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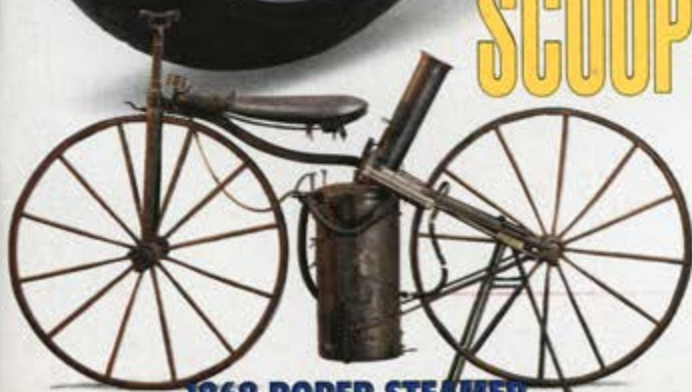
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# First Fired, First Forgotten

**If this is the world's first motorcycle, and that's what the evidence suggests, why doesn't anybody know about it?**

BY ALLAN GIRDLER

**W**HAT THE PHILOSOPHERS LEFT OUT, WHEN THEY TOLD US THAT there's nothing more powerful than an idea whose time has come, is that there's no quicker route to the ashcan of history than to have an idea for which the world is not yet ready.

As in, ever heard of Daimler and Benz? Heck yes, we all snort, they were the guys who gave us the first motorcycle back in 1885 and the first motorcar in 1886. Says so in all the books, you could look it up.

But not yet. Instead, who was Sylvester H. Roper?

Take your time on this one, class, and you can even refer to the books...and your notes...and almost every reference the internet provides.

It will all be in vain. Nobody's ever heard of Sylvester H. Roper, late of Roxbury, Massachusetts.

Except that on display in the Smithsonian Institution's National Museum of American History is a two-wheeled device with an engine amidships. It was built by Sylvester H. Roper.

By evidence that's as convincing to some of us as it's been ignored by the history books, this vehicle was the world's first motorcycle.

Making such a claim requires several cautions, so here they are:

First, the people at the Smithsonian do not claim outright that their motorcycle (and never mind that the term wasn't in use when this vehicle was built, nor even when Daimler did his first machine) is the world's first motorcycle. They will say it seems to have been the first built in America, and that the evidence unearthed to date makes a good case for a world record. But the Smithsonian staff comprises historians and scientists, by nature and profession a careful lot not given to wild, undocumented claims.

We reporters also have to be careful, but because we can print corrections and admit mistakes—which we do all the time—we can strike bolder notes and say, what the heck, Roper's machine sure looks like the world's first from here.

Second, where we all agree scientific precision is required, is in the descriptive terms and definitions. For instance, the Wright Brothers are credited with being the first to fly. Except it's fair to note that the Montgolfier Brothers went aloft in their hot-air balloons more than a century before the Wright Flyer took off. But that aircraft was lighter than air, so it doesn't count, not in the fine print and not in the record books.

So all right, the books do show that a chap in France had a device that hopped into the air, for a moment or two, and stayed off the ground, for a second or two. And we've skipped right over a whole flock (sorry) of gliders.

Still doesn't count. When we say "Flight," it's shorthand for the powered, sustained, controlled flight of a craft heavier than air, under the control of a human being who's riding in or on the aircraft. And he has to be able to do it on command, under observation. The Wright Brothers could and did meet all the requirements, and that's why they got the credit (which they deserved).

Third caution: Large chunks of the evidence in Roper's favor are circumstantial, and/or they rely on that form of logic known as deduction. That's fair in court and it's fair here, even though, sure, it would be neater and even more convincing if the television news crews had been there to film the world's first powered ride. That said, the next move is to scan the record.

No, wait. Perhaps we'd better first agree on what we are looking for.

The vehicle we now call a motorcycle can be defined as a machine with two wheels (okay, sometimes three). It will be powered by an engine, mounted on the machine and generating its own forward motion, as opposed to a sail perhaps. It will carry a person, and that person will have the controls; as in the motorcycle will go when the rider wishes, and likewise will stop and turn



Going by newspapers and books of the era, it seems that Roper built his steam-powered motorcycle in 1868, some 17 years before Daimler's device hit the cobblestones

on command.

Now, the record.

Just as the Wrights were preceded by the hot-air balloon and the glider, so were motorcycles and cars preceded by self-propelled vehicles, what we now know as bicycles. The name back then was velocipede, loosely translated Latin for "speedy feet." A patent was issued in 1818 for something named a "Dandy-Horse," a pair of straddled wheels, propelled by a seated rider scooting the device forward with his feet. In that same year, a German cartoon suggested utilizing steam power for a velocipede—in fact, some straddled two-wheelers would be powered by sails, carbon dioxide, compressed air and clockwork springs.

