

Figures from **LIFT**

*Innovation Lessons From
Flying Machines That ALMOST Worked
And The People Who NEARLY Flew Them*

Dan Ward

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CHAPTER 1

Octave Chanute

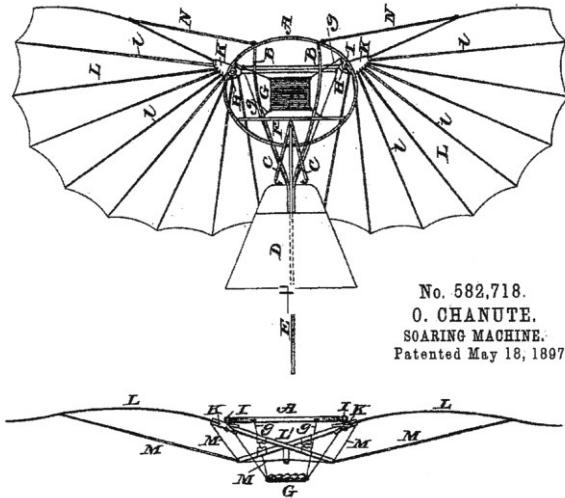


Figure 1: Chanute's Soaring Machine Patent (1897)

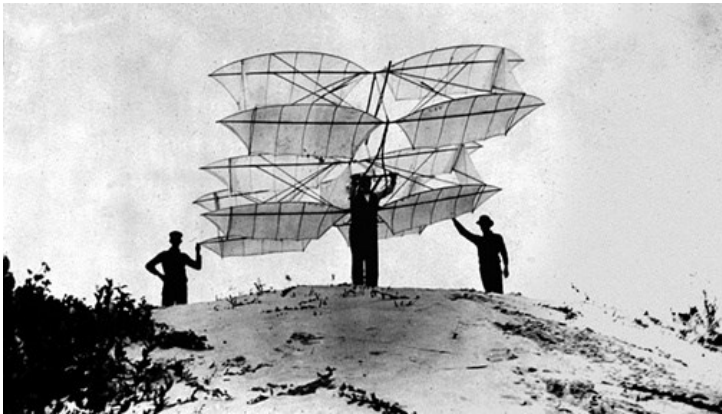


Figure 2: Chanute's *Katydid* Glider (1896)

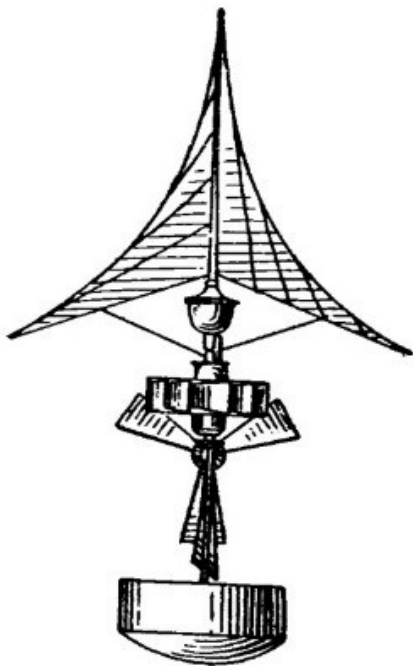


Figure 3: Melikoff (1877)

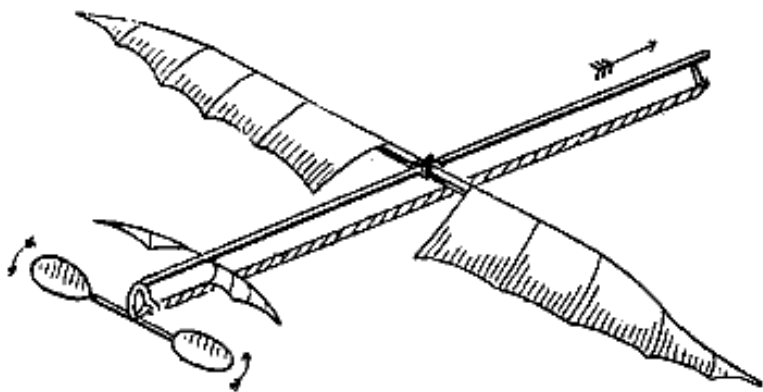


Figure 4: Penaud's Planophore (1871)

