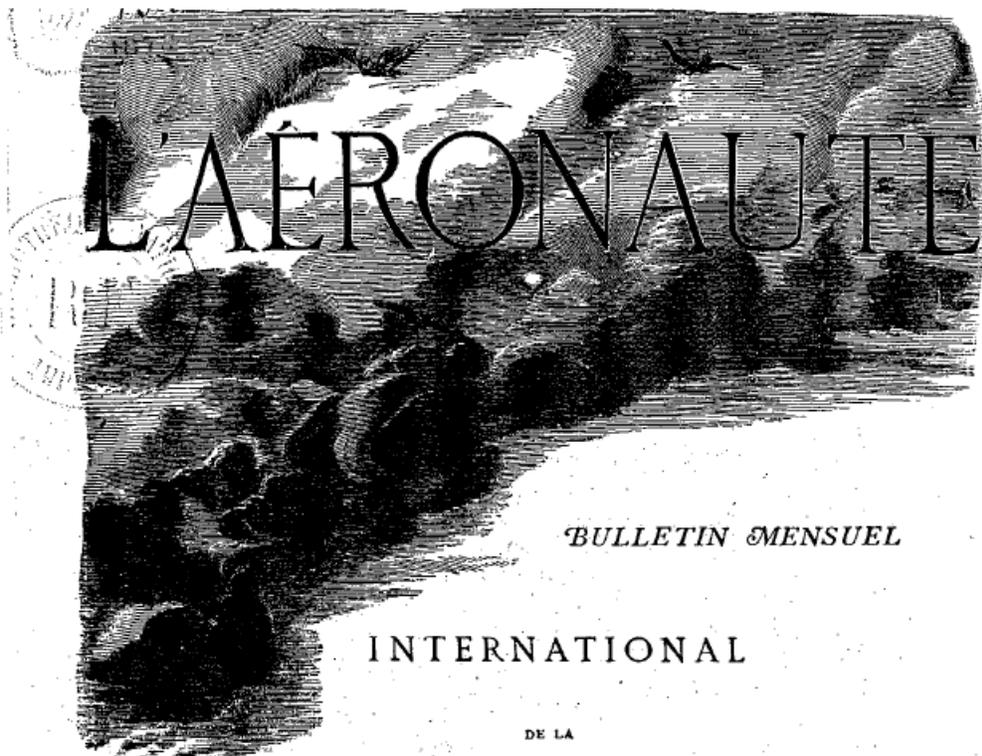


**Extract From**



NAVIGATION AÉRIENNE

DIRIGÉ PAR  
LE D<sup>r</sup> ABEL HUREAU DE VILLENEUVE  
Secrétaire général de la  
Société française de Navigation aérienne

5<sup>e</sup> ANNÉE, N<sup>o</sup> 12

*Janvier* - DÉCEMBRE 1872

PARIS : 6 FRANCS PAR AN

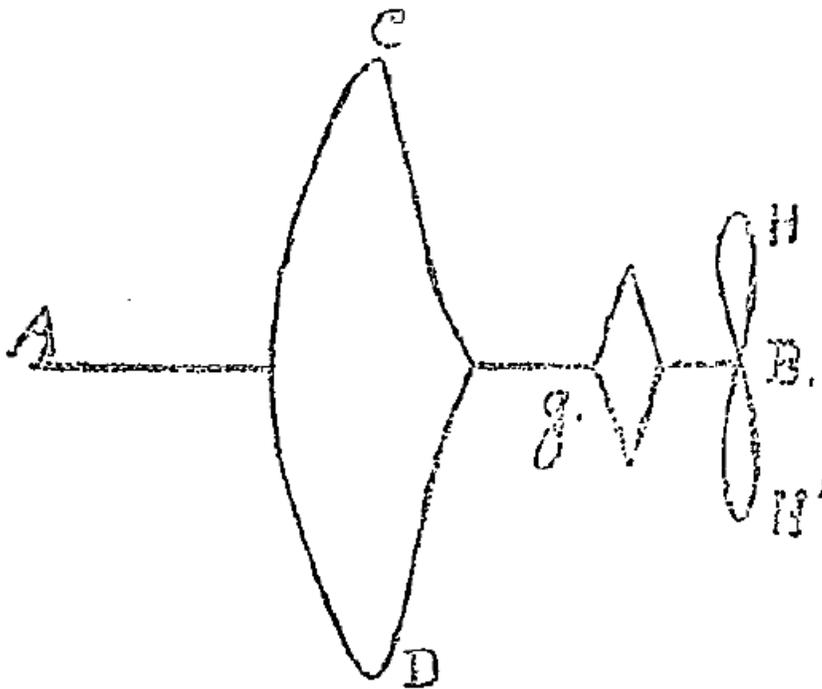
RÉDACTION ET BUREAUX  
95, RUE LAFAYETTE, 95  
PARIS

