

История самолётов 2



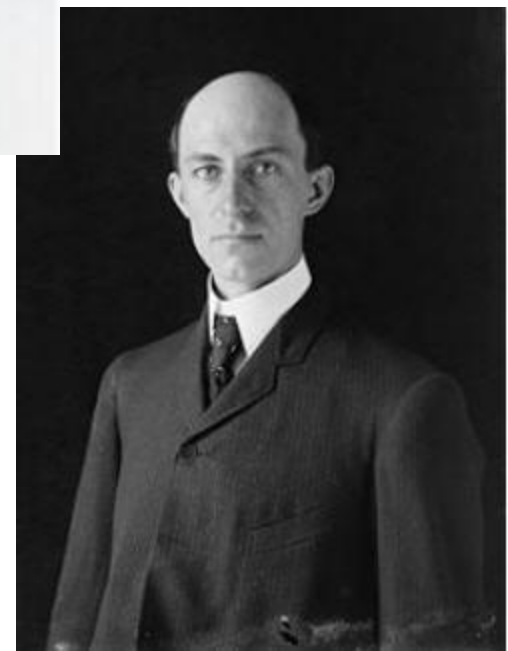
Братья Райт открывают авио-эру!

**Самолёты
изобрели
братья
Райт**



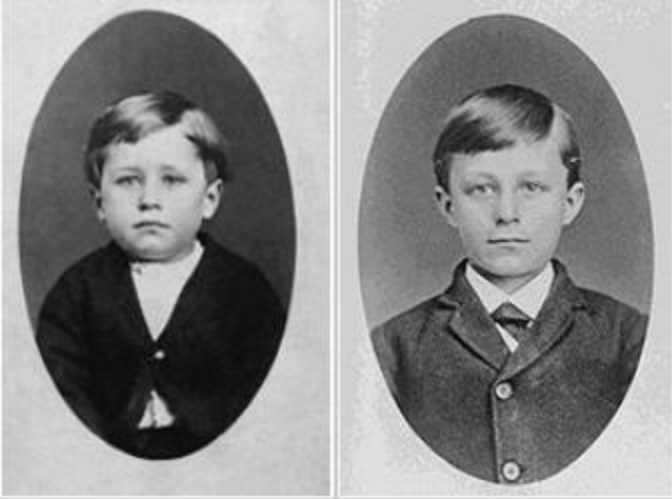
Orville Wright

Wilbur Wright



Orville and Wilbur Wright were very deliberate in their quest for flight. First, they spent many years learning about all the early developments of flight. They completed detailed research of what other early inventors had done. They read all the literature that was published up to that time.

**Маленькие
братья Райт
любили
играть с
вертолётom.**



Orville (left) and Wilbur (right) in 1876.

One day, when Orville and Wilbur Wright were boys, their father returned from a trip with a gift that would help change their lives--and history--forever. The toy was a helicopter, made of cork, bamboo, and paper. It was powered by a rubber band.

Alphonse Pénaud *Planophore*

At that time, in the year 1878, flight was still a dream. Helicopters and airplanes that could lift a man into the air had not yet been invented. But the toy helicopter thrilled Orville, age 7, and Wilbur, age 11. They began to build and fly copies of it.



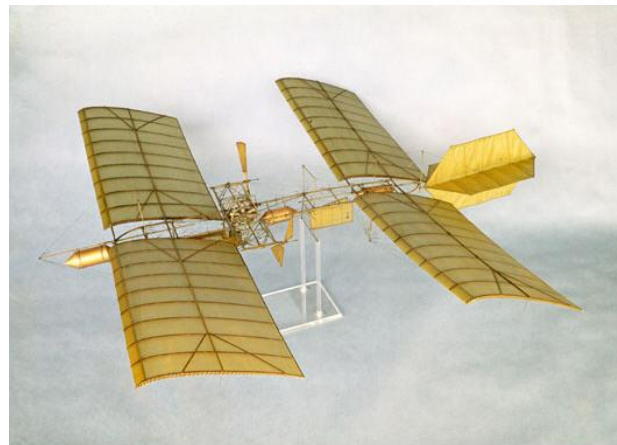
**Сегодня
вертолётёты
очень
большие!**



**ПТИЦЫ
ПОМОГЛИ
БРАТЬЯМ
ПРИДУМАТЬ
САМОЛЁТ!**

Otto Lilienthal and others had already proven that **wings could lift** a man so that he could **glide in the air**. And Samuel Langley, an American, had designed a craft that could be **propelled into the air** with a **steam engine**. But until then, the **problem of taking off, turning, and descending** in an aircraft had eluded them all.

