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## Mini Tractor Made From Scratch

"I love those early 1900s steel wheel gas tractors like the Rumely Oil Pull, Fairbanks Morse 15-25 and the International friction drive, but they're rare and expensive to own, so I decided to build my own mini tractor," says Shawn Strunk, a Wichita, Kan., machinist and manufacturing engineer.

Strunk began without specific drawings but had planned it all out in his mind, knowing he'd use an Economy 1.5-hp. hit-and-miss engine, built in 1920 and sold by Sears Roebuck, to power his scaled-down tractor.

Strunk fabricated everything but the engine and the gears.

Six months after he started, the 1,000-lb. finished tractor, which measures 3 ft. wide by 8 ft. long, clearly resembled a model of early 1900s gasoline tractors. Now, it puts along in parades at 3 mph.

Strunk and his two children have driven it in parades in Colwich, Mount Hope and Yoder, Kan. He also shows it at Kansas threshing bees in five different towns and at the Kansas State Fair.

The tractor is built on a frame made of 3-in. channel iron. The engine is mounted mid-body, driving a working manual clutch resembling one from a Case steam engine. The transmission has one forward gear and one in reverse. Strunk says, "The clutch and sliding gear transmission probably took the most time to sort out and figure out how to build. The friction clutch uses two "shoes" made from Basswood that engage inside the clutch drum. Power is transferred from the clutch to the transmission via a large roller chain."

The tractor has a differential from a Deere 110 garden tractor that transfers the motion to each rear wheel. The bull gears are from a Stover water well pump jack.

Strunk made the wheels out of oil field pipe on his shop-built turntable, powered by a variable-speed gear motor. This allowed him to position a plasma torch to slice the wheels to the desired width.

The rear wheels are 24 in. in diameter by 7 in. wide, and the front wheels are 16 in. in diameter. He used the same jig to make the center hub and weld in the steel spokes. The wheels have rubber treads to resemble lugs on the rear and bands on the front, so they won't damage concrete or paving while driving.

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very well and adds detail to the tractor, similar to large radiators on full-size tractors.

The wood bunkers on the tractor's rear serve as seats and hold the ignition battery and supplies such as oil and grease. Steering is done with a shaft that extends to a worm gear below the tractor's frame. That turns a chain roll shaft running width-wise under the frame. Strunk says many early gas and steam tractors used this type of steering. The steering wheel is an old hand wheel from a J.I. Case threshing machine.

Strunk says the engine has a simple make-and-break ignitor, which was common before the modern spark plug. Two electrodes inside the cylinder mechanically make contact via the engine exhaust push rod and charge up the ignition coil. The points rapidly release to create a hot spark and ignite the fuel. He starts the engine by spinning the flywheels while choking the air intake to draw fuel into the cylinder. "Once it's primed, it takes just one or two pulls on the flywheels to get it started," Strunk says.

A black pipe funnels the engine's exhaust up and away from the driver. "The engine makes a very nice heartfelt thump and hums along very smoothly," Strunk says. He and his kids love driving it, and paradegoers find the small tractor fascinating.

Contact: FARM SHOW Followup, Shawn Strunk, Colwich, Kan. (inventive.machine@gmail.com).

## Rock Picking Pays Off With Iron Meteorite

It took 15 years, but a "rock" Jim Koch picked from his Wisconsin field is finally getting the attention it deserves. The rock is a 110-lb. iron meteorite that scientists estimate fell to the earth more than 250 years ago.

Koch found it in 2009 while picking rock before planting alfalfa and oats.

"It was unusual looking, and I usually have an idea of what rocks will weigh when you pick them up. It was just extremely heavy," he says. It sent a metal detector "through the roof."

Koch's brother-in-law, Joe Zanter, happens to be a metallurgical engineer and shared Koch's excitement about the rock. Zanter hacksawed off a piece for testing. Despite contacting several scientists, no one seemed interested. It turns out they get many requests to check out rocks that are not meteorites.

No one showed much interest even after the sample was documented in 2015 as a rare IVA iron meteorite by the Robert A. Pritzker



**It's called the Vienna Meteorite, named for Vienna Township where it was found, also echoing the name of Koch's farm, Vienna EqHo Farms. It's the only meteorite recorded from Dane County.**

Center at the Field Museum in Chicago. With the meteorite wrapped in a piece of old carpeting in his garage, Koch took up the project again in 2023.