V 2735  
Ha. A

***A Google Translated extract from a portion of the French document***

My airplane, I also called planophore. se consists a rod A B 50 c. long, with a small tab in A B and a small bearing , in which the axis of the helix H H .

This shaft is terminated by a hook ' to which is attached the end of a rubber strap , fixed by the other After the leg A. Helix H H has 21 c. of diameter , it has two blades, so that the unit arriving at the ground, she can be placed flat on the ground and do not continue to run , as do the propellers on several blades , which may deteriorate and break , in addition, the weight of the propeller being concentrated on two blades , they are naturally stronger , but in view of the flight , the propeller four blades should be the best.



**Fig. 4. Aéroplane en plan.**

Towards the middle of the rod AB is a CD plan (wing) 45 c. large 11 c . about wide (chord), tips C and D are some surveys and receive a slight curve that contributes to prevent capsizing on the side. This form, scope on through , excellent for support, is also very useful to keep walking straight . Thus, in some birds, we see long wings supplement tail almost entirely, while birds broad train all have a significant tail.

Before the propeller is the rudder G- having a form like the great plan (wing) and carrying it as its ends identified.

The lateral direction is obtained by a small rudder \ evtical acting like ships.

The center of gravity is slightly forward of the center surface C D. The whole weighs 16 g. On which the rubber accounts for 5 g., so it seems difficult to adapt significantly greater engine power to frame lighter.

Now, if after turning the propeller about 240 times on itself, it abandons himself to planophore in a horizontal position, seen down a moment, then its momentum, stand up and describe a steady motion, seven or eight feet from the ground, a race 40 m. and lasts about 11 seconds. I even saw cross up to 60 meters in 13 seconds now.

Cares for this time, the rudder tilts represses ascending or descending as they occur, with perfect accuracy, and there is then often oscillations in the flight , as we see describe the sparrows and mainly woodpecker . Finally, when the movement is on its end, the unit falls gently ground, in an oblique line, remaining himself perfectly straight .

Several members of the Society were willing, August 18 last , to attend the experience, and the smaller model has come several times, in their presence, at . roundabouts Tuileries Gardens .

Average speed, 3.6 m/s quite similar to ordinary speed insects which have the same ratio weight to the wing : such as dragonflies and some grasshoppers.

This is the fastest speed that an air unit motor has been reached yet, rockets, of course, excepted.

This speed is naturally slowed by headwind and can even become negative if it is a little strong , for cons , if the wind is right, the flight is accelerated especially, often have et.je Aru and gain speed considerable. Finally, if the wind speed is precisely equal to planophore said, it will remain in place space, as some birds. I had several when the opportunity to observe this interesting fact, and I fired a means for measuring the labor expended in one second.

Everything is arranged in the most advantageous way recognized, I saw that the propeller should be mounted at 60 revolutions for the small model could stand for a moment in the air, without lowering or backward , against a wind of 2.7 m per second. He then flew course itself, the wind keeping only the outset, under the conditions of normal speed it may acquire on in calm air.