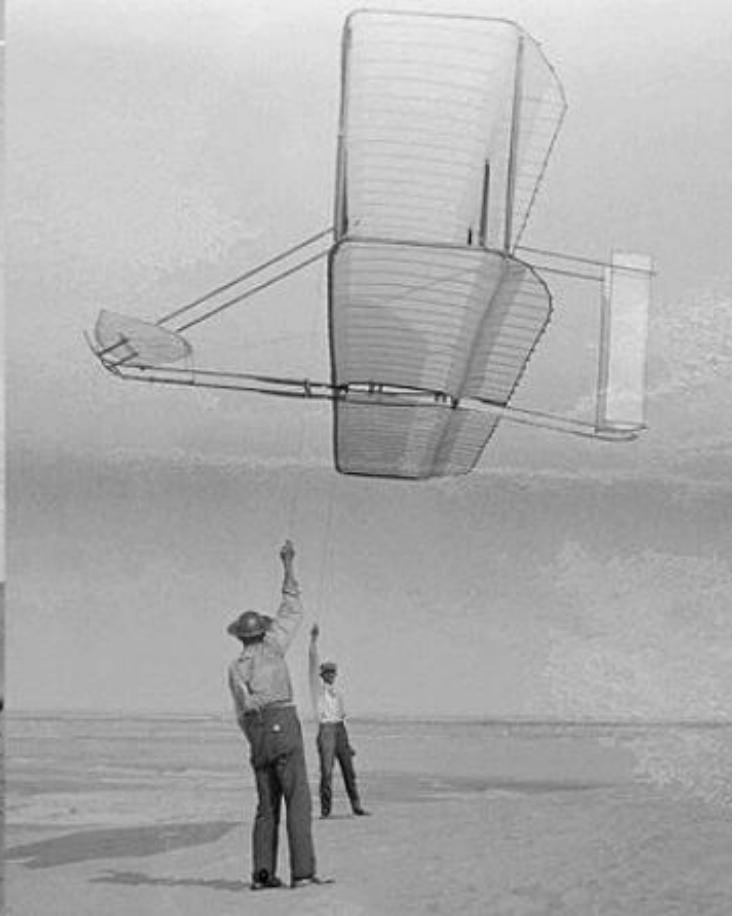
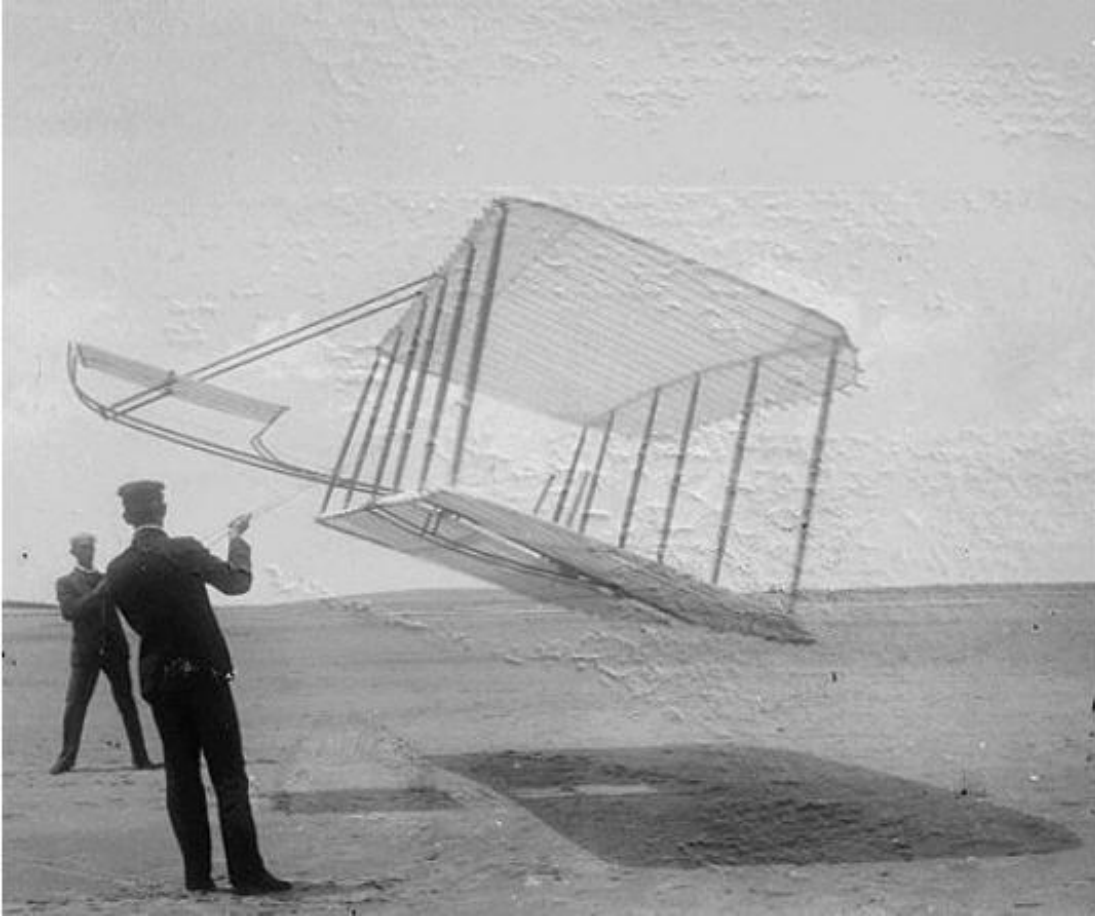
The Wright brothers divided flight into three problems: The aircraft needed **wings** that could lift it into the air. It needed an **engine** that could propel it. And finally, it needed a **means of controlling it** in flight.



