

EDDIE RICKENBACKER: RACETRACK ENTREPRENEUR

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ABSTRACT

Edward V. (Eddie) Rickenbacker (1890-1973) is best remembered for his record as a combat pilot in World War I, in which he shot down 26 German aircraft and won fame as America's "Ace of Aces." From 1934 until 1963 he was general manager, president, and board chairman of Eastern Air Lines, which was for a time the most profitable air carrier in the United States. This paper shows how Rickenbacker's fiercely entrepreneurial style of management was born in his early involvement in the automobile industry, and particularly in his career as an automobile racing driver from 1909 through 1916.

On Memorial Day, 1911, approximately 80,000 racing fans gathered at the Indianapolis Speedway to see history in the making. Cheering themselves hoarse, they would watch the first running of the Indy 500, one of the world's greatest automotive spectacles. The race had been created by a syndicate of businessmen led by Carl G. Fisher, who made a fortune from Prest-O-Lite gas headlamps and became a key figure in the emergence of American motor sport. It was unique among all attractions on the American racing tour in testing the three basic criteria of automotive excellence--speed, power, and endurance--in one grueling event. For automobile manufacturers, the need for cars to make repeated circuits of the 2.5-mile track, built on a 328-acre site four miles from the heart of Indiana's capital city, presented an opportunity to demonstrate the merits of their products in a mercilessly demanding venue. For the road warriors who drove the vehicles, the race was a supreme test of courage and skill in a dangerous arena where the specter of sudden death lurked around every turn. The Indy 500 was an ideal expression of the values dominating a culture that worshipped technology, admired stern masculine virtues, and celebrated the will to win.

Lured by a \$27,000 purse, forty-four of America's best drivers slowly circled the arena like Roman gladiators while Fisher, a formidable figure wearing pince-nez eyeglasses, led them to the starting line in a Stoddard-Dayton pace car.¹ The list of contestants and the cars in which they would compete, built by both foreign and domestic manufacturers, read like a *Who's Who* of motordom. Waiting anxiously for starter Fred Wagner to signal the beginning of the race by detonating a bomb were Johnny Aitken in a National, Gil Anderson in a Stutz, Bob Burman in a Benz, Arthur Chevrolet in a Buick, Louis Disbrow in a Pope-Hartford, Ralph de Palma in a Simplex Zip, Ray Harroun in a Marmon Wasp, Hughie Hughes in a Mercer, Ralph Mulford in a Lozier, and Spencer Wishart in a Mercedes. After driving 6 hours, 42 minutes, and 8 seconds, Harroun was first to cross the finish line, averaging 74.59 miles per hour. Today his

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black Marmon six, bearing a large gold numeral 32, has pride of place in the center of the main floor in the Hall of Fame Museum at Indianapolis.²

Among the less heralded drivers at the first Indy 500 was Lee Frayer, from Columbus, Ohio, crouching over the wheel of a 4-cylinder scarlet and gray Firestone-Columbus powered by an air-cooled engine of his own design. Because he did not finish among the top 12 competitors, Frayer was flagged before completing five hundred miles. Even so, his 13th place performance was respectable considering how many contestants had started the race. His presence at Indianapolis, however, is memorable chiefly because of the identity of his relief driver, Edward Rickenbacher, for whom the race would be a significant milestone in the career of a future national hero. In time, he became better known as Eddie Rickenbacker. For many years, that name was a household word among his fellow citizens.

Rickenbacker won an enduring image as American Ace of Aces in World War I (he shot down 26 German aircraft), Medal of Honor winner, commercial aviation pioneer, and long-time chief executive of Eastern Air Lines. But it is worth remembering that he was firmly grounded in the automotive world long before he took to the sky. He won seven major events on the American racing tour. He was its third-leading money winner in 1916. He manufactured a car bearing his own name in the 1920s. He chaired the American Automobile Association's Contest Board for nearly two decades. He was a leading promoter of soapbox derbies and other events that enhanced automobile awareness among the nation's youth. He owned the Indianapolis Speedway from 1927 to 1945. Had he done only these things, he would still be noteworthy for the role he played in helping create what historian James J. Flink has aptly called the "Car Culture."³

Among economic and business historians, however, it is fitting to recognize that, even in the early years of his career, Rickenbacker was not simply an automobile *racer*. More specifically, he was a *racer-entrepreneur*. His rise from a childhood of extreme poverty to financial success places him firmly in the company of Benjamin Franklin, Andrew Carnegie, and other enterprising Americans whom John Cawelti has appropriately called "Apostles of the Self-Made Man."⁴ Rickenbacker's experiences on the roaring road reveal much about the way in which motor sport was organized, financed, and supervised on its way to becoming a mass spectator sport. Also, Rickenbacker's early career provides an excellent example of the worship of speed that became one of the prime characteristics of American culture.⁵

Rickenbacker was born in Columbus, Ohio, in 1890. His parents were humble Swiss immigrants who had eight children, of whom he was the third. He learned self-reliance early in life, displaying strong entrepreneurial tendencies and a fervent commitment to rugged individualism. His business career began at the age of five, when he was already smoking. Needing money to buy tobacco to roll cigarettes, he collected rags, bones, and rusty nails and sold them to a junk dealer named Sam, who paid for these items by weight. (Bones had market value because they could be ground into fertilizer.) Finding that the bones he collected weighed more when soaked in water,

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Rickenbacker swished them in mud puddles before selling them to Sam. Suspecting that Sam had improperly set his scales in order to short-weigh him, he bought his own scales to make sure the wily dealer did not cheat him out of a single penny. He got his first steady job selling newspapers when he was only ten years old, rising early each morning and walking two miles to get copies of the first edition of the *Columbus Dispatch* so he could get on the street ahead of competing newsboys.