The next practical move, though, came in Scotland, where in 1839 Kirkpatrick MacMillan was the first (or so the record shows now) to use pedals instead of pushing. He pedaled his velocipede 40 miles, to the nearest big city, where—speaking of setting a trend—he was arrested.

But where the Dandy-Horse used same-size, fore-and-aft wheels, the early pedalbikes had one large wheel

with an elevated saddle and a trailing wheel for steering. They didn't work very well, as in if you fell down, your noggin usually got knocked but good.

Then came the Safety Bicycle, so-named because it was easier to mount and balance, with equal-sized wheels, the saddle between them, pedals and sprocket below the seat, and a chain (or even, in rare cases, a *driveshaft*) going to the rear wheel.

One can make a very strong case for the classic Safety Bicycle being one of the best and most useful of all human inventions. We still have the basic design today, mostly because it's so difficult to improve upon. The bicycle as we now know it is safe, fast and efficient, in that you can ride from here to there quicker and with less energy than you can walk.

To the credit of our species, people went wild for the bicycle. To see one was to know it would work, and be fun, so folks promptly rode to work and for fun. There were clubs and races, worldwide and nearly overnight.

Now we back up for another parallel: The official record, by which I mean the books that get quoted and quote each other, says that a French inventor applied for a patent for a steam-powered velocipede in 1868. The record doesn't show if the device was built, or if it worked, or even if it would have worked if it had been built. In 1879, an Italian inventor applied for a patent for a "gas-engined" velocipede. The historian who reports this adds that the design was "little more than a curiosity, a scientific toy of no real, practical value."

Next comes the beginning of the real, orthodox, established record. Otto Benz made an internal-combustion engine that worked. It was the principle we all know now, as in intake, compression, power, exhaust— a.k.a. the Otto Cycle because Otto Benz did it first.

Pause here for a reflection. Most

people who make history don't know that's what they're doing. Their intention is to improve the present. We can safely guess, therefore, that when Gottlieb Daimler put a Benz-style engine between two wheels, topped it with a seat and added outriggers, he didn't tell his test pilot son that if all went as planned, Mike Hailwood would someday ride a Honda Six in the Isle of Man TT. More likely, what he said was something like, "Trundle down the road, my boy, until something falls off."

Daimler didn't intend to invent the motorcycle, in other words. What he meant to do on that momentous day in 1885 was devise a way to learn for sure if it was possible to build an engine both light and powerful enough to propel itself and its attached machinery and a person or two, far enough and under enough control to be called a motor vehicle.

Which, as we all know now, it was. And in 1886 the test vehicle had four wheels, and ever since then history has stated that the motorcycle was invented in 1885, the motorcar in 1886 and we bike-types have taken ill-concealed pride in having gotten there first.

But at the time, nothing like that was said, and the more closely one looks at the two-wheeled-plus-outriggers machine, the more obvious it is that it's a motorcycle mostly through courtesy. *But*, Daimler's device made the case, proved the point and was done at the right time, in the right place, by the right people.

And that, pause for breath and perhaps a cup of coffee, is conventional history.

For a challenge, we back up to 1823, when Sylvester Roper was born in Frankestown, New Hampshire. By later accounts, he early displayed mechanical aptitude. He moved to Massachusetts, and during the Civil War worked at the Springfield Armory. Again relying on stories told later, when Roper was at the armory he worked on steam engines, as well as with ammunition, and even made some improvements to the Spencer repeating rifle.

This is useful stuff. It's easy to dismiss anecdotes, social historian Ben Wattenburg said, but if you collect enough anecdotes, you have data. There are, for example, people who don't think Shakespeare did his own



Steam from the boiler is released into the cylinders, the pistons move the rods, the rods turn the wheel and, presto, there are no more hills

work because he didn't go to school and couldn't have known the Greek and Roman words used in the plays. But we can note that Roper: 1) knew about and worked on steam engines; and 2) when he improved the Spencer rifle, nothing came of it—no patent, no shared credits or royalties, no Roper repeating rifle.

The main problem here is that all the anecdotes were collected years later, from people who didn't know they were watching history being made. Still, what we have now, taken from newspapers and books done generations ago and repeated, is that it seemed to those who were there that Roper built a steam-powered motorcycle in or about 1868, some 17 years before Gottlieb Daimler's device hit the cobblestones.

What we see on display is obviously a velocipede, a Dandy-Horse, two wheels with a perch and with handlebars for the rider to grip. Slung below the frame is a boiler. Between boiler and rear wheel is a system of cranks, so that as steam from the boiler is released into the cylinders, the pistons move the rods, the rods turn the wheel...and, presto, there are no more hills, which, after all, was the point of the whole exercise.

Roper had invented the motorcycle, and his creation was a whole bunch closer to the definition of today than Daimler's was.