The solution came from **pigeons**. While watching pigeons flying, Wilbur and Orville Wright noticed that the **birds kept adjusting the positions of their wings**.

When a bird wanted to turn, it lifted the front edge of one wing while tilting the edge of the other wing down. By reversing the process, the bird could turn the opposite way.

**Самолёты
запускали,
как
воздушного
змея.**



Then, they began to **test the early theories with balloons and kites**. They learned about how the wind would help with the flight and how it could affect the surfaces once up in the air.

At left, 1901 glider flown by Wilbur (left) and Orville. At right, 1902 glider flown by Wilbur (right) and Dan Tate, their helper. You can see the dramatic improvement in performance!



**Было тяжело
выбрать
хорошую
форму
самолёта.**

The next step was to **test the shapes** of gliders much like George Cayley did when he was testing the many different shapes that would fly. They spent much time testing and learning about **how gliders could be controlled**.

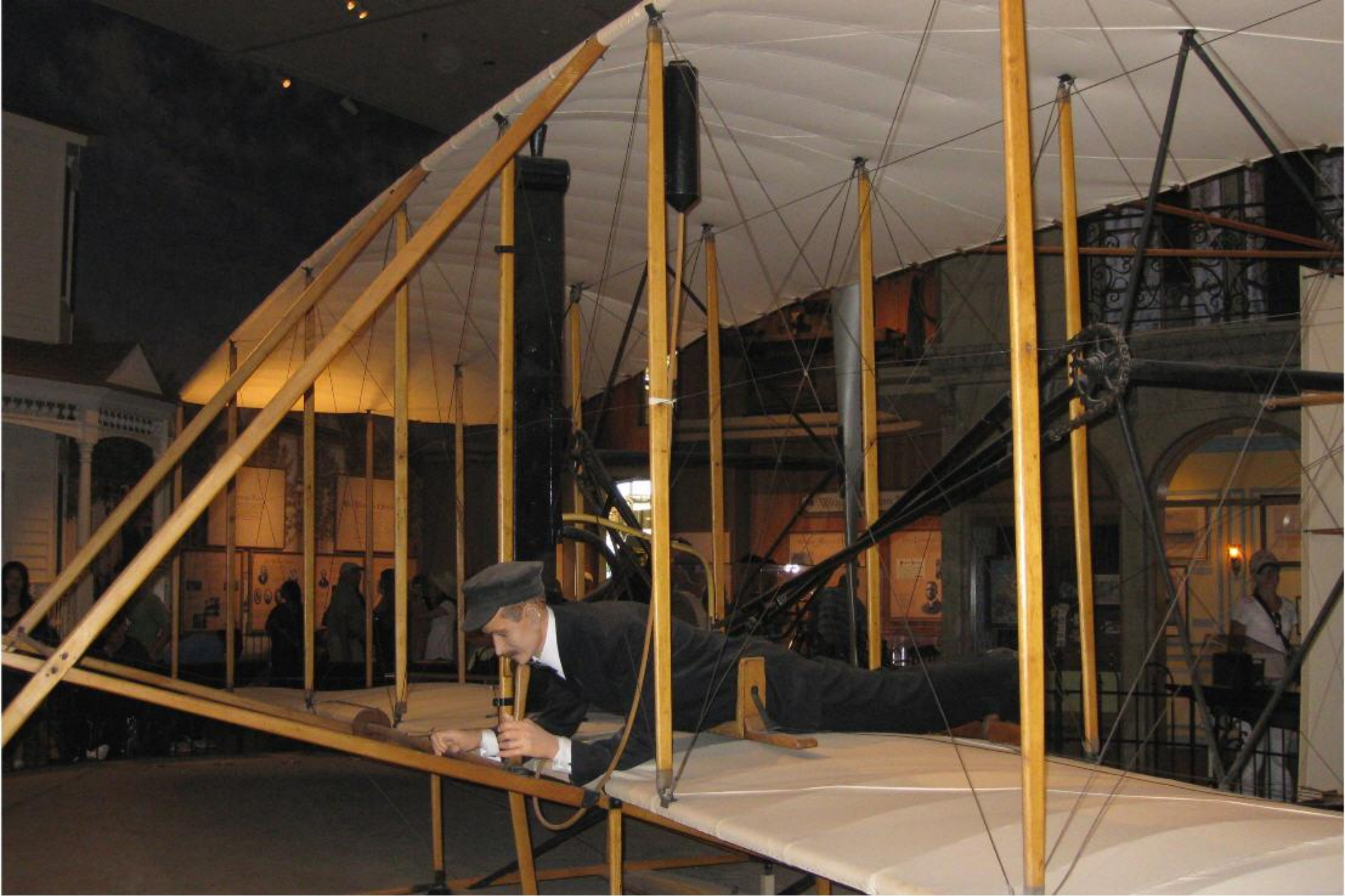
To get their glider in the air, the brothers needed to take it somewhere with lots of wind. Orville and Wilbur chose a place called Kitty Hawk, in North Carolina.

Kitty Hawk is beside the Atlantic Ocean. It is one of the windiest places in America. It also has lots of sand. Sand would give the glider a soft place to land.

In October 1900, the brothers started testing their glider at Kitty Hawk. Sometimes people helped them.