In 1904, when an assailant killed his father, Rickenbacker dropped out of school in the seventh grade to help support his mother. He never forgot the thrill of giving her his first pay envelope, containing three one-dollar bills and a fifty-cent piece he had earned at a factory by working six twelve-hour days. Getting a job cleaning passenger cars at the Pennsylvania Railroad shops in Columbus for \$1 a day, he doubled and tripled his income by finding loose change that had fallen behind seat cushions. He never understood why anybody could not succeed by practicing the initiative, perseverance, and thrift that came naturally to him.⁶

Rickenbacker was a thrill-seeker who learned early in life that subjecting himself to mortal danger and coming out alive gave him ecstatic feelings he learned to crave. Close brushes with death energized his will. His need for the overpowering sensations he derived from successfully facing danger, coupled with a strong sense of the aesthetic beauty of mechanical technology, led him to seek a job in the automobile industry after a car salesman gave him an exhilarating ride in a Ford runabout. Columbus had long been a center of carriage making, and played an important role in the early history of the American automobile industry. Forty brands of motor cars were made in the city between 1895 and 1923.⁷

Rickenbacker started as a handyman at the Evans Garage, a small shop that repaired bicycles and automobiles. Dissatisfied with his meager earnings, he moved on to the Oscar Lear Company, which made a car, the Frayer-Miller, named after two of the firm's partners. When Rickenbacker's first attempts to get a job with the company were rebuffed, he badgered the owners into hiring him by grabbing a broom, sweeping the floor, and asking for nothing in return. After he was hired he displayed phenomenal zeal to learn as much as he could about cars. Saving as much money as he could, he paid \$60—a large sum for a teenager to amass at the time—to International Correspondence Schools for a mail-order course in automotive technology. He rose at four o'clock every morning to study the lessons, and spent his lunch hours poring over engine diagrams. Rickenbacker's determination to succeed captured the attention of Lee Frayer, a partner in the Oscar Lear Company who had a mechanical engineering degree from Ohio State University.⁸ Frayer, a designer of innovative air-cooled engines and builder of racecars, became Rickenbacker's mentor and surrogate father. Under Frayer's tutelage Rickenbacker mastered basic engineering principles and showed an intuitive feeling for gasoline motors. He had an uncanny ability to diagnose what was wrong with a malfunctioning engine merely by feeling peculiar vibrations or hearing a telltale sputter.

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Frayer did not merely build racing cars. He also drove them. In 1906 he took Rickenbacker to the Vanderbilt Cup Race, a ten-lap event held on a twisting 29.7-mile circuit on Long Island. There, Frayer wanted to showcase his latest experimental air-cooled engine, which featured a large fan that was driven by the crankshaft and forced cold air through an aluminum pipe to individually jacketed cylinders surfaced with conical spikes to dissipate heat.⁹ Rickenbacker's assignment was to serve as Frayer's riding mechanic, a dangerous job requiring steady nerves and quick reflexes. Sitting beside the driver as a racecar hurtled around a twisting course at breakneck speed, a riding mechanic pumped oil, checked fuel consumption, monitored tire wear, and gave hand-signals to warn the driver about impending hazards or indicate that other cars were about to pass. Because riding mechanics could not brace themselves with the steering wheel, they were three times more likely than a driver to be thrown out of a car and killed if it overturned.¹⁰ Being a riding mechanic was a perfect role for a person with Rickenbacker's instincts.

Frayer had spent an entire year preparing for the Vanderbilt race, only to have his hopes dashed in a series of unfortunate developments in practice runs on the designated course. His brakes failed while he and Rickenbacker were powering down the Jericho Turnpike and his car landed, dented but fundamentally undamaged, in a sand dune. After mechanics readied the vehicle for another test, Frayer rounded a curve without realizing that a flock of guinea hens was about to cross the road and plunged headlong into their midst. "We plowed right through them," Rickenbacker recalled. "One bird was sucked up into the big blower in the front. Our air-cooled Frayer-Miller picked him up, killed him, broiled him, and carved him all in a split second. What a mess! What a stench!"¹¹

Mechanics again repaired the damage and prepared the car for a third run that would determine whether or not Frayer could officially compete in the race. This time a blown tire and a steadily worsening problem of engine knocking forced Frayer to leave the course, shattering his hopes after a \$50,000 investment and endless seven-day weeks of labor. Taking the setback calmly, Frayer turned to Rickenbacker and said, "We're through." This simple statement underscored the laconic way in which men were expected to cope with adversity under the stern code of masculinity prevailing at the time, and Rickenbacker never forgot it. Despite the disappointing outcome, Rickenbacker was thrilled to participate in an international event that featured some of the world's best drivers and most powerful racecars and drew more than 250,000 spectators. From this point onward he was captivated by the lure of big-time motor sport.

Soon after the Vanderbilt race Frayer left Oscar Lear to become chief engineer of a much larger enterprise, the Columbus Buggy Company, whose sprawling plant occupied an entire city block.¹² Taking Rickenbacker with him, he put his young protege in charge of the testing department, where, at age seventeen, he supervised fifteen or twenty workers who were older and more experienced than he was. His ingenuity and zeal came to the attention of Clinton Firestone, chief owner of the Buggy Company and a relative of the famous rubber-manufacturing family in Akron. Impressed by

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Rickenbacker's ability, Firestone sent him to Texas and Arizona as a trouble-shooter for wealthy ranchers who bought cars bearing the Buggy Company's Firestone-Columbus marque and drove them on rough roads or over rugged terrain dotted with mud holes and sagebrush. Within two years Rickenbacker was a district manager, in charge of sales in five midwestern states. Headquartered in Omaha, Nebraska, he made \$150 per month, a remarkable salary for a person his age.