The Smithsonian's experts believe

that Roper didn't do what first occurs; that is, he didn't take an existing velocipede and attach an engine. Rather, Roper used the basic idea of the velocipede and built his own frame, the chassis as we'd say now, except that his frame had provision for a boiler, cylinders, rods and cranks, nautical-looking exhaust stack and so forth.

Because he had invented the game, Roper didn't need to follow any rules, which is why the operator either sat on the water tank, or the seat contained water, take your pick. The rider's feet rested on pegs—what else can we call them?—that were part of the front axle. The 34-inch wheels were solid, the pneumatic tire not yet available. There's a front brake, the little arm just ahead of the fork at the top of the wheel. It's fun to note now that Roper's frame traces a nearly straight line from steering head to rear axle, just as today's best sportbike

designs do, which puts him well ahead of Daimler when it comes to predicting the future.

As one of the most important notes for establishing the Roper machine's claim and the factors behind its lack of recognition, check out the handlebar.

Yes. It's a twistgrip (actually, the whole bar rotates, like a paper-towel dispenser). The machine has not been started or run in the Smithsonian's possession, on grounds that what would be learned would matter less than what could be lost, but it's not difficult to deduce how the device worked, even though some parts have been lost over time. Rolling the grip forward opened the throttle, while rolling back applied the brake. That's not how we'd do it today. It's worth mentioning that the Model T Ford used a push-for-this-direction-pull-for-that-one control, so Roper wasn't the only inventor to use such a thing, nor was it beyond the average operator.

What counts here, though, is that this control is a twistgrip. Popular history once credited Indian with inventing the twistgrip control for motorcycles, while debunkers later proved that aviator/bike-builder Glenn Curtiss used it before Indian did. Now we have Roper twisting the grip before Curtiss.

But wait now! Before Curtiss did it, the very first motorcycles used elaborate and extensive networks of rods, cranks, swivels and pivots to deliver the message from the lever on the han-

dlebar/frame to the carburetor. These controls were clever and complicated, but the speed with which Curtiss' system was adopted must mean that until he did it, the motorcycle community didn't know about it, nor did Curtiss use Roper's method.

In preliminary sum, as it were, the motorcycling world didn't know about Roper's twistgrip, or his motorcycle.

Well then, how do we know about it?

First, we can look at the actual machine, as preserved by happy chance, and we can compare technologies, as in what would the pushbike of 1865 or so have looked like, ditto for the small steam engine of that time? We know what they were like, leading to the deduction that if a clever and determined man did in fact build a steam-powered velocipede right after the War Between The States, this is how he would have done it.

Next comes the line of descent. Roper's machine was donated to the Smithsonian by Mr. and Mrs. Robert C. Bacon. They got the machine from a woman who got it from a man who got it from the Roper family. It would perhaps be possible for one of the parties to have built the motorcycle in secret and smuggled it into the world, but it's not likely.

Now, for a little historical philosophy. Some inventions—the cotton gin, the linotype and the revolver, for example—are done with a sure idea as to what will happen when they work. Others, no. The motorcar was supposed to be a cheap substitute for the horse, to provide transportation for those too poor to have a stable or barn, or to feed something that ate when it wasn't working and delivered exhaust, so to speak, when it wasn't going anywhere. Nobody could imagine the car going faster or being more reliable than a team of horses.

In the same vein, imagine a time when a pre-Safety Bicycle velocipede would have been as useful to the average household as, say, a hang glider would be today. If this was so, what would the market be for a powered ultralight?

Right. Not much demand, eh?

What we find in the newspapers from Massachusetts and New York, dating back to 1869, are mentions of Roper displaying his invention at fairs and circuses. It wasn't fast, the accounts agree, but it did work. And the crowds enjoyed the idea, just as



The world's first twistgrip? Actually, the whole bar rotated: rolling backward operated the brake; forward opened the throttle via a now-missing chain

they enjoyed the barnstorming aviators of more recent history.

These accounts don't give a precise date of invention, but because the Roper motorcycle was established by the time the stories appeared, again it's fair to guess 1868 or 1869 as when the machine was built.

Oh yeah, there was also mention that Roper had built a steam-powered motorcar, more like a wagon actually, before he did the motorcycle. Henry Ford, the first Henry Ford that is, the man who founded the firm and dynasty, was interested in history. After Ford founded his museum, he sent people to ask about Roper. The museum's records say the investigators reported that Roper made two steam-powered motorcycles and eight, yes eight, steam-powered cars.

One Roper steam car is now at the Henry Ford Museum, Dearborn, Michigan. The date it was made isn't established, although restorer Buck Boudeman says there's evidence the first Roper car was made in 1863 and, yes, that would make it a contender for the title of World's First Motorcar, subject as always to definition and verification.

