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DOUBLE PULITZER PRIZE WINNER

DAVID McCULLOUGH

THE WRIGHT BROTHERS

The Dramatic Story behind the Legend

CHAPTER ELEVEN

Causes for Celebration

Telegram from Katharine, telling of their safe arrival in New York, saying they will be home Thursday. BISHOP WRIGHT'S DIARY, TUESDAY, MAY 11, 1909 I. After a rousing welcome at New York, with a chorus of harbor whistles blaring as their ship came in, and a swarm of reporters and photographers surrounding their every move during a one-day stopover in the city, the three Wrights went on by train to Dayton, arriving at Union Depot, Thursday, May 13, 1909, at five in the afternoon. The crowd at the station was of a size rarely seen in Dayton. Cannons were booming, factory whistles blowing across town, everyone at the station cheering. Seeing Bishop Wright, as she and her brothers stepped from the train, Katharine shouted, "Oh, there's Daddy," and rushed to throw her arms around him. Wilbur and Orville then warmly embraced their father, but so wild was the noise no one could hear what was being said. There were more embraces for Lorin and Netta and their children. Then, as they began inching their way through the crowd, Wilbur and Orville started shaking hands. Seeing a big, veteran member of the Dayton police force, Tom Mitchell, Wilbur said, "Hello, Tom!" "Good boy!" said Tom as he took Wilbur by the hand. Katharine was described in one account as looking like the typical American girl at a homecoming, in a smart, gray traveling gown, with a large, broadbrimmed picture-hat of dark green. The only woman in the world who had made three flights in an airplane, she was now as much a subject of attention nearly as her brothers. In New York she had lectured reporters on some of the "flippant" accounts that had appeared in the American press about the notable Europeans who had

taken an interest in her brothers. She loved America, she said, but the American people did not always understand Europeans, who were an appreciative people. She could not listen to anyone saying unkind things about them without protesting. But here in the noise and crowds of the moment there was no call for such comment. Wilbur looked "bronzed and hard," and Orville, too, looked well—certainly a great deal better than when he had left Dayton in January—but walked still with a limp. In the middle of all that was happening, Bishop Wright, as was noted, rarely spoke a word, but "feasted" his eyes on the two sons who had made the name Wright, as well as Dayton, known to the world. Eleven carriages awaited at the entrance to the station to carry the family and a variety of town officials to Hawthorn Street, each of the three reserved for the Wrights pulled by four white horses. The bishop and Orville rode in the first, Wilbur and Reuchlin in the second, Katharine, Lorin, and Lorin's family in the third. The streets were filled with more crowds the whole way. Sidewalks were packed. People were leaning from windows, children waving small flags. Hawthorn Street and the Wright homestead were bedecked with flags and flowers and Japanese lanterns. Standing at last at the railing of the front porch, Katharine called out to neighbors across the street, "I'm so glad to get home I don't know what to do." For considerable time, she and the brothers stood in the front parlor receiving a steady procession of old friends and neighbors. Outside the crowd grew to more than ten thousand. The day after, Mayor Edward Burkhardt, and several city officials called at 7 Hawthorn Street to discuss with the family the "real celebration" to come. Speaking with a local reporter only shortly afterward, Orville said quite matter-of-factly that though his doctors had told him he was to do no flying in Europe and that he had obeyed them to the letter, he would soon resume his flights at Fort Myer. As he did not say, Wilbur and Katharine felt strongly that a return to the

scene of the crash now would put too great a strain on him. He should wait until he was back in practice. But to Orville the matter was settled. Fort Myer it had to be. And he was ready. The Wright workshop on West Third Street became a “beehive of industry” no less than ever, with Charlie Taylor in charge. “The most important thing we have before us at this time is to get ready for the Fort Myer tests,” Wilbur told reporters, and he and Orville “personally” were constructing the plane to be used there. The old machine had been so badly broken up in the crash that all but the motor and transmission was being built anew. On May 20 it was announced that President Taft would soon be presenting the brothers several medals at the White House. Katharine was to go with them to Washington for the ceremony, of course. Bishop Wright, however, felt obliged to take part in some church work in Indiana. To attract as little attention as possible, the brothers and Katharine quietly left Dayton on an earlier train than expected and no notice was taken except for a few railroad officials at the depot. They were to remain in Washington only the day of June 10. There was a lunch in their honor at the Cosmos Club, which for the occasion waived its longstanding policy of men only so Katharine could attend. Prominent among the more distinguished Washingtonians present was Alexander Graham Bell. Shortly after the lunch the entire party walked the short distance to the White House, where nearly a thousand men and women stood in the East Room as President Taft formally presented two Gold Medals on behalf of the Aero Club of America. At six feet two and weighing three hundred pounds, the president loomed large as he stood beside the brothers. In addressing his two fellow Ohioans, he spoke appropriately to the point and with unmistakable warmth. I esteem it a great honor and an opportunity to present these medals to you as an evidence of what you have done. I am so glad—perhaps at a delayed hour—to show that in America it is not true that