Being a salesman, however, did not satisfy Rickenbacker's thirst for excitement. Stripping the fenders from a Firestone-Columbus and installing a bucket seat, he followed a common practice among automobile agents by entering it in races on dirt tracks at county fairs to advertise its power and speed. In his first race, at Red Oak, Iowa, in 1910, his right rear wheel collapsed as he went around a turn, throwing him clear without serious injury. Soon afterward, he won three victories in two days at Atlantic, Iowa, not far from Red Oak. His winnings, \$625, opened his eyes to pecuniary vistas far exceeding what he could attain in selling cars. He did even better in a series of races held at Omaha in connection with an annual celebration known as Aksarben (Nebraska spelled backwards) Week. Winning five races, he garnered between \$1,300 and \$1,400 after paying his expenses. "That was a world of money to me," he said later in a masterpiece of understatement.¹³

Because Rickenbacker took risks that other drivers shunned, his winnings mounted and Frayer invited him back to Columbus to take part in a race against Barney Oldfield, then the most famous driver in America. Setting a blistering pace, Rickenbacker led throughout most of the 100-mile event until he was forced off the track by a broken connecting rod with only a few laps to go. Going head-to-head with Oldfield and coming close to winning increased his confidence that he could succeed against top-flight competition.

Impressed by Rickenbacker's performance at Columbus, Frayer invited him to be his relief driver at the first Indy 500 in 1911. Filled with excitement to be taking part in the historic event, Rickenbacker took the wheel during the early laps, just in time to see the first of many fatal accidents he would witness in his racing career. As Art Greiner came down the back straight on the 13th lap, one of his wheel rims came off and he lost control of his Amplex. When the car spun around, he and his riding mechanic, Sam Dickson, were thrown out of the car. Greiner suffered only a broken arm, but Dickson died instantly as he hit a retaining wall. The grisly spectacle took place directly before Rickenbacker's eyes. Soon afterward, he found himself in the thick of another crisis when the steering mechanism failed on Joe Jaegersberger's Case. As Jaegersberger slowed down in the middle of the track, his mechanic jumped out of the car in a desperate effort to guide the wheels by hand and fell as the vehicle lurched toward the pits. As the hapless mechanic lay on the bricks, Harry Knight, following close behind at 88 miles an hour in a Wescott, swerved to avoid hitting him and crashed into Herbert Lyttle's stationary Apperson while it was having a tire change. The Apperson was hurled into the air and came down in an adjoining pit as four workers dove for cover, barely avoiding being killed. The terrific impact of the collision threw Knight

and his riding mechanic out of the Wescott, which hit a Fiat in yet another pit. Miraculously, nobody was killed, but Knight suffered a fractured skull and was rushed to a hospital. Such were the thrills that drew frenzied spectators to speedways by the millions as auto racing became mass entertainment.¹⁴

Tasting the excitement of big-time racing at Indianapolis only made it harder for Rickenbacker to go back to Omaha to sell cars. In 1912, Frayer, who had decided to bow out of racing, asked Rickenbacker to substitute for him at the second running of the Indy 500. Driving Frayer's "Red Wing Special," Rickenbacker had to leave the race with a broken valve. Retreating to the stands, he watched Ralph de Palma, one of the most popular drivers on the tour, lose a heartbreaking race to Joe Dawson in one of the most dramatic finishes in the history of motor sport. The way De Palma displayed sportsmanship by helping his riding mechanic push his disabled Mercedes off the track while Dawson took the checkered flag touched Rickenbacker deeply.¹⁵ After going back to Omaha, Rickenbacker decided to quit the Buggy Company and become a professional racer.

Having little money and no sponsors, Rickenbacker started at the bottom by joining a second-rate team, operating out of Chicago, which followed mid-western county fairs in the "cornstalk circuit," as veteran drivers contemptuously called it. The name of the troupe—the "Flying Squadron"—eerily foreshadowed Rickenbacker's later career flying in combat on the Western Front. During the summer of 1912 it traveled throughout Iowa, giving exhibitions at fairs in towns like Harlan, Boone, Carroll, Missouri Valley, Mason City, Marshalltown, and Grinnell. Marshalltown, the largest of these communities, was listed in the 1910 census as having 13,374 people. Harlan had only 2,570.¹⁶ Obviously, the "Flying Squadron" existed on the fringes of the racing world.

The way the Flying Squadron operated gives business historians an instructive glimpse into the world of small-time auto racing in the early years of professional motor sport. Several weeks prior to an upcoming event, the team's business agent, Fred C. Bailey, would visit a town where a fair was about to be held and make financial arrangement with its directors. Bailey represented a "Mrs. Marshall" of Chicago, probably the wife of the well-known architect and automobile enthusiast Benjamin Marshall, who designed the Drake Hotel.¹⁷ Working closely with local dealers and automobile club members, Bailey found places for the group's racecars to be kept and displayed. He also courted the local press to secure good advance publicity. He took care to marvel at the condition of the local track, praising its suitability for a fast race and intimating that speed records would probably be set because of its fine condition. He was obviously a master of hype.

As the week of the fair approached, notices appeared in the town's newspapers announcing the upcoming show and touting records and achievements of the team's cars and drivers. Because France was the world center of motor sport, the advertisements did everything possible to connect the Flying Squadron with that country. Andrew Burt, who drove a Cino racer called "King Dodo," was advertised as the "young-

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est French driver in the world." C. W. ("Frenchy") Canner, another driver of supposedly Gallic extraction, would drive a De Detrich Tornado that had assertedly set a speed record at Ormond Beach. Marion Arnold, from Chicago, would be at the wheel of a Buick Marquette, "The Flying Comet," which had once belonged to speed king Bob Burman. No connections with the great or the near great were missed, strengthening the misleading impression that the Flying Squadron was a first-class attraction. To heighten local interest, Ray Boody, one of Iowa's best-known racers, sometimes appeared with the Chicago-based team. Rickenbacker's name was never mentioned in the advance publicity, and rarely appeared in accounts of races held at the fairs. Obviously he was merely a fledgling member of a team that was not of elite status to begin with.¹⁸

After arriving by rail, the cars were taken to showrooms at local dealerships and gaped at by auto enthusiasts. On opening day of the fair the big vehicles, resplendent in gaudy paint schemes, were towed to the fairgrounds in a festive parade, accompanied by civic dignitaries and a smartly uniformed band. (It was carefully explained beforehand that the racecars, being built for high-speed conditions, could not be driven under their own power in normal traffic without sustaining damage to their components.) Local automobile owners were encouraged to drive their cars in the parade, and were invited to participate at the fair in selected events along with the professionals. These venues included several three-mile races, with individual heats of one mile each, and a novelty event known as a "slow race," in which drivers would vie with one another to see who could negotiate a given distance at a snail's pace and come in last without stalling his vehicle. Enthusiastic crowds, some of which numbered as many as 9,000 people, attended the events, paying an average of sixty cents to see them.

