



Just Winging It

Arkansas Air and Military Museum
Laci Prince, Executive Director
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October 5th, 1911

Co. Fair Fayetteville Ark. 10-5-1911

A “Brief” History of Aircraft Design

Balloons and Early Gliders

“If you’re faced with a forced landing, fly the thing as far into the crash as possible.”

-Bob Hoover

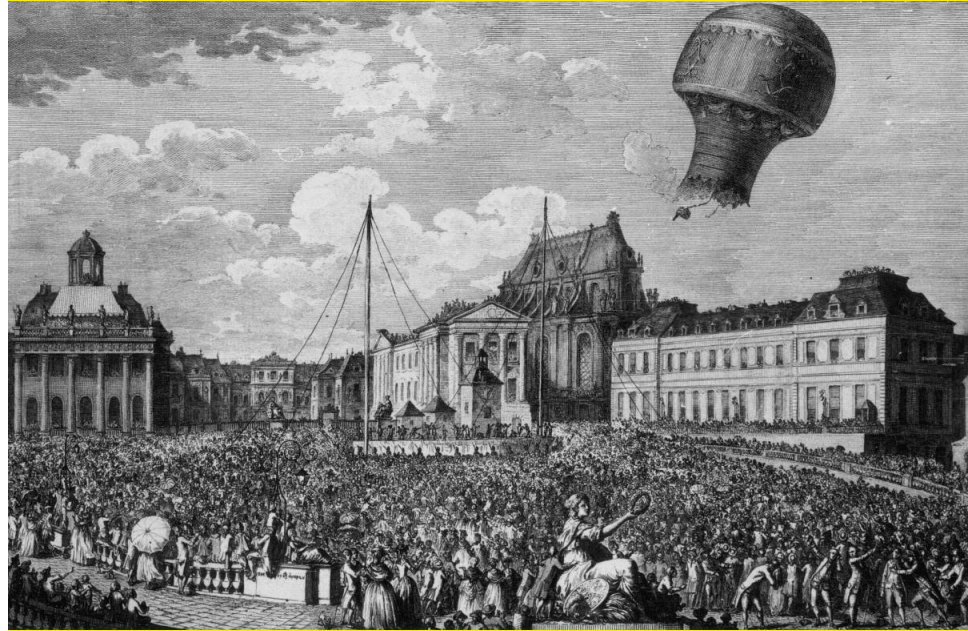


Photo from Château de Versailles

The First Hot Air Balloon Flight

- In 1782 the Montgolfier brothers began testing lighter-than-air flight.
- On September 19th, 1783 they succeeded with the first flight.
- The Balloon floated for 20 minutes.



The Making of the First Air Balloon

- Much like more “modern” aircraft, the air balloon was made of cotton canvas with paper glued on both sides.
- The paper had a design of a sky-blue background decorated with the King’s cypher.



