

THE WILBUR WRIGHT MEMORIAL LECTURE

"The Generation of Vortices in Fluids of Small Viscosity"

THIS year's Wilbur Wright Memorial Lecture was read on May 16 before the Royal Aeronautical Society of Great Britain by Prof. Dr. L. Prandtl, of the Gottingen Laboratory, Berlin. This is the first time in the history of the R.Ae.S. that this lecture has been delivered by a lecturer from outside Anglo-American circles, and the occasion was marked, in addition, by the presentation of the Gold Medal of the R.Ae.S. the highest distinction which the Society has to bestow, to Dr. Prandtl, and the Society's Silver Medal to Prof. B. Melvill Jones of Cambridge University. Chairman of the meeting was Col. the Master of Sempill, Chairman of the R.Ae.S., who, in introducing the lecturer, drew attention to the importance of the phenomenon of vortices and to the great work carried out by Dr. Prandtl on the building up of theories relating to the generation of vortices and their relation to aerofoil theory. He also made the interesting statement that Dr. Prandtl had learned English after receiving the invitation to read the Wilbur Wright lecture.

Prof. Prandtl personally read the introduction to his paper, but asked to be excused from reading the entire paper, as it was thought that if the paper were read by Major Low, who had translated it, a certain amount of time might be saved. Prof. Prandtl referred to the origin of the "Lanchester-Prandtl aerofoil theory," and explained that the popular belief that he (Prandtl) got the ideas on which his theory was based from Lanchester's work "Aerodynamics," published in 1907, was wrong. The necessary ideas upon which to build up the theory had occurred to him before he saw Lanchester's book. Having already thought along similar lines, when Lanchester's work appeared, the Germans were able instantly to grasp his meaning, while in England this was not the case, Lanchester's treatment making a considerable demand on the reader's intuitive perception. At the same time he admitted that in many respects Lanchester worked along different lines, and that consequently German scientists were able to obtain many useful ideas from Lanchester's work.

Maj. A. R. Low then read the main paper, the title of which was "The Generation of Vortices in Fluids of small Viscosity." It is not possible usefully to summarise the paper, which should be read in its entirety. The lecture was illustrated by a number of lantern slides and cine films illustrating the formation and development of vortices, and there is little doubt that the illustrations did a good deal towards stimulating a general understanding of the circulation theory which hitherto has not, we fear, been given a great deal of attention

in this country outside a few scientists who have been directly concerned in the subject.

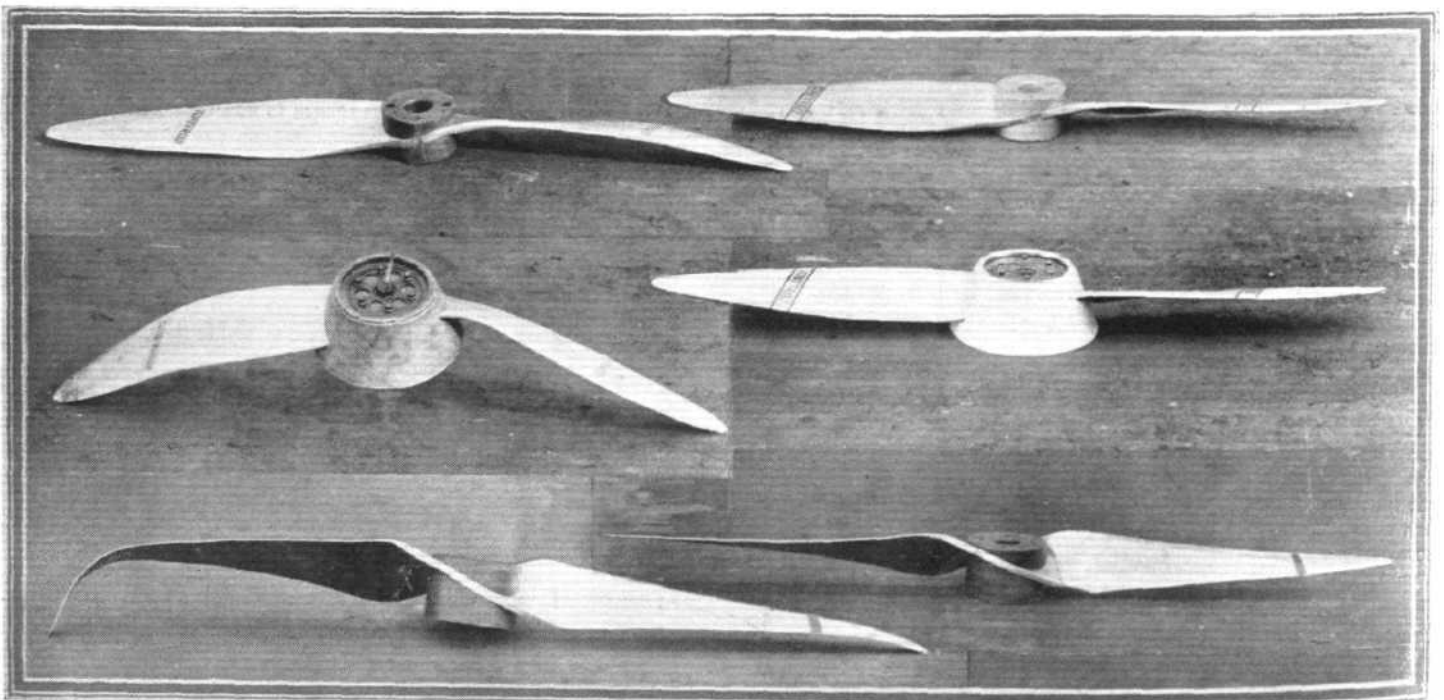
As in the case of previous Wilbur Wright Memorial Lectures, no discussion followed the reading of Dr. Prandtl's paper, but the Chairman asked Sir Sefton Brancker to propose a vote of thanks to the lecturer, and Mr. Lanchester to second it.