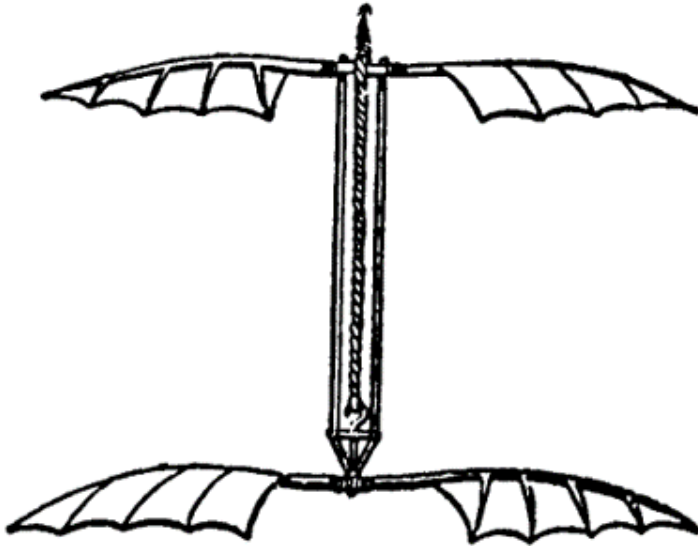


Figure 5: Penaud's *Hélicoptère* aka The Bat (1870)

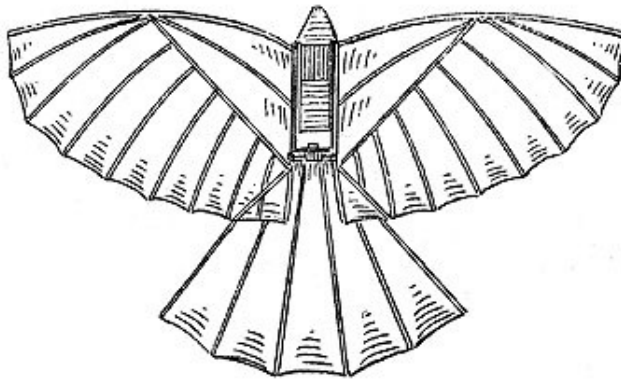


Figure 6: D'Esterno's Patent (1864)

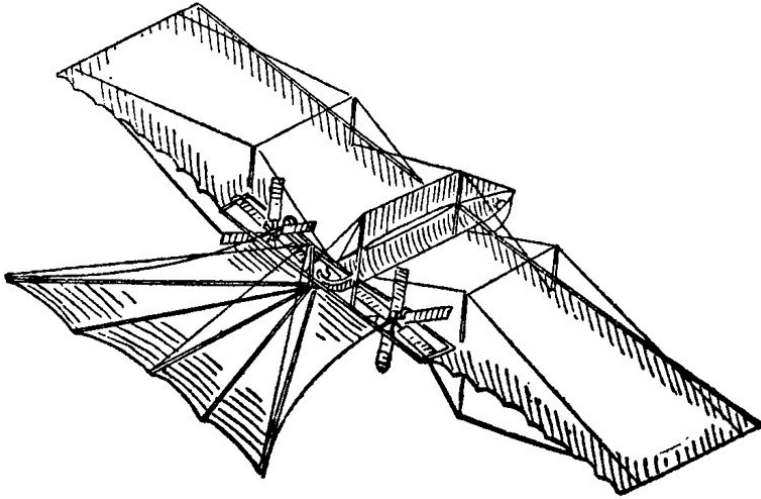


Fig 7: Henson (1842)