“a prophet is not without honor save in his own country.” It is especially gratifying thus to note a great step in human discovery by paying honor to men who bear it so modestly. You made this discovery by a course that we of America like to feel is distinctly American—by keeping your noses right at the job until you had accomplished what you had determined to do. By evening, the three Wrights were back on board the train, on their way back to Dayton. Thorough testing of new propellers had become a primary requirement. In the meantime, however, there was Dayton’s “real celebration,” the Great Homecoming, to be faced, like it or not. “Gigantic” was the word used to describe the preparations. The whole story of America and Dayton from earliest times was to be portrayed with “historical exactness,” in a parade of enormous floats being built at the National Cash Register plant. Indians and their canoes, the eras of the Conestoga wagon, the canal boat, the first railroad, Robert Fulton’s steamboat, the evolution of the bicycle, and an up-to-date automobile, would be followed by the first American balloon and a dirigible, all this in prelude to a float titled, “All the World Paying Homage to the United States, the Wright Brothers, and the Aeroplane,” and featuring a handcrafted, half-size replica of a Wright Flyer. There were to be fifteen floats and 560 people in costume (“all historically correct”), in what the newspapers promised to be the greatest parade Dayton had ever beheld. On Main Street a “Court of Honor” was being created reaching from Third Street to the river, white columns lining both sides of the street and strung with colored lights. “Everywhere is the tri-colored bunting . . . everywhere flutters the pennants and flags and banners,” the papers were saying. Soldiers, sailors, and the Fire Department would march, bands play. Some 2,500 schoolchildren dressed in red, white, and blue would be arranged as a “living-flag” on the Fair Grounds grandstand and sing “The Star-Spangled Banner.” In the nearly ten years that the Wright

brothers had been working to achieve success with their invention, this was to be the first formal recognition by their hometown of their efforts and success and there was to be no mistaking the whole town's enthusiasm. While little of such elaborate fanfare appealed to the brothers, they knew that if Dayton saw fit to celebrate, if Dayton felt that was important, then it was not for them to complain or appear in any way annoyed or disapproving. Octave Chanute wrote to Wilbur to say he knew such honors could grow "oppressive" to modest men, but then they had brought it on themselves with their ingenuity and courage. It was well-meant advice, but the brothers had no need to be reminded. On the eve of the opening of the festivities, the Dayton Daily News ran an editorial expressing much that was felt by a great many: It is a wonderful lesson—this celebration. It comes at an auspicious time. The old world was getting tired, it seemed, and needed help to whip it into action. There was beginning a great deal of talk about man's no longer having the opportunities he once had of achieving greatness. Too many people were beginning to believe that all of the world's problems had been solved. . . . Money was beginning to tell in the affairs of men, and some were wondering whether a poor boy might work for himself a place in commerce or industry or science. This celebration throws all such idle talk to the winds. It crowns anew the efforts of mankind. It crushes for another hundred years the suspicion that all of the secrets of nature have been solved or that the avenues of hope have been closed to those who would win new worlds. It points out to the ambitious young man that he labors not in vain; that genius knows no class, no condition. . . . The modesty of the Wright brothers is a source of a good deal of comment. . . . But above all there is a sermon in their life of endeavor which cannot be preached too often. The following morning, Thursday, June 17, at nine o'clock every church bell and factory whistle announced the start of what was to be a two-day

celebration. Thousands of people poured into the city. Business had been suspended, except for the sale of ice cream and flags and toy airships and Wright brothers postcards. That it was raining lightly the first part of the first day seemed to matter little to anyone. And the show was all that had been expected, one spectacle following another. There were marching bands, concerts, the presentation of medals and the keys to the city. A line of eighty automobiles—all the newest model touring cars— streamed across the Main Street Bridge and down through the "Court of Honor." The parade of historical floats, "the greatest street procession ever held in Dayton," stretched two miles. There were laudatory speeches in abundance, and Wilbur, Orville, Katharine, and Bishop Wright were to be seen prominently present on platforms and reviewing stands. The second day, the Bishop delivered a brief but eloquent invocation in tribute to his sons. We have met this day to celebrate an invention—the dream of all ages— hitherto deemed impracticable. It suddenly breaks on all human vision that man, cleaving the air like a bird, can rise to immense heights and reach immeasurable distances. And we come to thee, our Father, to ask thy peace to rest on this occasion and thy benediction on every heart participating in this assembly. Amazingly, all through both days and as very few were aware, Wilbur and Orville managed to slip deftly in and out of the picture, back and forth to their West Third Street shop, one of the few buildings in town that remained undecorated and where work went on. A correspondent for the New York Times who kept close watch on them provided a memorable chronology of how they spent the first day: 9 A.M.—Left their work in the aeroplane shop and in their shirt sleeves went out in the street to hear every whistle and bell in town blow and ring for ten minutes. 9:10 A.M.—Returned to work. 10 A.M.—Drove in a parade to the opening ceremony of the "Homecoming Celebration." 11 A.M.—Returned to work. Noon—

Reunion at dinner with Bishop Milton Wright, the father; Miss Katharine Wright, the sister; Reuchlin Wright of Tonganoxie, Kansas, a brother; and Lorin Wright, another brother. 2:30 P.M.—Reviewed a parade given in their honor in the downtown streets. 4:00 P.M.—Worked two hours packing up parts of an aeroplane for shipment to Washington. 8:00 P.M.—Attended a public reception and shook hands with as many Daytonians as could get near them. 9:00 P.M.—Saw a pyrotechnical display on the river front in which their own portraits, 80 feet high and entwined in an American flag, were shown. It was estimated that in the course of the fireworks, Wilbur and Orville shook hands with more than five thousand people, and according to the Daily News, only "the instinct of self preservation compelled them to cease." Less than forty-eight hours later, the festivities at an end, the brothers were packed and on the train to Washington to resume the trials at Fort Myer. Shipment of the plane had been taken care of. Charlie Taylor was already on the scene. II. It was six-thirty the extremely warm evening of June 26, as Wilbur and Orville sat waiting on the starting rail in the parade ground at Fort Myer. Beside them their white-winged machine stood ready for flight. Farther off, behind a rope at the edge of the field, some four thousand people including men of known importance to the nation, stood, according to one account, "pawing the ground" for something to happen. Hundreds of them had been there since three o'clock. The Senate had adjourned so its members could see the flight. Others waiting included high-ranking army officers; ambassadors; the son of the president, Charlie Taft; and Speaker of the House Joseph Cannon, whose word, as said, was "open sesame to the Treasury vaults." Wilbur had assigned to himself full responsibility for seeing that all was in order. Given the heat, he had dispensed with his customary coat and tie. His hands and face were grimy, his work trousers grease-stained, and perspiration streamed down his face.