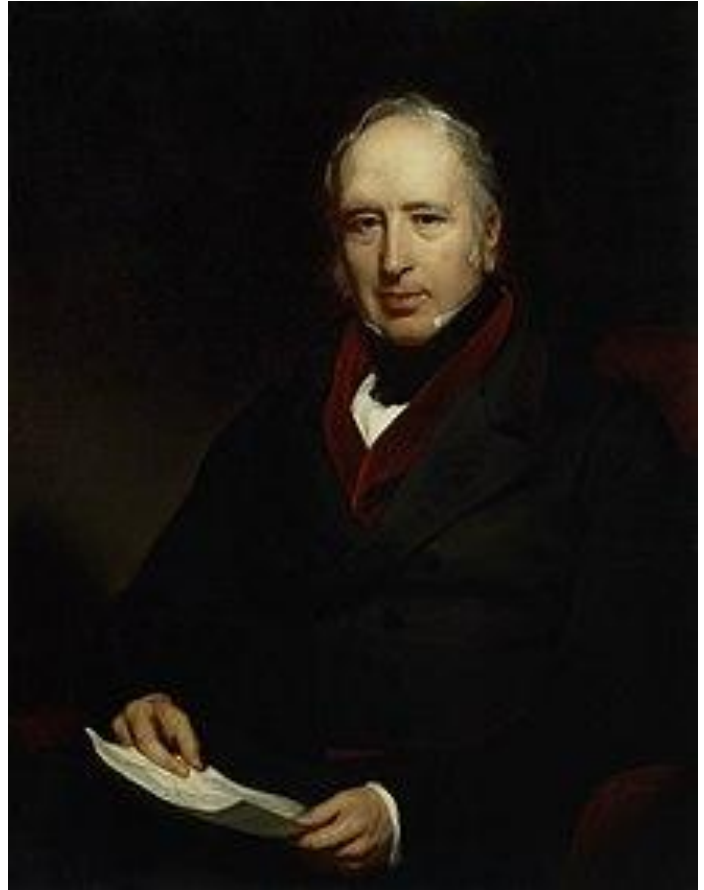
The First Gliders

- Gliders we first conceptualized by Leonardo da Vinci
- The first SUCCESSFUL flight was in 1853 with a design by “The Father of Aeronautic”, George Cayley.