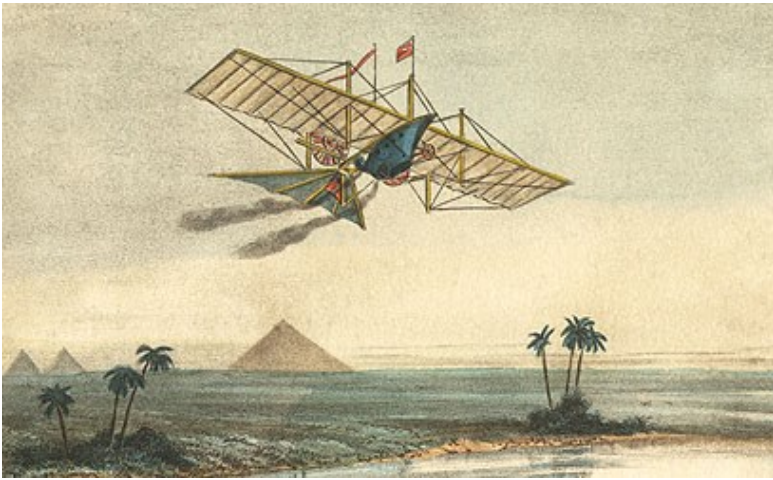


Figure 8: Artist's Depiction of Henson's Aerial Steam Carriage Flying Over Egypt (1843)

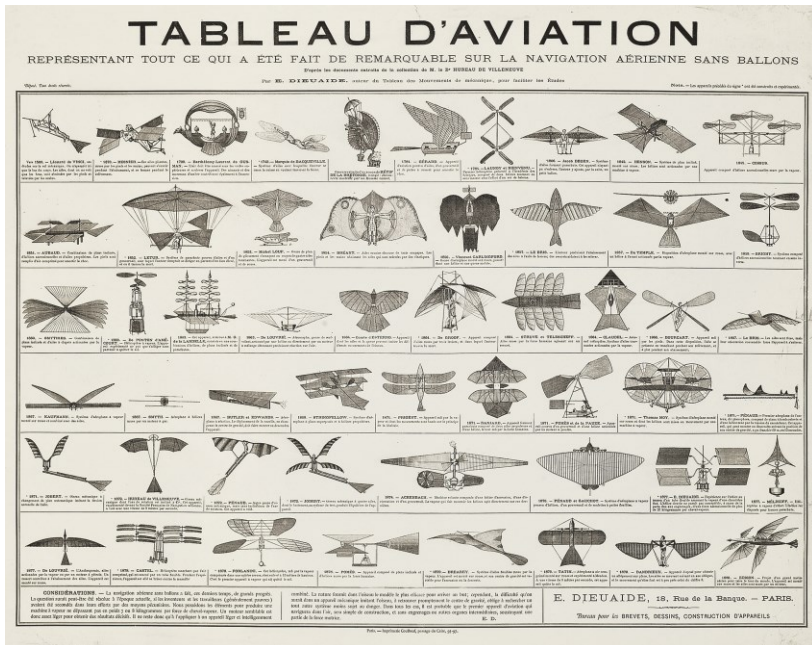


Figure 9: Dieuaide's *Tableau d'Aviation* (1880)

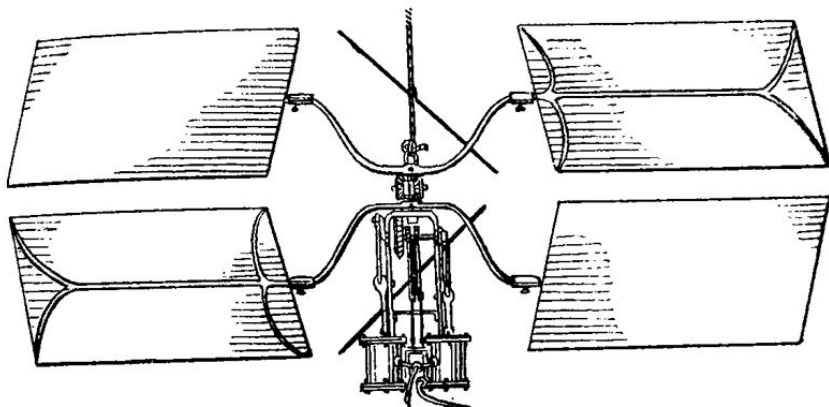


Figure 10: Dieuaide's Double Screw Helicopter (1877)

(No Model.)

O. LILIENTHAL.
FLYING MACHINE.

2 Sheets—Sheet 1.

No. 544,816

Patented Aug. 20, 1895.