Orville, by contrast, was described as looking natty as the prize guest of a yachting party. “His coat was buttoned tightly about his slender form, as if it were a mistake about its being hot,” wrote the Washington Herald. “Altogether he . . . exhaled the atmosphere of a man who finds himself on the top layer of the upper crust of the crème de la crème of all that is worthwhile.” The brothers were waiting for the wind to settle down. Again the wind would be the deciding factor, the wind would have the final say, no matter that most of the United States Senate and several thousand others were being kept waiting. Orville got up and walked away toward the shed looking nervous. Then Wilbur walked off a while. Then both returned to sit again and chat with a small group of army officers. “She’s blowing at a 16-mile clip,” Wilbur told an inquiring reporter. “That’s far too stiff for a first flight with a new machine.” He looked windward again and sniffed the air. “Take her back to the shed,” he said. “There is always an element of uncertainty in aviation as far as it has advanced,” Wilbur explained to a writer for the Washington Post. “People must remember that this machine has never been flown before, and also that my brother has not been up in the air since his accident last year. They can’t blame me for wanting the first flight to be made under conditions as nearly ideal as possible.” No one with a keen sense of dramatic effect, wrote the Washington Herald, could have created a better scene to demonstrate the “utter immunity of the two brothers from the fumes of importunity and the intoxication of an august assemblage.” Uniformed army signalmen gathered “like pallbearers” and wheeled the plane away, and four thousand spectators departed, many expressing opinions, including one senator, who was heard to say of the brothers, “I’m damned if I don’t admire their independence. We don’t mean anything to them, and there are a whole lot of reasons why we shouldn’t.” That same day, Bishop Wright and brother Reuchlin arrived in Washington, the Bishop having

acquired two new suits and two new shirts for the expedition. Late the afternoon of June 29, Wilbur had “no quarrels” with the weather, and shortly before six o’clock Orville finally took to the air. The crowd, noticeably smaller than three days before, but still numbering several thousand, saw the plane waver, struggling, as it skimmed over the grass for no more than 75 feet, then, at a height of about 15 feet, tilt sharply to the right and its wing touch the ground, at which point Orville cut the engine and the machine came down in a cloud of dust. A second and third flight were hardly better. Finally, on the fourth try, a flight lasting all of 40 seconds, the plane reached an altitude of 25 feet and took a turn down the field and back. Still it was enough to evoke cheers and automobile horns. Orville and Wilbur were both in fine spirits now, perfectly confident the machine would prove a success, and that Orville would remain at the controls. He would do no flying at Fort Myer, Wilbur told reporters. That was Orville’s job. But being “big brother,” he would do the “bossing.” A machine was like a horse, Wilbur said. “If it’s new, you have to get used to it before it will do just as you want it to. You have to learn its peculiarities.” As a result of the day’s test flights, it was discovered that one important “peculiarity” was that the ignition, or “sparker,” was being shaken loose by vibrations, and thus the motor had too little power. The next two days, while Wilbur, Orville, and Charlie Taylor worked on the engine, the Bishop and Reuchlin went to the Smithsonian to look at “all manner of birds, Ostrich, Emu, Condor, etc.,” as the Bishop recorded in his diary. Another day, when Orville took off again, the plane climbed only 20 feet and after a distance of 200 feet hit the ground hard enough to smash one skid. Then, on July 2, at an elevation of 80 to 100 feet and at about the same point over the hangar where the propeller had broken the previous September and Orville’s plane had plunged to the ground, the engine suddenly stopped dead. And though this time he was able to

glide “nicely” down, he hit a small thorn tree, ripping open a good-sized portion of the plane’s lower wing fabric. Then the machine fell heavily, breaking both skids. Fortunately, Orville was not hurt. Again, as the previous September, reporters and some of the spectators rushed to the crash, as did Wilbur, who, seeing a photographer by the wrecked plane, lost his noted self-control, just as he had with the photographer at Le Mans, picked up a stick and threw it at the man, then demanded he turn over the exposed photographic plate, which he did. It had not been a good day. (Wilbur would later apologize to the photographer who, it turned out, was an official with the War Department.) But the brothers had had more than a little experience with adversity and, as so often before, refused to give up. The next day, Orville went off to Dayton to prepare a new wing covering and by July 7 was back at Fort Myer, where the work resumed. On July 21, Katharine arrived to join the brothers and that afternoon watched Orville make a short, 10-minute flight at an estimated speed of 44 miles per hour, or faster than Wilbur had ever flown in Europe, as she happily reported to those at home. On July 25, a Sunday and as customary a day off for the Wright brothers, came stunning news. In a frail, under-powered monoplane, his No. XI, the French aviator Louis Blériot had flown the English Channel. He had taken off from Les Baraques, near Calais, shortly before five in the morning, and landed in the Northfield Meadow by Dover Castle, covering a distance over water of 23 miles in just under 20 minutes. As it happened, Hart Berg and Charles de Lambert were at Dover at the same time and not far from where Blériot landed. De Lambert, too, had been planning to fly the Channel and he and Berg had come to look over possible landing places. A porter had awakened them at quarter to five that morning to say the wireless man at the hotel had just received a message that Blériot had left France, and as Berg wrote in a long letter to Wilbur and Orville, he and de Lambert