Sir Sefton Brancker took for his theme the development in art and science. The former appeared to have reached the limits of development, and if modern painters or composers attempted to improve upon what had been accomplished in the past the result was usually disastrous. Not so with science. Progress in aviation depended upon research, and Germany had been foremost in that field. He hoped the appearance of Dr. Prandtl was indicative of the coming of close co-operation between the two great countries Britain and Germany.

Mr. Lanchester did not quite agree with Sir Sefton Brancker on the subject of art and science. The one was creative while the other was mainly a question of discovery. If there had never been a Wagner we should never have had the equivalent of the great works of that composer. If Newton had never lived, scientific progress might have been delayed, perhaps a hundred years, perhaps two hundred years, but someone else would, sooner or later, have come along and done what Newton did. While the great composers and painters were gods on high, scientists occupied a much less exalted position. They had, however, their small uses (laughter) and among them Dr. Prandtl occupied a very prominent place.

Prof. Prandtl was the guest of honour, after the lecture, at a dinner given by the Royal Aeronautical Society at the Athenæum. Among those present were:—

Air Vice-Marshal Sir W. Sefton Brancker (president), Colonel the Master of Sempill (chairman), the following members of the Council: Captain P. D. Acland, Mr. A. E. L. Charlton, Mr. C. R. Fairey, Major A. R. Low, Mr. F. Handley Page, Mr. R. McKinnon Wood, Mr. H. E. Wimperis, Mr. Griffith Brewer, Wing-Commander T. R. Cave-Browne-Cave, Captain G. T. R. Hill, Mr. J. E. Hodgson, Mr. H. B. Irving, Major R. H. Mayo, Lieut.-Colonel M. O'Gorman, Mr. T. O. M. Sopwith, Air Vice-Marshal Sir Vyell Vyvyan, and Mr. H. C. Watts; and the following guests: Prof. L. Bairstow, Mr. H. Glauert, Sir Richard T. Glazebrook, Air Vice-Marshal Sir John Higgins, Prof. F. W. Lanchester, Sir Francis McClean, Mr. R. V. Southwell, and Herr Dieckhoff, Counsellor of the German Embassy, representing the German Ambassador.



BEFORE AND AFTER: We show above some interesting photographs of three Fairey-Reed metal airscrews which, as indicated on the left, have been somewhat deranged through bad crashes. After a visit to hospital, however, they return to service "as good as new," as shown on the right. A wooden airscrew under similar circumstances would undoubtedly have been destroyed