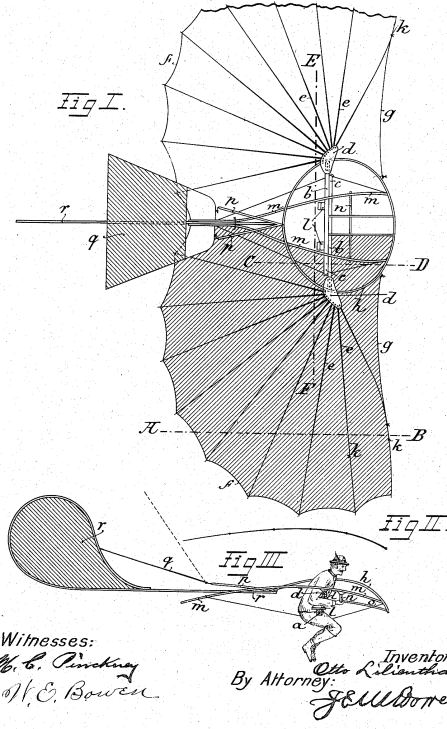


Figure 13: Lilienthal's Patent Diagram (1895)



Figure 14: Lilienthal's First Glider (1891)



Figure 15: Lilienthal About To Launch (1894)

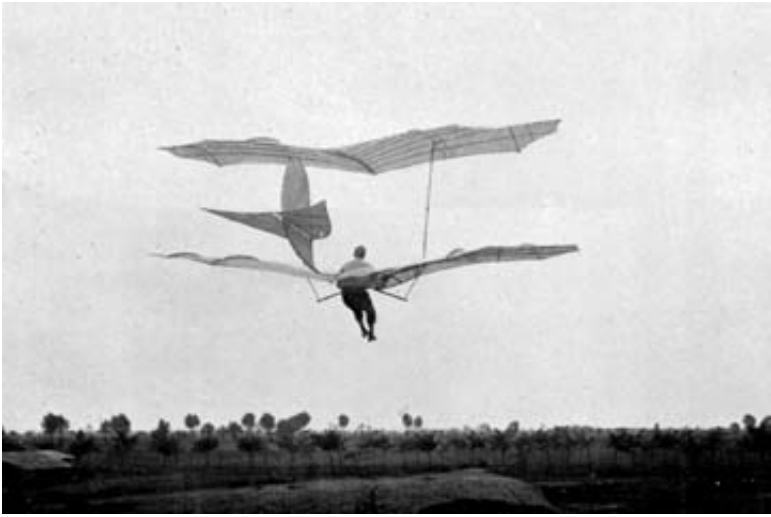


Figure 16: Lilienthal airborne (1895)

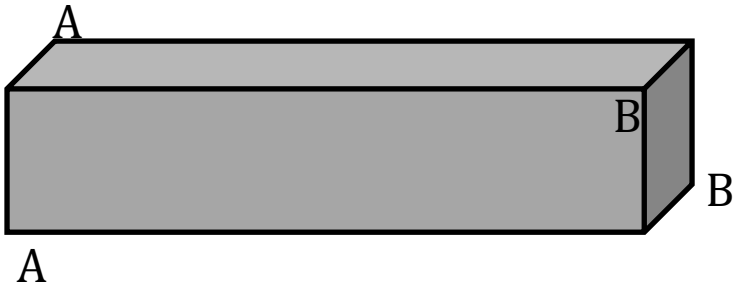


Figure 17: Wilbur Wright's Cardboard Box Demonstration

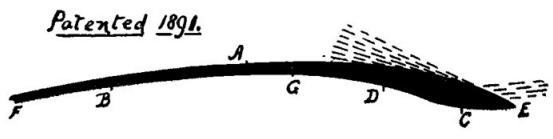
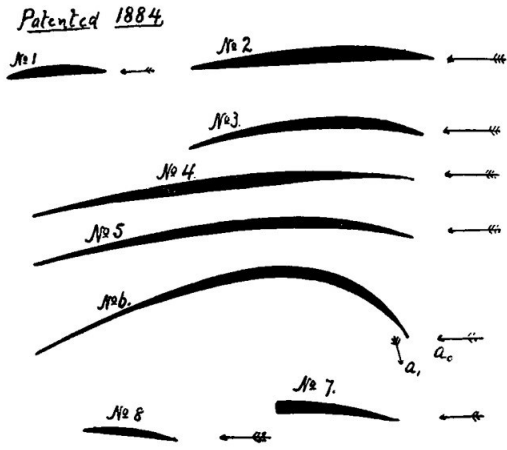


