

Citizen Ford

He invented modern mass production. He gave the world the first people's car, and his countrymen loved him for it. But at the moment of his greatest triumph, he turned on the empire he had built—and on the son who would inherit it.

David Halberstam

Part One THE CREATOR

Late in the life of the first Henry Ford, a boy named John Dahlinger, who more than likely was Ford's illegitimate son,* had a discussion with the old man about education and found himself frustrated by Ford's very narrow view of what schooling should be. "But, sir," Dahlinger told Ford, "these are different times, this is the modern age and—" Ford cut him off. "Young man," he said, "I invented the modern age."

The American century had indeed begun in Detroit, created by a man of simple agrarian principles. He had started with scarcely a dollar in his pocket. When he died, in 1947, his worth was placed at \$600 million. Of his most famous car, the Model T, he sold 15,456,868. Mass production, he once said, was the "new messiah," and indeed it was almost God to him. When he began producing the Model T, it took twelve and a half hours to make one car. His dream was to make one car every minute. It took him only twelve years to achieve that goal, and five years after that, in 1925, he was making one every ten sec-

*Dahlinger, who died in 1984, was baptized in the Ford christening gown and slept as an infant in the crib Henry had used as a baby. His mother was a secretary at the Ford company. —Ed.

onds. His name was attached not just to cars but to a way of life, and it became a verb—to *fordize* meant to standardize a product and manufacture it by mass means at a price so low that the common man could afford to buy it.

When Ford entered the scene, automobiles were for the rich. But he wanted none of that; he was interested in transportation for men like himself, especially for farmers. The secret lay in mass production. "Every time I reduce the charge for our car by one dollar," he said early in the production of the T, "I get a thousand new buyers," and he ruthlessly brought the price down, seeking—as the Japanese would some sixty years later—size of market rather than maximum profit per piece. He also knew in a shrewd, intuitive way what few others did in that era, that as a manufacturer and employer he was part of a critical cycle that expanded the buying power of the common man. One year his advertising people brought him a new slogan that said, "Buy a Ford—save the difference," and he quickly changed it to "Buy a Ford—SPEND the difference," for though he was innately thrifty himself, he believed that the key to prosperity lay not in saving but in spending and turning money over. When one of the children of his friend Harvey Firestone boasted that he had some savings, Ford lectured the child. Money in banks was idle money. What he should do, Ford said, was spend it on tools. "Make

something," he admonished, "create something."

For better or worse Ford's values were absolutely the values of the common man of his day. Yet, though he shared the principles, yearnings, and prejudices of his countrymen, he vastly altered their world. What he wrought reconstituted the nature of work and began a profound change in the relationship of man to his job. Near the end of this century it was clear that he had played a major part in creating a new kind of society in which man thought as much about leisure time as about his work. Ironically, the idea of leisure itself, or even worse, a leisure culture, was anathema to him. He was never entirely comfortable with the fruits of his success, even though he lived in a magnificent fifty-six-room house. "I still like boiled potatoes with the skins on," he said, "and I do not want a man standing back of my chair at table laughing up his sleeve at me while I am taking the potatoes' jackets off." Of pleasure and material things he was wary: "I have never known what to do with money after my expenses were paid," he said, "I can't squander it on myself without hurting myself, and nobody wants to do that."

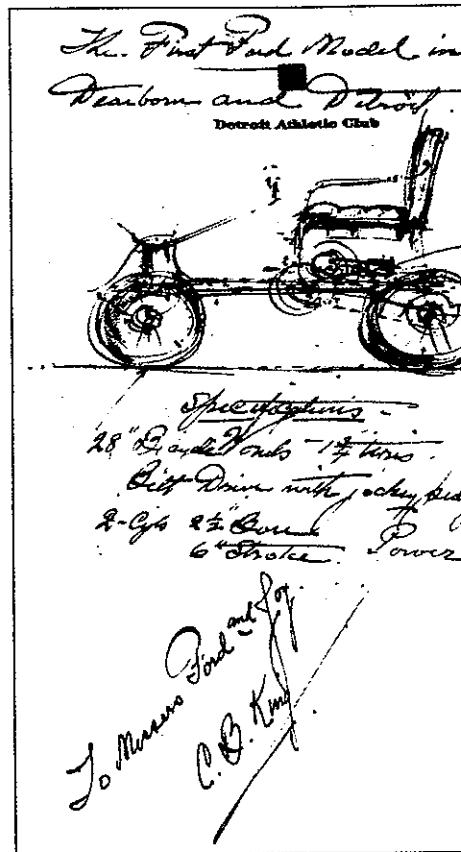
Only work gave purpose: "Thinking men know that work is the salvation of the race, morally, physically, socially. Work does more than get us our living; it gets us our life."

As a good farm boy should, he hated alcohol and tobacco, and he once said that alcohol was the real cause of World War I—the beer-drinking German taking after the wine-drinking Frenchman. His strength, in his early years—which were also his good years—was in the purity of his technical instincts. “We go forward without facts, and we learn the facts as we go along,” he once said. Having helped create an urbanized world where millions of God-fearing young men left the farm and went to the cities, he was profoundly uneasy with his own handiwork, preferring the simpler, slower America he had aided in diminishing. For all his romanticizing of farm life, however, the truth was that he had always been bored by farm work and could not wait to leave the farm and play with machines. They were his real love.

When Ford was born, in 1863, on a farm in Dearborn, Michigan, the Civil War was still on. His mother died at the age of thirty-seven delivering her eighth child. Henry was almost thirteen at the time. He had idolized her, and her death was a bitter blow. “I thought a great wrong had been done to me,” he said. Later in his life he not only moved the house in which he grew up to Greenfield Village, and tracked down the Ford family’s very own stove, whose serial number he had memorized, he also had a cousin who resembled his mother dress up in an exact imitation of the way she had and wear her hair in just the same style.

His father’s people were new Americans. When the great potato blight had struck Ireland in 1846, ruining the nation’s most important crop, that country had been devastated. Of a population of eight million, one million had died, and one million had emigrated to America. Among the migrants was William Ford, who had set off to the magic land with two borrowed pounds and his set of tools. He was a skilled carpenter, and when he arrived, he moved quickly to Michigan, where some of his uncles had already settled, and found work laying railroad track. With his savings he bought some land and built a house, in awe of an America that had so readily allowed him to do so. To William Ford, Ireland was a place where a man was a tenant on the land, and America was a place where he owned it.

Henry Ford started school when he was seven. The basic books were the McGuffey Reader; they stressed moral



On the fiftieth anniversary of Ford's first car, in 1946, his adviser Charles Brady King made this sketch of it.

values but included sections from Dickens, Washington Irving, and other major writers, which enticed many children into a genuine appreciation of literature. Although Ford loved McGuffey, he did not like books or the alien ideas they sometimes transmitted. “We read to escape thinking. Reading can become a dope habit. . . . Book-sickness is a modern ailment.” By that he meant reading that was neither technical nor functional, reading as an end in itself, as a pleasure without a practical purpose. But he was wary even of practical volumes. “If it is in a book, it is at least four years old, and I don’t have any use for it,” he told one of his designers.

What he truly loved was machinery. From the start, he had a gift for looking at a machine and quickly understanding it, not only to repair it but to make it work better. “My toys were all tools,” he wrote years later. “They still are!” In his early teens he designed a machine that allowed his father to close the farm gate without leaving his wagon. Watches fascinated him. When he was given a watch at thirteen, he immediately took it

apart and put it back together. He soon started repairing watches for his friends. His father complained that he should get paid for this, but he never listened, for it was a labor of love.

His father wanted him to become a farmer, but it was a vain hope. Henry Ford hated the drudgery of the farm. In 1879 he entered his seventeenth year, which in those days was considered maturity. On the first day of December of that year, he left for Detroit, a most consequential departure. He walked to the city, half a day’s journey.

DETROIT WAS A TOWN OF 116,000, A PLACE of foundries and machine shops and carriage makers. There were some nine hundred manufacturing and mechanical businesses, many of them one-room operations but some of them large. It was an industrial city in the making. Ten railroads ran through it. As New York City, in the next century, would be a mecca for young Americans interested in the arts, Detroit was just becoming a city with a pull for young men who wanted to work with machines. The surge in small industries was beginning, and a young man who was good with his hands could always find a job.

Ford went to work at James Flower & Brothers, a machine shop with an exceptional reputation for quality and diversity of product. As an apprentice there, Ford was immersed in the world of machinery, working among men who, like himself, thought only of the future applications of machines. He made \$2.50 a week, boarded at a house that charged him \$3.50 a week, and walked to work. His salary left him a dollar a week short, and as a good, enterprising young man, he set out to make up the difference. Hearing that the McGill Jewelry Store had just gotten a large supply of clocks from another store, Ford offered to clean and check them. That job added another two dollars to his weekly salary, so he was now a dollar a week ahead.

His fascination with watches led him to what he was sure was a brilliant idea. He would invent a watch so elementary in design that it could be mass-produced. Two thousand of them a day would cost only thirty cents apiece to make. He was absolutely certain he could design and produce the watch; the only problem, he decided, was in marketing 600,000 watches a year. It was not a challenge that appealed to him, so he dropped the

From the Collections of the Henry Ford Museum and Greenfield Village

3. FROM PROGRESSIVISM TO THE 1920s

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Ford at Detroit Edison in 1893.

By 1896, at the age of thirty-three, Ford finally had his first car on the street. He couldn't sleep for forty-eight hours before driving it.

project. The basic idea, however, of simplifying the product in order to mass-produce it, stayed with him.

