

It took Arnold Green three years to finish this half-size working model of a 20 hp Advance Rumely steam engine. It has one speed forward and one speed reverse.

Built-From-Scratch Steam Engine

Arnold Green of Smithville, Mo., recently finished making a half-size working model of a 20 hp Advance Rumely steam engine. He machined almost all of the parts himself.

This was no small undertaking. It took three years to finish. "I learned a lot of what I know from my dad, Pat Green, who's 80 years old now and still builds stuff. In fact, he helped me with this latest engine," Green says. "Both my dad and grandfather did a lot of work with these engines, and that's how you get steam in your blood. It's a hobby that I really enjoy."

Green also credits Tom Turnbull of Leavenworth, Kansas with providing a bit of help on the most recent engine. Turnbull himself has built four model steam engines of his own, he says.

"There are two full-sized engines here in the area where I live, so I made many trips to take measurements and digital pictures," Green says. "I made it as close as possible to the big one as I could."

The rig has one speed forward and one speed reverse and reaches a maximum of 2 mph.

According to Green, most of this engine

was made out of scrap steel, except for the boiler material. He wanted to ensure it would be safe, so he purchased the proper grades of steel and had the boiler welded by professionals.

"Our family has been going to steam shows since 1958. My dad used to build all kinds of things to take to the shows, including a steam car," he says. "Dad also built a half-size sawmill that we pull with the steam tractors or the Waterloo Boy, and we use it to make furniture lumber. We saw cedar lumber to make cedar chests, and things like that. It gives us something to do at the steam shows we attend. You need to make them work — they have to earn their keep. If they don't work, they're no good."

Arnold Green estimates that he has invested between 3,000 and 4,000 hrs. into building the most recent steam engine. He thinks it weighs between 4,800 and 5,500 lbs.

He's currently painting the wheels and engine red and the boiler black.

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Easy-To-Move 3-Wheeled Mobile Grill

"I call it 'meals on wheels,'" says Gene Rosenberg, who mounted a charcoal grill on a wheeled chassis complete with cargo basket that holds his food before and after he's grilled it.

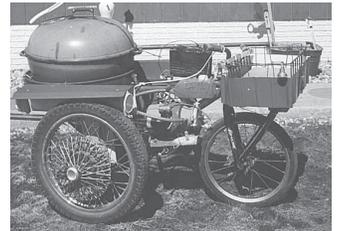
The frame of the mobile grill is a boy's bike with two small motorcycle wheels on back.

Rosenberg cut 3 in. off a 50-gal. barrel to make a ring that holds the grill. He fashioned fenders out of leftover metal roofing.

For fun, he mounted a "motor" (actually a garbage disposal) and wiring, a battery, gas tank and exhaust pipe on the grill. "People think it runs, but it's just for show," he says.

Rosenberg says the best thing about it is that he can easily move the grill around as needed.

"I would never get rid of it," he says. "My wife and I just love it."



Rosenberg mounted a motor, battery, gas tank and exhaust pipe on the grill. "People think it runs, but it's just for show," he says.

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1917 Self-Propelled Combine Restored To "Like-New" Condition

"As far as I know it's the oldest self-propelled Holt hillside combine in existence," says Jim Heater of Silverton, Ore., about his restored 1917 Holt combine. It was one of the show stoppers at the recent Northwest Ag Show in Portland, Oregon.

The machine dates back to 1917 and is a model 24 hillside, self-propelled unit built by Holt Mfg., Stockton, Calif. It cost less than \$2,000 new.

"At the show, a number of older people climbed on top of the machine to have their photos taken with it. Some of them said they had fathers or grandfathers who had operated these machines when they were very young," says Heater.

"Holt self-propelled combines were produced from 1917 to 1921, with a total run of just 308 units. There are only 10 of these machines still around and only four are restored and operational. The other three restored Holt hillside combines are in California, South Dakota, and Kansas."

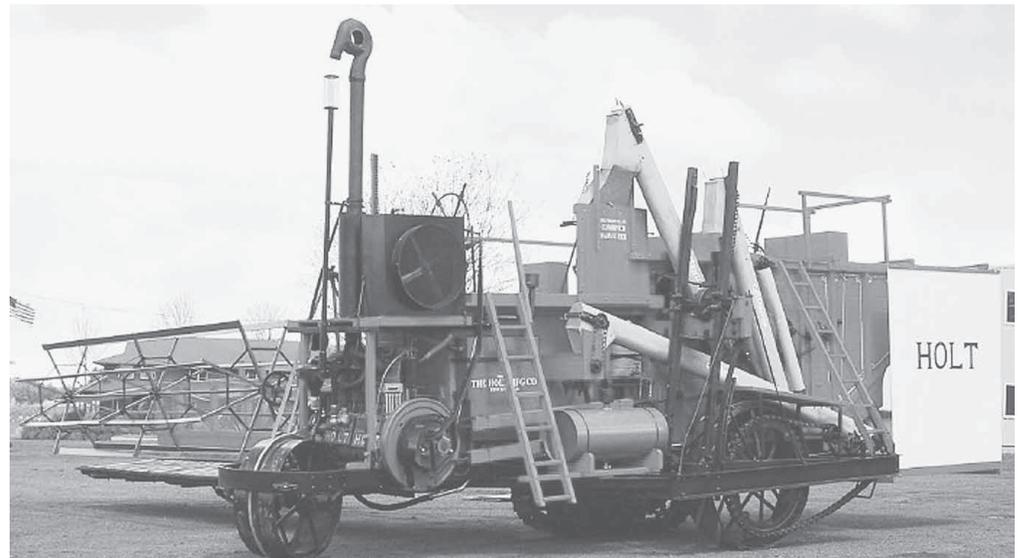
The 12-ton machine, which can handle hill-sides up to a 35 percent grade, was restored using engine serial numbers and old photos.

"Everything is as original as we could make it," says Heater.

The header on the combine is 18 ft. long. There are 50-lb. counterweights on a yoke at the rear of the header that allow the operator to counterbalance the header.

Except for traction and engine parts, the model 64 is all wood, most of which was either missing or rotting away when Heater bought the machine.

Until a few years ago, the old combine resided in a field near Spokane, Wash., where it had been put out to pasture and had settled



Self-propelled model 24 Holt hillside combine dates back to 1917. It cost less than \$2,000 new. Yet, it took Jim Heater's employees more than 1,800 man hours to restore. "The combine had been sitting in the same fence row for more than 35 years," says Heater. "It took four months to negotiate a sale and then another two years before we actually moved it home."

into the ground. Heater found out about the combine from a friend and dug it out. The restoration, which was done by several of Heater's employees, took more than 1,800 man hours.

"The combine had been sitting in the same fence row for more than 35 years," says Heater. "It took four months to negotiate a sale and then another two years before we actually moved the combine home."

Benjamin Holt was a former wagon builder who began building wooden ground-powered "traveling thrashers" in the late 1800's. The combines were pulled by 35 to 40 horses and four men were needed to operate it.

Holt patented his hillside combine in 1891. He received a patent for the original self-propelled combine in 1908, but production did not begin until 1916. He later began to build all-steel combines around 1924.

In 1925, Holt merged with the Best Company to form Caterpillar. Caterpillar continued to build steel pull-type combines in both hillside and prairie models until 1935, when the harvester business and all the patents were sold to John Deere.

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