were downstairs and on the beach inside three minutes. Only minutes after that a telephone message was received that Blériot had landed on the other side of Dover Castle. “You have had all the details from the papers,” Berg continued in his letter. “I can only supplement the fact that I had a long talk with Blériot afterwards, in fact he used my room to wash up in, and the rest of the day wore my clothes. He told me that he had never been so thrown about in his life, as when he got into this valley. He made two complete circles, and his machine was pointing out to sea when he came to the ground. The front chassis was wrecked, the propeller blades broken, but the wings and tail of his monoplane were intact. Blériot was not hurt. From Washington, Katharine wrote to assure the Bishop that the brothers were not at all disturbed by Blériot’s flight. And, as widely reported on both sides of the Atlantic, the brothers joined in giving Blériot due credit for his performance, which they characterized as “remarkable.” “I know him well,” Wilbur said in an interview with the New York Times, “and he is just the kind of man to accomplish such an undertaking. He is apparently without fear, and what he sets out to do he generally accomplishes.” Orville noted the many accidents Blériot had had with a machine over which he had so little control and expressed amazement that he had succeeded. Wilbur was asked if he and Orville would be making any attempts to win some of the prizes to be offered at the European air meets such as that at Reims. No, they would not, said Wilbur. Their time would be put to better use, though what that was he did not say. All the same, throughout France, indeed throughout much of the world, Blériot’s flight was taken as only a prelude to the very burgeoning of French aviation that the New York Times had made so much of earlier in the year. As if by magic, everything started to work at Fort Myer as it was meant to. On the evening of July 27, Orville took off with Lieutenant Frank Lahm as passenger on an official endurance trial and in an hour

and 12 minutes flew around the field 79 times, at an altitude of 150 feet, not only passing the test but breaking a world record that Wilbur had set at Le Mans the year before. An estimated eight thousand spectators saw him take off and among them was President Taft. On Friday, July 30, Orville flew what was the official cross-country speed trial required by the army. The course covered from Fort Myer to Alexandria, Virginia, a distance out and back of 10 miles. Records of the speed flown varied, from 42 to 45 miles per hour, but there was no question that Orville passed the test. An especially smooth landing was made to the accompaniment of honking horns and cheering. Wilbur rushed to the plane, his face covered with a broad smile. Their contract with the War Department would be signed. The price to be paid by the department was $30,000—a figure that made headlines—but far more importantly their own country was at long last committed to their achievement. “Orv finished the Fort Myer business in a blaze of glory,” wrote Katharine, who ten months earlier, sitting by his bedside there at the post hospital, had wondered if he might ever have strength enough to walk again. III. As reported in the Chicago Tribune, the eager interest shown by the French people in the progress of aviation could hardly be appreciated in America, and foremost among that summer’s scheduled aeronautic events was the Reims “congress of aviators where it is expected great things will be done.” It was to be the world’s first international air race, and financed entirely by France’s champagne industry. Its official title was “La Grande Semaine d’Aviation de la Champagne,” and among the French aviation stars to take part were Henri Farman, Louis Blériot, Léon Delagrange, two of Wilbur Wright’s protégés, Charles de Lambert and Paul Tissandier (flying French-built Wright planes), as well as the American Glenn Curtiss, who had been chosen to participate by the American Aero Club when the Wright brothers declined. At age thirty-one, Curtiss was a lean, shy, intensely

serious competitor who, like the Wrights, had started out as a bicycle mechanic in his hometown of Hammondsport, New York, then began building and racing motorcycles. (He became the first acclaimed American motorcycle champion, “the fastest man in the world,” achieving speeds on his motorcycle as high as 130 miles an hour.) His interest in aviation had begun when a balloonist named Tom Baldwin asked him to build a lightweight motor for a dirigible. Once, in September 1906, while in Dayton, Baldwin and Curtiss had visited Wilbur and Orville at their shop. Baldwin had thought Curtiss asked the brothers far too many questions, but, as he later said, they “had the frankness of schoolboys.” The year after, Curtiss met Alexander Graham Bell, who made him “Director of Experiments” for the Aerial Experiment Association. In 1909, with a wealthy aviation enthusiast who had worked with Octave Chanute and Samuel Langley, Augustus Herring, Curtiss formed the HerringCurtiss Company to build flying machines. Those they built relied on movable flaps on the wings—ailerons, “little wings”—instead of wing warping, to control rolling and banking. The idea had occurred earlier to a young French engineer, Robert Esnault-Pelterie, and had been tried by Santos-Dumont, Blériot, and others. Alexander Graham Bell, too, had become interested, but whether on his own or having heard about Esnault-Pelterie, is not clear. Also, it had already been described for all to see by the Wrights as an alternative to wing warping in their patent published in 1906. But for Curtiss at Reims, speed would be the point and the small, new biplane he would fly had been built strictly for that, with a powerful, lightweight engine. Anyone wanting proof of the pace of change in the new century had only to consider that just one year before, in August 1908, at Le Mans, all the excitement had been about one man only, Wilbur Wright, flying one airplane before about 150 people to start with. This August at Reims, a total of twentytwo pilots would take off in