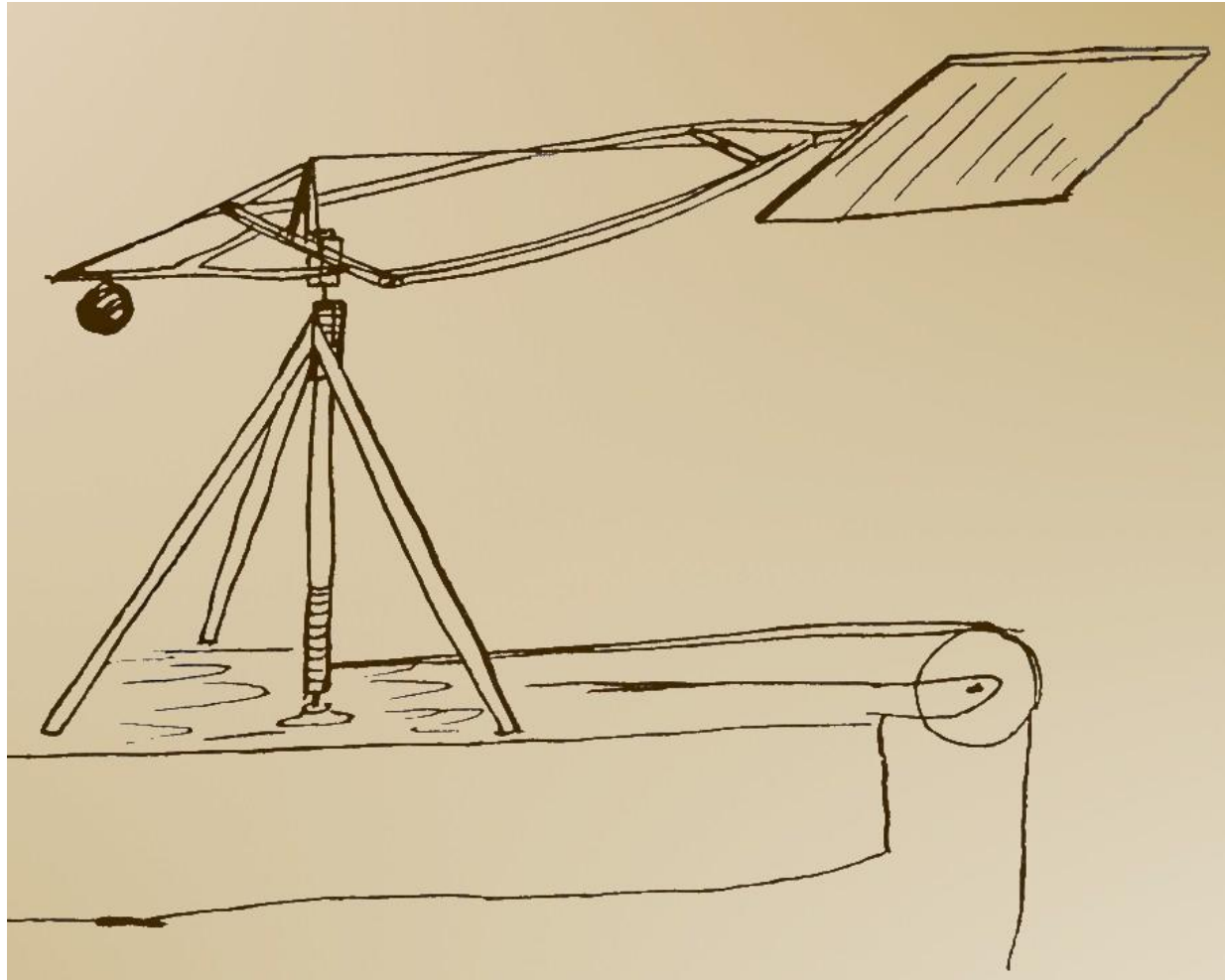


Sir George Cayley

- Born in 1773 in Scarborough, Yorkshire.
- He settled in Brompton and began experimenting with flight.
- He would also would discover the 4 keys to flight.