**Первые
самолёты
делали из
дерева и
ткани.**



A replica Orville on the actual Wright Flyer, National Air and Space Museum

**Первые
самолёты
часто
падали.**



**У первых
самолётов
не было
мотора.**



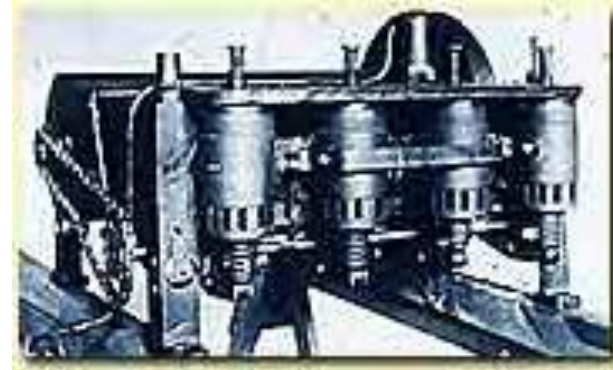
They designed and used a wind tunnel (a wooden box equipped with a fan) to **test the shapes of the wings and the tails** of the gliders. After they found a glider shape that **consistently would fly in the tests** in the North Carolina Outer Banks dunes, then they turned their attention to how to create a propulsion system that would create the lift needed to fly.

Wilbur Wright pilots the [1902 glider](#) over the Kill Devil Hills, October 10, 1902.

Wilbur can now steer his plane by moving a single rear rudder!

**Братья
построили
мотор и
попробовали
взлететь!**

Back in Dayton, the Wrights worked to **build propellers and a lightweight engine that could propel their aircraft skyward**. In the fall of **1903**, they returned to Kitty Hawk, where they **practiced flying** on the latest model of their glider as they assembled their **new engine-powered craft**.



The early engine that they used generated almost 12 horsepower.



Several local men helped them roll the 700 pound **Wright Flyer** to its starting place. They started the engine and Wilbur and Orville tossed a coin to choose the pilot. **Wilbur won**. He lay down on the lower wing and took the controls. **Orville held one of the wing tips** to help balance the airplane as it roared down the starting track.

After about thirty-five feet the Flyer lifted off the ground. But after just 3 1/2 seconds, it **smashed back to earth**. It took two days to repair the damages.

**Летит
первый
управляемый
самолёт с
мотором!**

But on **December 17, 1903**, the Wrights were ready to try again.

Now it was **Orville's turn to be the pilot**. He set up a camera, focusing it at the point where the Flyer would lift off. Then he took the controls. With Wilbur running alongside it, the Flyer picked up speed, then rose into the air.