He went from Flower & Brothers to a company called Detroit Dry Dock, which specialized in building steamboats, barges, tugs, and ferries. His job was to work on the engines, and he gloried in it, staying there two years. There was, he later said, nothing to do every day but learn. In 1882, however, at the age of nineteen, he returned to the farm, and his father offered him eighty acres of land to stay there. William Ford did that to rescue his wayward son from the city and his damnable machines; Henry Ford took it because he momentarily needed security—he was about to marry Clara Bryant. Nothing convinced him more of his love of machines than the drudgery of the farm. Again he spent

every spare minute tinkering and trying to invent and reading every technical magazine he could. He experimented with the sawmill on the farm; he tried to invent a steam engine for a plow. Crude stationary gasoline engines had been developed, and Ford was sure a new world of efficient gasoline-powered machines was about to arrive. He wanted to be part of it. In 1891, with all the timber on the farm cut, he asked Clara to go back to Detroit with him. "He just doesn't seem to settle down," his father said to friends. "I don't know what will become of him."

The last thing Henry Ford was interested in was settling down. He intended, he told his wife, to invent a horseless carriage. But first he needed to know a good deal more about electricity. So he took a job with Detroit Edison at forty-five dollars a month. The city had grown dramatically in the few years since he had first arrived; its population was now more than 205,000. The railroads had begun to open up the country, and, except for Chicago, no town in America had grown as quickly. Detroit now had streetlights. There were more machine shops than ever before. In this city the age of coal and steam was about to end.

By 1896, at the age of thirty-two, Ford finally had his first car on the street. He was so excited by the prospect of his inaugural ride that he barely slept for the forty-eight hours before it. He had been so obsessed and preoccupied during the creation of the car that not until it was time for the test drive did he find that the door of the garage was too small for it to exit. So he simply took an ax and knocked down some of the brick wall to let the automobile out. A friend rode ahead on a bike to warn off traffic. A spring in the car broke during the ride, but they fixed it quickly. Then Henry Ford went home so he could sleep for a few hours before going to work. Later he drove the car out to his father's farm, but William Ford refused to ride in it. Why, he asked, should he risk his life for a brief thrill?

Henry Ford sold that first car for \$200 and used the money to start work immediately on his next. It was considerably heavier than the first, and he persuaded a lumber merchant named William Murphy to invest in the project by giving him a ride. "Well," said Murphy when he reached home safely, "now we will organize a company." In August 1899 Murphy brought together a consortium

of men who put up \$15,000 to finance Ford's Detroit Automobile Company. Ford thereupon left Detroit Edison to work full time on his car.

In February 1900, at the threshold of the twentieth century, Ford was ready to take a reporter from the Detroit *News Tribune* for a ride. The car, he said, would go twenty-five miles an hour. The reporter sensed that he was witness to the dawn of a new era. Steam, he later wrote, had been the "compelling power of civilization," but now the shriek of the steam whistle was about to yield to a new noise, the noise of the auto. "What kind of a noise is it?" the reporter asked. "That is difficult to set down on paper. It is not like any other sound ever heard in this world. It was not like the puff! puff! of the exhaust of gasoline in a river launch; neither is it like the cry! cry! of a working steam engine; but a long, quick, mellow gurgling sound, not harsh, not unmusical, not distressing; a note that falls with pleasure on the ear. It must be heard to be appreciated. And the sooner you hear its newest chuck! chuck! the sooner you will be in touch with civilization's latest lisp, its newest voice." On the trip, Ford and the reporter passed a harness shop. "His trade is doomed," Ford said.

Ford, however, was not satisfied. The cars he was making at the Detroit Automobile Company were not far behind the quality of the cars being made by Duryea or Olds, but they remained too expensive for his vision. Ford desperately wanted to make a cheaper car. His stockholders were unenthusiastic. By November 1900 the company had died. But Ford was as determined as ever to make his basic car, and he decided that the way to call attention to himself and pull ahead of the more than fifty competing auto makers was to go into racing. In 1901 he entered a race to be held in Grosse Pointe. He won and became, in that small, new mechanical world, something of a celebrity. That propelled him ahead of his competitors.

Two years later, in 1903, he set out to start the Ford Motor Company. He was forty years old and had, he felt, been apprenticing long enough. There were 800 cars in the city at that time, and some owners even had what were called motor houses to keep them in. Ford soon worked up his plan for his ideal, inexpensive new car, but he needed money—\$3,000, he thought, for the supplies for the prototype (the actual cost was \$4,000).

He got the financing from a coal dealer named Alexander Malcomson. Ford and Malcomson capitalized their original company for \$150,000, with 15,000 shares. Some of the early investors were not very confident. John Gray, Malcomson's uncle, made a 500 percent return on his early investment but went around saying that he could not really ask his friends to buy into the company. "This business cannot last," he said. James Couzens, Malcomson's assistant, debated at great length with his sister, a schoolteacher, on how much of her savings of \$250 she should risk in this fledgling operation. They decided on \$100. From that she made roughly \$355,000. Couzens himself managed to put together \$2,400 to invest, and from that, when he finally sold out to Ford in 1919, he made \$29 million.

This time Ford was ready. He was experienced, he hired good men, and he knew the car he would build. "The way to make automobiles," he told one of his backers in 1903, "is to make one automobile like another automobile . . . just as one pin is like another pin when it comes from a pin factory, or one match is like another match when it comes from a match factory." He wanted to make many cars at a low price. "Better and cheaper," he would say. "We'll build more of them, and cheaper." That was his complete vision of manufacturing. "Shoemakers," he once said, "ought to settle on one shoe, stove makers on one stove. Me, I like specialists."

But he and Malcomson soon split over the direction of the company: Malcomson, like Ford's prior backers, argued that fancy cars costing \$2,275 to \$4,775 were what would sell. At the time, nearly half the cars being sold in America fell into this category; a decade later, largely because of Ford, those cars would represent only 2 percent of the market. Malcomson wanted a car for the rich; Ford, one for the multitude. Though the early models were successful—the company sold an amazing total of 1,700 cars in its first 15 months—it was the coming of the Model T in 1908 that sent Ford's career rocketing.

It was the car that Henry Ford had always wanted to build because it was the car that he had always wanted to drive—simple, durable, absolutely without frills, one that the farmer could use and, more important, afford. He was an agrarian populist, and his own people were farmers, simple people; if he could make their

lives easier, it would give him pleasure. He planned to have a car whose engine was detachable so the farmer could also use it to saw wood, pump water, and run farm machinery.

THE MODEL T WAS TOUGH, COMPACT, AND light, and in its creation Ford was helped by breakthroughs in steel technology. The first vanadium steel, a lighter, stronger form developed in Britain, had been poured in the United States a year before the planning of the Model T. It had a tensile strength nearly three times that of the steel then available in America, yet it weighed less and could be machined more readily. Ford instantly understood what the new steel signified. He told one of his top men, Charles Sorensen, that it permitted them to have a lighter, cheaper car.

The T was a brilliantly simple machine: when something went wrong, the average owner could get out and fix it. Unimproved dirt tracks built for horses, which made up most of the nation's roads and which defeated fancier cars, posed no problem for it. Its chassis was high, and it could ride right over serious bumps. It was, wrote Keith Sward, a biographer of Ford, all bone and muscle with no fat. Soon the Ford company's biggest difficulty was in keeping up with orders.

Because the Model T was so successful, Ford's attention now turned to manufacturing. The factory and, even more, the process of manufacturing, became his real passions. Even before the T, he had been concerned about the production process. In 1906 he had hired an industrial efficiency expert named Walter Flanders and offered him a whopping bonus of \$20,000 if he could make the plant produce 10,000 cars in 12 months. Flanders completely reorganized the factory and beat the deadline by two days. He also helped convince Ford that they needed a larger space. Flanders understood that the increasing mechanization meant that the days of the garage-shop car maker were over. There was a process now, a *line*, and the process was going to demand more and more money and employees. Flanders understood that every small success on the line, each increment that permitted greater speed of production (and cut the cost of the car), mandated as well an inevitable increase in the size of the company. "Henceforth the history of the industry will be the