as many planes, before colossal grandstands accommodating fifty thousand people. The grand opening took place Sunday, August 22, and by then Orville and Katharine had once more sailed for Europe, heading this time for Berlin, the brothers having concluded that demonstrations there were a necessity. Orville, as a result of his "blaze of glory," was the one in most demand. Wilbur remained in Dayton, concentrating on motors with Charlie Taylor, and seeing to business of the kind he most disliked, including the commencement, in mid-August, of a lawsuit against the Herring-Curtiss Company for violation of Wright patents. Events at Reims created an even greater sensation than promised. By the last days the crowds numbered 200,000, four times the capacity of the grandstands. The contestants flew higher, farther, and faster than anyone ever had, breaking every record set by the Wright brothers in the past year, and the biggest winner, the most celebrated of the contestants, was Glenn Curtiss, who won the prize for speed. Nor was the excitement limited to France and the rest of Europe, as was clear from the American press. "The great meeting at Reims has been an electrifying, delirious success" (New York Sun); "The scoffers scoff no longer" (Washington Herald); "The aviation tournament is only a hint of what the future will soon witness when the sky shall become the common highway" (Cincinnati TimesStar); "This week at Reims marks a new epoch and one of the most ambitious phases of human history" (Atlanta Constitution). Overnight Curtiss was the new American hero. But only a week later crowds as large as 200,000 turned out at Tempelhof Field in Berlin to see Orville fly, and in the course of his demonstration flights over the next several days, Orville, accompanied by a student pilot, flew for an hour and 35 minutes, a new world's record for a flight with a passenger. And at the same time Wilbur had signed on to make his first-ever public flight in the United States, in New York. It was to be part of a celebration commemorating the three-

hundredth anniversary of Henry Hudson's ascent of the Hudson River and the hundredth anniversary of Robert Fulton's first steamboat on the Hudson. Wilbur was to be paid $15,000. Glenn Curtiss, too, was to participate in the event. Writing to Orville aboard the train to New York on September 18, Wilbur reviewed some of the precautions he might take, on the chance he would be forced to land his plane in the waters off Manhattan. An idea he had of using rubber tubes no longer made sense. "So I have gone back to my old plan of mounting a canoe under the center of the machine, well forward," he wrote, adding, "Of course, I do not expect to come down, but if I do I will be reasonably safe." The canoe would be purchased in New York. The plane had already been shipped to the army base of Governors Island in New York Harbor, where Charlie Taylor would be joining him. The great sweep of New York Harbor and the Hudson River had become a spectacle beyond anything ever seen there, with twenty American battleships at anchor, a squadron of the Royal Navy, naval vessels from France, Germany, the Netherlands, Mexico, and Argentina, in addition to ferryboats, tenders, colliers, all manner of river craft, and the giant luxury liner Lusitania—no fewer than 1,595 vessels. Added to all this was the promise that for the first time New Yorkers were to witness airplane flights over their waters. On Governors Island in Upper New York Bay, half a mile southeast of Manhattan, two hangars had been provided, almost side by side, one for Wilbur, the other for Curtiss. When Curtiss arrived to look things over, he and Wilbur greeted each other cordially enough and talked for five minutes or so, mainly about the events at Reims. Wilbur excused himself from shaking hands, saying his hands were too greasy. At about this point Guglielmo Marconi, inventor of the wireless telegraph, appeared on the scene and was so thrilled to meet Wilbur he insisted on shaking his hand, greasy or not. It had been arranged that whenever Wilbur or Curtiss was about to take flight, Marconi would

send a wireless message from Governors Island to the warships in the harbor and they in turn would raise flags as a signal to other ships and all on land. Curtiss soon departed for Hammondsport in upstate New York, where he was to be honored with an all-out homecoming. One day the reporters who hung about as close as permitted hoping for a chance to talk to Wilbur saw some small boys from the garrison approaching the guards and expected to see the children rebuffed as they had been. Instead they saw Wilbur, “a kindly smile” on his face, welcome them, then through the open doors watched as he “explained every detail on the machine.” “I have been here about a week and have the machine almost ready to fly,” Wilbur wrote Katharine on September 26. He was staying at the stylish Park Avenue Hotel, but getting his lunches at the Officers Club on Governors Island. Yesterday was the big naval parade. . . . In the evening the boats were illuminated with millions of electric lights and the same was true of many of the great buildings. For ten miles the river was an almost solid mass of steamboats and but for the fact that they were nearly all outlined with electric lights, it would have been impossible to navigate. To reporters who descended on him, Wilbur said he had not come to astonish the world but to give everybody a chance to see what the airplane was like in the air. Asked if he thought it would be perilous to fly over a harbor so filled with ships, he said an airplane ought to be able to go anywhere. Glenn Curtiss returned from upstate late in the day on September 28, and camped that night in the hangar with his plane on Governors Island, in order to make an early test flight the next morning. As it was he made his flight shortly after six o’clock, with only a friend and one army officer as witnesses. He flew 300 yards, then went back to upstate New York. Wilbur, who had spent the night at his hotel in the city, did not get started with his preliminary tinkering until eight o’clock then, about nine o’clock, took off on a 7-minute practice run, circling