Going to great lengths to oblige small-town residents upon whom their financial welfare depended, managers of the Flying Squadron ignored safety regulations established by the American Automobile Association's Contest Board, the official regulatory agency of commercialized motor sport. Spectators were permitted to get too close to the track, with disastrous results. At the North Iowa Fair, held at Mason City, one of Marion Arnold's wheels collapsed. Five people were injured, two of them seriously, when his car left the track and plowed into the crowd. An even worse accident occurred just across the Iowa line in Blue Earth, Minnesota, when Canner, driving a Colby "Red Devil," skidded on a turn. His car "tipped over three times," throwing him sixty feet from the track, where the racer landed on top of him. He came out of the wreck with a broken arm, a fractured jaw, the loss of numerous teeth, and "his tongue bitten in two until there was scarcely enough to hold the end in his mouth." It was reported that local physicians "took 56 stitches in his body."¹⁹

The laxity with which the Flying Squadron was administered cost Rickenbacker the loss of his racing license. On October 24, 1912, only a few weeks after the debacle at Blue Earth, the AAA Contest Board disqualified him until January 1, 1914, for participating in unsanctioned meets.²⁰ Undaunted, he spent the winter of 1912-1913 in Des Moines, where he got a job as a mechanic for two brothers, Frederic (Fred) and

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August (Augie) Duesenberg, whose names became legendary in the American motor vehicle industry. Fred, the older of the two brothers, had served as a judge when the Flying Squadron visited Marshalltown, which is probably where Rickenbacker met him. Like Rickenbacker, he had little formal education and had taken courses from International Correspondence Schools. These common bonds undoubtedly worked to Rickenbacker's advantage in securing employment with the Duesenbergs for \$3 a week. That sum was considerably less than what he had made with the Buggy Company, but was more than sufficient to entice a young man who was crazy about powerful automobiles.

The Duesenbergs had come to America from Lippe, a tiny German principality in the Teutoberg Forest, to join an older brother who lived near Mason City. Fred became a bicycle and motorcycle racer, fell in love with automobiles, and worked as a test driver for Rambler at its factory in Kenosha, Wisconsin. After he returned to Iowa, he and Augie, who was also mechanically gifted, started building cars with the financial backing of Edward R. Mason, a lawyer in Des Moines. They named the motor vehicle that they developed the "Mason" in his honor. Known as "The Fastest and Strongest Two-Cylinder Car in America," the Mason made its debut in 1906 and became known for its hill-climbing ability and speed. It gained its reputation partly from climbing the steps of the state capitol building in Des Moines.

As the car's popularity grew, the Duesenbergs needed more capital than Mason could provide and turned for help to Frank and Elmer Maytag of Waterloo, who also made washing machines for which they eventually became famous. The resulting enterprise, the Maytag-Mason Motor Company, made passenger cars, but the Duesenbergs wanted also to build racers and established an experimental shop in Des Moines. It was located back of the showroom of a Dodge dealership owned by William Sears, a friend of the Maytags. Operating on a shoestring, the Duesenbergs developed a rugged 4-cylinder racecar powered by a new engine of Frederic's design, featuring horizontal valves and vertical rocker arms that functioned in a way similar to the action of walking beams in a steam engine.

Like most American automobile makers, the Duesenbergs maintained a racing team that competed on the AAA Contest Board's tour. Encouraged by the performance of their new model in the 1912 season, they were preparing three cars for 1913 when Rickenbacker came to Des Moines seeking employment after being suspended by the AAA.²¹ The experience Rickenbacker gained while working for the Duesenbergs became a valuable asset not only in his racing career but also in his development as an automotive engineer. Working sixteen hours a day, he paused only long enough to gulp down a chocolate milk shake containing two raw eggs for lunch. "I worked like a dog in those days," he later recalled. "We used to have to file the connecting rods from a rough forging, file them down and balance them to the finest point of an ounce to get smoothness and the high speed necessary. I worked...from early morning to late at night, helping to build those cars."²²

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As Memorial Day approached in 1913, the cars were only marginally ready for action, but the Duesenbergs were running out of money and it was crucial to get the publicity that a good showing at the Indy 500 would give them. Because Rickenbacker was still under suspension by the AAA, he could not join the Duesenberg racing team, but he accompanied it to Indianapolis and served in the pit crew. There he watched one of the three cars on which he had worked, driven by Willie Haupt, perform creditably by finishing ninth out of twenty-seven vehicles entered in the contest.²³

Soon afterward, Rickenbacker was reinstated by the AAA, enabling him to join the Duesenberg team and take part in a race in his hometown, Columbus, on the Fourth of July. Partly because of his presence in the contest, it received lavish publicity in Columbus newspapers. Cheered by a crowd including his mother, he was teamed with one of America's most admired racers, Ralph Mulford. Among many other accomplishments, Mulford had won the Vanderbilt Cup and placed second to Harroun in the 1911 Indy 500. Rickenbacker's assignment, which he executed well, was to act as a decoy by getting off to a fast start, leading the field as long as he could, and letting Mulford overtake him late in the race. Driving furiously resulted in mechanical trouble, forcing him off the track after 107 miles. But he did his job, and Mulford won.²⁴

