

FORD

The Men and the Machine

ROBERT LACEY

1.

The Ford Motor Company is today the world's largest family controlled business. It stands today as a monument to the vision and drive of one man in particular - Henry Ford.

Henry Ford was born on 30 July 1863. His father William and mother Mary were hard working and industrious farmers who had achieved some measure of success - in fact, they owned several hundred acres of land and were very well regarded in the greater Detroit area. Their land was located in Dearborn, a suburb on the outskirts of Detroit.

Henry Ford's early life was dominated by attending school and the death of his mother while delivering her eighth child. Henry was 13-years old at the time and his mother died at age 37.

Henry, like most boys, enjoyed playing with anything mechanical. However, the sight of a steam engine propelling a rudimentary wagon absolutely fired his imagination. This was July 1876. Henry Ford would later recall:

"I remember that engine as though I had seen it only yesterday. I had seen plenty of these engines hauled around by horses, but this one had a chain that made a connection between the engine and the rear wheels of the wagon-like frame on which the boiler was mounted."

As the oldest child in the family, William Ford was keen for Henry to follow him and eventually take over the farm. Henry's heart and enthusiasms, however, lay in the field of mechanical pursuits. Therefore, there was an increasing amount of tension between the father and son, until the matter was suddenly and decisively decided when Henry was 16-years old. He simply walked the 9 miles to Detroit, rented a room and sought employment in a mechanical shop. It was 1 December 1879.

Detroit, at that time, was a city of around 80,000 people which was embarking on an ambitious program to expand by concentrating on manufacturing. (This program would be so successful that Detroit would within a few years rank as the third most productive city in the entire U.S.A..)

Ford started an apprenticeship at the James Flower & Brothers Machine Shop manufacturing metal fittings. He then continued his mechanical apprenticeship at the Detroit Dry Dock Company. By the age of 20, Henry Ford was now qualified as a mechanical engineer.

Even though Ford had left his father's farm, he still went back to help out each year at harvest time. This led to a job for a few years with Westinghouse helping maintain a demonstration steam engine the company was selling to farmers in the Detroit region. Ford's father also offered Henry an 80-acre farm which needed clearing - which suited Henry very well as he could use a steam engine to fell and trim the lumber.

On 11 April 1888, Henry Ford married Clara Bryant and they settled down on Henry's farm. However, when Henry was visiting Detroit, he had a look at a new internal combusting engine that was all the rage at that time. Henry realized this would be ideal for making a self-propelled vehicle. Therefore, he moved his family into Detroit to allow him to follow up on this new idea. It was now September 1891.

"Bell and the telephone. Edison and the light bulb, the Wright brothers and the airplane. Henry Ford and his motorcar fit neatly into this familiar pantheon of American hero-inventors - except that Henry Ford was not an inventor. Bell, Edison and the Wright brothers all personally devised the machines that made them famous, but Henry Ford's achievement was built on the work of others."

- Robert Lacey

2.

When Ford moved back to Detroit, he took a job at the Edison Illuminating Company. The first American motorcars had already been developed by the Dureya brothers and exhibited in a car race organized by the Chicago Times-Herald in 1895.

From Henry's perspective, the good thing about his work was that he had access to metal working machinery. He began building an internal combustion engine from scraps of metal and assorted electrical spares.

While Ford was working on that project, he started to attract around him other people who were also enthusiastic about the prospects of building motorcars. These men included George Cato, James Bishop and Edward Huff. Together, they decided to attempt to build a motorcar in the brick shed at the back of Henry's house.

"Today car enthusiasts can build or modify engines from ready-made component parts, but in 1896 Henry Ford and his collaborators had to build everything themselves. For the heart of their motor, they took a length of scrap pipe from an old steam engine, reamed out the inside to a bore that was later measured as 2.565 inches, cut the pipe into two 11-inch lengths - and there they had their cylinders. Fuel was fed to the engine by the simple device of placing the gas tank above it, so that gasoline would flow into the manifold by gravity. Power was transferred to the wheels by a ten-foot length of chain."

- Robert Lacey

Around the same time, a number of other people were also working on the same project - of trying to develop a motorcar. Most of these people literally took conventional horse-drawn carriages and added motors. By contrast, Henry Ford's machine was very light and therefore had a very high speed of over 20-mph.

"Fat men cannot run as fast as thin men, but we build most of our vehicles as though dead-weight fat increased speed. I cannot imagine where the delusion that weight means strength came from."

- Henry Ford

Ford called his car the Quadricycle since it looked like two bicycles side by side. When they went to take it for its first test run on 4 June 1896, they found one minor problem - they had built it so wide it would not fit out the door. Henry Ford made a few adjustments to the door width with an ax and the car set off on its maiden run, only to break down a few streets away.

It was not unexpected the quadricycle would prove fragile at first. However, one of Henry Ford's essential character traits was that he could never stop working on and improving his products. This would later prove to be both a fault and a virtue, but in this case, it meant that before too long Ford had strengthened his new car until it was able to undertake the 8-mile journey out to Dearborn.

