

THE AUTOMOBILE COMES TO CONNECTICUT

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We pulled out of the parking lot on the corner of Park and Laurel Streets in Hartford – the one in front of the Save-a-Lot store across the street from Pope Park – turned left onto Laurel, drove a quarter-mile, and then turned right onto narrow, winding Capitol Avenue. We were retracing Hiram Percy Maxim’s historic 1897 motorcar journey from Hartford to Springfield, the first long-distance trip ever taken by a Connecticut driver. Maxim and his traveling companion, Eugene Lobdell, were early engineers, employed by Hartford’s Pope Manufacturing Company to design and build what they hoped would be the first commercially viable “horseless carriage.” The two men slipped out of the factory grounds at the corner of Park and Laurel at 5:30 on a clear May afternoon, drove north 25 miles over mostly rocky, unpaved roads, and finally sputtered into Springfield nine-and-a-half hours later. Their vehicle, the prototype Mark VII – a slight, one-of-a-kind, roofless, gasoline-powered tricycle with only one seat – became, according to Maxim, “the first Connecticut machine to get out of its own state under its own power.” It was so badly damaged by the trip that Maxim had to ship it home by rail.

Throughout the nineteenth century, engineers like Maxim dreamed about building automobiles. As early as 1769, a French inventor constructed the first self-propelled road vehicle, a crude, steam-powered military tractor. In 1807 a Swiss engineer invented the first internal combustion engine, burning hydrogen and oxygen rather than gasoline. And in the 1830s a Scots inventor built the first crude electric carriage. But it was during the four decades following 1875 that automobiles really took off. In 1877 the German mechanic Nicholas Otto created a four-cycle, gasoline-powered, internal combustion engine that became the prototype for most modern automobiles. In 1885 another German, Karl Benz, produced a working gasoline-powered tricycle. Two years later his countryman Gottlieb Daimler developed the first true motorcar, a four-wheeled, gasoline-powered carriage. In 1897 Francis and Freelan Stanley of Maine crafted a reliable steam-powered auto, the famous Stanley Steamer. In 1896 the American entrepreneur Ransom Olds built his first gasoline-powered car, and in 1901 began manufacturing Oldsmobiles. They sold for between \$600 and \$700, more than a year’s wages for a factory worker. In 1909 another entrepreneur, Henry Ford, introduced a cheaper car, the Model T. The industry took off. By 1916 American manufacturers, led by the Michigan-based Olds and Ford, produced well over a million automobiles a year. And by 1929 the United States had 23 million cars, or about one per family, and General Motors had surpassed Olds, Ford, and even Daimler as the industry giant.

Connecticut’s Hiram Percy Maxim was one of those early engineers who experimented successfully with automobiles. Born in 1869 in Brooklyn, New York, the son and nephew of inventors (his father Hiram Stevens Maxim invented the Maxim machine gun, while his uncle Hudson Maxim concocted smokeless gunpowder), Maxim was a technological prodigy who had entered MIT in 1885 when he was only 16. By the time he died in 1936 he owned a long string

of patents and a substantial personal fortune, most of it generated by his most profitable invention, the silencer. Driven to prove himself to his famous but absent father (Hiram Stevens Maxim had divorced Percy's mother, abandoned his family, and moved to Britain when Percy was only 12), the ambitious Percy had secured a job as superintendent of a factory in Lynn, Massachusetts, in 1890, when he was only 21. A bicycle enthusiast, he was riding through the Massachusetts countryside late one night following a rendezvous with a girlfriend when he fantasized about equipping his bike with a small motor. After several months of trial-and-error, he succeeded in producing a crude motorized tricycle, which he showed (he didn't dare actually attempt to demonstrate it, knowing that it would likely stall or crash, mostly because he hadn't developed a system of multiple gears for it) to an executive from the Pope Manufacturing Company of Hartford, then the country's premier producer of quality bicycles. Infected by Maxim's enthusiasm and vision, the executive hired the young inventor to head up Pope's new automobile department. Lobdell, a bicycle mechanic, was made his assistant. Years later in 1933, Maxim recalled his days at Pope in a lively and humorous memoir, *Horseless Carriage Days*, a terrific Connecticut book that somehow has gone out of print.