No longer banned from competition, Rickenbacker became a regular on the Duesenberg team. He endeared himself to fans by displaying a gutsy style, taking potentially lethal chances that other drivers shunned and miraculously surviving close brushes with death. In an event at St. Paul, Minnesota, he lost control of his vehicle while trying to pass Louis Disbrow, causing his own car to do a triple somersault in the air, crash through a fence, and land upside down. Rickenbacker fell out of the car as it gyrated in the air and landed on the track, but was not seriously injured. Struggling to his feet, he calmly picked up some nail-studded boards from the fence that had fallen onto the track and might have threatened the safety of other drivers. He then limped around the oval until he reached the welcoming arms of friends in the Duesenberg pit. The crowd gave him a standing ovation.²⁵ For a thrill-seeker, experiences like these were rewarding in themselves, but Rickenbacker also savored the joy of victory before ending his first year on the tour. His first win was modest, coming in a 5-mile race at Libertyville, Illinois, on August 17, but he had a more impressive triumph on September 30 when he outpaced the field in a 100-mile event at Cincinnati. He also finished fourth in a major event in the Chicago area, the 300-mile Elgin Road Race. When the AAA published its national championship standings for 1913, he ranked a respectable 27th, with 115 points.²⁶

Rickenbacker became an established star in 1914, in which he won his first major event. Early in the season the Duesenberg brothers named him manager of their racing team. He captured 10th place at the Indy 500, where French drivers virtually swept the field and most of the American entries did not even finish the race. Despite the creditable showing of their cars--Willie Haupt finished 12th--the Duesenbergs had hoped for even better results because they were in dire financial condition and had counted on winning a greater share of the prize money. It was crucial for them to do

well in an upcoming 300-mile race on the Fourth of July at Sioux City, Iowa, or they might be forced off the tour.

Like many racers, Rickenbacker was superstitious. Before the Sioux City race, he consulted his mother, who was well-versed in Swiss folklore. Acting on her advice, he competed in the event with a bat's heart tied to the third finger of his right hand with a red silk thread. But he also took a more rational approach by adopting a strategy of throwing caution to the wind on the turns, knowing that drivers with more powerful cars would outrun him on the straightaways. Rocks and gravel underlay the dirt surface of the track, forming a mixture that drivers called "gumbo." Rickenbacker therefore fastened a wire mesh atop his cowl to protect him from being hit by this dangerous stuff as it flew back at him from under the wheels of cars he was trying to pass on the turns.

Thirty thousand screaming spectators filled the stands at the Sioux City event, which was held in a facility in nearby South Dakota that had been built on what had only recently been a cornfield. Trying to attract the best possible field of competitors, the promoters had put up an extremely large purse of \$25,000, of which the winner would take \$10,000. Stars like Bob Burman, Ralph Mulford, Barney Oldfield, Spencer Wishart, and Howdy Wilcox were among the eighteen drivers who entered the race. Oldfield got off to an early lead but was forced out after 100 miles with a broken radiator. One by one, cars left the track as engines overheated, tires exploded, and fuel lines caught fire. With 150 miles to go, the contest was largely between Rickenbacker and Wishart, driving a powerful Mercer that had cost a reported \$63,000.

Following his plan, Rickenbacker did the best he could to keep up with Wishart on the straightaways and took almost suicidal chances on the turns to pull ahead of his rival before once again falling behind. Every time Wishart entered a turn, his wheels sprayed "what looked like rocks thrown at us," Rickenbacker later recalled. When "the stuff would come back...it would hit us like a stream of water, but it was gumbo." The screen he had fashioned did little or no good, and flying stones battered his forehead every time he entered a turn. Eddie O'Donnell, his riding mechanic, who was unprotected by the screen, was knocked unconscious for five laps, forcing Rickenbacker to steer the car with one hand and operate the oil pump with the other. Fortunately, O'Donnell was merely stunned, and regained consciousness in time to help Rickenbacker win the race a scant forty seconds ahead of Wishart. After the checkered flag came down to signal his victory, as Rickenbacker steered toward the pit, one of his tires exploded. Had it blown out only minutes before, he would have lost.²⁷

When the national standings were posted at the end of the 1914 season, Rickenbacker had vaulted from 27th to sixth place, largely on the strength of his dramatic victory at Sioux City. If he was not a star of the first magnitude, he was by now an established figure on the tour. Seizing every opportunity to polish his image, he raced one of America's most famous aviators, Lincoln Beachey, in a contest between airplane and automobile at the Iowa State Fair.²⁸ Ever ambitious to increase his stature, he left the Duesenberg team near the end of the season to join Peugeot, whose cars had

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become the acknowledged leaders of the racing world by winning a recent string of European and American races.²⁹

Rickenbacker's desire to excel sometimes got the better of him. After getting off to a disappointing start in the 1915 season, he gave up on the car Peugeot assigned him and sold it to a gifted American designer, Harry A. Miller, who modified it so successfully that Dario Resta drove it that year to a national championship.³⁰ Meanwhile, Rickenbacker joined a team sponsored by the Maxwell Motor Company and drove under the shadow of its star racer, Barney Oldfield. By mid-season, however, Oldfield quit the team and Rickenbacker became one of its main attractions. By winning four races at Columbus, Sioux City, Omaha, and Providence, he finally proved that he was an authentic superstar. At Providence, he set a world speed record at a new 100-mile concrete bowl at Narragansett Park, averaging 89 miles per hour.³¹ By the end of the year he had climbed one more notch in the AAA standings, placing 5th with 1,785 points as opposed to 6th with 754 points in 1914.

Just before the Omaha race, Rickenbacker learned that Maxwell Motors—possibly because of Oldfield's departure—was planning to disband its racing team. This major disappointment turned out to be a blessing in disguise when Rickenbacker traveled to Indianapolis and arranged a deal that salvaged his fortunes and propelled him near the top of the racing profession. Buying Maxwell's cars, Carl Fisher and a close business associate, James A. Allison, established an entity known as the Prest-O-Lite Racing Team and designated Rickenbacker as its manager, with a guaranteed share of its profits. Rickenbacker was now not merely a racing driver. He had become a racer-entrepreneur.