Governors Island, the white-and-silver Flyer looking much as always except for the 14-foot, canvas-wrapped, red canoe that hung beneath. Thus the newest form of transportation was making its debut over American waters with one of the oldest of all forms conspicuously in readiness, in case of trouble. Soon after landing, Wilbur announced he would fly again. Wireless signals went out, signal flags went up, and off he went. Instead of heading toward the mouth of the Hudson, as expected, he swung to the west into the wind and, flying over two ferryboats, headed straight for the Statue of Liberty on Bedloe's Island, circled the statue, and sailed low over the Lusitania, which was then heading down the harbor, outward bound to Liverpool. Thousands of people were watching. Battery Park at the tip of Manhattan was thick with spectators, and passengers on deck on the Lusitania frantically waved hats, scarfs, handkerchiefs as Wilbur passed over their heads. He maneuvered his plane with perfect control through a whole series of dips and turns. But it was the spectacle of Wilbur Wright and his flying machine circling the Statue of Liberty that made the most powerful impression, which would be talked about, written about, and remembered more than anything, as a writer for the New York Evening Sun tried to express in a front-page account: Once his great aeroplane, so near the horizon that it seemed one with the ocean gulls among which it flew . . . [was] just above the level of the feet of the Statue of Liberty. An instant later it appeared at the level of the statue's breast and then passed in front on an even keel. In the air Wright seemed to pause for a moment to pay the homage of an American aviator to the lady who attests his country's destinies. Then suddenly turning eastward with the wind, he sped rapidly over the waves while the harbor craft shrieked their welcomes, and the cheering men and women ashore bore witness that our Lady of Liberty had been visited by one of her children in a vessel needing only the winds on which to

sail. Harper's Weekly, "The Journal of Civilization," would feature on its next cover a dramatic photograph of Wilbur and the plane circling the Statue of Liberty with the caption, "A New Kind of Gull in New York Harbor." "Goes pretty well, Charlie," Wilbur was reported to have said to Charlie Taylor, when, after a smooth landing, he climbed from the plane back on Governors Island. "Looks alright to me, Will," replied Charlie. The next day came news from Potsdam, Germany, that Orville had flown to an altitude of 984 feet, higher than anyone had yet flown in an airplane. Stiff winds out of the north kept both Wilbur and Glenn Curtiss grounded on Governors Island for two days, Saturday and Sunday, and by then Curtiss announced he had to leave to keep a contract in St. Louis. This left only Wilbur to make the flight up the Hudson River that had been promised and all were waiting for. The morning of Monday, October 4, though the wind out of the north had eased off to a degree, it was still blowing at 16 miles per hour, or more than Wilbur would have preferred. Sensing it was only going to increase again, he decided to fly. The plane was brought out of the hangar and he looked it over. Finding the gasoline tank not full, he took an old can and filled it himself. At 9:53, he took off from Governors Island, the emergency canoe still hanging from beneath the plane. The one difference this time was a tiny American flag fixed to the rudder. It had been sent to him by Katharine with the request that he fly it over New York. Again the wireless messages went off. Again signal flags were flying, and again whistles shrieked, foghorns sounded. Work came to a standstill in much of the city and there was a "stampede" to the windows and rooftops of office buildings to see the spectacle in the sky of "wonderful Wilbur Wright, the Dayton aviator," as one New York paper was calling him. From the new skyscrapers like the Metropolitan Life Tower the view of the harbor and the Hudson River was panoramic. Most spectacular of all was the outlook from the upper floors of the

forty-seven-story Singer Building on Broadway, which, once completed, would be the tallest skyscraper on earth. When Wilbur headed across the harbor and turned northward into the wind heading for the Hudson River the excitement grew even greater. He had climbed by then to about 150 feet and was moving at a speed of about 36 miles per hour. But on reaching the river, as he later recounted, he began getting air currents such as he had never had to cope with. They were coming off the skyscrapers and so strong and dangerous he had to drop elevation "considerably" and hug the west, or New Jersey, side of the river. "I went to a height just a little above the ferryboats until I reached the battleships, and then I skimmed over their funnels. I passed so close to the funnels that I could smell the smoke from them." Asked later if one of the British battleships fired a salute in his honor, Wilbur said he did not know what it was, but something made an "awful noise." Seeing the dome of Grant's Tomb on the right side of the river at West 122nd Street, he decided he had gone far enough, and after making a large 180 degree turn, he started south, back down the river, this time moving considerably faster with the wind behind him. "I think I came back in half the time. . . . I hugged the water much closer and kept further toward the Jersey shore as I passed the downtown skyscrapers." His return trip was greeted with enthusiasm as great or greater than that upriver. Now the Jersey hills were black with people, and piers and building roofs on the Manhattan side were packed to capacity. It was estimated a million people were watching. At precisely 10:26 A.M., Wilbur landed at Governors Island within a few feet of the spot where he had taken off. His time in the air was 33 minutes and 33 seconds. The distance traveled to Grant's Tomb and back was approximately 20 miles, his average speed 36 miles per hour. In spite of stiff winds, skyscraper gusts, whistles, horns, shrieking crowds, and battleship salutes, he had done it. How formidable the wind problem

had been could be measured by the small American flag Katharine had given him. Brandnew at the start of the flight, it had returned in shreds. Charlie Taylor told reporters how extremely concerned he had been the whole time Wilbur was “up.” I was staring with both eyes square at that big flag over the Singer building. Sometimes it layed down and hugged the pole, and then I knew Wilbur was having it good. And sometimes it stood out pretty near even and I knew he was having his troubles. And once it flipped right out and the tip began to point upward like it did all day Saturday. I began to tremble. For I didn’t know what Wilbur could do against a gust like that. No, he had not conquered the air, Wilbur remarked to the press as he walked away. “A man who works for the immediate present and its immediate rewards is nothing but a fool.” Shortly afterward, to much surprise, he announced he would fly again that afternoon and this time it would be much farther, an hour-long flight in which he would circle Manhattan. But about four o’clock as he and Charlie Taylor were cranking up the plane the head of one of the engine’s piston rods blew off with a terrible roar, and the head, which was about six inches long and four wide, “flew like a cannon ball” no more than 20 inches from Wilbur’s head. To Charlie Taylor he said, “It’s a darn good thing that didn’t happen up in the air.” The plane was taken away. The New York performances were over. Talking with a correspondent for Scientific American magazine a little later, in the gathering dusk of the October afternoon, Wilbur was asked what the explosion of the engine indicated and what direction the development of aviation would take in the future. The broken cylinder was only “an incident,” Wilbur said. As for the future, direction was the thing: “High flying.” We must get up clear of the belt of disturbed air which results from the irregularities of the earth’s surface. From now on you will see a great increase in the average elevation at which aviators will take their flights; for not only will they find in the higher strata more