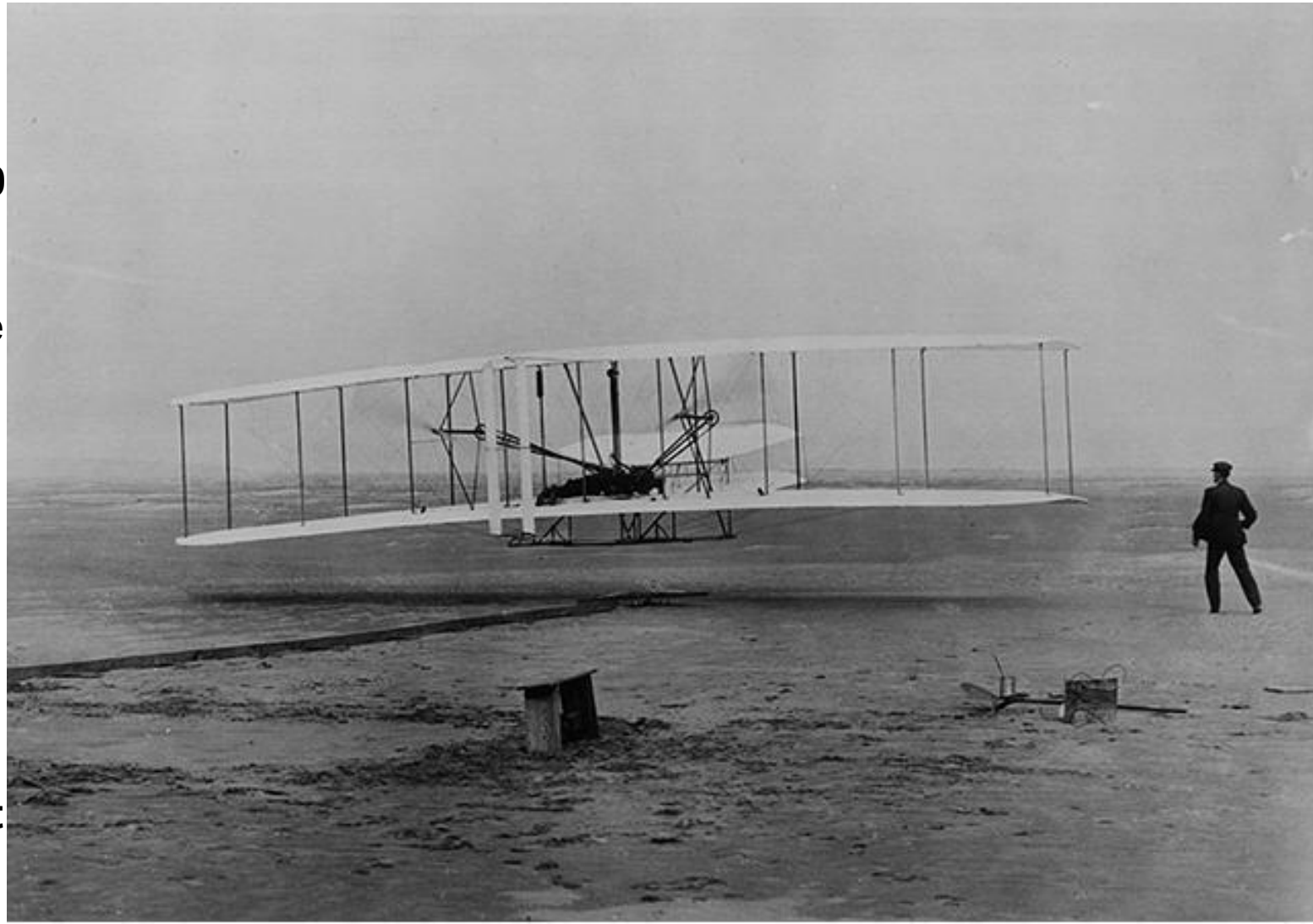


**Век
авиации —
начался!**

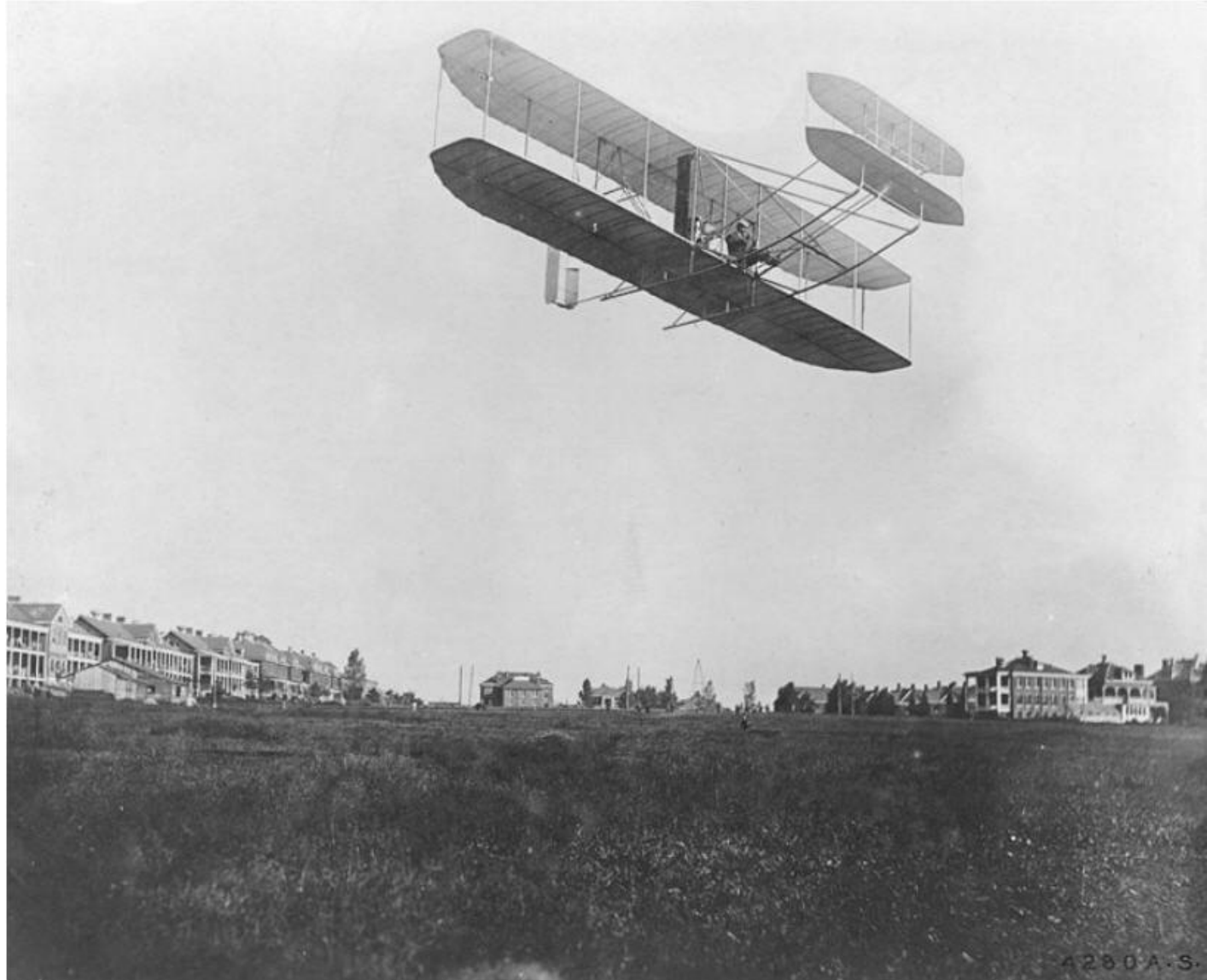
The "Flyer" lifted from level ground to the north of Big Kill Devil Hill, at **10:35 a.m.**, on **December 17, 1903**. Orville piloted the plane which weighed **six hundred and five pounds**.