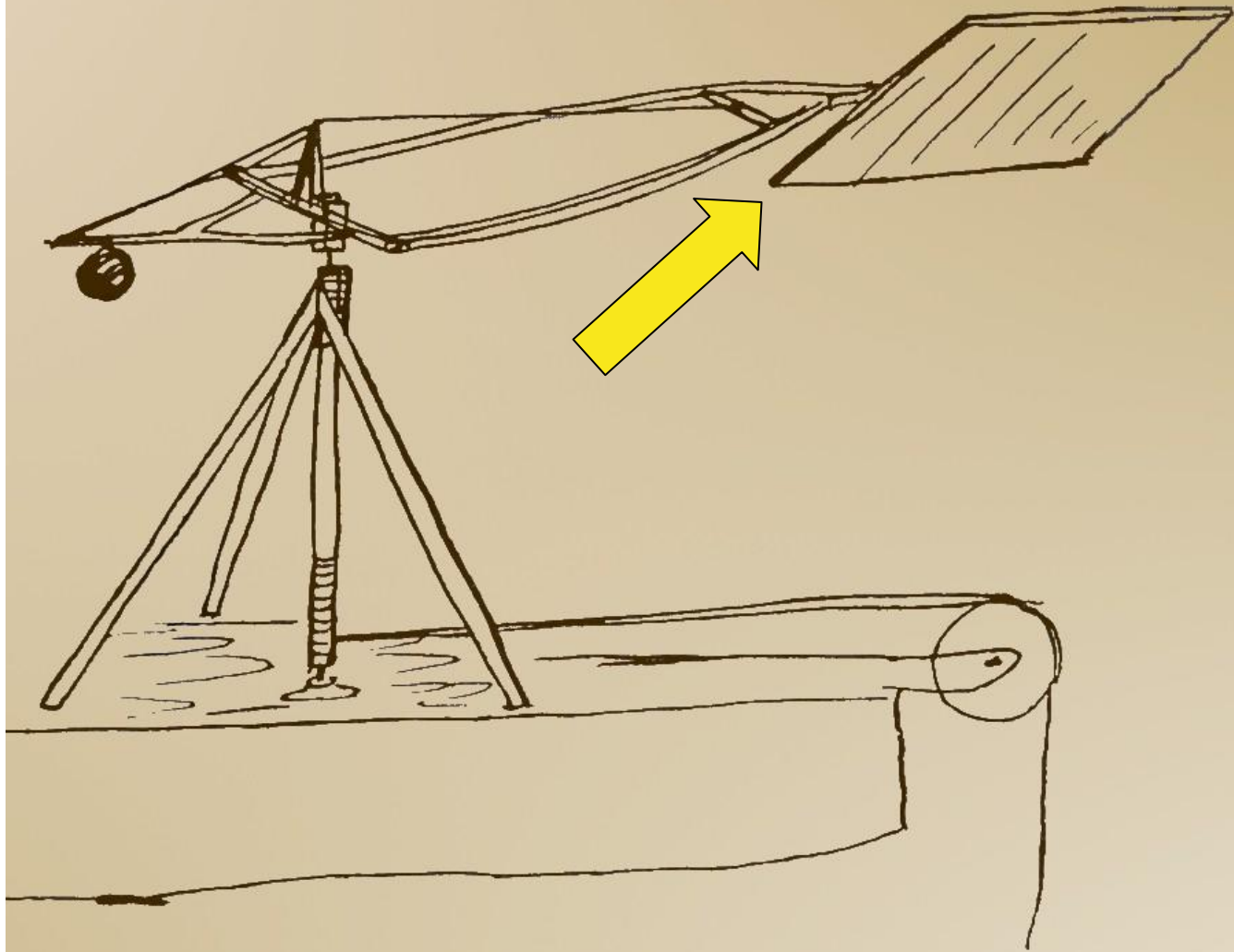
Cayley's Whirling Arm





First Key of Flight

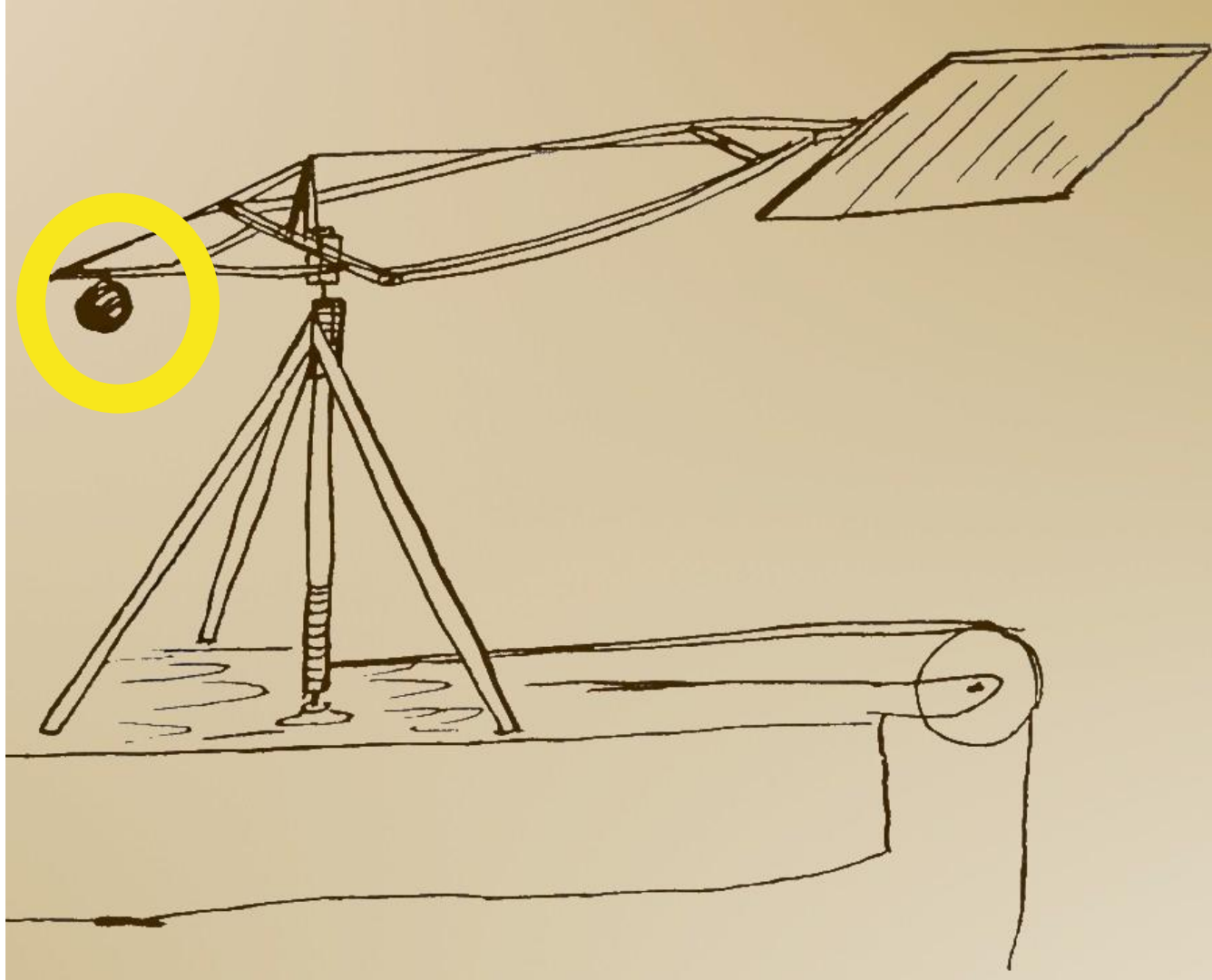
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Second Key of Flight