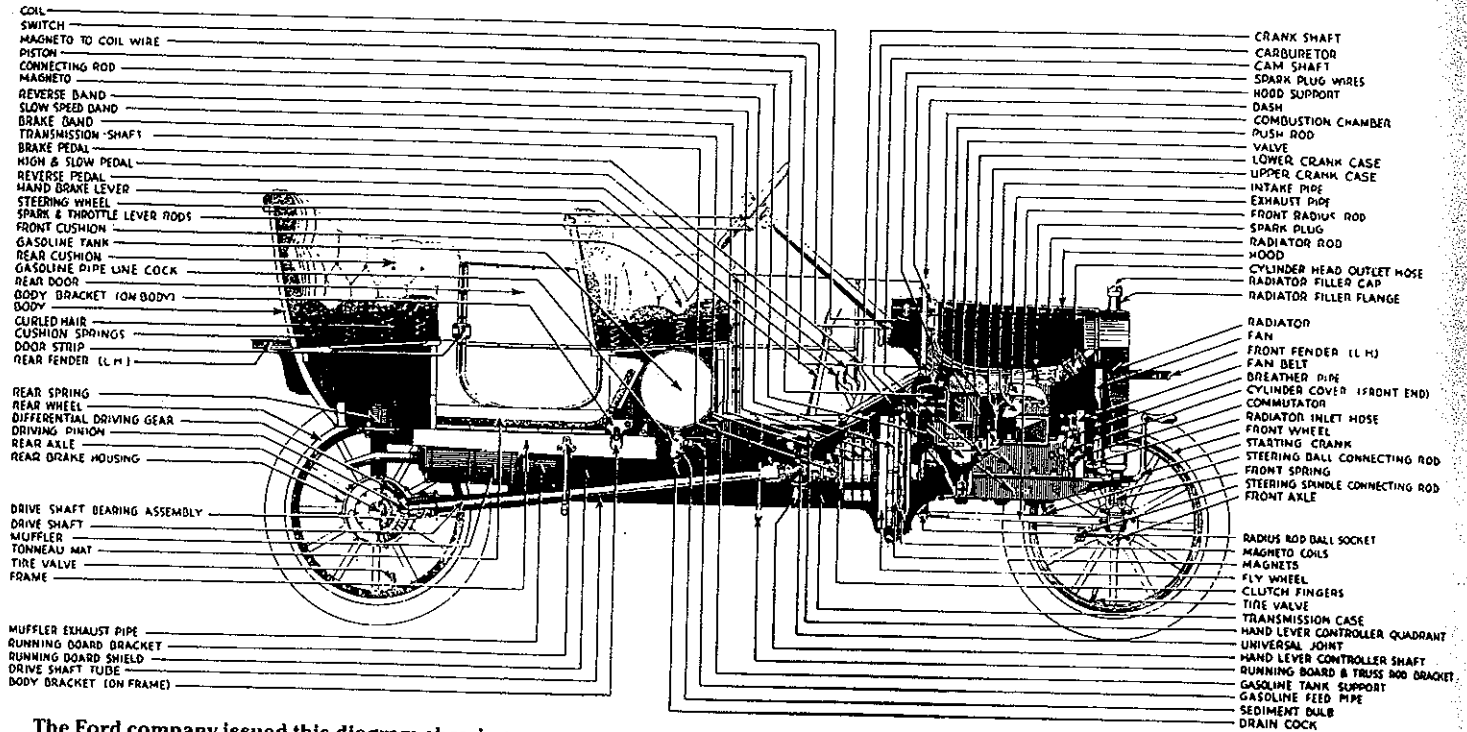
Ford at the turn of the century.

The way to make cars, Ford said in 1903, is to make one like another, "just as one pin is like another pin, or one match like another match."

history of the conflict of giants," he told a Detroit reporter.

FORD THEREUPON BOUGHT HIS HIGHLAND Park grounds. Here he intended to employ the most modern ideas about production, particularly those of Frederick Winslow Taylor, the first authority on scientific industrial management. Taylor had promised to bring an absolute rationality to the industrial process. The idea was to break each function down into much smaller units so that each could be mechanized and speeded up and eventually flow into a straight-line production of little pieces becoming steadily larger. Continuity above all. What Ford wanted, and what he soon got, was a mechanized process that, in the words of Keith Sward, was "like a river and its tributaries," with the subassembly tributaries

3. FROM PROGRESSIVISM TO THE 1920s



The Ford company issued this diagram showing every component of the Model T in 1913, five years after the car's birth. It was accompanied by the explanation, "The better you know your car the better will you enjoy it."

merging to produce an ever-more-assembled car.

The process began to change in the spring of 1913. The first piece created on the modern assembly line was the magneto coil. In the past a worker—and he had to be skilled—had made a fly-wheel magneto from start to finish. An employee could make 35 or 40 a day. Now, however, there was an assembly line for magnetos. It was divided into 29 different operations performed by 29 different men. In the old system it took twenty minutes to make a magneto; now it took thirteen.

Ford and his men quickly imposed a comparable system on the assembly of engines and transmissions. Then, in the summer of 1913, they took on the final assembly, which, as the rest of the process had speeded up, had become the great bottleneck. Until then the workers had moved quickly around a stationary metal object, the car they were putting together. Now the men were to remain stationary as the semifinished car moved up the line through them.

One day in the summer of 1913, Charles Sorensen, who had become one of Ford's top production people, had a Model T chassis pulled slowly by a windlass across 250 feet of factory floor,

timing the process all the while. Behind him walked six workers, picking up parts from carefully spaced piles on the floor and fitting them to the chassis. It was an experiment, but the possibilities for the future were self-evident. This was the birth of the assembly line, the very essence of what would become America's industrial revolution. Before, it had taken some thirteen hours to make a car chassis; now they had cut the time of

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An oddly wistful 1912 portrait.

assembly in half, to five hours and fifty minutes. Not satisfied, they pushed even harder, lengthening the line and bringing in more specialized workers for the final assembly. Within weeks they could complete a chassis in only two hours and thirty-eight minutes.

Now the breakthroughs came even more rapidly. In January of 1914 Ford installed his first automatic conveyor belt. It was, he said, the first moving line ever used in an industrial plant, and it was inspired by the overhead trolley that the Chicago meat-packers employed to move beef. Within two months of that innovation, Ford could assemble a chassis in an hour and a half. It was a stunning accomplishment, but it merely whetted his zeal. Everything now had to be timed, rationalized, broken down into smaller pieces, and speeded up. Just a few years before, in the days of stationary chassis assembly, the best record for putting a car together had been 728 minutes of one man's work; with the new moving line it required only 93 minutes. Ford's top executives celebrated their victory with a dinner at Detroit's Pontchartrain Hotel. Fittingly, they rigged a simple conveyor belt to a five-horsepower engine with a bicycle chain and used the conveyor to serve the food

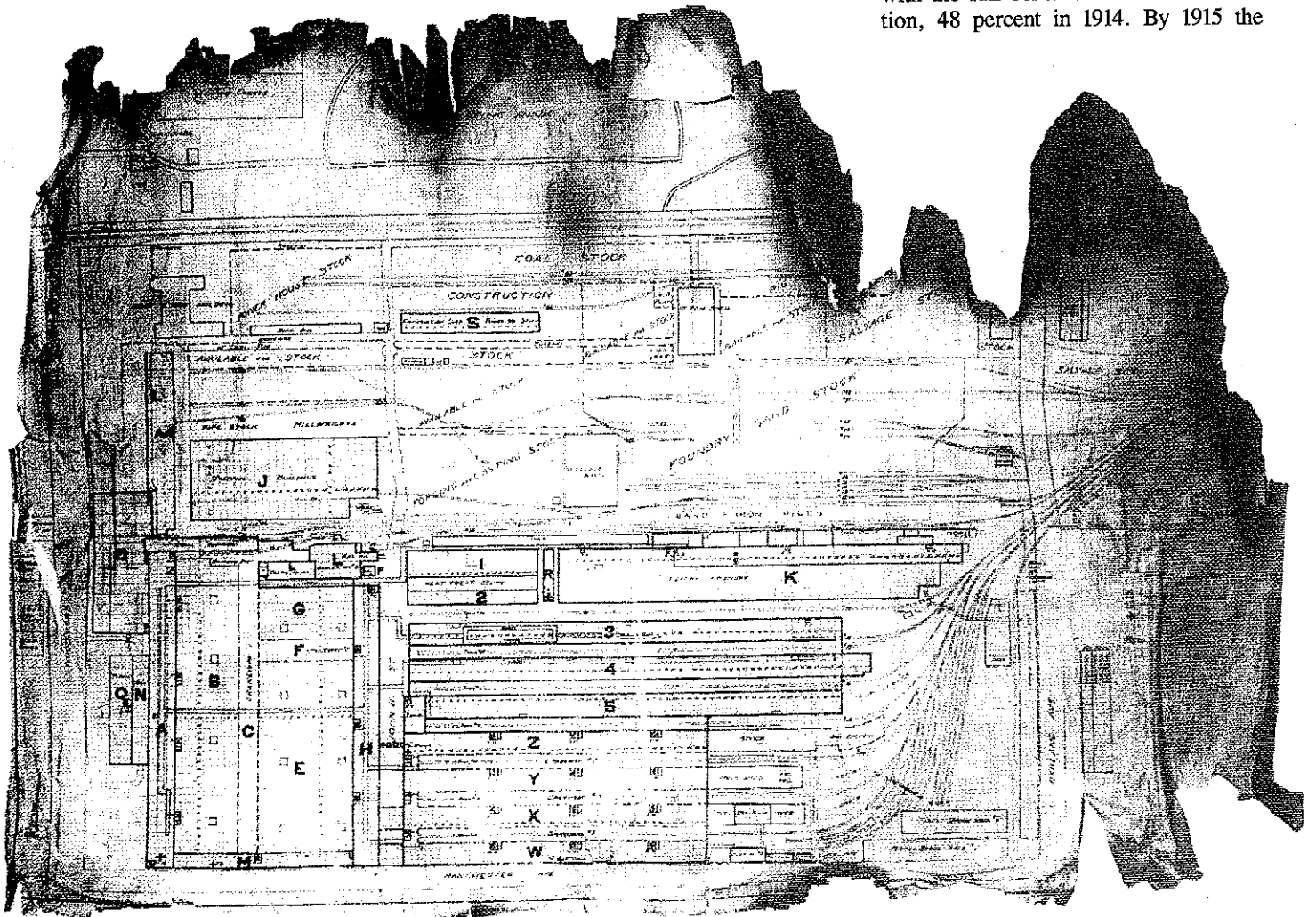
When Ford began making the Model T, the company's cash balance was \$2 million; when production ceased, it was \$673 million.

around the table. It typified the spirit, camaraderie, and confidence of the early days.

