

First free ascent of a balloon carrying humans, as seen from the terrace of Benjamin Franklin's house in Passy.

Man's first aerial flight

by E. C. WATSON

ON November 21, 1783, two Frenchmen, Jean Francois Pilatre de Rozier and Francois Laurent, Marquis D'Arlandes, entered the wicker gallery of M. de Montgolfier's aerostatic machine and, rising majestically over Paris, achieved the first aerial voyage of man.

In an eyewitness report to the President of the Royal Society in London, Benjamin Franklin, who was living in Passy at the time, describes the alarmingly simple mechanism of the flight:

This balloon was larger than that which went up from Versailles, and carried the sheep, etc. Its bottom was open, and in the middle of the opening was fix'd a kind of basket grate in which faggots and sheaves of straw were burnt. The air rarefied in passing thro' this flame rose in the balloon, swell'd out its sides & filled it.

The persons who were plac'd in the gallery made of wicker, and attach'd to the outside near the bottom, had each of them a port thro' which they could pass sheaves of straw into the grate to keep up the flame, & thereby keep the balloon full. When it went over our heads, we could see the fire which was very considerable. As the flame slackens, the rarefied air cools and condenses, the bulk of the balloon diminishes and it begins to descend. If those in the gallery see it likely to descend in an improper place they can, by throwing on more straw, & renewing the flame, make it rise again, and the wind carries it further.

What actually happened is told with amazing detachment and simplicity by one of the participants, the Marquis D'Arlandes. In a letter to a friend, written a week after the ascent, he gives the following circumstantial account:

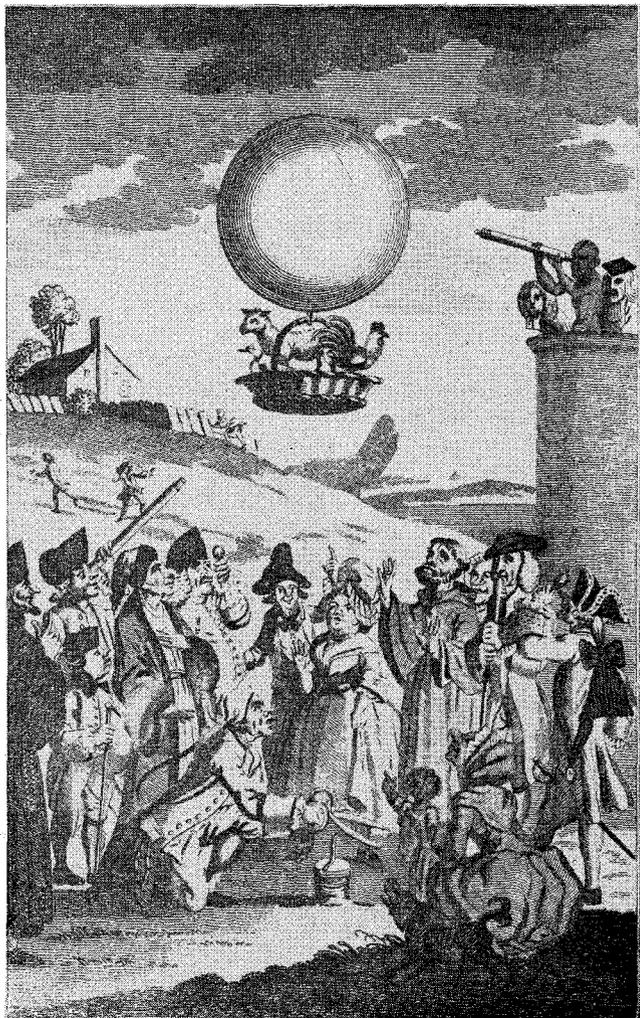
We set off at 54 minutes past one. I was astonished at the smallness of the noise or motion occasioned by our departure among the spectators: I thought they might be astonished or frightened, and might stand in need of encouragement. I waved my arm with little success; then I drew out and shook my handkerchief, and immediately perceived a great movement in the garden. It seemed as if the spectators all formed one mass, which rushed, by an involuntary motion, towards the wall, which it seemed to consider the only obstacle between us.

At that moment M. Pilatre called out "You are doing nothing, and we do not rise." Pardon me, I replied.—I threw a bundle of straw upon the fire, stirring it a little at the same time, and then turned again quickly, but I could not find *la Murette*. In astonishment, I looked for the course of the river, followed it with my eye, and at last found where the *Oise* joined it. I said to my brave companion, "Here is a river which is very difficult to cross."—"I think so," said he; "you are doing nothing."—"I am not so strong as you," I answered; "and we are well as we are." I stirred the fire and took with the fork a bundle of straw which, being too tight, did not take fire easily. I lifted and shook it over the flame. The instant after I felt as if I had been lifted up from under the arms, and said to my companion, "We are rising now, at any rate."—"Yes, we are rising," he answered, emerging from the interior, where he had been seeing that all was right. At this moment, I heard a noise, high up in the machine, which made me fear it had burst. I looked up and saw

nothing; but as I was looking up, I felt a shock, the first I had experienced. The direction of the motion was from the upper part downward, and I cried out, "What are you doing? Are you dancing?" — "I am not stirring," said he. — "So much the better," I said; "this must be a new current, which will, I hope, take us off the river." I heard a new noise in the machine, which I thought came from the breaking of a cord. This fresh admonition made me examine attentively the interior of our habitation. I saw that the part of the machine which was turned towards the south was full of round holes, many of which were of considerable size. I then said, "We must get down." — "Why?" — "Look," said I. At the same time I took my sponge and easily extinguished the small fires which were around some of the holes that I could reach; but, leaning on the lower part of the linen to observe whether it adhered firmly to the surrounding circle, I found that the linen was easily separated from it, on which I repeated to my companion, "We must descend." He looked down and said, "We are over Paris." — "Never mind that," said I, "but let me see: is there no danger for you? Are you secure?" — He said, "Yes." I examined my side and found that there was no danger to be apprehended. Further I wetted with my sponge the principal ropes that were within my reach. They all held firm except two, which gave way. I

then said, "We can cross Paris." While this was happening, we passed close to the roofs of the houses; we increased the fire and rose again with the greatest ease . . . We passed the *boulevard* and I called out, "Let us now descend." We extinguished the fire, but the brave Pilatre, who never loses his presence of mind, and who was in front, imagining that we were going against the mills that are between the *Gentilly* and the *boulevard*, admonished me. I threw a bundle of straw on the fire, and shaking it in order to inflame it more easily, we rose, and a new current carried us a little towards our left. M. Rozier said again, "Take care of the mills!" But, as I was looking through the aperture of the machine and could observe more accurately that we could not meet with them, I said, "We have arrived". . . . We alighted at the *Butte-aux-Cailles*, between the *moulin des Merveilles* and the *moulin Vieux*. The moment we touched the ground I raised myself up in the gallery and felt the upper part of the machine pressing lightly on my head. I pushed it off, and leaped out. When I turned towards the machine, which I expected to find full, to my great astonishment it was entirely empty and flattened.

Ironically—the man who wrote this account of one of the most hazardous adventures in human history, was broken for cowardice during the French Revolution.



Barnyard animals stoically made an experimental balloon ascent at Versailles for an astonished crowd shortly before man's first flight over Paris. According to contemporary sources: "M. de Montgolfier's Air Balloon, after having Ascended an Amazing height above



the Clouds & being Carried in the Air 45 Leagues, fell down near a Cottage, where the poor Country People were exceedingly frightened & Astonished. The Cock, Sheep & Duck came out of the Basket which had been tyed to it, unhurt."