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## Homebuilt Ice Gouger Improves Traction

Steve Ferrante doesn't salt or sand his icy driveway. He uses an ice gouger to rough it up for better traction. His homebuilt tool fits on the 3-pt. hitch of his Ford 27-hp. tractor.

"We have a 500-ft. long driveway that goes downhill to the main road, and just walking on it to put down sand or salt was dangerous," he says. "I feel this simple and inexpensive-to-build tool could be a help to other FARM SHOW readers," he says.

Like the stump grinder he built (FARM SHOW Vol. 31, No. 6), the frame is an inexpensive 3-pt. hitch carry-all that he purchased from a farm supply store. To make it an ice gouger he used 3-in. angle iron and five old railroad spikes with the heads cut off. Two 1/4-in. bolts secure each spike on the angle iron. A wooden frame holds four

cement blocks for added weight and pressure.

"It could be built heavier duty and with 1-in. hardened spikes," he says, noting he sharpens the spikes a couple of times a season to make it through Gaylord, Mich., winters.

Two 3/8-in. bolts secure the ice gouger's angle iron frame to the carry-all, so it's easy to put on and take off. When not in use, Ferrante stores the gouger on one of his homemade dollies.

"I spent about 5 hours building it and it cost \$25, not counting the carry-all that I already had," Ferrante says. "This is one of the simplest things I've made, and it works well."

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Heron's original plan was to build a smaller cart, but he decided to expand it to add a longer steering shaft. He installed an old 70 cc Honda clone, electric-start engine from a scrapped quad to power the runabout.

## How He Built This Custom Runabout

When Michael Heron's grandkids saw a picture of a go-cart he had built for his son, they became excited and begged their grandfather to build one for them as well.

"I couldn't say no, so that's how this 'runabout' got its start," says Heron. "The plan was to give it to the grandkids when they got bigger."

He began with old bed rails for the frame, which he covered with fitted plywood body pieces. He wanted something inexpensive for wheels, so decided on bicycle rims and tires. For the hood, he salvaged an old lawn tractor hood and cut it to the right size and shape.

Heron's original plan was to build a smaller cart, but he decided to expand it to add a longer steering shaft. He installed an old 70 cc Honda clone, electric-start engine from a scrapped quad to power the runabout. It came with a centrifugal clutch that wouldn't engage the wheels until it was throttled up. A drive chain, jackshaft and sprocket system were assembled to drive the wheels. He connected a

cable to a foot pedal for easy throttle control.

For braking, he used bicycle coaster brakes linked by a shaft to a non-driven wheel.

"It's not designed for speed but if you're gentle with it, the brakes slow it down all right," Heron says. "The steering system was simple as well with a basic steering mantle on the front."

Heron used IBC tote metal for the seat frame that his wife Leonie covered with cut-up pieces of a canvas tote bag. The cushion uses thick foam for a softer ride.

As one grandchild asked for green color and another wanted yellow, they decided on a combination for the color scheme.

Heron estimates the finished runabout cost him about \$200 as he already had most of the major pieces lying around. His biggest expense was a \$40 battery.

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## Self-Agitating Cattle Oiler Needs No Power Source

Thirty years ago, Chris Sandoval came up with a new design for a cattle oiler, but it took his son Cassidy's persuasion to finally get the marketing ball rolling. Chris took out a patent on the oiler and has been traveling the country promoting the equipment ever since.

"The Escoba cattle oiler, named after the Spanish word for broom, doesn't require any power," says Sandoval. "It just sits in the pasture and is self-applicating. Cattle rub on it causing it to agitate as they scratch. This agitation moves the liquid in the tank around and it kicks off oil which runs down through the brushes and lands on the animals."

The roller side frame supports are 2-in. piping with the upper crossbar 2 1/2 in. Skid pipes are capped for easy transport around a pasture or pen. The floating poly tank can be set at three convenient levels to work on anything from small calves to large bulls. Its full weight adds enough downward pressure for excellent application of insecticide to an animal's hide.

"Cattle can safely push them around," Sandoval says. "I built them as heavy as I can to make them portable, plus sturdy enough they won't get overturned."

Small holes are drilled into the top of the tank providing an outlet for the insecticide. As livestock agitate the oiler, liquid runs down the side of the tank and into the specially designed, chemically resistant, upper horizontal and vertical side brushes.

"The oiler doesn't do anything until the animals rub on it and start moving it around," Sandoval says. "Farmers just need to keep the tank relatively full. It will still kick out oil when it's 1/4 full and the holes are small enough it won't waste product."



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The Escoba cattle oilers are manufactured in Sioux Falls, S.D., and are available anywhere in North America.

Units come complete with a hardware kit and sell for \$1,175 plus S&H. A weld-on side gusset plate for added support and strength is optional.

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"I ended up using Toro zero-turn lawn mower individual trans-axles so I could spread the frame a bit and made some linkage to tie the two drive motors together," Hadler says.

## Half-Scale Road Grader

When George Hadler was growing up on a North Dakota farm, he loved riding with his father while using their pull-behind road grader. These experiences inspired him to build his own version after he retired from his welding business.

"I took a picture of a grader off the internet that had some dimensions and figured I'd build one half size," says Hadler. "I tried to draw it half-scale on a piece of cardboard but ended up designing it full size and just kept changing the angles to get it where I wanted. Then I just started cutting tubing."

The grader is all steel with the front frame made from 3/16-in. walled, 5-in. square tubing. The rear frame is 2 by 5-in., 3/16 and 3/8-in. walled. He found a 5-ft. blade that fit perfectly and installed 12-in. tires normally used on Bobcat loaders.

A local windshield company cut the windows to size after he supplied them with patterns.

Hadler bought a new 19-hp. Briggs & Stratton single-cylinder engine with a bottom

electric clutch to run the hydraulic pump so it wouldn't turn while starting the engine. Valves and cylinders came from a nearby surplus center. One cylinder rotates the blade while the other side shifts it.

"I ended up using Toro zero-turn lawn mower individual trans-axles so I could spread the frame a bit and made some linkage to tie the two drive motors together," Hadler says. "I didn't want to put in a regular steering box with a shaft running down the side of the frame, so I found one used on drag-type cars and dune buggies with a center steer rack and pinion. It's manual but steers easy."

Hadler estimates he put about \$10,000 into the mini road grader over the few months it took him to build. He uses it on his driveway and recently ran it in their town's 4th of July parade.

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