The Pope Company was interested in motorized bicycles, tricycles, and carriages mostly as a way to diversify its product line. The company's owner, Albert Augustus Pope, thought that electric cars held the most promise, but Maxim talked them into building some gasoline-powered vehicles as well. Everyone at Pope, including Maxim, rejected steamers because, although they utilized a known technology, they were also bulky, heavy, and expensive. Moreover, they looked radically different from anything else on the road, and neither Pope nor Maxim wanted to build autos that appeared to be too newfangled. Rather, they aimed at creating vehicles that resembled bicycles, tricycles, and horse-drawn carriages, hoping that such familiar-looking "horseless carriages," as people called them, would have wide appeal. Pope preferred electric cars to gasoline-powered ones because they could be made more compact and "carriage-like," but Maxim worried that the batteries would wear down after only a few miles. Gasoline, he was convinced, could combine the compactness of electric cars with the long-distance capability of steamers. To placate his boss, Maxim agreed to experiment with both electric and gasoline-powered vehicles, but his heart was in the latter. Between 1895 and 1900 Maxim produced more than a dozen prototype motorcars for the Pope company.

After several months of experimentation, Maxim managed to construct a sturdy, reliable, gasoline-powered motor sufficient to exert in excess of one horsepower of force, and which did not stall every time he tried to use it. He then set to work attaching it to a wheeled vehicle. First, he designed the steering gears. He decided to play it safe and build only one gear – forward low. (He later added a reverse and second gear, but since he saw no reason to exceed 12 miles per hour – which was faster than either a bicycle or a horse-drawn carriage could travel – he stopped there.) He then added a clutch and hot-ignition device, the latter his own invention. He installed all of these in a lightweight, four-wheeled, horse-drawn Crawford runabout – without the horse, of course.

His prototype complete, Maxim decided to give it a real test. On a warm day in August 1895, he, Lobdell, and about 20 workmen who eagerly had volunteered to be part of history pushed the

runabout to the Park Street door of the factory and muscled it down a flight of steps. Although Maxim tried to keep the experiment quiet, word rapidly spread through the factory. Management hurried to witness the scene, and a crowd of bystanders soon gathered on the street. Park Street teamsters pulled their wagons aside, and pedestrians stopped to watch. Gingerly, Maxim approached the runabout.

“When we had it safely in the street I started the engine and mounted the seat. Lobdell precipitously removed his bag of tools..., explaining it was to remove the last ounce of unnecessary weight, because he had serious misgivings about that three-percent grade up Park Street. I had considered this grade very carefully. It seemed to me to be wisest to tackle it at the start, because it offered a downgrade coming home.... So it was that on this historic first horseless-carriage ride in Hartford I headed for the Park Street grade.... To my delight and Lobdell’s stupefaction the little carriage ran up the grade at about the same speed as it ran on the level. He had to run to keep up with me on foot, as did most of the crowd.”

Maxim drove east as far as Zion Street, less than a quarter-mile from the factory, turned around, and then returned to the plant, where his ebullient boss heartily congratulated him. What Pope didn’t know (because Maxim didn’t tell him) was that at the top of the hill the motor had overheated and stalled. Maxim had coasted back to the factory with no power. Clearly, more work needed to be done.

In October, after many more weeks of tinkering, Maxim thought he had the problem licked and took the runabout out again. This time he headed north on Laurel Street about a quarter mile and drove up the steep grade of a railroad bridge. The motor ran perfectly. Maxim was ecstatic. He continued on to Farmington Avenue, turned west, and drove all the way to the Hartford city line at Prospect Avenue. Although traveling less than 12 miles per hour, “I had to [dodge] the trolley cars and the other traffic, and it kept me extremely busy,” he later recalled. “Lobdell ran [biked?] alongside and was one of some twenty-five or thirty other bicycle-riders.” At Prospect Street Maxim heard an “ominous noise” in the motor and prudently decided to return to the factory. Still, he was giddy with excitement. “I had passed beyond the city limits,” he exulted. “Beyond was the open country – the hinterland – dark and forbidding.”

For the next year, Maxim and Lobdell continued to test the runabout and other prototypes on Hartford’s streets, frequently drawing crowds. Following orders, Maxim staged a well-publicized drive around the block near his boss’s house on Hartford’s south side, with numerous city leaders in attendance and the boss’s wife in the passenger seat. He encountered problems on another jaunt at City Hall Square, where the pavement was so smooth that it caused the gasoline to flow too evenly through the carburetor, stalling the vehicle. Rough roads, Maxim concluded, worked better than smooth ones. By February 1897, he and Lobdell had developed a reliable motorized tricycle – the Mark VII – and decided to give it a real test – a 25-mile trek through the “dark and forbidding hinterland” to Springfield. The two engineers set out on an evening in March, after the factory had closed, so not to attract too much

attention. They headed up Laurel Street, turned onto Capitol, continued on to Trinity, which they took to Pearl, turned right, drove to Main, turned left, drove to Windsor Avenue, and then took Windsor north into the country. Twice the Mark VII broke down just outside of Hartford and the trip had to be called off. But on their third attempt they made it all the way to Springfield.

