



Letting Off Steam

Capt. Trevithick's 1803 motor carriage led to neither fame nor fortune; it did prepare an exquisite brunch

BY DAVE SELBY

FORGET ABS, TRACTION CONTROL, CD autochangers, twin-cam this and four-valve that—they're nothing. Can your modern wipe-clean driving appliance carry 10 in plush velour comfort,

scare horses at 50 paces, then cook a sizzling-hot British breakfast faster than you can drive through a McDonald's?

Well, Capt. Richard Trevithick's fabulous 1803 London Steam Carriage did all this and more, as I found out when I took

the tiller of a remarkable re-creation that's recently been completed after 15 years of invention, reinvention, toil and endeavor by British steam enthusiast Tom Brogden and a team of friends.

Brogden, a 58-year-old engineering com-

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pany boss, says, "I really like to think of it as the first production model, rather than a replica. It's based on Trevithick's 1802 patent drawings for the vehicle he built in 1803, and it was always his intention to license the design for others to produce the vehicle. I suppose we're the first to go into production—it's just that we've omitted to pay him a royalty."

That, sadly, seems to have been Trevithick's fate. There's no doubt that Capt. Dick, as he was known, was a man ahead of his time—his steam carriage runs on unleaded fuel if you count logs and coal. But he was perhaps a little *too* far ahead of his time. Certainly many of his ideas that weren't taken seriously in his day are commonplace in our modern world.

WHO KNOWS, IF THINGS HAD TURNED out differently, Trevithick might have been regarded as a scientific superstar. Born in Cornwall in the southwest of England in 1771, Trevithick died a disillusioned pauper in 1833 after a life of frenzied invention, adventure and equal measures of disappointment. He was a giant of a man, six-foot-two, whose early career was spent as a mine "captain"—or chief engineer—in Cornwall. His physical strength was legendary. One contemporary report recorded that he could write his name on a beam six feet from the floor with half-a-hundredweight hanging from his thumb. No doubt it was an impressive party trick, and that, unfortunately, was also about the level of regard for most of his wonderful inventions.

You could have had frozen peas or sipped scotch on the rocks in the early years of the 19th century—if only Trevithick's ice-making machines had become a commercial success. Central heating and steam propulsion for boats were just a couple more of his unfulfilled projects.

Yet, thanks to Tom Brogden, Capt. Trevithick is finally earning a little of the respect he deserves for creating the world's first powered passenger road vehicle back in 1801. (Frenchman Nicholas-Joseph Cugnot built a steam truck in 1769, but that was for transporting an army cannon, not people.) Two years later Trevithick's second vehicle, the London Steam Carriage, achieved the dubious distinction of being involved in the first-ever traffic accident when it collided with some railings.

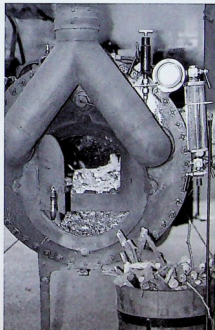


THE MASSIVE INTERIOR of Capt. Trevithick's London Steam Carriage could carry a little 19th-century folk, or one author (above). Eighty gallons of water fed the engine, which drove one of the massive eight-foot rear wheels.

That extraordinary machine was dismantled in 1804, but now it lives again. As Brogden's friends help prepare the steam carriage for a run through the grounds of beautiful Tatton Park in Knutsford, Cheshire, in the north of England, it's clear that Brogden's admiration for Trevithick has remained intact and even increased throughout his remarkable project. It takes a good 20 minutes to fill the carriage's water barrels with 80 gallons and another half hour to put fire in the beast's belly and raise the pressure to the 30 pounds per square inch needed for running. Even though he's created it from scratch, Brogden studies parts of the machine intently, perhaps planning minor modifications, and certainly still in awe of Trevithick's genius.

