FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE
Ballooning Commission

Hall of Fame

Bartolomeu Lourenço de Gusmão
1685-1724

Museo do Ar, Portuguese Air Force

Bartolomeu Lourenço de Gusmão was born in the Vila de Santos, in São Paulo, in December of 1685. He was the son of Francisco Lourenço, Chief Surgeon of the Penitentiary of the Vila de Santos, on the São Paulo coast, and Maria Alvares. The brilliant youngster, with advanced ideas for his time, distinguished himself early in his career. He began his primary studies in Santos, followed by attendance at the Belém Seminary, (Bahia), where he completed the Course of Humanities. He next joined the Society of Jesus, under the sponsorship of the good friend of his father and founder of that Seminary, Priest Alexander de Gusmão. In 1705, at only 20 years of age, he petitioned the Chamber of Commerce of Bahia to recognize his first invention. It was a device that could lift water from a stream to a height of about 100 meters. The water would no longer need to be carried by men or on the backs of animals from the coast to the tops of the hills.

Bartolomeu de Gusmão belongs to that group of individuals who stand out in the history of Humanity, in the field of sciences with his notable invention, joining the gallery of our national glories and those of the World, with primary relevance to the field of air navigation.

Between 1708 and 1709, Bartolomeu de Gusmão, already having joined the priesthood, embarked for Lisbon, capital of the Empire, in order to pursue his quest for knowledge.

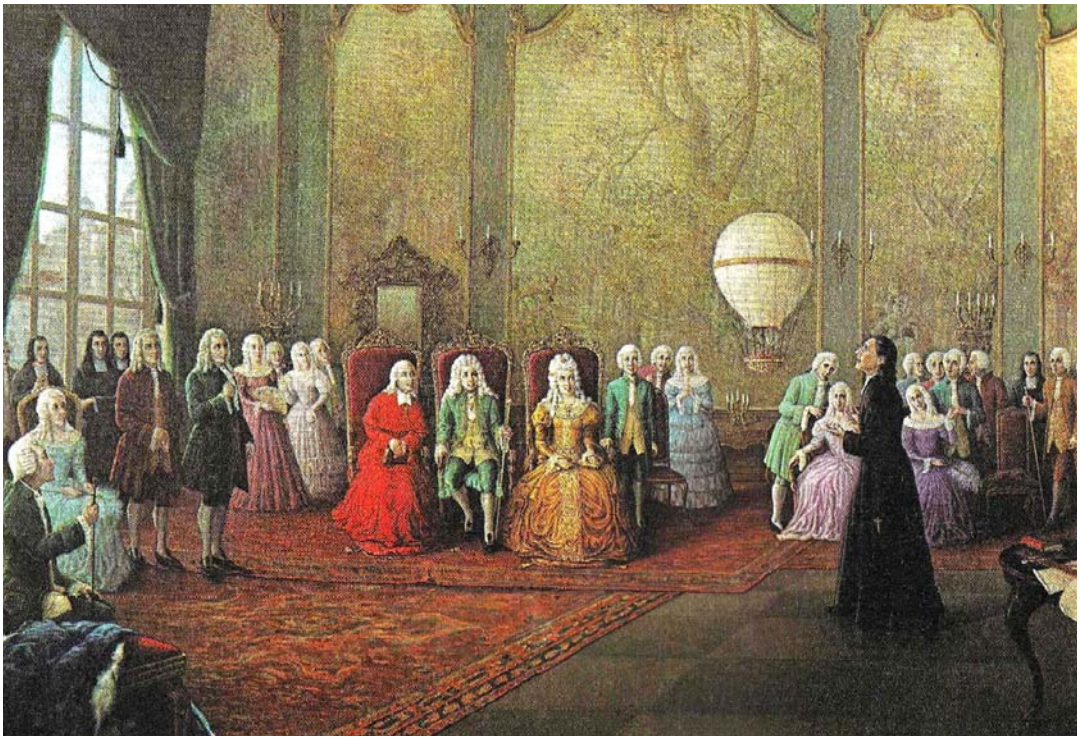
At the University of Coimbra, he devoted himself to the studies of Mathematical Science, moving beyond Astronomy, Mechanics, Physics, Chemistry and Philosophy. He also studied the disciplines of Diplomacy and Cryptography, having been granted the designation of D. João V, having graduated on May 5, 1720. He next completed the Doctoral Course of the College of Rules at the University of Coimbra, on June 16, 1720.