Henry Ford could now mass-produce his cars, and as he did so, he cut prices dramatically. In 1909 the average profit on a car had been \$220.11; by 1913, with the coming of the new, speeded-up line, it was only \$99.34. But the total profits to the company were ascending rapidly because he was selling so many more cars. When the company began making the Model T, its cash balance was slightly greater than \$2 million. Nineteen years and more than 15 million cars later, when Ford reluctantly came to the conclusion that he had to stop making the T, the company balance was \$673 million. But this was not the kind of success that merely made a company richer; it was the beginning of a social revolution.

Ford himself knew exactly what he had achieved—a breakthrough for the common man. "Mass production," he wrote later, "precedes mass consumption, and makes it possible by reducing costs and thus permitting both greater use-convenience and price-convenience." The price of the Model T touring car continued to come down, from \$780 in the fiscal year 1910-11 to \$690 the following year, to \$600, to \$550, to, on the eve of World War I, \$360. At that price he sold 730,041 cars. He was outproducing everyone in the world.

In 1913 THE FORD MOTOR COMPANY, WITH 13,000 employees, produced 260,720 cars; the other 299 American auto companies, with 66,350 employees, produced only 286,770. Cutting his price as his production soared, he saw his share of the market surge—9.4 percent in 1908, 20.3 in 1911, 39.6 in 1913, and with the full benefits of his mechanization, 48 percent in 1914. By 1915 the



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The only surviving plan of the production line that changed the world and made Ford a billionaire is this badly charred 1918 blueprint of the Highland Park plant.

3. FROM PROGRESSIVISM TO THE 1920s

company was making \$100 million in annual sales; by 1920 the average monthly earning after taxes was \$6 million. The world had never seen anything remotely like it. The cars simply poured off the line. An early illuminated sign in Cadillac Square said, "Watch the Fords Go By." Ford's dreams, in a startlingly brief time, had all come true. He had lived his own prophecy.

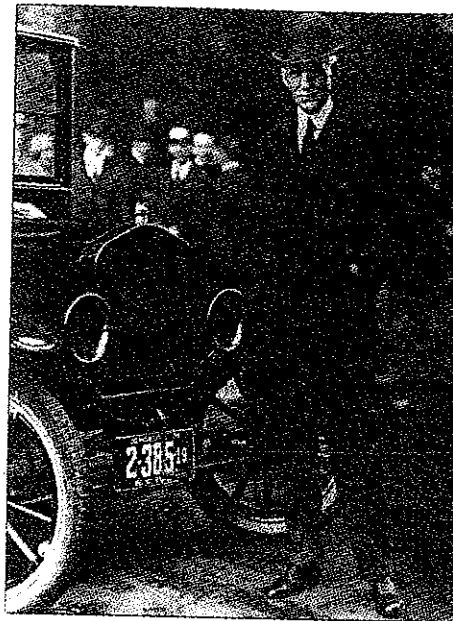
There was a moment, however, in 1909 when Ford almost sold the entire company. William C. Durant, the entrepreneur who put General Motors together from several fledgling companies, felt him out about selling the company. An earlier offer of \$3 million had fallen through because Ford wanted cash. This time, his company more successful, Ford demanded \$8 million. But again he wanted what he called "gold on the table."

Durant couldn't get the financing.

Ford's timing in holding on to his company, it turned out, had been exquisite. There was no point in designing an Everyman's Car unless the average man could buy fuel cheaply as well. The coming of Ford was almost perfectly synchronized with the discovery in the American Southwest of vast new reserves of oil.

If, as has been said, the American century and the oil century were one and the same thing, then that century began on January 10, 1901, in a field just outside of Beaumont, Texas. The name of the field was Spindletop, so called because of the spindly pines that grew there. For years local children had tossed lighted matches into the field; as the flames hit the strong petroleum vapors seeping up through the soil, there would be a satisfying bang. But anyone who believed that there was real oil beneath the ground was thought an eccentric. Oil was not found in Texas; it was found in places like Pennsylvania, West Virginia, and Ohio. Those states were all Standard Oil territory, and the Rockefeller people had no interest in the Southwest. "I will drink any drop of oil west of the Mississippi," boasted John D. Archbold of Standard.

It was Patillo Higgins, a Beaumont man, who had insisted that there was oil underneath Spindletop, and he had been trying to tap it for several years. It had cost him \$30,000 of his own money, and he owed friends an additional \$17,000. As each attempt had failed and he had been forced to go to others for financial help in order to continue drilling, his



The Model T and its creator, 1921.

*As he became one of
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own share of the operation shrank. Higgins's faith had never flagged, but he had become more and more a figure of ridicule in his hometown. "Millionaire," his neighbors nicknamed him. The drilling had gotten harder and harder; just before New Year's Day they had gone through 140 feet of solid rock. That had taken them to a level of 1,020 feet. On January 10 it happened. A geyser of oil roared out of the ground and shot a hundred feet above the derrick. No one had ever seen anything like it before; with it, the word *gusher* came into use.

At first no one could figure out how much oil the field was producing. Some said 30,000 barrels a day, some said

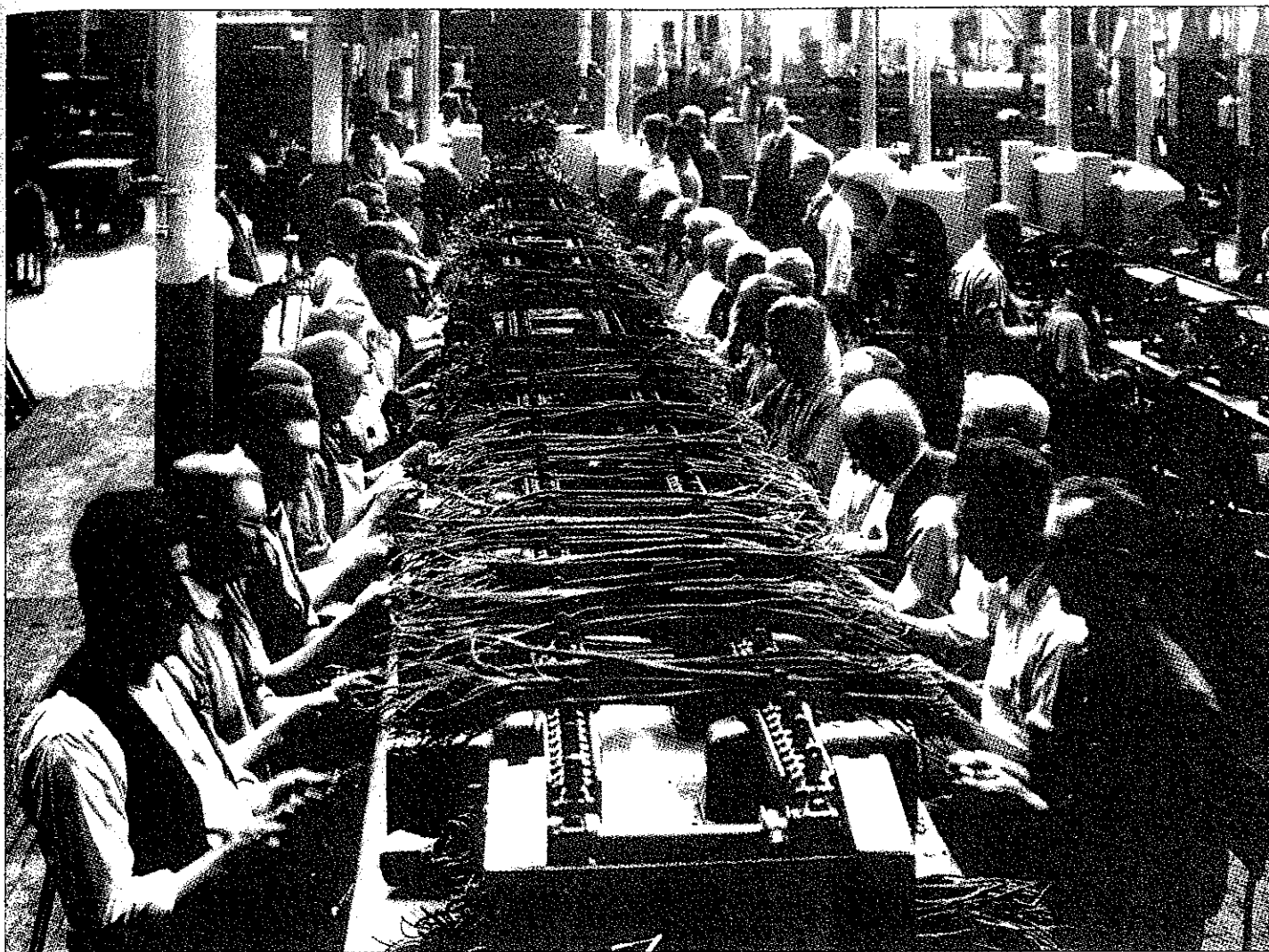
40,000. Capt. Anthony Lucas, who had become a partner of Higgins, said 6,000, because he had never heard of a larger hole in America. In fact, that one gusher was producing 100,000 barrels a day, roughly 60 percent of the total American production. One new well at Spindletop produced as much as the total from all the 37,000 wells back East in the Rockefeller territory. Within a short time there were five more hits. Eventually analysts found that the oil from the first six holes, some 136 million barrels annually, more than twice surpassed what Russia, then the world's leading petroleum producer, could generate.

