The Family Heritage Series

A weekly discussion of Americanist truths and traditions for those "heirs of all the ages" who will have to preserve that most important inheritance of all – freedom. Produced by the Movement To Restore Decency.

Volume II Lesson Eighty-Nine

The Wright Brothers

LESSON IDEA

To show how the Wright brothers succeeded, where hundreds of others had failed, in building a heavier-than-air craft that would fly.

PREPARATION

Many pictorial histories of flight are available at your local library. We recommend obtaining one as a visual aid for this lesson.

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SOME THIRTY-FOUR YEARS AGO, a young aviator wrote a poem that captured the euphoric spirit of flying. It is called *High Flight*, and it goes like this:

Oh! I have slipped the surly bonds of Earth
And danced the sky on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
Of sun-split clouds, and done a hundred things
You have not dreamed of – wheeled and soared and swung
High in the sunlit silence. Hov'ring there,
I've chased the shouting wind along, and flung
My eager craft through footless halls of air. . . .

Up, up the long, delirious, burning blue
I've topped the wind-swept heights with easy grace,
Where never lark or even eagle flew –
And, while with silent, lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand and touched the face of God.

THE YEAR was 1941. The author of that poem, John Magee, was just nineteen years old – an eager and courageous boy who had become a pilot in Britain's Royal Air Force. His enemies were the Nazi invaders. Tragically, however, after seeing combat in the skies over Britain and the Continent only briefly, Magee's plane collided in mid-air with another on a training mission. The bodies of the two young men and jagged hunks of metal tumbled out of the sky.

Like many other men during the Twentieth Century, John Magee had fallen in love with flight. He could think of nothing more exhilarating than to test the limits of his plane, circling through clouds and skimming over mountain peaks. And, as is so obviously expressed in his poem, John was often awed by the wondrous beauty of the sky above him and of the earth below. Oftentimes he felt as though he were face to face with the very Creator of heaven and earth. Perhaps, as he died, he actually *did* put out his hand to God and found himself lifted still higher than man has flown.

It is doubtful that John ever realized how few men had ever experienced flight or how many brilliant men in the past had longed to leave the bonds of earth to soar with the eagles. But it was only in the Nineteenth Century that inventors and scientists started making any real progress in freeing man from his earthbound existence. One major contributing factor was the invention of the gasoline engine. Without a reliable and compact energy source, it was impossible to get an airplane into the

air and keep it there. It was true that men had been sailing in the skies in balloons, but balloons were notoriously unreliable. They were as fickle as the wind which carried them.

THE MOST IMPORTANT breakthrough in man's dream of flight came at a place called Kitty Hawk in North Carolina in 1903.

Oddly enough, though men had dreamed of flying, apparently few really believed such a thing was possible. In fact, no one believed that Orville and Wilbur Wright would ever manage to get their flimsy-looking mass of wires and canvas and girders off the ground. Despite advance notice of the trial, only five persons were present on that bitterly cold, clear day, December 14th, when the Wright brothers prepared to launch their makeshift airplane from a wooden track. The two brothers had been working together on their airplane for years. So they flipped a coin to see who would have the honor of test-flying it. Wilbur won the toss. In later years Orville recalled the event: "I took a position at one of the wings, intending to help balance the machine as it ran down the track, but when the restraining wire was slipped, the machine started off so quickly I could stay with it only a few feet. After a thirty-five to forty-foot run, it lifted from the rail.

"But it was allowed to turn up too much. It climbed a few feet, stalled, and then settled to the ground near the foot of the hill, 105 feet below. . . . In landing, the left wing touched first. The machine swung around, dug the skids into the sand and broke one of them. Several other parts were also broken, but the damage to the machine was not serious. . . . Two days were consumed in making repairs, and the machine was not ready again till late in the afternoon of the 16th. . . . Wilbur having used his turn in the unsuccessful attempt on the 14th, the right to the first trial now belonged to me. After running the motor a few minutes to heat it up, I released the wire that held the machine to the track, and the machine started forward into the wind . . . *This flight lasted only 12 seconds, but it was nevertheless the first in the history of the world in which a machine carrying a man had raised itself by its own power into the air in full flight, had sailed forward without reduction of speed, and had finally landed at a point as high as that from which it started."*