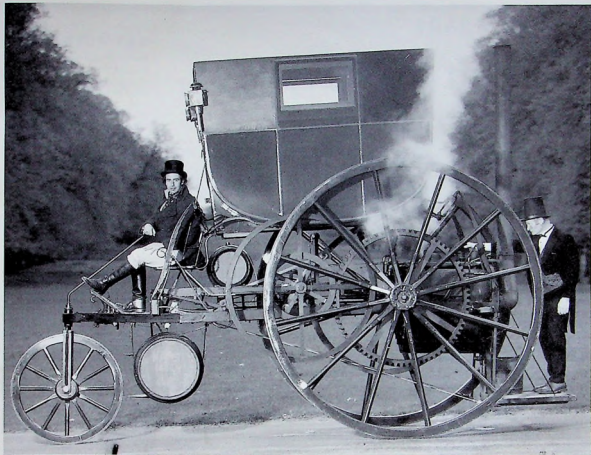
"THE BOILER HAS BEEN DESIGNED TO MEET modern safety standards," explains Brogden, "but it's probably about 220 pounds heavier than the original for the same performance."

I'm soon to become very grateful that Tom has resisted the temptation to upgrade the machine's original 1803 performance. We're talking 3 horsepower at 50 rpm to give a maximum speed of 8 mph in the higher of its two gears.



At idle, if you can call it that, the engine gives out a slow, wheezing rhythmic snort that sounds like a horse with asthma. It's a sight and sound that alarms a pair of shire horses in a nearby field. Perhaps they know that the ultimate development of Trevithick's steam carriage would eventually put them out of work.

You and I, in our modern machines,



select gears with a little stick through a synchromesh gearbox. With the Trevithick it's a four-man operation with three turning the eight-foot road wheels to align a drive-shaft with a socket on a gear wheel. When everything is in line, the fourth man in the driver's seat pulls a lever to engage the gear. If you wanted to change gear you'd have to come to a stop and find another three men to help you.

WITH RUBBER LEGS AND A SWEATY PALM clasp the tiller, I ease forward on the throttle lever—or more properly, steam regulator—and the Trevithick lunges forward wildly and drunkenly, its whole chassis twisting alarmingly. This is normal apparently, as only one of the eight-foot wheels is driven and the tremendous torque tries to turn the thing over.

Amazingly, I'm still in the seat and find that the tiller does seem to have some kind of vague influence on direction. I decide to open this baby up until I'm cantering along at a breakneck 6 mph. At these

kinds of speeds you don't need the lightning reactions and anticipation of an F1 driver, but rather the clairvoyance of a gypsy fortuneteller, because stopping the machine is almost as scary as starting. You throttle back and don't even bother with Capt. Dick's original patented flywheel brake—it doesn't really do anything.

Instead, Brogden has fitted a useful aftermarket item, a bar brake that rubs against the rear wheels when you wind a crank at your feet.

I jump off and look back. The erratic, serpentine route I've navigated is marked by the impression of the front wheel on the ground. It's all of 800 feet, but the main thing is that I didn't hit anything. Not like old Capt. Dick's original steam carriage, which made several excursions in London. On one occasion, Oxford Street was closed off for a run, but on another occasion the barely controllable Trevithick tore down six or seven yards of garden railing.

It didn't survive much longer as Capt. Dick was unable to find commercial backers

and in 1804 the London Steam Carriage was broken up and its engine used in a mill. His first steam passenger road vehicle of 1801 didn't survive either. After breaking down on a run in Cornwall it was pushed into a barn while Trevithick and his partner "comforted their hearts with roast goose and proper drink," according to an account of the period. Unfortunately the "proper drink" must have made them forget to put out the fire in the boiler and after the water boiled away the carriage burned itself out.

As a passenger vehicle, the London Steam Carriage might be compromised, not least because it required at least two men and a bag of coal to do what a horse-drawn vehicle could do with one man and a bag of hay. But as a stove, the vehicle is tremendous.

After our invigorating run, one of Brogden's friends sizzles sausages on the boiler-fire embers and they're done to perfection in seconds.

If only Capt. Dick had opened the first fast-food franchise he might have made his fortune.