The cars Fisher bought from Maxwell were potentially excellent vehicles, but at this point they were fundamentally flawed. In order to save money, Maxwell had built the engines to burn kerosene, resulting in carburetor problems that plagued the team so severely that the drivers threatened to quit unless the engines were modified to run on gasoline. (One member of the Maxwell team, Bill Carlson, became known as "Coal Oil Billy" for driving with it.) Even after the modifications were made, problems persisted, causing Oldfield to leave the organization and give Rickenbacker a better chance to be recognized. During the winter of 1915-1916, Rickenbacker directed a major rebuilding campaign to solve the remaining difficulties, resulting in remarkably fast 4-cylinder vehicles that were now known as Maxwell Specials. Rickenbacker also displayed his managerial talent by working out rail connections permitting him to enter two of the team's four racers in one major event while the other two were simultaneously participating in another race hundreds or thousands of miles away, thereby doubling potential earnings. He also prepared an instructional manual for his drivers, explicitly spelling out the exact procedures he expected them to follow before and during a race—including making a mandatory trip to a urinal just before a race began.

Perhaps most importantly, Rickenbacker adopted a pioneering system of time and motion study with the help of Harry van Hoven, an Iowan who led his pit crew. Van Hoven rigorously drilled mechanics in maintenance and repair procedures that shaved

precious seconds off the time it took a driver to negotiate repeated laps of a racetrack. It is unclear whether Rickenbacker's and Van Hoven's ideas came from Frederick Winslow Taylor, whose scientific management methods were sweeping the country at the time. Even if this were the case, what is more important is the path-breaking way in which Rickenbacker and Van Hoven adapted scientific management to motor sport. Van Hoven's pit crews, for example, could change all four tires on a racing car in as little as 33 seconds, giving Rickenbacker a significant advantage over competitors who did not use the same system. More than any other factor, Rickenbacker's adoption of time and motion study enabled him to win over drivers with even faster cars in the upcoming season.³²

In 1916, his final year on the AAA tour, Rickenbacker registered a dazzling total of five victories. It hardly mattered that a broken steering knuckle forced him off the track after only 25 miles at the Indy 500. He won for the first time in that remarkable season in a 150-mile race on May 16 at a new board-track motordome at Sheepshead Bay in Brooklyn. He took the checkered flag for the second and third times in successive races at Des Moines on June 24. His fourth victory came in a major 300-mile event, the Montmarathon, at Tacoma, Washington on August 5; and he scored a final triumph at the end of November in a 150-mile race at Ascot Park in Los Angeles. On Labor Day he entered a special race at the Indianapolis Speedway in his last attempt to win a victory at the Brickyard. He did not succeed, but showed his flamboyant style by crossing the finish line on his brake drums after losing all four tires. His earnings for the year (including his share of purses won by the other members of the Prest-O-Lite team) were \$60,000, of which he cleared \$40,000 after paying salaries and business expenses. One again, he jumped in the national standings, this time rising from fifth to third place with 2,910 points.

Toward the end of the 1916 season William Weightman III, a wealthy sportsman, and Artemas Ward, president of the King Motor Company, commissioned Rickenbacker to go to England, France, and Italy. While in Europe, he was to study new racers that were being developed despite the exigencies of the war raging on the Western Front. He and his sponsors were particularly interested in a new model being built by the Sunbeam Company in England under the direction of that firm's world-renowned chief engineer, Louis Coatalen, who had seen Rickenbacker race in California and was impressed by his style.³³

When Rickenbacker sailed for England in December 1916, he was looking forward to returning to the American tour for the 1917 season and winning the national championship that had thus far eluded him. Just before leaving, he spent time in Detroit, making arrangements to secure space in an automobile factory or find a plant of his own to prepare cars for the campaign, but these prospects did not materialize. Soon after he arrived in Great Britain, the United States broke off diplomatic relations with Germany, and he went back home. Before leaving England, he visited the Brooklands Speedway, an automobile racing center where Royal Air Service recruits were using the grass infield for landings and takeoffs while training to be combat pilots

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in France. He returned to America inspired by the idea of organizing a team of American racing drivers who would learn to fly and emulate the achievements of the famed Lafayette Escadrille in the war-torn skies above the Western Front. He tried to sell his idea to the Signal Corps, which administered what there was of the wretchedly ill prepared United States Air Service, but was rebuffed because he lacked the educational credentials and social graces deemed necessary for officer material.

Disappointed, Rickenbacker returned to motor sport and was preparing for a Memorial Day race at Cincinnati when he received a telephone call that changed his life. By this time, the United States had declared war on Germany. One of Rickenbacker's many fans was an army officer, Major Lewis Burgess, who was helping plan the impending departure of General John J. Pershing for Europe with the staff of the American Expeditionary Force. Burgess wanted to know if Rickenbacker would like to go along as a chauffeur, with the rank of sergeant. Rickenbacker jumped at the chance, took a train for New York City, and was soon aboard Pershing's troopship, the *Baltic*, on his way to the exploits awaiting him in the perilous skies of eastern France. Never again would he race on the American tour, but he had already gained the managerial expertise that would guide him throughout the business career he later followed in the motor vehicle and airline industries. The automotive world had also provided the seedbed in which he developed and honed his keen entrepreneurial instincts.

Today, when sports stars like Michael Jordan, Jack Nicklaus, and Tiger Woods make millions of dollars in the business world, the athlete-entrepreneur is a familiar figure. Long before they appeared on the scene, Eddie Rickenbacker was anticipating their activities by panning for gold on the roaring road.