AFTER THREE MORE FLIGHTS that day, the brothers stopped to discuss their success. As they were standing near the plane, a strong wind came up and started blowing it down the field. Everyone ran to grab it, but said Orville: "All our efforts were in vain. The machine rolled over and over. Daniels, who had retained his grip, was carried along with it, and was thrown about, head over heels, inside of the machine. Fortunately he was not seriously injured though badly bruised in falling about against the motor, chain guides, etc. The ribs in the surfaces of the machine were broken, the motor injured and the chain guides badly bent, so that all possibility of further flights with it for that year were at an end."

Most of the spectators who had witnessed the flight had no appreciation of what they had seen. And when the Wright brothers tried to get newspaper publicity for their unique invention, they were met with ridicule and disbelief.

The only major account that appeared in the newspaper the day after the flight was in the Norfolk *Virginian-Pilot*, in an article written by H.P. Moore. About ninety-nine percent of his story was exaggeration or pure fiction, but the newspaper at least gave the story front-page coverage.

Moore offered his story to over twenty other newspapers in the country, but only five accepted it and ultimately only three papers published accounts of the event which would ultimately affect the world.

For several years after the event, few newspapers or magazines even discussed the subject. Those that did ridiculed it as a hoax. Even the scholarly *Scientific American* editorialized in its October 1905 issue: "If such sensational and tremendously important experiments are being conducted in a not very remote part of the country, on a subject in

FOR SERIOUS STUDENTS

In our nation's 200-year history, American inventors have contributed more to the well-being of mankind than all the inventors of all other nations in any period in the past. Man's material progress throughout the world during this century can be attributed mainly to the genius of American inventors. For proof of this, we recommend *The Heroic Age Of American Invention* by L. Sprague de Camp. For an excellent book on the early history of flight, see *The Heritage Of Kitty Hawk* by Walter T. Bonney. We also recommend *The Wright Brothers* by Fred C. Kelly.

which almost everybody feels the most profound interest, is it possible to believe that the enterprising American reporter, who, it is well known, comes down the chimney when the door is locked in his face – even if he has to scale a fifteen-story skyscraper to do so – would not have ascertained all about them and published them broadcast long ago?" But the truth is that the reporters all ignored one of the biggest stories of the century – indeed, one of the biggest stories in man's recorded history.

IN 1904 WILBUR and Orville had rebuilt their primitive airplane and were preparing to give a demonstration to some friends, relatives, and a dozen newmen who had shown up at a field near their home in Dayton, Ohio. A high wind had come up earlier in the day, and the brothers waited patiently for it to die down. When it never did, they cancelled the flight. But the reporters began to voice suspicions they were being conned, so the brothers offered to give them a short demonstration. The engine revved up, then started backfiring and sputtering. The plane jerked down the track and fell to the ground. The reporters were not the least impressed.

Orville and Wilbur had no idea how long it would take to repair the engine, but asked the reporters and friends to come back the following day for the flight. The next morning only two or three sullen reporters straggled on to the field. They were pleasantly surprised, however, when the aircraft flew six feet above the ground for a distance of sixty feet. They wrote friendly stories, but during the rest of 1904, no reporters sought out the Wright brothers. That was just as well. Orville and Wilbur needed to spend all the time they could on the perfecting of their airplane. Publicity could wait.

During 1904 their plane had flown only 45 minutes, but with each try, slight improvements were made in the engine or in the control mechanisms. The brothers spent 1905 in the same way, and still without any reporters hounding them for stories.

But finally, as more and more residents of the community witnessed the flights and word of mouth spread the news, skeptical newsmen started believing the reports. *Scientific American*, three years after the first flight, finally editorialized in December of 1906: "In all the history of invention, there is probably no parallel to the unostentatious manner in which the Wright brothers of Dayton, Ohio, ushered into the world their epoch-making invention of the first successful aeroplane flying-machine." Wilbur and Orville Wright were finally getting the recognition they deserved.