"In 2019, I had a health situation, so I'm in a wheelchair and have time on my hands," he says, noting he also continues to manage

his farm's 200-head jersey dairy operation. Through internet research, he discovered the meteorite could be sold for a lot of money at an Arizona auction. He also learned that the University of Wisconsin Madison Geology Museum was about 20 minutes from his farm. He called and talked to scientist Noriko Kita and told her he thought it would be worth her time to check out the "rock" at his farm. Four days later, she, another scientist, and the museum director joined Koch and his wife, Jan Shepel, and Zanter and his wife, Laurie, at the farm.

"They were like little kids at Christmas," Koch recalls. "It made their day when I said they could take it back with them."

After verifying its authenticity, Koch and his wife had to decide what to do with the meteorite. Sell it for a good chunk of money to a bidder who would likely cut it up to resell it. Or, receive a lot less money and have it displayed in one piece at a nearby museum.

"Money isn't everything," Koch says. "We thought it would be so much cooler to go see it and have it there for kids to see and study. This will put the museum on the map."

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Koch says the carpet it was wrapped in may have helped the meteorite stay in good condition and avoid excess rusting. It's larger than the rest of Wisconsin's meteorites put together, and the museum is working on creating a permanent display case for it.

"We're thrilled with how 'our' meteorite ended up finding a home in Madison, where as many as 60,000 people who visit the museum each year will get to see it," says Shepel, Koch's wife.

Contact: FARM SHOW Followup, Jim Koch, DeForest, Wis. (janshepel@tds.net).

## Giant Wooden Trolls Found In Minnesota

"Trolls in D.L." is a creative project that blends art, nature, recycling and puzzle solving, requiring mental and physical activity. These gigantic trolls won't be found under bridges. Leif, the 36-ft. troll, is the tallest of five giant trolls made of recycled wood and other items hidden on public land around Detroit Lakes, Minn.

According to volunteers with Project 412, a nonprofit group dedicated to cultural and economic development who coordinated the project, there are plenty of places to "hide" them in the lush forests around 412 lakes in a 50-mile radius.

The adventure begins with Alexa, a Detroit Lakes City Park troll, and a giant wooden book with clues to find a "Golden Rabbit." The website, [www.project412mn.org/trolls-dl](http://www.project412mn.org/trolls-dl), provides information on where to find the trolls.

The giant sculptures are the brainchild of Thomas Dambo, a Danish artist who created trolls in several countries as part of his recycling message, which includes his book "Trash, Trolls & Treasure Hunts." A Project 412 member saw his work in Breckenridge, Colo., and recognized the attention it brought

By Dee Goerge, Contributing Editor



**Danish artist Thomas Dambo created giant trolls to create awareness for recycling.**

to the area. The group decided to go big with the idea.

"Thomas says it's his most ambitious project because it has the most sculptures in a concentrated area and has the largest troll," says Amy Stoller Stearns, Project 412's executive director. After coming to Detroit Lakes with his wife in 2023 to find suitable locations, Dambo and his crew built the heads, hands and feet of the trolls in Denmark.

The rest of the bodies were built onsite with lumber sawed from trees cut from

a nearby highway project, pallets, and other waste wood gathered around Detroit Lakes. The Golden Rabbit was inspired by a visit to the city's waste facility. Dambo found broken yellow plastic boxes that had held parts at BTM, a local metalwork manufacturing company. About 2,000 were salvaged, disassembled, and power-washed by Sentencing to Service workers before Dambo and his team returned in 2024.

"We had over 300 volunteers to help build the trolls," Stoller Stearns says, including people from other states who heard about the project. Under Dambo's direction, his crew and volunteers also pieced the yellow plastic pieces to create the rabbit and made 800 birdhouses and three "portals" in local communities that are part of the clues in the treasure hunt.

The storyline is about "cooking up an elixir for a better life" by being good to the planet. The clues are challenging for people who enjoy puzzles. For those more interested in hiking on trails and seeing the trolls, general locations can be found at a link at [www.visitdetroitlakes.com/explore/discover-trolls-in-detroit-lakes](http://www.visitdetroitlakes.com/explore/discover-trolls-in-detroit-lakes).



**Over 300 volunteers came together to help build the giant trolls.**

Contact: FARM SHOW Followup, Project 412, 806 Summit Ave., Detroit Lakes, Minn. 56501 (ph 218-844-4221, ext. 122; hello@project412mn.org; [www.project412mn.org](http://www.project412mn.org)).