At that moment, one of the local men snapped the camera shutter, taking the photograph that would preserve the moment forever.

The first flight lasted only **12 seconds**, and covered only **120 feet**. But the brothers flew the plane three more times that day. The last flight, with Wilbur piloting, covered **852 feet in 59 seconds**, proving conclusively that sustained, **controlled flight was possible**.



**Первые
самолёты
летали
медленно.**



Orville demonstrating
the flyer to the U.S.
Army, Fort Myer,
Virginia September
1908.

The first flight, by Orville, of 120 feet (37 m) in 12 seconds, at a speed of only **6.8 miles per hour** (10.9 km/h) over the ground. In July 1909 Orville, with Wilbur assisting, completed the proving flights for the U.S. Army, meeting the requirements of a two-seater able to **fly with a passenger for an hour** at an average of speed of **40 miles an hour** (64 km/h) and **land undamaged**.

**Теперь
самолёты
летают
очень
быстро!**



Lockheed's SR-71

Also referred to as the **Blackbird**, the **SR-71** made its maiden flight on 22 December 1964. It's a jet-powered and piloted airplane, which is said to have reached Mach 3.2 (**2,094 miles** or 3,370 kilometers per hour) making it the **fastest airplane in the world**. Some speculate that its true top speed and other capabilities were never revealed. The SR-71 is said to have reached an altitude of 16.1 miles (25.9 kilometers).

**В США
первые
самолёты
перевозили
почту.**



Aircraft that were purely **mailplanes** existed almost **exclusively** prior to World War II. Because early aircraft were **too underpowered to carry cargoes**, and **too costly** to run any “economy class” **passenger-carrying service**, the main civilian role for aircraft was to carry letters faster than previously possible.

**Теперь на
самолётах
летает
очень много
людей!**



In 1987, for the first time, airplanes carried more than 1 billion passengers worldwide.

ИСТОЧНИКИ:

<http://www.ueet.nasa.gov/StudentSite/historyofflight.html>

http://pbskids.org/wayback/flight/feature_wright.html

<http://en.wikipedia.org/>