Figure 18: Phillips Patented Aerocurves (1884)

CHAPTER 3

Alberto Santos=Dumont



Figure 19: Degen's Demonstrator (1812)



Figure 20: Alberto in the *Brazil* (1898)

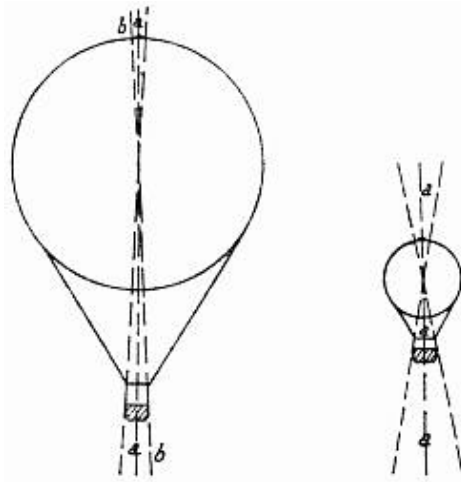


Figure 21: The *Brazil* Basket Arrangement

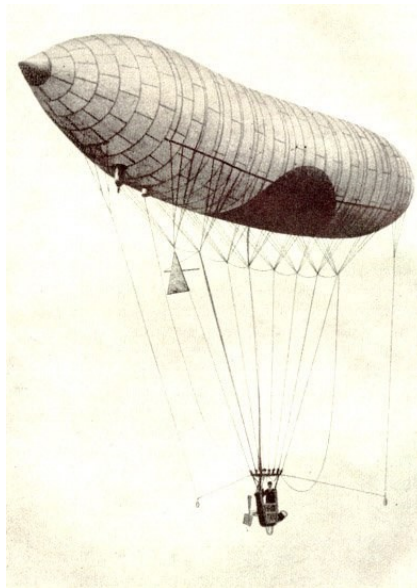


Figure 22: Airship *Number 1* (1898)

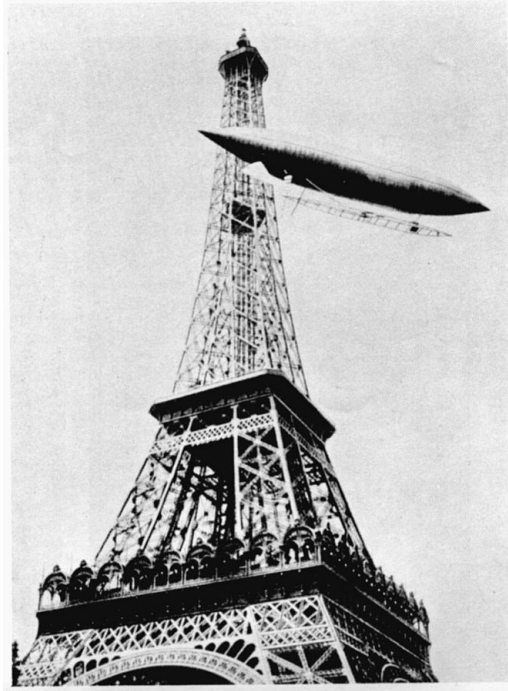


Figure 23: The *Number 5* circling the Eiffel Tower (1901)

