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CIAM FLYER

The Introduction to the Model Aircraft World

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Alphonse Pénaud: 150 Years of Aeromodelling Part 2

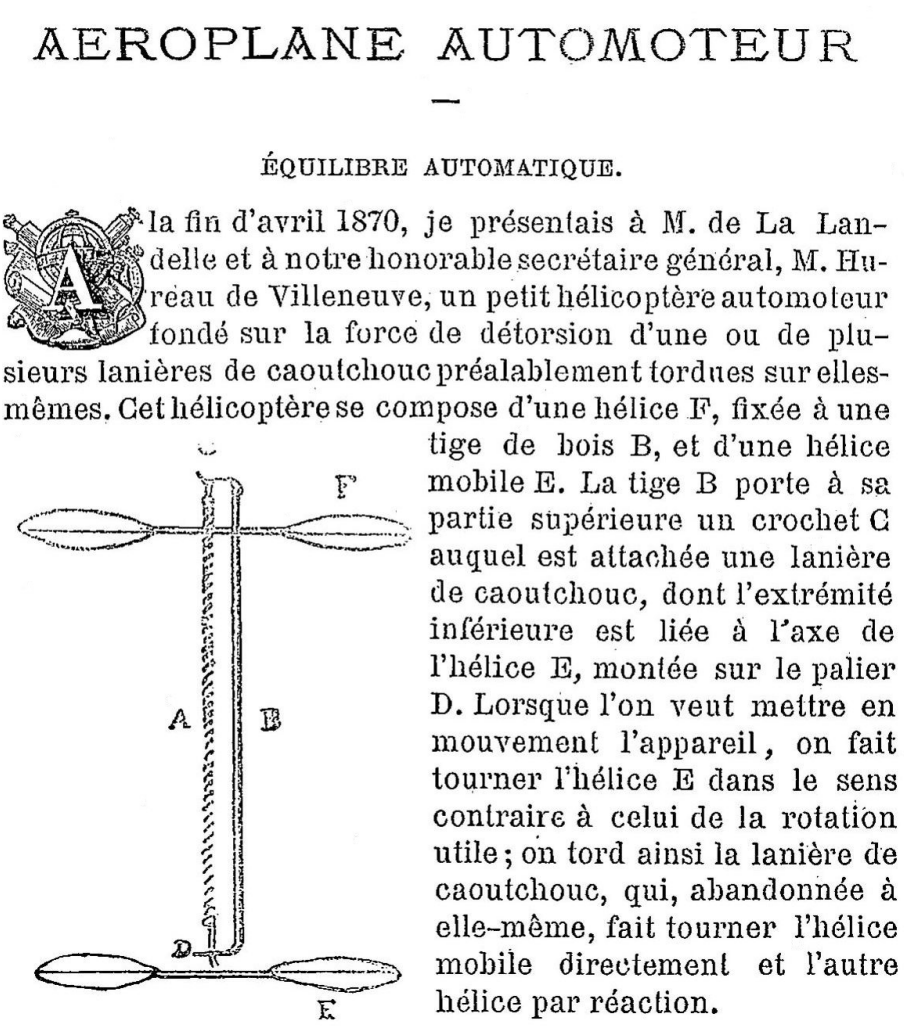
Man-Carrying Projects

Bernhard Schwendemann

Alphonse Pénaud did not limit himself to models, he also designed and patented man-carrying aeroplanes. He published numerous articles in the journal L'Aéronaute (of which he was co-editor), including his explanation of "Thermal Updraft".

In 1876, he patented a successful ornithopter with retractable landing gear, convex wings, counter-rotating propellers for torque balancing and devices for compensating rudder forces. He was also granted patents for other technical developments, such as a differential barometer for detecting climb and sinkl.

Alphonse Pénaud is not just considered to be the father of aeromodelling. With Planophore and later work, he also demonstrated that flying models can provide



AEROPLANE AUTOMOTEUR

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ÉQUILIBRE AUTOMATIQUE.

