

## War in the Air:<sup>1</sup>

**Key terms:** Wright brothers, Airplanes, Zeppelin, Bombing

In 1914, when the First World War began, flying was in its infancy. The **Wright Brothers** (Orville †1948 and Wilbur †1912), had made the first flight ever **in 1903 in North Carolina, USA**. In 1914 the aircrafts were primitive junks made of wood and canvas, held together with piano wire.

The pilots who flew these machines sat in **open, unheated cockpits with only goggles and leather helmets to protect them from the weather**. They had no parachutes, few instruments, and they had to depend on very unreliable engines. It needed a great deal of courage to fly one of these early machines, let alone fight in one.

**The purpose of the pilots in WWI:** The pilots patrolled above the trenches allowing their observers to collect information about troop movement and artillery positions, they bombed enemy supply dumps and, of course, they fought each other in the spectacular “dog-fights” which became such a feature of the war in the air.

In 1918 the Royal Flying Corps (R.F.C.), which had only been able to muster 37 aircraft to send to France in 1914, had grown into the Royal Air Force<sup>2</sup>, a fighting service of 290,000 men.

Answer these questions:

*Who made the first airplane flight ever?*

*Where did it take place?*

*What were the conditions like for the early pilots?*



The **Sopwith Camel** was a British World War I single-seat biplane fighter introduced on the Western Front in 1917.

The Camel was credited with shooting down 1,294 enemy aircraft, more than any other Allied fighter in the First World War.

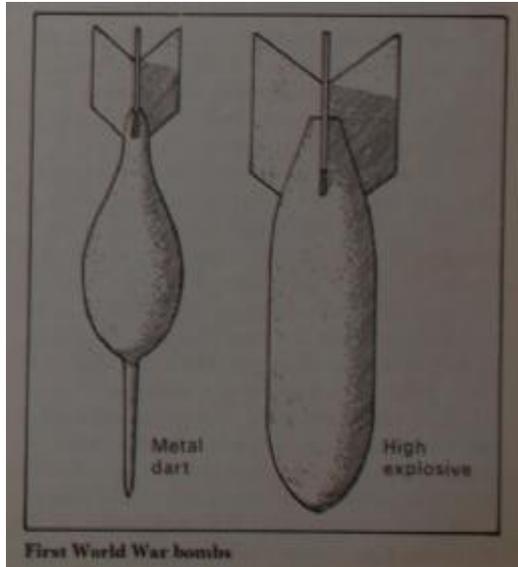
Other fighters: Germany: Albatross, France: Spad

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<sup>1</sup> Motto: „Doby starnú ešte rýchlejšie ako ľudia. Časy našej mladosti sa stali dejinami, od základov inou dobou než tá, ktorú žijeme nielen v starobe, ale i v zrelom veku ... A mení sa to naďalej, stále rýchlejšie. Naši dedovia sa, rovnako ako stovky generácií pred nimi, rodili do rovnakej doby, v ktorej aj zomreli. My ale zomrieme v nejakej nebývanej dobe, ktorá sa nebude podobáť ani tej, v ktorej sme prišli na svet, ani tej, v ktorej sa teraz nachádzame ... Inovácie a pokrok neprinášajú len dočasnú zmenu, ale vytvárajú dlhodobú dejinnosť, čím rýchlejšie, tým „minulejšie“. “Třeštík, Dušan: *Dějiny ve věku nejistot*.

<sup>2</sup> The **Royal Air Force (RAF)** is the air force of the United Kingdom and the oldest "independent" air force in the world. The RAF was formed in April 1918.

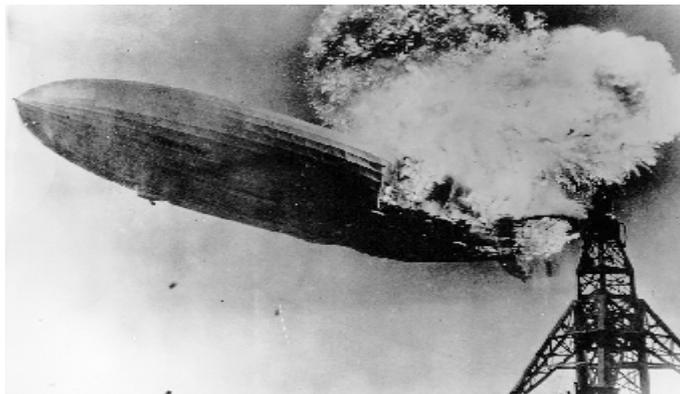
**The most famous flyers of the WWI:** Baron Manfred von Richthofen of Germany, who destroyed 80 Allied aircraft before he himself was shot down in 1918. The most successful British aces were Albert Ball V.C. and Mick Mannock V.C. and in France Georges Guynemer.