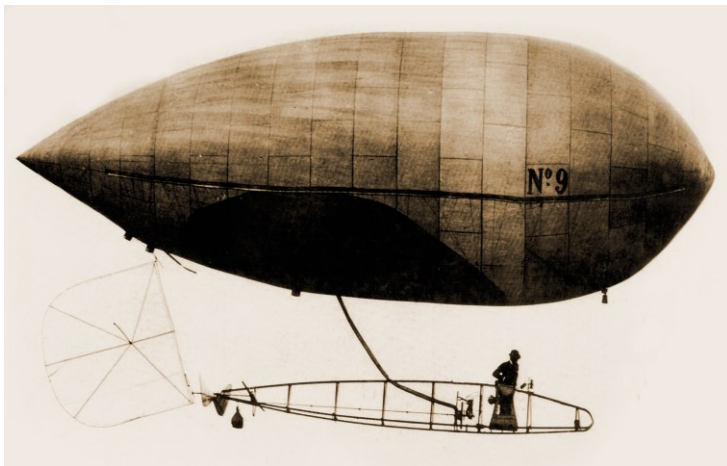


Figure 24: Alberto flying *Number 9 Baladeuse*

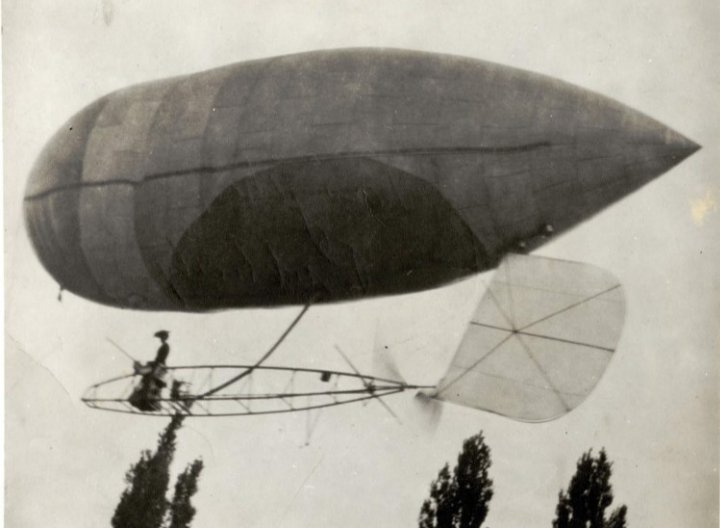


Figure 25: Acosta piloting *Number 9* (1903)



Figure 26: Emma Lilian Todd and her airplane (1909)

CHAPTER 4

James Means

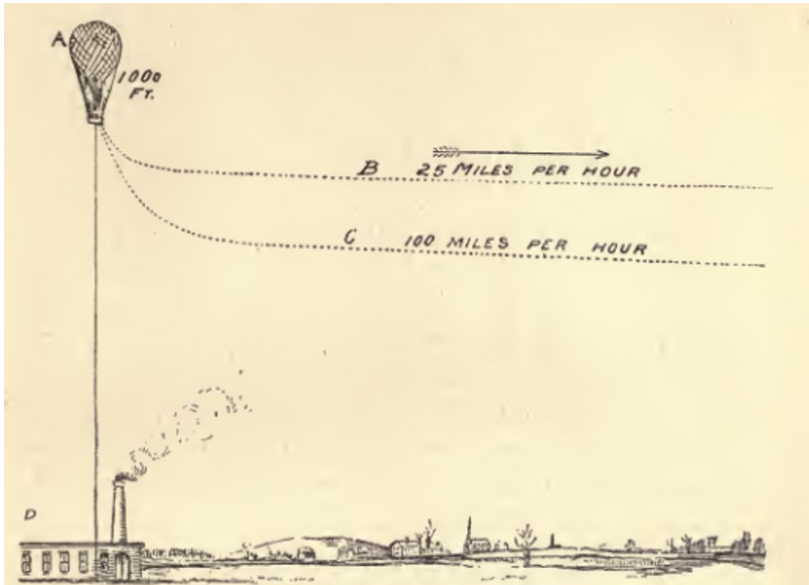


Figure 27: James Means' Freight Shipping Concept (1894)

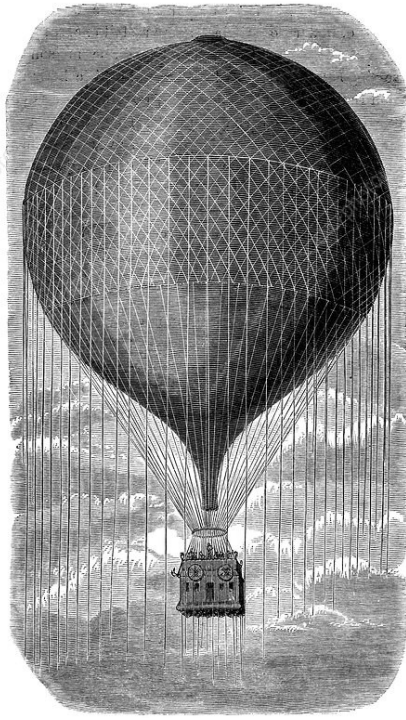


Figure 28: Nadar's *Le Geant* balloon (1863)