Spindletop changed the nature of the American economy and, indeed, the American future. Before the strike, oil was used for illumination, not for energy. (Until 1911 the sales of kerosene were greater than the sales of gasoline.) Spindletop inaugurated the liquid-fuel age in America. The energy of the new age was to be oil, and America suddenly was rich in it.

Texas was providing the gas; Henry Ford was providing the cars. The only limits on him were those imposed by production, and he continued to be obsessed by it. He wanted to put as much of his money as he could back into the factory. He hated bankers and financial people anyway, and he did not want to waste the company's money on stockholders. They were, to his mind, parasites, men who lived off other men's labor. In 1917 the Dodge brothers, who had manufactured many of the early components for Ford and who had been rewarded with sizable amounts of stock, sued him for withholding stock dividends. Some \$75 million was at stake. During the trial, Ford testified that putting money back into the plant was the real fun he got from being in business. Fun, the opposing attorney retorted, "at Ford Motor Company expense." Retorted Ford, "There wouldn't be any fun if we didn't try things people said we can't do."

That was the trial in which he referred to the profits he was making as "awful," and when questioned about that by attorneys for the other side, he replied, with absolute sincerity, "We don't seem to be able to keep the profits down." Ford lost the suit, and the court ordered him to pay \$19 million in dividends, \$11 million of which went to him. The decision probably persuaded him to take as complete control of the company's stock as he

From the Collections of the Henry Ford Museum and Greenfield Village



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The major production problems had been solved, but labor problems lay ahead when this picture of workers in the Highland Park plant was taken in the 1920s.

could, so that as little money would be wasted as possible. Money to stockholders was a waste, money gone idle; money for the factory was not.

Out of that suit came both the means and the determination to build the River Rouge plant, his great industrial masterpiece, a totally independent industrial city-state. Nothing in the period that followed was too good for the Rouge: it had the best blast furnaces, the best machine tools, the best metal labs, the best electrical systems, the most efficient efficiency experts. Dissatisfied with the supply and quality of the steel he was getting, Ford decided to find out how much it would cost to build a steel plant within the Rouge. About \$35 million, Sorensen told him. "What are you waiting for?" asked Ford. Equally dissatisfied with both the availability and the quality of glass, he

built a glass factory at the Rouge as well. The price of glass had been roughly thirty cents a square foot early in the life of the T; soon it had soared to \$1.50 a foot. With the glass plant at the Rouge, the price came down to twenty cents a foot.

At the Rouge, barges carrying iron ore would steam into the inland docks, and even as they were tying up, huge cranes would be swinging out to start the unloading. Some sixty years later Toyota would be credited for its just-in-time theory of manufacturing, in which parts arrived from suppliers just in time to be part of the final assembly. But in any real sense that process had begun at the Rouge. As Eiji Toyoda, of the Toyota family said in toasting Philip Caldwell, the head of Ford, who in 1982 was visiting Japan: "There is no secret to

how we learned to do what we do, Mr. Caldwell. We learned it at the Rouge."

All of this, the creation of the Rouge as the ultimate modern plant, speeded up production even more. Before the opening of the Rouge as an auto plant in 1920 (it had produced submarine chasers for World War I in 1918), it had taken 21 days from the receipt of raw material to the production of the finished car. The Rouge cut that time to 14 days. With the opening of the Rouge steel plant in 1925, it took only 4 days.

The Rouge was Henry Ford's greatest triumph, and with its completion he stood alone as the dominant figure in America and the entire developed world. He had brought the process of manufacture to its ultimate moment; he had given the world the first people's car and by dint of his inventive genius had become

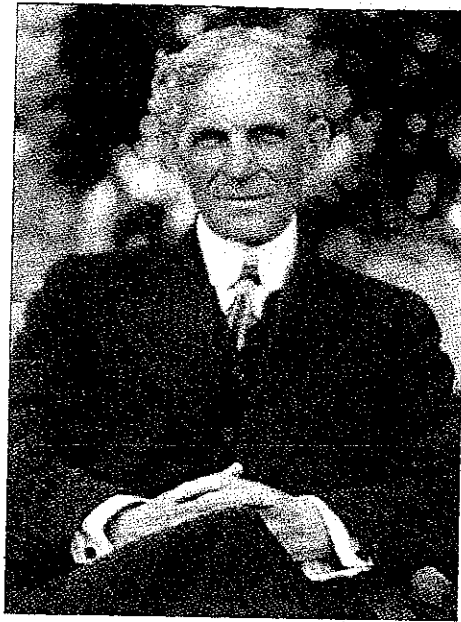
3. FROM PROGRESSIVISM TO THE 1920s

America's first billionaire. He was an immensely popular man as well, the man who had lived the American dream. But even then, forces he had helped set in motion would begin to summon forth the darkness in his character.

Part Two THE DESTROYER

Henry Ford's strengths eventually became his weaknesses. One notorious example was staying with his basic car far too long, ignoring technological change in the cars themselves while obsessively pursuing technological change in their manufacture. From the very start he fought off every attempt to perfect the Model T. In 1912, while he was off on a trip to Europe, his top engineers made some changes intended to improve the car. Their version of the T was lower and some twelve inches longer. It was a better, smoother-riding vehicle, and his associates hoped to surprise and please him. When he returned, they showed it to him. He walked around it several times, finally approaching the left-hand door and ripping it off. Then he ripped off the other door. Then he smashed the windshield and bashed in the roof of the car with his shoe. During all this he said nothing. There was no doubt whose car the T was and no doubt who was the only man permitted to change it. For years anyone wanting to improve a Ford car ran into a stone wall.

What had been another Ford strength, his use of manpower, also turned sour. The early workers at Ford had been skilled artisans, tinkering with designs as they worked. A job at Ford's, as it was known, had been desirable because Henry Ford was at the cutting edge of technology, always trying to do things better, and men who cared about quality wanted to be a part of his operation. In the early days he had his pick of the best men in Detroit. But the mechanized line changed the workplace. These new jobs demanded much less skill and offered much less satisfaction. The pressure to maximize production was relentless. Men who had prided themselves on their skills and had loved working with machines found themselves slaves to those machines, their skills unsummoned. The machines, they discovered to their rage, were more important than they were. The more the plant was mechanized, the more the work force began to unravel.



At the peak of his power, about 1914.

From the Collections of the Henry Ford Museum and Greenfield Village

Every year on his birthday, Ford said, he put on one old shoe to remind himself that he had once been poor and might be poor again.

Men began walking out of the Ford plant.

The turnover in the labor force in 1913, the year of the great mechanization, was 380 percent. It soon became even worse. In order to keep one hundred men working, Ford had to hire nearly a thousand. Ford and his principal business partner, James Couzens, realized they had to stabilize the work force. So they came up with the idea of the five-dollar day—that is, of doubling the existing pay. There were some who thought it was Couzens's idea, though Ford later took credit for it. Perceived by many observers as an act of generosity, it was

also an act of desperation. Ford calculated that a five-dollar day would attract the best workers, diminish labor unrest, and thus bring him even greater profits. Besides, he believed, it was a mistake to spend money on the finest machinery and then put those precious machines into the hands of disgruntled, unreliable, perhaps incompetent men.

Ford's instincts were right. Not only did the decision solidify the work force; it was so successful a public relations gesture that it allowed Ford to cut back sharply on his advertising. He liked to refer to it as one of the finest cost-cutting moves he had ever made and insisted that he had no philanthropic intent. This denial of altruism, a young Detroit theologian named Reinhold Niebuhr said later, was "like the assurance of an old spinster that her reputation as a flirt has been grossly exaggerated." Indeed in 1914, 1915, and 1916, the first three years of the five-dollar wage, the Ford Motor Company's profits after taxes were \$30 million, \$20 million, and \$60 million.

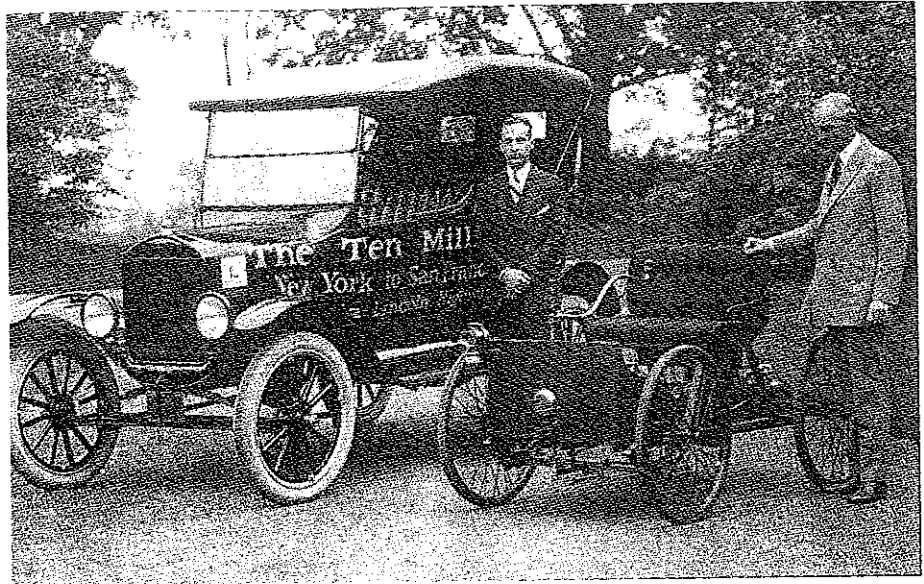
To workingmen, the five-dollar day was electrifying. Ford had also instituted an eight-hour workday and with it a third shift, and the day after his announcement of the new wage, 10,000 men turned up at the gates of the plant looking for work. Ford had wanted the pick of workers; the pick he now had. For days the crowds grew, and policemen were needed to keep them under control. It was probably the first time that the fruits of the oil-fueled industrial age had reached down to the average worker. A worker had a grim and thankless job that rarely let him get ahead. He would end his life as he began it, and his children were doomed to the same existence. Now, however, with cheap oil and mass production, the industrial cycle was different. It was more dynamic; it generated much more profit and many more goods, which required customers with money to buy them. The worker became the consumer in an ever-widening circle of affluence.