A la fin d'avril 1870, je présentais à M. de La Landelle et à notre honorable secrétaire général, M. Hureau de Villeneuve, un petit hélicoptère automoteur fondé sur la force de détorsion d'une ou de plusieurs lanières de caoutchouc préalablement tordues sur elles-mêmes. Cet hélicoptère se compose d'une hélice F, fixée à une tige de bois B, et d'une hélice mobile E. La tige B porte à sa partie supérieure un crochet C auquel est attachée une lanière de caoutchouc, dont l'extrémité inférieure est liée à l'axe de l'hélice E, montée sur le palier D. Lorsque l'on veut mettre en mouvement l'appareil, on fait tourner l'hélice E dans le sens contraire à celui de la rotation utile; on tord ainsi la lanière de caoutchouc, qui, abandonnée à elle-même, fait tourner l'hélice mobile directement et l'autre hélice par réaction.

The original article by Alphonse Pénaud in L'Aéronaute, January 1872 with the drawing of his helicopter (www.gallica.bnf.fr)

insights relevant to man-carrying aircraft at low cost and no risk. This put him at the forefront of designing, developing and trialling of aircraft. Towards the end of the 19th century, Planophore models and helicopters were sold as toys in substantial quantities.

The tragedy

In 1875, the French Academy of Sciences awarded Alphonse Pénaud a prize for the brilliant ideas which he had every intention of implementing. He was, however, more an engineer than a businessman. When his efforts to find financial backers for his forward-thinking aircraft project were unsuccessful and his achievements failed to gain recognition from the public, he became embittered and, at the age of only 30, sadly took his own life.

Important impulses

In addition to his developments, Alphonse Pénaud provided important impulses for the future. It has been proven that Milton Wright 1874 gave his sons, Wilbur and Orville, one of Pénaud's toy aircraft as a present and thus triggered their enthusiasm for flying, leading to the first motorised flight in 1903.

When it comes to aeroplanes, as with many inventions, historians disagree on who was first - was it Otto Lilienthal with his glider, or maybe Albrecht Ludwig Berblinger, the tailor of Ulm? Was it the Wright brothers with the first motorised flight, or Gustav Weisskopf from Leutershausen after all? Prior to Alphonse Pénaud, Sir George Cayley was working on gliders as early as 1809, but with what success? It often depends on the strictness of criteria for "proof" or how well connected the inventor was, sometimes even national bias comes into it.

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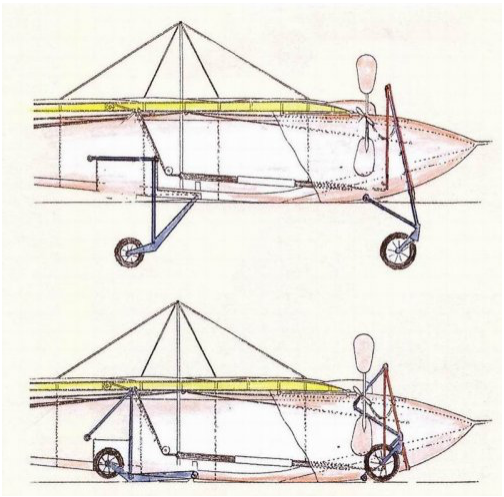
Additional details and references

Information about the life and work of Alphonse Pénaud can be found in the German and English versions of Wikipedia and at www.britannica.com. For Alphonse Pénaud's original article describing his development, his calculations and his flights in "L'Aéronaute", see the French National Library website at www.gallica.bnf.fr, while an English translation can be found at "L'Aéronaute", see the French National Library website at www.gallica.bnf.fr, while an English translation can be found at www.endlesslift.com. The search for the first aeromodeller is discussed in detail by historian Dr. Michael Sip in the first chapter of "Das große Handbuch Modellflug", Munich, 2008.



Manned designs by alphonse Pénaud. secretprojects.co.uk

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