CHAPTER 5

Laurence Hargrave

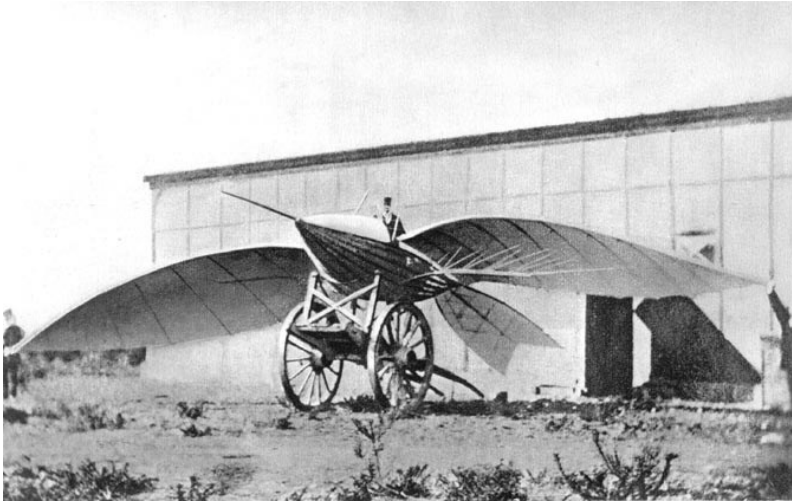


Figure 29: The *Albatross* mounted on a cart (1868)

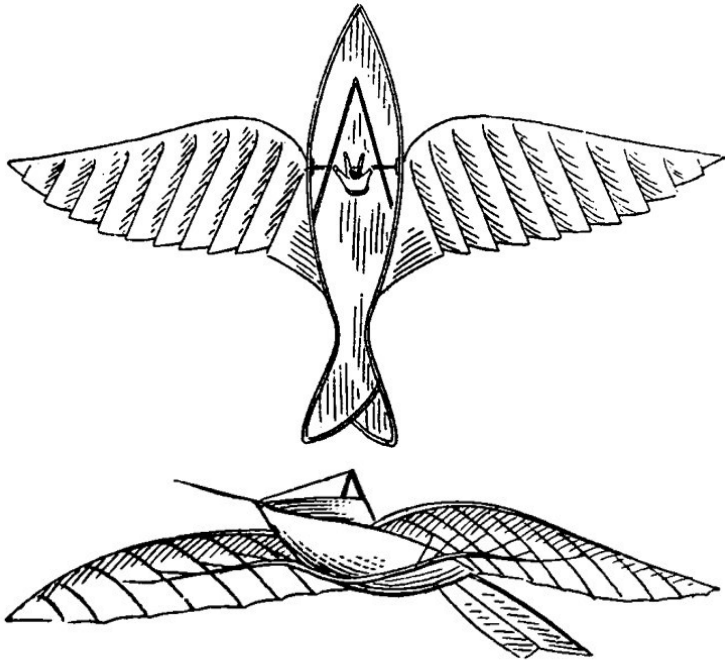


Figure 30: Two Drawings of Le Bris' *Albatross*

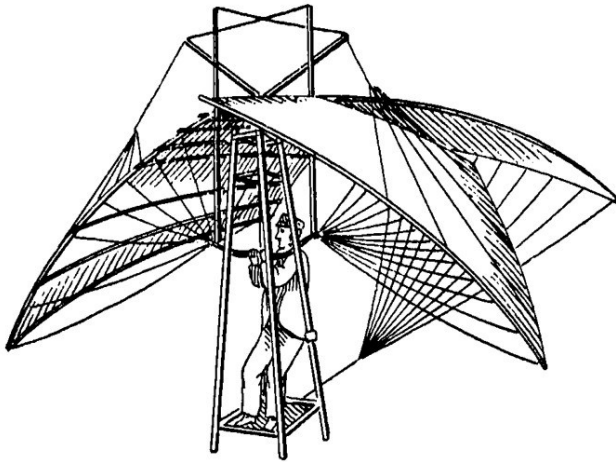


Figure 31: De Groof's Folly (1874)