THEIR INTEREST IN flight had begun when Wilbur was eleven and Orville seven years old. Their father, a bishop in the United Brethren Church, had just returned from church business in another town and had brought them a small present. He hid the gift in his hand until inside their room, then tossed it into the air. Instead of dropping to the floor, it flew to the ceiling, hovering there momentarily, before falling.

The boys were thrilled. What was it? His father explained that it was a new toy called a "helicopter," invented by a Frenchman named Alphonse Penaud. The brothers dubbed it the "bat" and later even tried to build a larger model. From that moment their fascination with the possibilities of flight never faded. Brothers seldom stick together as closely as did Orville and Wilbur. Both were mechanically inclined, both liked working with their hands, and both were willing to put in long hours on projects which interested them. Years after their successes together, Orville was told by a friend that he thought they were a good example to other youngsters who were growing up without any special advantages. Orville corrected his friend's remark by saying he and his brothers *did* have special advantages at home. "What do you mean," asked his friend? "Simply that we were lucky enough to grow up in a home environment where there was always much encouragement to children to pursue intellectual interests; to investigate whatever aroused curiosity. In a different kind of environment our curiosity might have been nipped long before it could have borne fruit." [*Discuss any such special interests with your children, and ask how they might be applied to their life's work.*]

The Wright brothers set out together in their teens to start a printing business and in 1889 issued the first edition of their newspaper, *West Side News*. It lasted only four months, but by then their interests had turned toward another business enter-

prise – the establishment of a bicycle shop. In 1892 they opened up their shop and by 1895 business was so good they had to move to a larger building.

During that same year, the brothers had done a great deal of reading about the possibilities of human flight. They were particularly interested in what a German named Otto Lilienthal was accomplishing with glider experiments in Europe. A year later, Lilienthal was killed while in flight, but his death only heightened the brothers' interest in flying. Their desire to know more about flying became insatiable and they wrote to authorities all over the world to learn as much as they could.

They kept their bicycle shop going but soon both were spending hours talking about how they might create a flying machine. In 1899 they built a biplane kite to test their theories of flight.

In 1900 they built a man-carrying glider and sought out an ideal part of the country in which to fly it. From the Weather Bureau in Washington, they learned that the winds were most suitable in Kitty Hawk, North Carolina. After experimenting with a glider, the brothers were convinced it was possible to fly. But to do so, they knew the glider would need an engine and a propeller.

Finding these two items proved to be an impossible task. The Wright brothers discovered that no engine manufacturers would build a compact engine to their specifications and that no ship propeller manufacturers could produce the kind of propeller they needed. This might have discouraged other men, but not the Wright brothers. They decided to build their own engine and propeller.

Walter T. Bonney, in *The Heritage of Kitty Hawk*, said, "The Wrights were sound thinkers. They were tenacious in their search for information which could be accepted without reservation. They possessed the energy and the patience necessary to conduct the systematic investigations leading to solution of difficult problems . . . . The Wrights possessed a quality ascribed to men more often than is deserved – Yankee ingenuity. It was natural for them to make things which they lacked." [*Are these attributes desirable for anyone seeking success? Is it possible for men to create without being interested in what they are doing? What do you think motivates men to invent things?*]

In the 72 years since the Wright brothers flew their rickety box-kite airplane, man has made astounding progress in flight. From a wood-and-wire contraption which flew only twelve seconds on its first flight, man has developed sleek jets which can fly at twice the speed of sound. And we have gone even beyond our own atmosphere by sending men to the moon. Think of it! In less than one century, Americans went from dependence on horses and carts to winged flight. What will the next hundred years bring?

Looking Ahead

In just a few years, men such as Henry Ford, and the Wright brothers had revolutionized America's traditional mode of transportation. During the latter half of the Nineteenth Century, Edison gave us the light bulb, Morse perfected the telegraph, Bell developed the telephone. In the field of agriculture, Eli Whitney gave us the cotton gin, a young blacksmith named John Deere invented the steel plow, and Cyrus McCormick invented the reaper. In next week's lesson we'll look at McCormick's contribution to America's progress.

The Family Heritage Series

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