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World's First Truck Recreated From Picture

The world's first truck was built in 1893 by Gottlieb Daimler, a German automotive pioneer also credited for the first motorcycle (1885) and the first taxi (1897). Bill Eggers made an amazing working reproduction of the truck working from a picture.

"I usually start with available specifications and pictures that I blow up and measure to scale," says Eggers, who had previously built a reproduction of one of the world's first motorcycles, a steam-powered rig built in 1867. "If I know the size of the wheels, I can estimate everything else."

Sometimes when recreating a piece of equipment, he admits he has to make an educated guess, such as when he built the Daimler motorcycle.

"There were 5 different sites on the internet with information they claimed was authentic, and all 5 were different," he recalls.

In the case of the Daimler truck, Eggers used a picture to come up with a body that was about 11 ft. long by 4 ft. wide, including a footrest for the operator. All the wood except for the ash used in the wheels is red oak.

The frame was fabricated from two 3 by 6-in. pieces of oak that run front to back. They tie in the 2 axles and support the 42-in. high, 7-ft. long and 44-in. wide bed. "The 2 sides and rear can fold down, turning the box into a flatbed," explains Eggers. "In London, the first models were used to deliver kegs of beer."

Eggers fabricated brass fixtures on the bed, including 3-leaf hinges for the drop sides. The 3 strap layers are soldered together and attached to the side panel with screws. Eggers made the knuckle as well. The hinges were another place he took artistic license.

"The originals were black iron, not brass, but otherwise are identical," he says. "Making the hardware is often necessary for

an authentic look. You can't have something smooth like it was punched out on a machine last week."

Daimler had used a horse-drawn front axle with heavy-duty leaf springs, so Eggers did likewise, making a fifth-wheel pivot point from two 12-in. dia., 1/2-in. thick steel plates. One is welded to the underside of the 12-leaf suspension, and the other pivots with the axle.

The 20-in. dia. steering wheel is mounted to a vertical shaft that extends down to a spool beneath the wagon bed. Chains mounted to the spool extend to either end of the front axle where horses' traces would have connected.

"When I turn the wheel, one chain tightens, tugging on one end of the axle, and the other chain loosens," explains Eggers. "This was one of the earliest steering systems."

The engine drive and axle are suspended on an A-frame at the rear of the bed. The A-frame connects to the truck frame at pivot points and rides on the axle. The bed floats on coil springs mounted to the A-frame base and directly over the axle.

The original Daimler had steel-banded wheels. Eggers opted for an Amish innovation, the rubber-banded wheel. It has a steel band with a U-channel that has a rubber piece for traction and a rubber brake shoe.

The wheels are also dressed up with brass fixtures. Eggers made the pattern he wanted, and a friend cut them out with a waterjet.

Eggers steamed and bent the ash for the wheel rims and also turned all the spokes on the 36-in. front wheels and the 40-in. rear wheels. He got the steel hubs from Amish craftsmen. He also had them mount the rubber-covered steel bands to the wheels.

For drive power, Eggers substituted a 20 hp. Kohler for the original 4 hp., 2-cylinder Daimler. While he used a roller chain to transfer power from the Kohler to an



Eggers also built this replica of one of the world's first motorcycles, a steam-powered rig invented in 1867.

intermediary driveshaft, 2 sets of wooden spools with leather belts reproduced the rest of the original Daimler drive.

One set of spools is mounted to either side of the chain sprocket on the intermediary shaft. The 2 corresponding spools are each mounted to a split shaft that engages ring sprockets mounted to the 2 wheels. Belt tighteners on each set of spools are connected to foot pedals on the operator's platform.

The Daimler has one-wheel drive forward and reverse. The right foot pedal engages the split shaft to the right wheel, and the truck goes forward.

"When I step down on the left foot pedal, it engages the split shaft that drives the left wheel, and the truck goes in reverse," he says. "To reverse direction, the split shaft drives one gear that engages a second gear to drive the ring sprocket."

Getting the right ratio between sprockets and spools on the different shafts was challenging. He went from 3-in. sprockets on the roller chain to a 1 1/2-in. sprocket on the Kohler, to a 14-in. on the intermediate shaft.

"The way it is now, it would still go 20 to 25 mph, but I wouldn't try it with this brake and steering system," says Eggers.

The truck took Eggers about 8 months to make and required about \$20,000 in materials. "If I were to make one for someone and charge him \$40,000, I would still only be making about \$5 per hour," he says.

Eggers is now starting work on a reproduction of the first American automobile, built by the Duryea brothers in 1893. The museum-quality craftsman has a long list of other reproductions from an early (1790) bicycle to a Wells Fargo (1865) stagecoach, to the Roper Steam Velocipede (1867), the first coal-fired motorcycle. Most are in museums or in the hands of private collectors.

Check out a video of Eggers's Daimler motorcycle at www.farmshow.com.

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Wireless Traps Capture Feral Hogs

"We've developed a system to trap wild hogs electronically using a cell phone or a computer," says Texas businessman Noel Gouldin. "Our solar-powered Wireless Trap system uses a motion-activated camera to monitor movement in a remote trap, and sends pictures from the trap to a cell phone to let the owner know what's inside. Then the owner decides whether or not to spring the trap door by speed-dialing an activation number." The \$2,000 system is gaining popularity fast because feral hog populations are on the rise in several states.

"Female feral hogs can raise 3 litters of 10 to 12 animals a year," Gouldin says. "If the population is left unchecked, that's 40 to 60 new hogs a year from one animal because they don't have natural predators," Gouldin

says one family group of feral hogs can ruin a 100-acre pasture in one night, rutting up large clumps of soil and killing the grass. A rancher or landowner should eliminate 70 percent of the animals every year just to keep the population under control.

The Wireless Trap system can capture one hog or several members of a family group. The company recommends a 6-ft. tall by 30-ft. dia. modular steel gate enclosure for the trap. Panels are pinned together and the headgate opening is equipped with an electronic latch. An automatic feeder is placed inside to entice animals to enter. A motion-activated remote camera is installed at the center of the trap to photograph animals when they enter and send the image to the owner. The camera can also be triggered

randomly from a cell phone or a computer.

"After you look at the cell phone image and see what's in the trap, you can activate the headgate immediately with the phone, or choose to wait for more animals to enter the trap so you catch a larger group," Gouldin says. "That's a big benefit compared to traps that are triggered by wire at a feeder."

Wildlife supervisors at the Kerr Management area in Texas were spending more than 3 1/2 man hrs. for every feral hog captured in a conventional pen before using the Wireless Trap system. Now they're much more efficient because there's no guesswork, and a trap isn't tripped with just one animal



Motion-activated camera monitors remote trap and sends photos to your cell phone.

or a small group inside, says Justin Foster, a Research Coordinator with Texas Parks and Wildlife.

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