favorable atmospheric conditions, but in case of motor trouble, they will have more time and distance in which to recover control or make a safe glide to earth. “On Monday I made a flight up the Hudson to Grant’s Tomb and back to Governor’s Island,” Wilbur wrote to his father three days later from College Park, Maryland. “It was an interesting trip and at times rather exciting.” And that was that. He had come to College Park to begin training U.S. Army pilots. On Monday, October 18, two weeks after Wilbur’s flight up the Hudson, Orville and Katharine were in Paris. Their events in Germany successfully concluded, they had stopped for a brief stay en route home, and by all evidence were unaware that shortly before five o’clock that afternoon a Wright plane would appear in the sky causing a sensation such as Paris had never experienced. It was not only the first airplane to fly over the city, but the first to fly directly over any city. Close as he was to New York on his flight up the Hudson and back, Wilbur had flown over water only. The Comte de Lambert, having told almost no one his plans, not even his wife, had taken off from Port-Aviation at Juvisy, fifteen miles southeast of Paris. He was spotted first in the golden afternoon sky by hundreds of visitors high up on the Eiffel Tower. Then came shouts from the streets below, “L’Aéroplane! L’Aéroplane!” One of the most memorable descriptions of the spectacle was provided by the American writer Edith Wharton, who had just stepped from her chauffeur-driven limousine at the front entrance of the Hôtel de Crillon on the Place de la Concorde and noticed several people looking into the sky, as she recounted in a letter to a friend: And what do you think happened to me last Monday? I was getting out of the motor at the door of the H. de Crillon when I saw two or three people looking into the air. I looked also and there was an aeroplane, high up against the sky . . . and emerging on the Place de la Concorde. It sailed obliquely across the Place, incredibly high above the obelisk, against a golden

sunset, with a new moon between flitting clouds, and crossing the Seine in the direction of the Pantheon, lost itself in a flight of birds that was just crossing the sky, reappeared far off, a speck against the clouds and disappeared at last into twilight. And it was the Comte de Lambert in a Wright biplane, who had just flown across from Juvisy—and it was the first time that an aeroplane has ever crossed the great city!! Think "what a soul was mine"—and what a setting in which to see one's first aeroplane flight! What she had neglected to say was that the Comte de Lambert had soared over the top of the Eiffel Tower, the tallest structure in the world, and thus had been flying at an elevation of at least 1,300 to 1,400 feet, "high up" indeed. Word of what happened had already reached Juvisy by the time de Lambert returned and landed. Thousands had gathered to welcome him. Stepping from the plane, "pale but radiant," he was instantly engulfed by reporters and an adoring crowd. There also, to his great surprise, were Orville and Katharine Wright. How they heard the news and how they got to Juvisy are not known. De Lambert insisted he was not the hero of the hour. "Here is the real man," he said, turning to Orville. "I am only the jockey. He is the inventor," by which he meant both Orville and Wilbur. "Long live the United States! It is to that country that I owe my success." Once Wilbur, Orville, and Katharine reached home, they hardly had time to unpack before their time and attention were taken up with business decisions and patent issues, Wilbur heading off to New York one day, Washington another, then Wilbur and Orville going together to New York, then Wilbur going alone again. And except for Christmas, so it continued on into the new year. A Wright Company for the manufacture of airplanes was incorporated, with offices on Fifth Avenue in New York. Ground was broken for a Wright manufacturing plant in Dayton. There were more dinners in their honor, more medals and awards, including the first Langley Medal, given by the

Smithsonian. And there were more patent suits. With the increase in the number of people flying, there were increases in serious accidents and deaths. In France aviators Eugène Lefebvre, Ferdinand Ferber, and Léon Delagrange were all killed in crashes. Extremely distressing, too, for Wilbur was an unfortunate falling-out with Octave Chanute that began in January 1910 and stretched into spring. Chanute thought the Wrights had "made a blunder" bringing suit against Glenn Curtiss and said so in a letter to the editor of Aeronautics. Specifically Chanute did not think that the idea of wing warping was original with the Wrights. In a letter dated January 20, Wilbur stated clearly to Chanute, "It is our view that morally the world owes its almost universal use of our system of lateral control entirely to us." In response Chanute wrote, "I am afraid, my friend, that your usually sound judgment has been warped by the desire for great wealth." Besides, Chanute was offended by something Wilbur had said in a speech in Boston about how he, Chanute, had "turned up" in the Wright shop in Dayton in 1901. This, Chanute felt, gave the impression that he had thrust himself upon Wilbur and omitted to say that Wilbur had been the first to write to Chanute in 1900, asking for information. Wilbur and Orville found Chanute's letter "incredible," and in one of his longest letters ever to Chanute, Wilbur let him know. Concerning Chanute's charge that greed had taken hold of the brothers, Wilbur dismissed it saying simply, "you are the only person acquainted with us who has ever made such an accusation." He centered his considerable fury instead on the way Chanute had given the French the impression that he and Orville were "mere pupils and dependents" of his, and the fact that Chanute had never once until now expressed any question about the brothers' claim to the invention of wing warping. Neither in 1901, nor in the five years following, did you in any way intimate to us that our general system of lateral control had long been part of the [flying] art. . . . If the idea was