Ford became perhaps the greatest celebrity of his time. Reporters hung out at his office, and his every word was quoted. That both helped and hurt him, because although he was a certifiable genius in manufacturing and perhaps a semi-genius for a long time in business, much of what he said was nonsense, albeit highly quotable nonsense. On cigarettes: "Study the history of almost any criminal, and you will find an inveterate cigarette smoker." On Jews: "When

there is something wrong in this country, you'll find Jews." The Jews, he thought, were particularly unproductive people, and he once vowed to pay a thousand dollars to anyone who would bring him a Jewish farmer, dead or alive. He hated the diet of Americans of his generation—"Most people dig their graves with their teeth," he once said. He was prophetic about the nutritional uses of the soybean and intuitive about the value of whole wheat bread, and he wanted his friends to eat no bread but whole wheat. He felt that people who wore glasses were making a serious mistake; they should throw away their glasses and exercise their eyes. For almost all his adult life, he used unadulterated kerosene as a hair cream. He did this because he had observed, he said, that men who worked in the oil fields always had good heads of hair. "They get their hands filled with the oil, and they are always rubbing their hands through their hair," he said, "and that is the reason they have good hair." One of the jobs of E. G. Liebold, his private secretary, was to keep a gallon of No. 10 light kerosene on hand for Ford's hair and constantly to watch that it did not turn rancid.

On one occasion someone noticed that his shoes did not match; he replied that every year on his birthday he put on one old shoe to remind himself that he had once been poor and might be poor again.

He was in some ways a shy man. In the old Ford factory his office had a window through which he used to crawl in order to escape visitors. Nonetheless he was acutely aware that his name was the company name and that his personal publicity generally helped the company. All news from the Ford Motor Company was about him. He was also a hard man, and he became harder as he became older. He distrusted friendship and thought it made him vulnerable: friends might want something from him. He used a company group called the Sociological Department—allegedly started to help workers with personal problems in finances or health—to check up on employees and find out whether they drank at home or had union sympathies. If they were guilty of either, they were fired. For all his populism, he always took a dim view of the average employee. Men worked for two reasons, he said. "One is for wages, and one is for fear of losing their jobs." He thought of labor in the simplest terms—discipline. He once told a journalist named William Richards, "I



From the Collections of the Henry Ford Museum and Greenfield Village

Edsel and Henry Ford stand with the ten millionth Model T—and the original quadricycle, Ford's first car—shortly after the T made a transcontinental trip in 1924.

have a thousand men who, if I say, 'Be at the northeast corner of the building at 4:00 A.M.,' will be there at 4:00 A.M. That's what we want—obedience."

Even in the days before he became isolated and eccentric, he liked playing cruel tricks on his top people. He loved pitting them against one another. A favorite ploy was to give the identical title to two men without telling either about the other. He enjoyed watching the ensuing struggle. The weaker man, he said, would always back down. He liked the idea of keeping even his highest aides anxious about their jobs. It was good for them, he said. His idea of harmony, his colleague Charles Sorensen wrote, "was constant turmoil." The same sort of thing was going on in the factories. The foremen, the men who ruled the factory floor, were once chosen for their ability; now, increasingly, they were chosen for physical strength. If a worker seemed to be loitering, a foreman simply knocked him down. The rules against workers talking to each other on the job were strict. Making a worker insecure was of the essence. "A great business is really too big to be human," Ford himself once told the historian Allan Nevins.

Slowly, steadily, in the twenties, Henry Ford began to lose touch. He had played a critical role in breeding new attitudes in both workers and customers. But as they changed, he did not, and he became more and more a caricature of himself. "The isolation of Henry Ford's mind is about as near perfect as it is

possible to make it," said Samuel Marquis, a Detroit minister who had headed the Sociological Department when its purpose had been to help the employees and who later became its harshest critic.

The Ford Motor Company was no longer a creative operation focused on an exciting new idea and headed by an ingenious leader. For its engineers and designers, the company, only a decade earlier the most exciting place to work in America, was professionally a backwater. Sycophants rose, and men of integrity were harassed. Rival companies were pushing ahead with technological developments, and Ford was standing pat with the Tin Lizzie. His own best people became restless under his narrow, frequently arbitrary, even ignorant, policies. He cut off anyone who disagreed with him. Anyone who might be a threat within the company because of superior leadership ability was scorned as often and as publicly as possible.

EVENTUALLY HE DROVE OUT BIG BILL Knudsen, the Danish immigrant who was largely responsible for gearing up the Ford plants during World War I and was widely considered the ablest man in the company. Knudsen was a formidable production man who had been in charge of organizing and outfitting the Model T assembly plants; he had set up fourteen of them in two years. But his prodigious work during World War I made him a target of perverse attacks by Henry Ford. Knudsen was a big, burly man, six

3. FROM PROGRESSIVISM TO THE 1920s

foot three and 230 pounds, and he drank, smoked, and cursed, all of which annoyed the puritanical Ford. Worse, Knudsen was clearly becoming something of an independent figure within the company. He was also drawing closer to Ford's son, Edsel, believing him a young man of talent, vision, and, most remarkable of all, sanity. Together they talked of trying to improve the Model T. All of this merely infuriated the senior Ford and convinced him that Knudsen was an intriguer and becoming too big for his place. Ford took his revenge by making a great show of constantly countermanning Knudsen's production decisions. Knudsen became frustrated with these public humiliations and with the company's failure to move ahead technologically. He finally told his wife that he did not think he could work there any longer. He was sure he was going to have a major confrontation with Henry Ford.

"I can't avoid it if I stay," he said, "and I can't stay and keep my self-respect. I just can't stand the jealousy of the place any more."

"Then get out," she said.

"But I'm making \$50,000 a year. That's more money than we can make anywhere else."

"We'll get along," she said. "We did before you went to work there."

In 1921 he quit, virtually forced out. "I let him go not because he wasn't good, but because he was too good—for me," Ford later said.

Knudsen went to General Motors for a starting salary of \$30,000, but GM soon put him in charge of its sluggish Chevrolet division. It was the perfect time to join GM. Alfred P. Sloan, Jr., was putting together a modern automotive giant, building on Ford's advances in simplifying the means of production and bringing to that manufacturing success the best of modern business practices. Within three years of Knudsen's arrival, GM became a serious challenger to Ford.

By the early twenties the rumblings from Ford's dealers were mounting. They begged him to make changes in the Model T, but he had become so egocentric that criticism of his car struck him as criticism of himself. Ford defiantly stayed with the Model T. Perhaps 1922 can be considered the high-water mark of Ford's domination of the market. The company's sales were never higher, and with an average profit of \$50 a car, it netted more than \$100 million. From then on it was downhill. As Chevy made



In 1927, last year of the Model T.

From the Collections of the Henry Ford Museum and Greenfield Village

*After he built his
fifteen millionth
Model T, Ford's
domination over a
market that he
himself had created
came to an end.*

