim Cowell, McGregor, Iowa, who hand-built a “mini” semi truck and trailer to 1/4 scale. The only difference between it and a regular rig is its size. It’s licensed and insured to drive on the highway, and is the headline attraction in a dozen or more parades every year.

Patterned after a 1971 Ford tractor-trailer unit, the “mini” semi is made of parts salvaged from old cars, trucks and other sources. The engine and first transmission are from a jeep, and the second transmission from a Chevy truck. Two transmissions allow the vehicle to move at crawl speeds in parades without overheating. Top speed

on the road is 40 mp. The frame, along with the front and rear axles, come from a 1-10 GMC.

The trailer, also built 1/4 scale, features a sliding tandem axle. It’s 4 ft. wide, 18 ft. long, 2 ft. deep and holds 112 bu. of grain. Dollies on the trailer are from a house trailer and are connected by a roller chain and tandem axle.

“I figure I’ve got approximately 2,000 hrs. of labor and \$3,000 in parts and materials invested in the rig,” says Cowell. That price includes a few extras, such as a CB. “It took me about a year to build it,” says Cowell, a former truck driver and blacksmith who now works for an elevator company in McGregor.



Build Yourself A Tractor

Canadian farmer Matt Sattler, of Wilcox, Sask., built his own 4-Wheel Drive tractor tailored to fit his needs. “My operation consists of straight small grain production on flat, heavy clay prairie land,” he told FARM SHOW. Instead of shelling out a lot of money for a factory-built tractor with features he felt he didn’t need, he cut costs by building his own 4-wheel drive

tractor engineered for his specific needs. “I didn’t need a pto, for example, nor a 3 pt. hitch or on-the-go shifting. To accent flotation, I wanted a low weight-to-power ratio.”

Major components include a 4-71 N series Detroit diesel engine by General Motors, rated at 160 hp. at 2,100 rpm, and giving an estimated drawbar hp. of 120. A 14 in. twin-disc clutch

connects the engine to an R-96 Fuller 10 speed transmission — a Road Ranger model commonly used by various heavy truck models about a decade ago. The power divider is from an off-highway, 4-wheel-drive 4 ton truck and has a link-belt silent chain running in oil to give high efficiency and low temperature power division to each of the front and rear axles.

Axles are from a 2 yard, 4 wheel drive loader of an early model, but with planetary hubs. Dual wheels are attached by 4 set-screw bolts per wheel. They have no spacer rims, leaving completely open centers for mud to fall through to prevent any buildup.

In designing his home-built tractor, Sattler paid special attention to making it easy to service and maintain. The engine hood tilts upward and locks without disturbing air intake and exhaust stacks. The under-hood dry type air cleaner pivots out for servicing. The en-

gine oil filter pivots away from the engine and frame, making it easy to reach. Batteries slide out on trays from the front fenders. These service items, as well as the radiator grille and a 12 sq. ft. dust cover over the rear half of the articulated frame, have finger operated fasteners.

“The entire tractor frame was fabricated progressively from front to rear to provide clear, functional attachment of all units in the tractor makeup,” Sattler explains. “Proper distribution of weight on the front and rear axles was attained by detailing frame construction carefully.”

Sattler notes that his home-built tractor “works great and has made it easier to contend with the time and cost factors of operating the power source for a prairie grain farm.”

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