really old in the art, it is somewhat remarkable that a system so important that individual ownership of it is considered to threaten strangulation of the art was not considered worth mentioning then, nor embodied in any machine built prior to ours. Plainly wishing the dispute to be resolved, Wilbur closed on a warmer note. “If anything can be done to straighten matters out to the satisfaction of both you and us, we are not only willing but anxious to do our part. . . . We have no wish to quarrel with a man toward whom we ought to preserve a feeling for gratitude.” When nearly three months passed with no response from Chanute, Wilbur wrote again to say, “My brother and I do not form many intimate friendships, and do not lightly give them up. I believed that unless we could understand exactly how you felt, and you could understand how we felt, our friendship would tend to grow weaker instead of stronger. Through ignorance or thoughtlessness, each would be touching the other’s sore spots and causing unnecessary pain. We prize too highly the friendship which meant so much in the years of our early struggles to willingly see it worn away by uncorrected misunderstandings, which might be corrected by a frank discussion. This time Chanute answered in a matter of days to say Wilbur’s letter had been gratifying, that he had been in bad health, and was about to sail for Europe. “I hope, upon my return from Europe, that we will be able to resume our former relations.” Except for one week in February, it had been an unusually mild winter in Dayton. On February 16, as Bishop Wright recorded in his diary, more than a foot of snow fell. And it snowed “very much” again on February 18. But “considerable thawing” followed the day after, and he spent time breaking icicles off the roof. But with the first week of March the snow was “passing away.” One “bright, mild day” followed after another. His diary entries recorded: “Beautiful weather,” “Fine weather,” “Spring weather,” “most beautiful weather,” on into April. Dayton’s West Side, Hawthorn

Street, and Wright homestead looked as they had looked so often before in springtime. Gone were the homecoming flags and bunting and Japanese lanterns of the previous fall. All was as before. The West Third Street shop and the outlook from the interurban trolley on the ride out to Simms Station and Huffman Prairie were as ever. So, too, were the Wright brothers. For all they had seen and done, the unprecedented glory bestowed on them, it had by all signs neither changed them nor turned their heads in the least. There was no boasting, no preening, no getting too big for their britches, as said, and it was this, almost as much as their phenomenal achievements, that was so greatly admired. As one writer on the scene put it, “They are the imperturbable ‘men from home,’ as always.” Katharine as well, for all her travels and the attention she had received, seemed no different than always. Pau was a mighty interesting place—Miss Wright stoutly insists on that, too, in spite of her brother Wilbur’s dry smile; and there was pretty country in Germany, yes he will admit that, but if you want to see pretty country, you don’t have to go any farther then their own field at Simms’s. Ohio is plenty good enough for him. And Orville agrees, mildly suggesting, however, that you really can’t see it at its best till you get up about a thousand feet. If the brothers might have had any cause for concern or annoyance, it would have been the lawsuit against the Curtiss Company over their patents. But they were confident in their case, for which there was already strong support in the press and in the country. As said in the New York Times, it was “a highly significant fact that, until the Wrights succeeded, all attempts at flight with heavier-than-air machines were dismal failures, but since they showed that the thing could be done everybody seems able to do it.” Nor had the argument that patents by the Wrights would retard the progress of aeronautics made much headway. “The insistence of Professor Bell upon his rights did not retard the growth in the use of

the telephone," wrote the Christian Science Monitor. "Thomas Edison's numerous suits for protection of his inventions have not kept any of them out of the market." And as both Wilbur and Orville knew better than anyone, if ever the development of an idea had been thoroughly documented with written records and photographs nearly every step of the way, it was theirs. Wednesday, May 25, 1910, was a particularly "nice day" in Dayton, noted Bishop Wright in his diary. It was also to be a very big day for the Wright family. The brothers had invited the Aeroplane Club of Dayton, as well as friends, neighbors, anyone interested, to come to Huffman Prairie to see Orville fly, and the crowd that came numbered two or three thousand. The interurban was jammed. Automobiles lined the roadway by the field where ice cream and sandwich vendors had set up for business. As later reported, Orville performed with his machine in such manner as to keep the spectators on tiptoe the whole time. "One minute he would be grazing the ground and the next shooting up in the air like an arrow." He did figure eights, twists and turns all in the most "remarkable manner." Most astonishing of all, he flew to an unbelievable height of 2,720 feet. And all the Wrights—the Bishop, Wilbur, Katharine, Reuchlin, Lorin and his wife and children—were on hand to see such proof of the genius of the brothers' achievements performed there on home ground before a home crowd. In all the years they had been working together Wilbur and Orville had never once flown together, so if something were to go wrong and one of them should be killed, the other would live to carry on with the work. But on this day at Huffman Prairie, where they had developed the first practical flying machine ever, the two of them, seated side by side, took off into the air with Orville at the controls. To many then and later, it seemed their way of saying they had accomplished all they had set out to do and so at last saw no reason to postpone any longer enjoying together the thrill of flight. Of the

immediate family of 7 Hawthorn Street, only Bishop Wright had yet to fly. Nor had anyone of his age ever flown anywhere on earth. He had been with the brothers from the start, helping in every way he could, never losing faith in them or their aspirations. Now, at eighty-two, with the crowd cheering, he walked out to the starting point, where Orville, without hesitation, asked him to climb aboard. They took off, soaring over Huffman Prairie at about 350 feet for a good six minutes, during which the Bishop's only words were, "Higher, Orville, higher!"