**Bombing:** was another feature of the war in the air which developed very rapidly between 1914 and 1918. The first bombs were simply metal darts dropped over the sides of the planes on troops beneath, but they were soon replaced by more destructive high explosive bombs. By 1918 both sides had twin-engined heavy bombers like the German Gotha and the British Vickers Vimy.

**Zeppelin:** these were huge, lighter-than-air flying machines named after their designer, Count Ferdinand von Zeppelin. Given the outstanding success of the Zeppelin design, the term *zeppelin* in casual use came to refer to all rigid airships.

The Zeppelins consisted of a long cigar-shaped framework of aluminium girders covered with fabric, which contained bags of hydrogen gas to give the necessary lift. Small gondolas containing the engines and crew's quarters were slung beneath the main body of the Zeppelin, and the tail there were giant fins to steer by.



**The Zeppelin Hindenburg burning in 1937**

### **The short story of the Zeppelins:**

*The first Zeppelin made its appearance in 1900 and it was not a great success, but the Count Ferdinand von Zeppelin, gradually solved the many problems and produces a workable machine. He trained young and enthusiastic Germans as crewmen and, when the war broke out in 1914, there was a fleet of about 10 Zeppelins ready for immediate service and several others under construction. With their ability to fly at very high altitudes*

and over greater distances than was possible for the airplanes of those days, it seemed that the Zeppelin could be a very useful weapon of war.

As a weapon, the Zeppelin got off to rather a bad start. One airship which was sent out to observe French troop movements in August 1914 was soon punctured by gunfire and, having lost much of its hydrogen, crashed in a wood. The crew only just managed to get away when their machine was attacked by a squadron of French cavalry with drawn swords. This particular Zeppelin must have been the only flying machine in history to have been destroyed by a cavalry charge.

Later, of course, the Zeppelin was put to much more effective military use when it was **used to bomb London**. The first raid took place in May **1915, 7 people were killed**. In the months that followed a further 50 Zeppelin raids took place and a **blackouts**<sup>3</sup> had to be imposed and extra defences in to protect the city.

In the long run the answer to the Zeppelin proved to be night-flying fighters, piloted by men of the Royal Naval Air Service. These men put a stop to the Zeppelin raids in October 1915. By that time the Germans had lost 77 of their machines and many valuable trained crewmen.

Zeppelins proved to be terrifying but inaccurate weapons. Navigation, target selection and bomb-aiming proved to be difficult under the best of conditions. The darkness, high altitudes and clouds that were frequently encountered by Zeppelin missions reduced accuracy even further. The physical damage done by the Zeppelins over the course of the war was trivial, and the deaths that they caused amounted to a few hundred at most. The Zeppelins were initially immune to attack by aircraft and anti-aircraft guns: as the pressure in their envelopes was only just higher than ambient, holes had little effect. But once incendiary bullets were developed and used against them, their flammable hydrogen lifting gas made them vulnerable at lower altitudes. Several were shot down in flames by British defenders, and others crashed en route. They then started flying higher and higher above the range of other aircraft, but this made their bombing accuracy even worse and success harder to achieve.

The World War I defeat of Germany in 1918 halted the airship business temporarily. But in the 1920s civilian zeppelins became popular. Their heyday was during the 1930s when the airships LZ 127 Graf Zeppelin and LZ 129 Hindenburg operated regular transatlantic flights from Germany to North America and Brazil. The **Art Deco spire of the Empire State Building** was originally if impractically designed to serve as a dirigible terminal for Zeppelins and other airships to dock. **The Hindenburg disaster in 1937**<sup>4</sup>, along with political and economic issues, hastened the **demise of the Zeppelin**.



**The Empire State Building**, New York, USA.

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<sup>3</sup> A **blackout** during war is the practice of collectively minimizing outdoor light, including upwardly directed (or reflected) light. This was done in the 20th century to keep the crews of enemy aircraft from being able to navigate to their targets simply by sight.

<sup>4</sup> The **Hindenburg disaster** took place on Thursday, May 6, **1937**, as the German passenger airship LZ 129 *Hindenburg* caught fire and was destroyed as it was attempting to dock with its mooring mast in New Jersey, USA. Of the 97 people on board, **35 people died in addition to one fatality on the ground**.