They left the factory on a May evening at 5:30 PM. Driving was easy enough at first, for the city streets were paved with macadam, but once out in the country things became difficult. The Mark VII had only one seat. Maxim sat at the controls while Lobdell perched precariously on the engine box. On the rough roads outside of Hartford the vehicle shook so much that Lobdell had to rise to his knees in order to see straight. They had to slow down to avoid rocks and potholes, with Lobdell on the engine box calling out warnings to Maxim at the controls. Several times the Mark VII got stuck in the mud and they had to push it free. Every time they passed a horse, they had to stop and turn off the motor, with Lobdell leaping off the engine box and running forward to grab the horse's bridle before it could rear up in terror. Darkness set in shortly after they passed Windsor village, not even halfway there. As they crossed the railroad tracks at dusk near Windsor Locks, they encountered another horse-drawn carriage. The terrified rider jumped out of the vehicle and darted into a nearby field, where he hovered until Maxim coaxed him back. When Maxim chided him, the man sheepishly replied, "Well, wouldn't it scare you to see a wheel-barrow coming down the road with nobody pushing it?" Between Windsor Locks and Suffield, Maxim and Lobdell encountered a peddler whose horse reared. The man's wagon toppled, breaking a wheel. The two engineers stopped, repaired the wheel with wire, and continued on. They passed Suffield village, then Agawam. At 3:00 AM they chugged across the South End Bridge over the Connecticut River into Springfield. The Mark VII's overheated engine clattered, groaned, coughed, and gave out just as they rolled up to a hotel. The night watchman, thinking that a train had jumped its tracks and was headed straight for him, dashed away in fright. It had taken them nine-and-a-half hours to cover 25 miles, an average speed of less than three miles an hour. They would have gotten there faster if they had walked!

After we retraced several of Maxim's early drives around Hartford, we decided to recreate his historic 25-mile journey to Springfield in our modern, twenty-first-century, air-conditioned Hyundai Accent. Our drive, of course, took much less time, only an hour and 24 minutes – an average speed of over 16 miles per hour – despite being slowed by 41 traffic lights (Kit counted them) and Kit's decision to stop at a tag sale in Suffield. We had to make a few detours: it is no longer possible to take Trinity Street all the way to Pearl Street, left turns from Pearl onto Main are not permitted, and we encountered a detour in Windsor Locks.

As we drove, we reflected on all the changes that have occurred during the past 109 years. Clearly marked street and highway signs and a state road map made finding our way a snap. Hartford's streets were now choked with automobile and pedestrian traffic. Tall skyscrapers made the streets feel like canyons. Windsor Avenue is now State Route 159, and it was noisy and congested all the way to Springfield. Police or ambulance sirens screamed somewhere in the distance. We passed hundreds of motor vehicles, including two farm tractors in Suffield.

No frightened horses appeared to slow our progress (although we did spot several old horse carriages on the front lawn of an apartment complex near Hartford's Nook Farm neighborhood), but we did see some show horses exercising near Springfield, unfazed by all the traffic whizzing by. An airplane flew overhead, heading into Bradley Field. A lost hubcap sat forlornly on the side of the road. We passed several old, historic houses in Windsor village, there even when Maxim and Lobdell had driven by, but we also saw far more that had been built since. It seemed to us that one large suburb now stretched all the way from Hartford to Springfield, with barely a break for real farms or woods. We stopped at a rare cornfield in Windsor Locks, near where the frightened carriage rider had fled from Maxim's approaching Mark VII, and snapped a picture. The dairy and subsistence farms of 100 years ago were mostly gone, replaced with housing tracts, urban sprawl, and the newer, commercial tobacco fields. In Massachusetts, we passed by the hubbub of Six Flags and the Big E. The road was paved the entire way, although not always well. The journey was far quicker and easier than it had been a century ago, but we are not sure that it was better. We returned to Hartford on I-91. It took us only 45 minutes.

One hundred years ago, inventors like Maxim helped usher in a new age. But, we wondered, if cars had been pioneered here in Connecticut, then why had Detroit and not Hartford become the center of the automobile industry in America? That would be research for another day.