It was a soap bubble rising in the hot air surrounding the flame of a candle that challenged the intellect of Gusmão to consider the difference between the densities of air. An object lighter than air could then be able to fly! On April 19, 1709, he announced that he would present a flying machine to the court.. He received authorization from King D. João V to demonstrate his invention before the Royal House.

On August 3, 1709, he made the first attempt in the Hearing Room of the Palace. However, the small balloon made of paper was set on fire before it could rise in flight. Two days later, a second attempt was successful: the balloon went up about 20 palmos (12 ft or 3.6

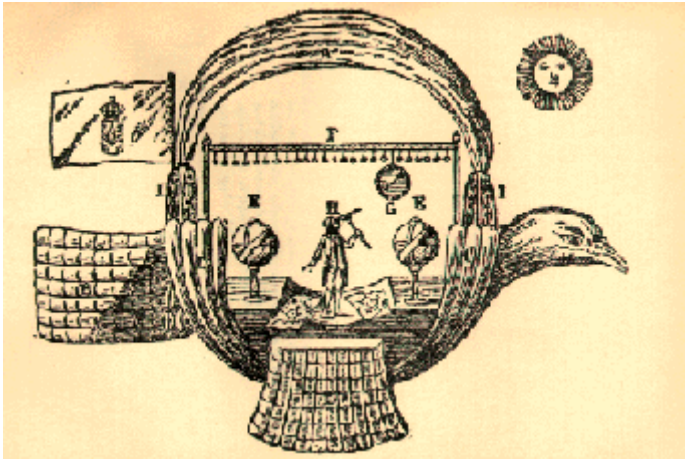
m), to the astonishment of the assembly. Fearing the possibility of a fire, the palace servants attacked the device before it had reached the ceiling.

Three days later, on August 8, 1709, the third trial was made in the Patio of the House of India before King D. João V, Queen D. Maria Ana, the papal messenger Cardinal Conti, the Infante D. Francisco of Portugal, the Marquês de Fonte, nobles and ladies of the Court and other personages. This time he had total success. The balloon had risen slowly, and then started to fall, having exhausted the flame, into theTerreiro do Paço. The first lighter-than-air device having been constructed, The King was so impressed that he granted the right to any and all flying ships to Gusmão from then on. And for all those who dared to intervene or to copy his ideas, the penalty would be the death.



The museum of the city of São Paulo, Brazil, contains this fine painting by Bernardino de Sousa Pereira of ***Bartolomeu de Gusmão's first experiment.***

Passarola



Museo do Ar, Portuguese Air Force

This invention of the Priest was called Passarola, because of its resemblance to a bird. It was filled with numerous tubes, through which the wind flowed and filled out the bulges which gave it shape.

Of the Passarola the picture is less clear; but one thing that does now seem virtually certain is that the illustration is a fanciful and therefore unreliable artist's impression, probably drawn from hearsay evidence of a 'flying machine'.

Documents consulted recently suggest a more reasonable explanation—that this drawing represented only a man-carrying nacelle, the complete Passarola design including a roughly spherical hot-air balloon from which this carriage was to be suspended.

Bartolomeu de Gusmão was a singular figure, in which the man, the priest and the gifted one were so well blended into a complex personality, that he was forced to the frontiers of his time, suffering the natural and inevitable consequences of his exceptional nature.

Father Bartolomeu Lourenço de Gusmão died on November 18, 1724 in Toledo, Spain

Sources:
The ***Bartolomeu Lourenço de Gusmão*** page of the ***Brazilian Air Force*** website.
History of Aviation, p1142. Air BP 1971-1972
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