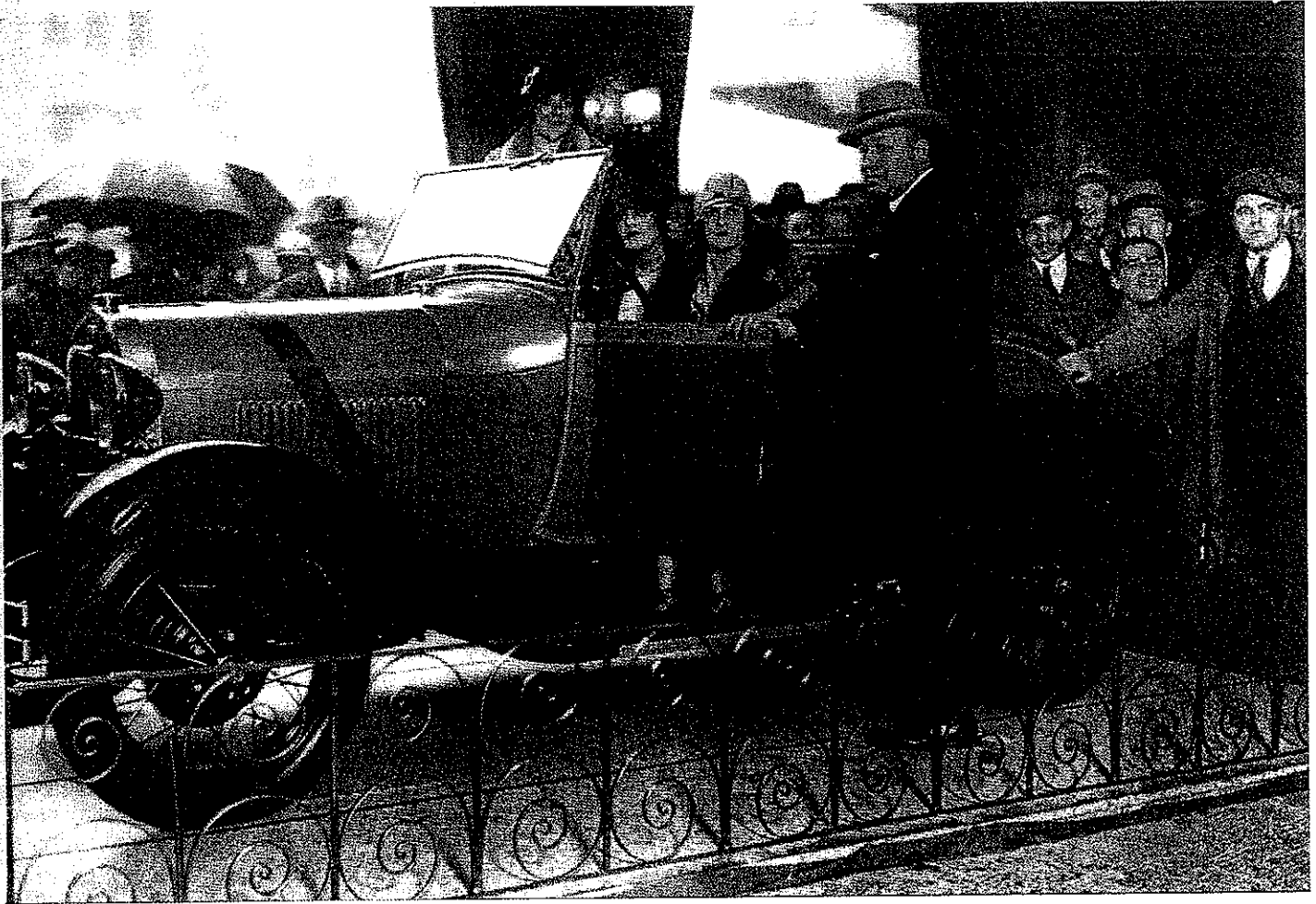
its challenge, the traditional Ford response—simply cutting back on the price—no longer worked. The success of that maneuver had been based on volume sales, and the volume was peaking. From 1920 to 1924 Ford cut its price eight times, but the thinner margins were beginning to undermine Ford's success. The signs got worse and worse. For the calendar year ending February 1924, the Ford company's net profit was \$82 million; of that only \$41 million came from new cars, and \$29 million came from the sales of spare parts. If anything reflected the stagnation of the company, it was that figure.

In 1926 Ford's sales dropped from

1.87 million to 1.67. At the same time, Chevy nearly doubled its sales, from 280,000 to 400,000. America's roads were getting better, and people wanted speed and comfort. In the face of GM's continuing challenge, Henry Ford's only response was once again to cut prices—twice in that year. The Model T was beginning to die. Finally, in May of 1927, on the eve of the manufacture of the fifteenth million Model T, Henry Ford announced that his company would build a new car. The T was dead. His domination over a market that he himself had created was over. With that he closed his factories for retooling, laying off his workers (many of them permanently).

The new car was the Model A. It had shock absorbers, a standard gearshift, a gas gauge, and a speedometer, all things that Chevy had been moving ahead on and that Ford himself had resisted installing. In all ways it seemed better than its predecessor, more comfortable, twice as powerful, and faster. When it was finally ready to be revealed, huge crowds thronged every showplace. In Detroit one hundred thousand people turned up at the dealerships to see the unveiling. In order to accommodate the mob in New York City, the manager moved the car to Madison Square Garden. Editorials ranked the arrival of the Model A along with Lindbergh's solo transatlantic flight as the top news story of the decade. The car was an immense success. Even before it was available, there were 727,000 orders on hand. Yet its success was relatively short-lived, for once again Henry Ford froze his technology. Even the brief triumph of the Model A did not halt the downward spiral of the company. Henry Ford remained locked into the past. The twenties and thirties and early forties at Ford were years of ignorance and ruffianism. Henry Ford grew more erratic and finally senile. At the end of his life he believed that World War II did not exist, that it was simply a ploy made up by the newspapers to help the munitions industry. No one could reach the old man any more. His became a performance of spectacular self-destructiveness, one that would never again be matched in a giant American corporation. It was as if the old man, having made the company, felt he had a right to destroy it.

With Knudsen's departure, the burden of trying to deal with Ford fell on his son, Edsel. Gentle and intelligent, Edsel Ford reflected the contradictions in his



The trim little Model A appeared in 1927: "Excitement could hardly have been greater," said the *New York World* of the crowd shown here, "had Pah-Wah, the sacred white elephant of Burma, elected to sit for seven days on the flagpole of the Woolworth Building."

From the Collections of the Henry Ford Museum and Greenfield Village

father's life. He had been born while the Fords were still poor. (As a little boy, Edsel had written Santa Claus a letter complaining: "I haven't had a Christmas tree in four years and I have broken all my trimmings and I want some more.") By the time he entered manhood, his father was the richest man in the country, unsettled by the material part of his success and ambivalent about the more privileged life to which his son was being introduced. Henry Ford wanted to bestow on his son all possible advantages and to spare him all hardship, but, having done that, he became convinced that Edsel was too soft to deal with the harsh, brutal world of industry, symbolized by nothing better than the Ford Motor Company.

Edsel was not a mechanical tinkerer himself, but he had spent his life in the auto business, and he knew who in the company was good and who was not; he was comfortable with the engineers and

the designers. Edsel knew times were changing and that the Ford Motor Company was dying. During his father's worst years, Edsel became a magnet for the most talented men in the company, who came to regard his defeats as their defeats. He was a capable executive, and an exceptionally well-trained one: his apprenticeship was full and thorough—and it lasted thirty years. Absolutely confident in his own judgment about both people and cars, Edsel Ford was beloved by his friends and yet respected in the automobile business for his obvious good judgment. "Henry," John Dodge, Henry Ford's early partner and later his rival, once said, "I don't envy you a damn thing except that boy of yours."

Edsel was the first scion of the automotive world. He married Eleanor Clay, a member of the Hudson family that ran Detroit's most famous department store. They were society, and the marriage was a great event, the two worlds of Detroit

merging, the old and the new, a Ford and a Clay. Henry Ford hated the fact that Edsel had married into the Detroit elite and had moved to Grosse Pointe. He knew that Edsel went to parties and on occasion took a drink with his friends, not all of whom were manufacturing people and some of whom were upper class—worse, upper-class citified people—and was sure all this had corrupted him. It was as if Edsel, by marrying Eleanor, had confuted one of Henry Ford's favorite sayings: "A Ford will take you anywhere except into society."

ON TOP OF ALL HIS OTHER BURDENS, IT was Edsel's unfortunate duty to represent the future to a father now absolutely locked in a dying past. Genuinely loyal to his father, Edsel patiently and lovingly tried to talk Henry Ford into modernizing the company, but the old man re-

3. FROM PROGRESSIVISM TO THE 1920s

From the Collections of the Henry Ford Museum and Greenfield Village



Reluctant author of the Model A, 1928.

*By the 1930s the
business community
had begun to turn
against Ford:
Fortune called him
“the world’s worst
salesman.”*

garded his son’s loyalty as weakness and spurned him and his advice.

When everyone else in the company agreed that a particular issue had to be brought before the old man, Edsel became the designated spokesman. With Knudsen now gone, he usually stood alone. He was probably the only person who told the truth to his father. Others, such as Sorensen, were supposed to come to Edsel’s defense during meetings with Henry, but they never did. Sorensen, brutal with everyone else in the company but the complete toady with the founder, always turned tail in the face of Henry Ford’s opposition.

All the while the competition was getting better faster. Chevy had hydraulic

brakes in 1924; Ford added them fourteen years later. Because Chevy had already gone to a six-cylinder car, Edsel pleaded even more passionately with his father to modernize the Ford engine. A six, his father retorted, could never be a balanced car. “I’ve no use for an engine,” he said, “that has more spark plugs than a cow has teats.” After all, he had built one back in 1909, and he had not liked it.

The six-cylinder engine, more than any other issue, stood between the two Fords. The quintessential story about Henry Ford and the six-cylinder engine—for it reflects not just his hatred of the new but his contempt for his son as well—concerns a project that Edsel and Laurence Sheldrick, the company’s chief engineer, had been working on. It was a new engine, a six, and Edsel believed he had gotten paternal permission to start experimenting with it. He and Sheldrick labored for about six months and they were delighted with the prototype. One day when they were just about ready to test it, Sheldrick got a call from Henry Ford.

“Sheldrick,” he said, “I’ve got a new scrap conveyor that I’m very proud of. It goes right to the cupola at the top of the plant. I’d like you to come and take a look at it. I’m really proud of it.”

Sheldrick joined Ford for the demonstration at the top of the cupola, where they could watch the conveyor work. To Sheldrick’s surprise, Edsel was there too. Soon the conveyor started. The first thing riding up in it, on its way to becoming junk, was Edsel Ford’s and Larry Sheldrick’s engine.

“Now,” said the old man, “don’t you try anything like that again. Don’t you ever, do you hear?”

In 1936, his company under mounting pressure, Henry Ford reluctantly built a six-cylinder engine. It went into production a year later. But moves like this were too late. By 1933, *Fortune*, reflecting the growing scorn and indeed the contempt of the business community that Henry Ford had once dazzled, called him “the world’s worst salesman.”

