

The First Powered Airship

Jules Henri Giffard (1825 - 1882)

Soon after the Montgolfier brothers launched the first hot-air balloon in 1783, inventors began to design ways to propel and control lighter-than-air aircraft. The major drawback in balloon travel was that it was essentially a one-way trip. If lighter-than-air flight was going to be successful, there had to be a way to steer the airship, or dirigible. The word "dirigible," in fact, comes from the French word *diriger*, meaning "to direct or to steer."

In 1784, **General Jean Baptiste Marie Meusnier** designed an elliptical airship that was about 260 feet (79 meters) long. It was to be powered by three hand-cranked propellers, which required the labor of 80 men. Meusnier's design was never built.

In 1850, another Frenchman, **Pierre Jullien of Villejuif**, demonstrated a cigar-shaped model airship at the Paris Hippodrome. The airship's rudder, elevator, and gondola were mounted under the front part of the balloon. A clockwork motor that drove two airscrews mounted on either side of a center line propelled the airship. A light wire frame stiffened by a truss maintained the bag's form. Jullien was onto something that another man would leverage.

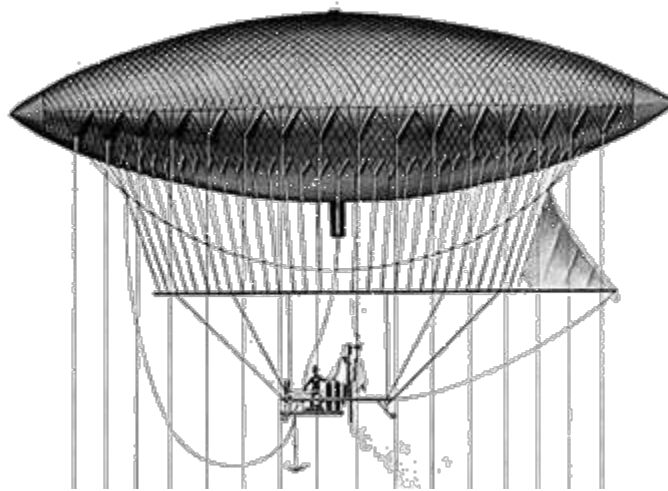
The first powered flight



Jules Henri Giffard,

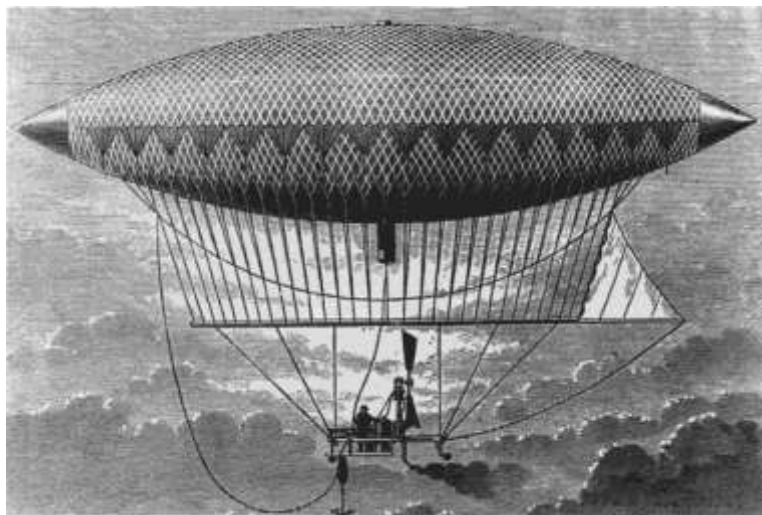
Inventor of the steam-powered airship

Jules Henri Giffard, a French engineer and inventor, took note of Jullien's design. He built the first full-size airship — a cigar-shaped, non-rigid bag that was 143 feet (44 meters) long and had a capacity of 113,000 cubic feet (3,200 cubic meters). He also built a small 3-horsepower (2.2-kilowatt) steam engine to power a three-bladed propeller. The engine weighed 250 pounds (113 kilograms) and needed a 100-pound (45.4 kilograms) boiler to fire it.



The first flight of Giffard's steam-powered airship took place Sept. 24, 1852 — 51 years before the Wright Brothers' first flight. Traveling at about 6 miles per hour (10 kilometers/hour), Giffard traveled almost 17 miles (27 kilometers) from the Paris racecourse to Elancourt, near Trappes. The small engine could not overcome the prevailing winds, and Giffard could only manage to turn the airship in slow circles. He did, however, prove that in calm conditions controlled flight was possible.

Source: space.com



*Jules Henri Giffard's steam powered airship, 1852.
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