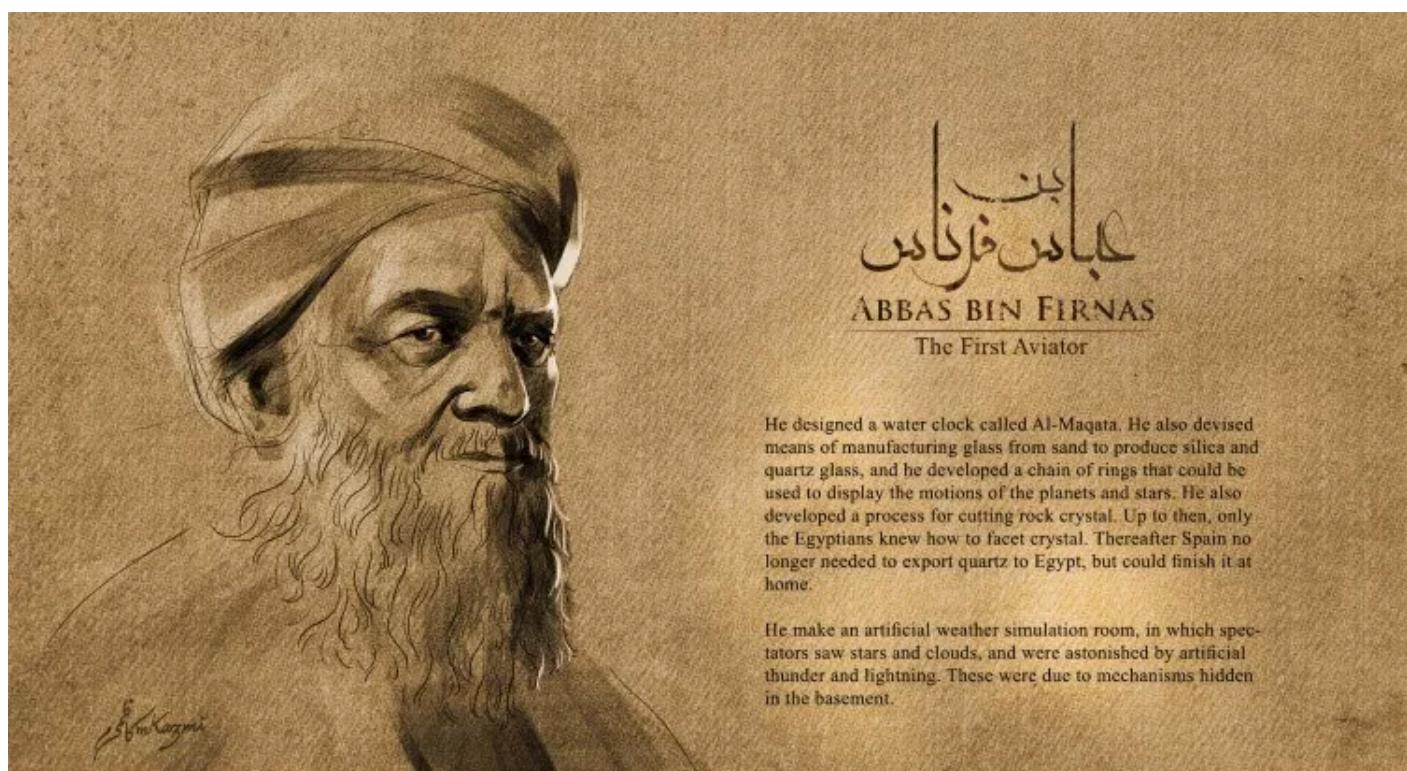


Flight



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ابن
ال Firnas

ABBAS BIN FIRNAS

The First Aviator

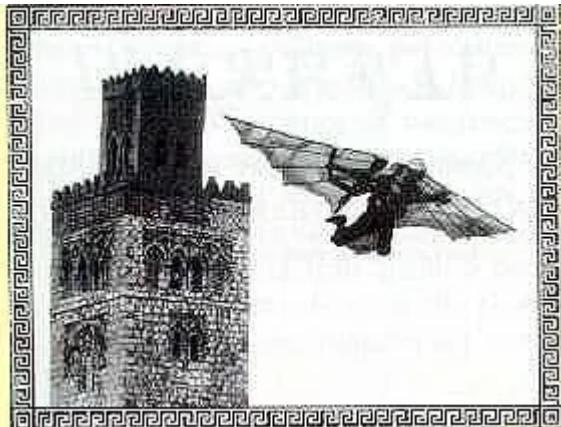
He designed a water clock called Al-Maqata. He also devised means of manufacturing glass from sand to produce silica and quartz glass, and he developed a chain of rings that could be used to display the motions of the planets and stars. He also developed a process for cutting rock crystal. Up to then, only the Egyptians knew how to facet crystal. Thereafter Spain no longer needed to export quartz to Egypt, but could finish it at home.

He made an artificial weather simulation room, in which spectators saw stars and clouds, and were astonished by artificial thunder and lightning. These were due to mechanisms hidden in the basement.

The First Mat to FlyAbbas Ibn Firnas

Ibn Firnas of Islamic Spain invented, constructed and tested a flying machine in the 800's A.D. Roger Bacon learned of flying machines from Arabic references to Ibn Firnas' machine. The latter's invention antedates Bacon by 500 years and Da Vinci by some 700 years.

About 875, Abbas Ibn Firnas built a flying apparatus placing feathers on a wooden frame; creating the first documented record of a very primitive glider. One of the two surviving versions of his flight states:



Having constructed the final version of his glider, to celebrate its success he invited the people of Cordoba to come and witness his flight. People watched from a nearby tower as he flew some distance, but then the glider plummeted to the ground causing him to injure his back..."

Depiction of Ibn Firnas in Flight 875 CE

The second account adds that, after failing to land successfully, Ibn Firnas claimed that he had not noticed how birds use their tails to land and that he had forgotten the tail on his flying apparatus.

The back injury prevented Ibn Firnas from ever trying again. Grounded, he went on to create a mechanized planetarium with revolving planets that simulated thunder and lightning

and evolved a formula for manufacturing artificial crystals. Soon after, in 888 however, he died, primarily as a result of an ongoing struggle with his back injury from the flight.