He became more and more distant from the reality of his own company. As he became more senile and more threatened by growing pressure from a restive labor force, he began to cut back on the power of Charlie Sorensen and grant it instead to Harry Bennett, who was head of the company’s security forces. Sorensen had been a savage man, hated by

many, capable of great cruelty, eager to settle most disputes with his fists, but at least he knew something about production. Bennett was worse. An ex-seaman who had boxed professionally under the name of Sailor Reese, he had come to power in the post-World War I days, when his assignment was to hire bullies and ex-cons and wrestlers and boxers to help control the plant and keep the union out. Bennett was well suited for that role. His was an empire within an empire, and that inner empire was built on fear. He padded his pockets with Ford money—the finances of the company were in chaos. He built at least four houses with his appropriated wealth. His rise exactly paralleled the decline of the old man, and he played on all the fears the old man had, especially fear of labor and fear of kidnapping. Ford was convinced that Bennett, with his connections in the underworld, could stop any attempt to kidnap his son or grandchildren. Ford loved the fact that Bennett used force to intimidate people. “Harry gets things done in a hurry,” he liked to say.

To the distress of Ford’s family, Bennett’s power over Henry grew almost without check in the 1930s, when the founder was in his seventies. Board meetings were a travesty. Often Ford did not show up. Or he would walk in at the last minute with Bennett and after a few minutes say, “Come on, Harry, let’s get the hell out of here. We’ll probably change everything they do anyway.” Once a magazine writer was in a car with Ford and Bennett, and he asked Ford who was the greatest man he had ever known—after all, in so rich and varied a career he had known quite a few exceptional people. Ford simply pointed at Bennett.

At the very end he used Bennett as his principal weapon against his son. The last years were truly ugly. Sure that he was protected by Ford, Bennett harassed Edsel mercilessly. The old man took obvious pleasure in Edsel’s humiliations. Already emotionally beaten down by his father, Edsel had become a sick man. He had remained loyal to his father and endured his humiliations while healthy. Now, battling stomach cancer, he had less and less to fight back with. Edsel’s last years were very difficult, as he struggled to expedite the war-production work his father hated while at the same time resisting his illnesses. In 1942 Edsel got undulant fever from drinking milk from his father’s dairy; Ford disapproved of

pasteurization. The old man blamed it on Edsel's bad habits. In 1943 Edsel died. He was only forty-nine. Almost everyone who knew both Henry and Edsel Ford thought the son had really died of a broken heart.

This was the final, malevolent chapter in Henry Ford's own life. Not only had he destroyed his son, he had all but ruined a once-great industrial empire. By the middle of the war, the Ford Motor Company was in such poor shape that high government officials pondered whether to take it over, for the government had to keep the giant going. Without the stimulus of the war and the work it eventually brought the company, it is possible that Ford might have failed completely. As the government debated, two women stepped forward. Clara Bryant Ford and Eleanor Clay Ford, one Henry Ford's wife and the other Edsel's widow, had watched it all with dismay—the old man's senility, the crushing of Edsel, the rise of Bennett—but with a certain helplessness. "Who is this man Bennett who has such power over my husband and my son?" Clara Ford once asked. She had hated the fact that Bennett and Sorensen had both taken it upon themselves to speak for Henry against Edsel and had participated in and encouraged his destruction. Now both women feared that the same forces might prevent young Henry, Edsel's son, from ascending and assuming power.

Henry Ford II had been serving in the Navy during the war, enjoying a taste of personal freedom. But in August 1943, thanks to intervention by his mother and grandmother, he got orders sending him back to Detroit; the nation's highest officials feared that, after Edsel's death, Harry Bennett might actually take over the company. Young Henry returned reluctantly, but he was the firstborn of Edsel Ford, and familial obligation demanded it. He had no illusions about the challenge ahead. He was well aware that, except for a very few men, the Ford Motor Company was a corrupt and corrupting place.

BENNETT AND SORENSEN IMMEDIATELY began belittling him, Bennett by undoing what Henry was attempting to do each day and Sorensen by demeaning him in front of other people and by always calling him "young man." "He might just as well have called me Sonny," Henry later told friends. Henry Ford II might

have titular power—he was named vice president in December 1943—and the power of blood, but unless his grandfather moved aside and Bennett left the company, he would never be able to take control. Even Sorensen was in the process of being destroyed by Bennett, and young Henry seemed very vulnerable. Again Eleanor Clay Ford put her foot down and forced an issue. Widowhood had stirred in her the kind of indignation her husband had always lacked. He had been too loyal to challenge his father, but now Edsel's company stock was hers to vote. She threatened to sell it unless old Henry moved aside in favor of his grandson. Her son would not be destroyed as her husband had been. Clara Bryant Ford backed her completely. They fought off the old man's excuses and his delaying ploys. With that threat, and a sense that these women were intensely serious, Henry Ford finally, furiously, gave up, and Henry Ford II took control.

The young man—he was just twenty-eight—had not served the long apprenticeship his father had, and he had only the scantest knowledge of the vast and complicated world he inherited. But it soon became clear that he was shrewd and tough. Through the most unsparing work he mastered the business; and he got rid of Harry Bennett. "You're taking over a billion-dollar organization here that you haven't contributed a thing to!" Bennett yelled. But, having no other recourse, he left.

In the end Henry Ford II broke all of Bennett's cronies and put an end to the bad old era. But there was no way to escape the complex legacy of the founder.

Once a popular figure with the average man, Henry Ford had become known as one of the nation's leading labor baiters. He had helped usher in a new age of economic dignity for the common man, but he could not deal with the consequences. His public statements during the Depression were perhaps the most pitiless ever uttered by any capitalist. He repeatedly said that the Depression was good for the country and the only problem was that it might not last long enough, in which case people might not learn enough from it. "If there is unemployment in America," he said, "it is because the unemployed do not want to work." His workers, embittered by his labor policies, marched against him and were put down by Bennett's truncheons and guns. His security people were so vicious that when Ford's workers marched

against the company, the workers wore masks over their faces to hide their identities—something rare in America. Nothing could have spoken more eloquently of tyrannical employment practices.

IN BUSINESS HENRY FORD WAS OVERTAKEN by General Motors, which relentlessly modernized its design, its production, and its marketing. GM fed the appetites Ford had helped create. In addition, GM inaugurated a dynamic that haunted the Ford company for the next fifty years; buyers started out driving Fords when they were young and had little money, but slowly, as their earnings rose, they graduated to more expensive GM cars. As a workingman's hero, Ford was replaced by FDR. What had once been charming about his eccentricity now became contemptible.

Nothing reflected his failures more tellingly than the fate of the River Rouge manufacturing complex. It was an industrial masterpiece, and it should have stood long after his death as a beacon to the genius of its founder. But the treatment of human beings there had been so mean and violent, the reputation of the Rouge so scurrilous, that in the postwar era it stood as an embarrassment to the new men running Ford, a reputation that had to be undone.

The bequeathment had other unfortunate aspects. By fighting the unions so unalterably for so long, Ford and the other Detroit industrialists had ensured that, when the unions finally won power, they would be as strong as the companies themselves, and that there would be a carry-over of distrust and hatred. There were other, more concrete, burdens as well. Because he had been locked in the past and had frozen his technology, the company was on the verge of bankruptcy.

Probably no major industrial company in America's history was ever run so poorly for so long. By the beginning of 1946, it was estimated, Ford was losing \$10 million a month. The chaos was remarkable, but some of it, at least, was deliberate. The old Henry Ford hated the government and in particular the federal income tax, and by creating utter clerical confusion he hoped to baffle the IRS. He also hated bookkeepers and accountants; as far as he was concerned, they were parasitical. When Arjay Miller, who later became president of the company, joined Ford in 1946, he was told to get the profit forecast for the next month.

3. FROM PROGRESSIVISM TO THE 1920s

Miller went down to the Rotunda, where the financial operations were centralized, or at least supposed to be. There he found a long table with a lot of older men, who looked to him like stereotypes of the old-fashioned bookkeeper. These men were confronted by bills, thousands of bills, and they were dividing them into categories—A, B, C, D. The piles were immense, some several feet high. To Miller's amazement the bookkeepers were actually estimating how many million dollars there were per foot of paper. That was the system.

Miller asked what the estimates for the following month's profits were. One of the men working there looked at him and asked, "What do you want them to be?"

"What?" asked Miller.

"I can make them anything you want."

He meant it, Miller decided. It was truly a never-never land.

It was not surprising, then, that the young Henry Ford, seeking to bring sense to the madness he found all around him, turned to an entirely new breed of executive—the professional managers, the bright, young financial experts who knew, if not automobiles and manufacturing plants, then systems and bottom lines. To them Henry Ford II gave nearly unlimited power. And they, in turn, would in the years to come visit their own kind of devastation on the company. The legacy of what the old man had done in his last thirty years left a strain of tragic unreason in the inner workings of the company. So, once again did the past influence the future. For the past was always present.

TO FIND OUT MORE There has been a great deal written about Henry Ford—

in fact two large new biographies have come out this year—but one older book that David Halberstam found particularly readable was Keith Sward's "irreverent" *The Legend of Henry Ford*, originally published in 1948 and reissued as a paperback by Atheneum in 1968. There is also, he said, a "very good small book" by Anne Jardim, *The First Henry Ford*, published by the MIT Press in 1970. Allan Nevins's trilogy, *Ford*, much praised by scholars, is no longer in print but is still available in libraries. For a vivid sense of the man's life, readers can visit Henry Ford's Greenfield Village in Dearborn, Michigan, which is open year-round. Writing about this "stupendous" museum in the December 1980 issue of *American Heritage*, Walter Karp said that the collection reflects Ford's mind so intimately that it becomes almost a three-dimensional autobiography.