Notes

1. L. Spencer Riggs, *Pace Cars of the Indy 500* (Fort Lauderdale, FL: Speed Age Inc., 1989), 8.
2. Jack C. Fox, *The Illustrated History of the Indianapolis 500, 1911-1994*, rev. ed. (Speedway, IN: Carl Hungness Publishing, 1994), 10-11, 24-27. For an extended account of Fisher's life and career, see Carl Hungness, "Carl Graham Fisher," *Indianapolis 500 Yearbook 22* (1994): 182-204.
3. See James J. Flink, *America Adopts the Automobile, 1895-1910* (Cambridge, MA: MIT Press, 1970), and *The Automobile Age* (Cambridge, MA: MIT Press, 1988).
4. John G. Cawelti, *Apostles of the Self-Made Man: Changing Concepts of Success in America* (Chicago: University of Chicago Press, 1965). For further perspectives, see Joseph J. Corn, *The Winged Gospel: America's Romance with Aviation, 1900-1950* (New York: Oxford University Press, 1983), and the acute discussion in Ann Douglas, *Terrible Honesty: Mongrel Manhattan in the 1920s* (New York: Farrar Straus Giroux, 1995), Chapter 5, "Skyscrapers, Airplanes, and Air-mindedness: 'The Necessary Angel,'" 434-461.
5. For a detailed analysis of this cultural phenomenon, see Christian Gelzer, "The Quest for Speed: An American Virtue, 1825-1930" (unpublished Ph.D. dissertation, Auburn University, 1998). It should be noted that speed was not merely an American passion during the period covered by Gelzer; see Stephen Kern, *The Culture of Time and Space, 1880-1918* (Cambridge, MA: Harvard University Press, 1983), Chapter 5, "Speed," pp. 109-130.
6. Unless otherwise indicated, material on Rickenbacker's early life in this and succeeding paragraphs is derived from Edward V. Rickenbacker, *Rickenbacker: An Autobiography* (Englewood Cliffs, NJ: Prentice-Hall, 1967), 1-76 (hereafter cited as *Autobiography*). Rickenbacker's claim in this book that his father was killed in an accident while working on a bridge-construction project is untrue. For the facts regarding what happened, see

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Finis Farr, *Rickenbacher's Luck: An American Life* (Boston, MA: Houghton Mifflin Company, 1979), 8; Columbus *Evening Dispatch*, July 18, 1904; and other issues of contemporary Columbus newspapers too numerous to mention here. I am indebted to Craig D. Walley for help in providing details on the assault by a vagrant, William Gaines, that resulted in William Rickenbacher's death, and on the subsequent court trial, in which Gaines was found guilty of manslaughter.

7. Richard E. Barnett, *Made in Columbus" Automobiles* (Columbus, Ohio: Columbus Historical Society, 1994), passim.

8. Frayer, born October 2, 1874, matriculated at Ohio State University and received a degree in Mechanical Engineering in 1896. I am grateful to the Registrar's Office at the University for providing me a copy of his transcript.

9. For a picture of the engine, surrounded by admiring racing fans at the weigh-in before the elimination runs, see p. 193 in Beverly Rae Kimes, "The Vanderbilt Cup Races, 1904-1911," *Automobile Quarterly* 6, no. 2 (Fall, 1967), 184-199. This article ably evokes the patrician ambience within which American motor sport was born.

10. E. V. Rickenbacher and J. C. Burton, "The Loyal Legion of Speed: Being the Short and Simple Annals of the Mechanician, an Unsung and Unhonored Hero," *Motor Age* 28, no. 14 (September 30, 1915): 5-10. A taped interview in 1965 between Rickenbacher and Booten Herndon, the ghostwriter of Rickenbacher's autobiography, supplies many details about the Vanderbilt Cup Race that were not included in the account in *Autobiography*, 39-43. See Edward V. Rickenbacher Papers (hereafter cited EVRP), Library of Congress, Reel 39, side B.

11. *Autobiography*, 41.

12. For a history of the firm, which was more important in the early American automobile industry than its old-fashioned name suggests, see Charles E. Tuttle, "Columbus Buggy Company," Parts I and II, in *The Carriage Journal* 15, no. 8 (Spring, 1978): 386-392, and 16, no. 1 (Summer, 1978): 7-14.

13. Interview with Herndon, EVRP, Tape 3, side B. On the races at Red Oak and Atlantic, see Red Oak *Express*, June 24, 1910 (calling Rickenbacher "Ed Reichenbaugh") and Atlantic *Telegraph*, July 1, 1910, referring to Rickenbacher, who had less than a month of racing experience at this time, as a "professional."

14. Erwin Lessner, *Famous Auto Races and Rallies* (Garden City, NY: Hanover House, 1957), 23-29.

15. Driving his famous Mercedes, De Palma led throughout most of the race and appeared to have an insurmountable lead with only a few laps to go when he experienced engine failure. When the car stopped short of the finish line, De Palma and his riding mechanic, Rupert Jeffkins, pushed it to the pits while watching Dawson win the checkered flag. Among various accounts, see Fox, *Illustrated History*, 28-31, with accompanying photographs.

16. *The Iowa Official Register for the Years 1911-1912* (Des Moines, IA: Emory H. English, State Printer, 1911), 640-653.

17. I have attempted without success to find conclusive evidence that the enigmatic "Mrs. Marshall" was Elizabeth Walton Marshall, wife of Chicago architect Benjamin H. Marshall. The Marshalls' wealth would have been a prerequisite for owning even a second-rate automotive team like the "Flying Squadron." Benjamin Marshall's devotion to horse racing (he was among the founders of the Post and Paddock Club at Arlington Race Track), his membership in the Chicago Automobile Club, and his social ties with flyers like Italo Balbo also seem congruent with the ownership of a racing group. For information on Marshall, a flamboyant individual who designed several notable Chicago hotels theaters, and other structures, see numerous newspaper clippings in the "Marshall" file at the Chicago Historical Society; Mae Felts Herringshaw, ed., *Clark J. Herringshaw's City Blue Book of Current Biography* (Chicago: American Publishers' Association, 1913), 228; and an article about Marshall in John Zukowsky, ed., *Chicago Architecture, 1872-1922: Birth of a Metropolis* (Munich, Germany: Prestel-Verlag, 1987), 277-288. I have consulted the curator of the Marshall-Walton Papers at the University of Texas at Austin with regard to possible ties between the Marshalls and the "Flying Squadron," but without success.

18. The account given here is based on local newspapers at the Iowa State Historical Society in Des Moines, all published during the summer of 1912. Among others, see Harlan *Tribune* (July 10, 17); Marshalltown *Times-Republican* (August 3, 5, 7, 8, 9, 10, 11); Mason City *Globe-Gazette*, (September 10, 17, 19, 26, October 3, 8).