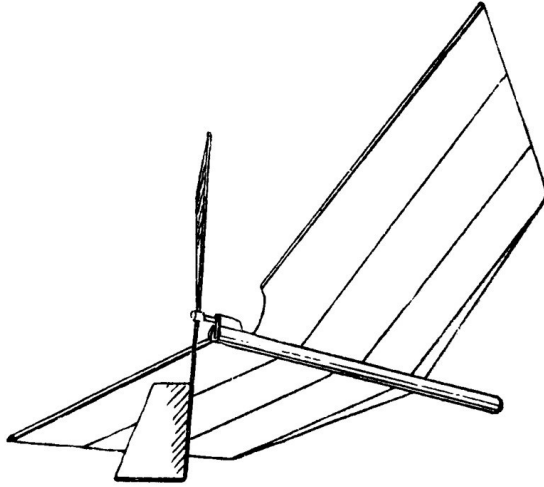


Figure 32: Hargrave's Rubber Band Powered Model (1889)

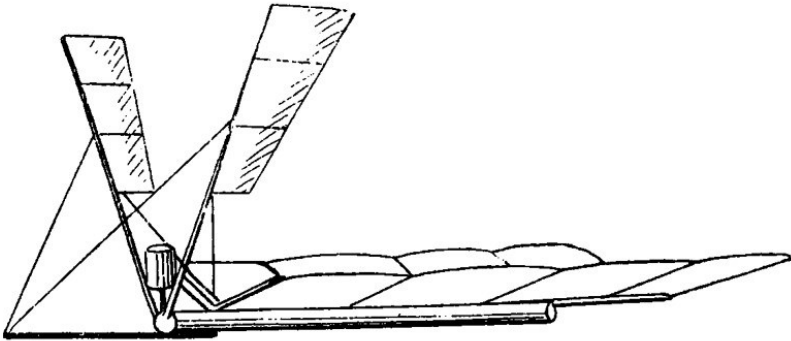


Figure 33: Hargrave's Number 10 (1890)

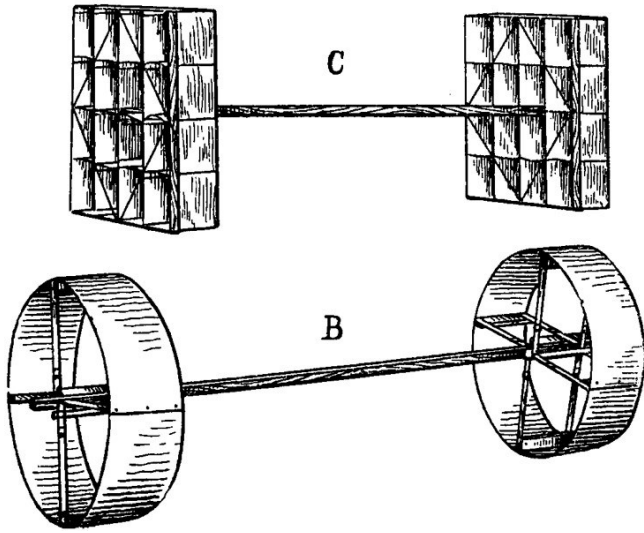


Figure 34: Hargrave's Kites, Square & Round

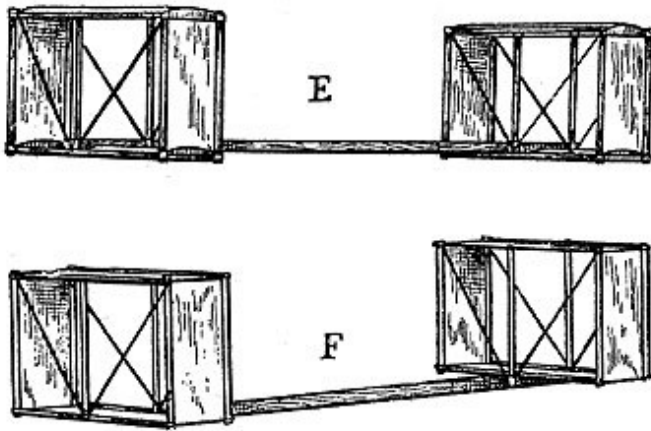


Figure 35: Hargrave's Kites - Curved & Flat

APPENDIX B

James Means' Soaring Machine