But during this general time frame, Roper is reported to have designed a knitting machine and built some steam engines for boats or yachts in the Boston area. His interest in road vehicles flagged, these same accounts say, because during the dozen years

he operated his first motorcycle, he was harassed and arrested for riding in and around Roxbury and Boston.

What this all does, is fit. There doesn't seem to be any doubt that Sylvester Roper had the skill, energy and resources to have made a steam-powered motorcycle, or a car or a yacht. And because he doesn't seem to have made any money off the repeating rifle or the knitting machine any more than he did off the bike or car, it follows that just because he didn't get rich or famous for inventing the motorcycle doesn't mean he didn't do it.

Then came vindication and/or tragedy. For this episode, the analogy comes from the world of music.

Back when the blues was invented, it wasn't the music of the rich and famous. Rather, the reverse. The blues pioneers spent most of their working lives in bars and saloons, make that dives and roadhouses. They had fans, but their talents didn't result in world tours or record contracts or even the ability to quit their day jobs.

Then came rock-n-roll, which became a tremendous force worldwide. The stars were the idols of millions. It happened that some of them paid tribute to those early blues guys, and other people asked around and found that some of the pioneers were still performing and they, the pioneers that is, did at last get to play the big halls and make some records and, yes, hear people appreciate what they'd done.

Back in the history of mechanized travel, the Safety Bicycle arrived and became the Beanie Baby of its day, as in everybody wanted one. Bicycle racing was tremendously popular. The need for speed was aided by the development of machines called pacers—big, motorized two-wheelers that ran ahead of the bicycles, cutting the wind and letting the racers go faster than they could have gone unaided.

Roper has to have been known by the bicycle-types around Boston, and he was invited to pace the racers. His old steamer wasn't up to the task, so Roper got a Columbia bicycle, one of the better makes of the day, and modified it to accept one of his steam engines. On June 1, 1896, according to Dr. Paul Johnston, Curator of Transportation at the National Museum of American History and custodian of the motorcycle seen here, Roper took his new pacer to the Charles River



After clocking a 40-mph top speed, the machine wobbled, veered off the track and crashed. Roper was dead before onlookers got to him

bicycle track, on the Cambridge side of the North Harvard Street bridge.

Roper was 73 years old. He piled on the coal, as Johnston's research says, and took to the track, where he promptly outpaced the bicycles, pulling away with a flying mile timed at 2:01.4 minutes and with a clocked top speed of 40 mph.

Impressed, the bicyclists pulled up, to give Roper a clear track. The machine was seen to wobble on the back stretch. It veered off the track, Roper was thrown and the motorcycle tumbled to a stop. Roper was dead by the time onlookers got to him.

According to an autopsy, the cause of death was a heart attack, suffered at speed. Johnston says one account, in the newspaper the next day, held that Roper had shut down the machine and steered away from the crowd when he lost control. Another reporter said the motorcycle had a device that shut off power when the rider let go, a dead-man's throttle as invented for locomotives and now seen in speedway and hillclimbing.

Roper's family took the motorcycle home, and it later was displayed at the Stanley Brothers museum in Maine.

Restorer Boudeman says the Stanleys, whose auto steamers set the standards when steam was still in contention, cheerfully acknowledged that they'd learned from Roper's earlier work.

Not a bad ending. Roper died with his boots on, as Johnston notes, in the saddle, proving his machine's mettle.

What are we left with? There doesn't seem to be any doubt that Roper had the talent, knowledge and energy to make the motorcycle seen here, while logic says it's the machine he would have made at the time.

A hoax? History shows some good examples, as in Piltdown Man, where experts with an agenda planted the sort of artifacts other scientists were looking for. That fraud held up for years and years. But for Roper's motorcycle to be counterfeit would require that someone didn't just build it and plant it, they also printed fake newspapers and persuaded Roper's neighbors to tell Henry Ford's researchers, "Oh yeah, Roper's machine. Near run me down back in '69, so I called the cops and he was busted."

No. When you have ruled out the impossible, Sherlock Holmes always lectured, the improbable has to be

the answer.

Our best parallel is Columbus, Discoverer of the New World. To which the revisionists are quick to rejoin that in 1491, when Columbus was still scratching for investment capital, anybody who'd studied the matter knew the Earth was round, while millions of people were aware there existed two large and unavoidable continents between Europe and Asia. They knew that because they lived on them, plus sailors and even missionaries had been bumping into the Americas for centuries before Columbus, and they'd talked about it.

Leif Erikson was ignored. Christopher Columbus wasn't.

Because the motorcycle as we know it began as a motorized bicycle, before there could be a beginning, there has to be both a motor and a bicycle. When Roper's motorcycle appeared, it was entertainment. When Daimler's appeared, it was an inspiration.

Is this fair? Heck no, not at all. Will all the history books be recalled and revised?

Sure. It will happen about the time we locate our federal government in the District of Erikson. □