19. Mason City *Globe-Gazette* (September 17 and October 8, 1912).

20. Minutes, AAA Contest Board, October 24, 1912, Hall of Fame Museum, Indianapolis, IN.

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21. For varying perspectives on the early years of the Duesenbergs up to the time Rickenbacker hired on with them, see Don Butler, *Auburn-Cord-Duesenberg* (Osceola, WI: Motorbooks International, 1992), 5-43; J. L. Elbert, *Duesenberg: The Mightiest American Motor Car*, rev. ed. (Arcadia, CA: Post-Era Books, 1975), 24-25; and Griffith Borgeson, *The Golden Age of the American Racing Car* (New York: W. W. Norton, 1966), 88-99. For a photograph of the remarkable walking-beam engine, see Borgeson, p. 87; other photos, along with newspaper clippings and publicity releases involving the brothers and their activities, are contained in a small but valuable Duesenberg collection at the Iowa State Historical Society, Des Moines, IA. According to an advertisement in the Des Moines *Register and Leader*, August 22, 1912, William Sears was the oldest automobile dealer in Iowa at the time. On Frederic Duesenberg himself, see Borgeson, *Golden Age*, 48-52.
22. Because the Duesenbergs could not afford to purchase forgings, they made their own, requiring manual work of the type about which Rickenbacker spoke.
23. On the history of the Duesenberg Racing Team, see Joseph S. Freeman and James G. O'Keefe, "Duesenberg Out Of The Crucible: A Racing History," *Automobile Quarterly* 34, no. 4 (Summer 1996): 80-99.
24. On Rickenbacker's reinstatement and his role in the Columbus race, see Columbus *Sunday Dispatch*, July 29, 1913, clipping in the first of 26 Rickenbacker Scrapbooks at Auburn University Archives (hereafter cited as AUA). On Mulford's role in the race, see J. W. Lehman, "Mulford in a Mason Wins 200-Mile Race at Columbus," *Motor Age* (July 10, 1913): 10. On Mulford's career, see Ralph Mulford, "Racing with Lozier: A Memoir," *Automobile Quarterly* 7, no. 4 (Spring, 1969): 367-381. The Lozier Motor Company, for which Mulford raced for a number of years, withdrew from automobile racing in 1911, explaining why Mulford was driving with the Duesenbergs in 1913.
25. Hans Christian Adamson, *Eddie Rickenbacker* (New York: Macmillan, 1946), 111-112.
26. Box 23 of EVRP contains a typewritten list, "Rickenbacker Automobile Racing Record," with additions in Rickenbacker's handwriting, showing the dates, locations, distances, cars, and results of all of Rickenbacker's races between October 4, 1911 and November 16, 1916. I have relied on this list unless evidence from published sources fails to corroborate it.
27. C. G. Sinsabaugh, "Rickenbacher in Duesenberg Wins Sioux City 300-Mile Race," *Motor Age* (July 9, 1914): 6-9; H. A. Tarantous, "Troubles that Made the Cars Stop at Pits at Sioux City," *Motor Age* (July 9, 1914): 10-13. The National Automotive Collection at the Detroit Public Library has a copy of the program of the race, listing prizes, trophies, rules, and other pertinent information. Among numerous articles in Sioux City newspapers, see "Iowa Driver Wins Classic" and "Tense Crowd Sees Race," *Sioux City Journal* (July 5, 1914).
28. Information about the race between Beachey and Rickenbacker is contained in a collection of newspaper clippings at the Des Moines Public Library, Des Moines, IA. The race was a handicap event, in which Rickenbacker was given a head start. See also the account of the race, accompanied by a photograph, in Ann Holtgren Pellegrino, *Iowa Takes to the Air* (Story City, IA: Areodrome Press, 1980), 186.
29. On Peugeot's success in America from 1913 onward, see particularly Beverly Rae Kimes, "Peugeot: A Family Affair," *Automobile Quarterly* 4, no. 4 (Spring, 1966): 417-419.
30. On Miller's life and achievements, see Borgeson, *Golden Age*, 62-71. The lack of attention paid by historians of technology to figures like Miller and his protege, Leo W. Goossen (see Borgeson, pp. 72-82) is unfortunate. Both men were major figures in the development of automotive, marine, and aircraft engine technology in the United States. On Miller, see also Borgeson's essay, "Harry Miller," in Ronald Barker and Anthony Harding, eds., *Automobile Design: Twelve Great Designers and Their Work* (Warrendale, PA: Society of Automotive Engineers, Inc., 1992), 199-223.
31. "Eddie' Rickenbacher Smashes World's Record—Gets Rich Plum," Providence *Sunday Tribune*, September 19, 1915, in first Rickenbacker scrapbook, AUA. On the Providence race see also William F. Nolan, *Men of Thunder: Fabled Daredevils of Motor Sport* (New York: G. P. Putnam's Sons, 1964), 102. Rickenbacker won the race by astutely having his helpers put wide tires on his car, reasoning that they would wear better on the concrete surface and last throughout the entire race, reducing the need for pit stops. Such strategies not only explain why Rickenbacker was a champion automobile racer but also shed light on why he became an outstanding combat pilot.
32. On Van Hoven's work for Rickenbacker, see Adamson, *Eddie Rickenbacker*, 130.
33. In 1965, in an interview with Herndon (see endnote 10), Rickenbacker indicated that he met Coatalen late in 1916 at Santa Monica, California, where the Sunbeam racing team was competing at the time. See transcribed tape-recorded reels of these interviews in EVRP, Reel 5, Side A. Numerous contemporary newspaper

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clippings in the first of 26 Rickenbacker scrapbooks at AUA indicate that Rickenbacker was going to Europe under a commission from Weightman and King, and that he intended to visit England, France, and Italy looking for suitable vehicles for the 1917 season. See particularly a letter from Rickenbacker to King, written in England, quoted in *Atlanta Journal*, February 4, 1917. Box 23 of EVRP contains numerous letters of introduction written on Rickenbacker's behalf by American to European industrialists.