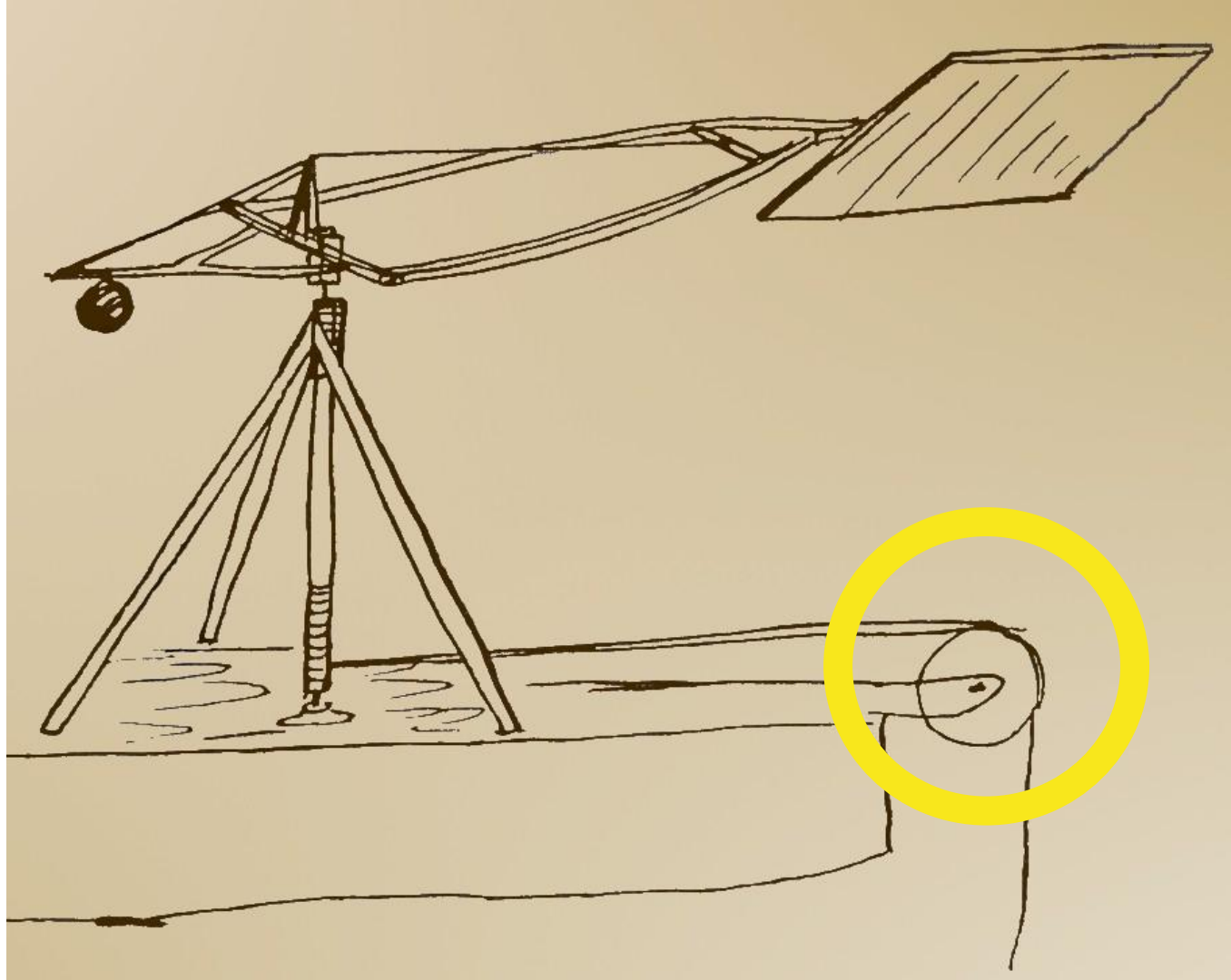
Weight





Second Key of Flight

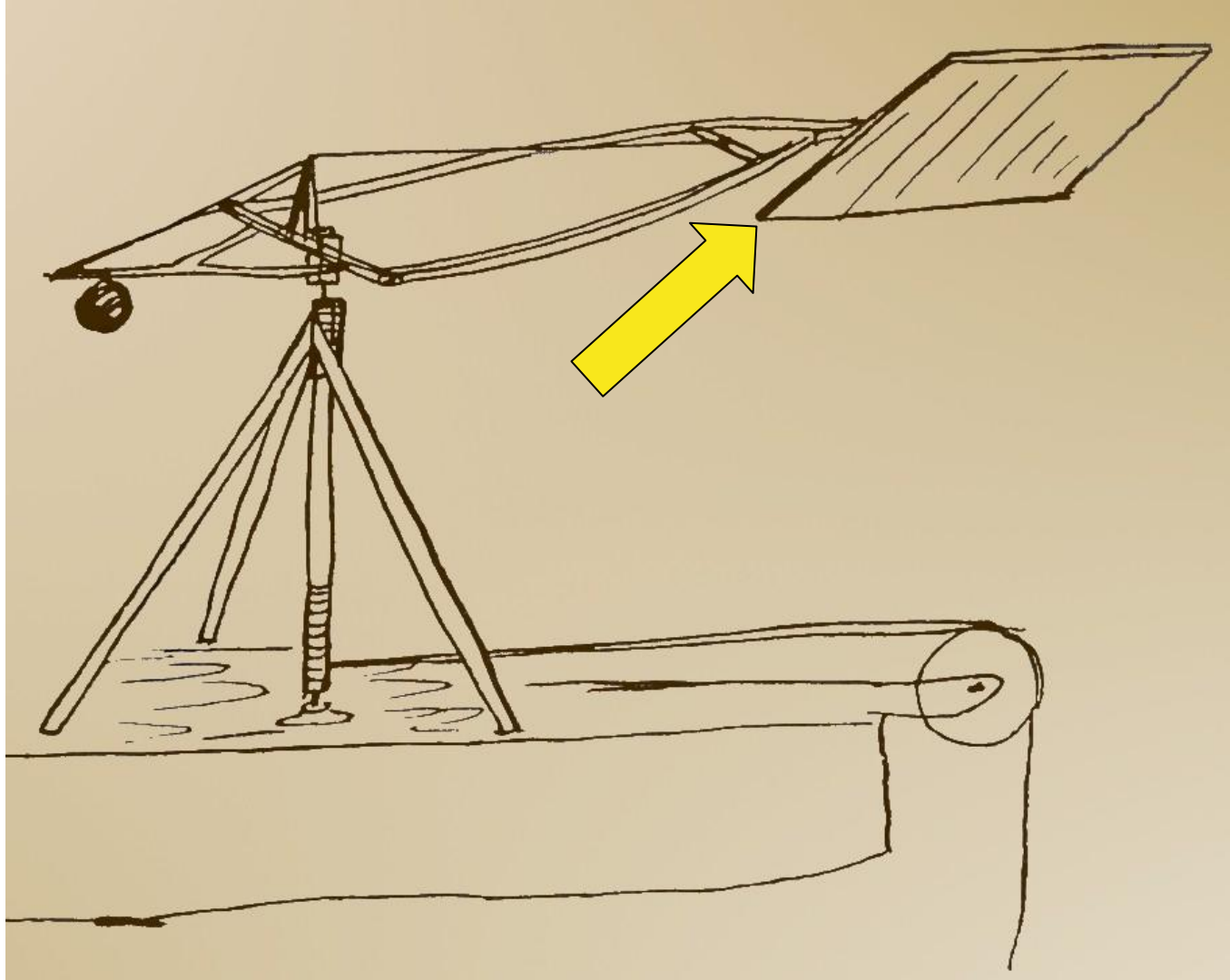
Thrust





Second Key of Flight

Drag



Otto Lilienthal

- Otto was born in 1848 in Germany and became one of the most documented Aviator of his time period.
- He also inspired the Wright Brothers.
- He is considered the first hand glider and flying man.
- Otto did his testing from 1891 to 1898.



The Wright Flyer

