FLIGHT WITHOUT FORMULAE: SIMPLE DISCUSSIONS ON THE MECHANICS OF THE AEROPLANE

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Flight Without Formulae: Simple Discussions on the Mechanics of the Aeroplane by Émile Auguste Duchêne & John H. Ledeboer

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ÉMILE AUGUSTE DUCHÊNE & JOHN H. LEDEBOER

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SIMPLE DISCUSSIONS ON THE MECHANICS OF THE AEROPLANE

BY

COMMANDANT DUCHÊNE

OF THE FRENCH GÉNIE

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TRANSLATOR'S PREFACE

FORMULÆ and equations are necessary evils; they represent, as it were, the shorthand of the mathematician and the engineer, forming as they do the simplest and most convenient method of expressing certain relations between facts and phenomena which appear complicated when dressed in everyday garb. Nevertheless, it is to be feared that their very appearance is forbidding and strikes terror to the hearts of many readers not possessed of a mathematical turn of mind. However baseless this prejudice may be—as indeed it is—the fact remains that it exists, and has in the past deterred many from the study of the principles of the aeroplane, which is playing a part of ever-increasing importance in the life of the community.

The present work forms an attempt to cater for this class of reader. It has throughout been written in the simplest possible language, and contains in its whole extent not a single formula. It treats of every one of the principles of flight and of every one of the problems involved in the mechanics of the aeroplane, and this without demanding from the reader more than the most elementary knowledge of arithmetic. The chapters on stability should prove of particular interest to the pilot and the student, containing as they do several new theories of the highest importance here fully set out for the first time.

In conclusion, I have to thank Lieutenant T. O'B. Hubbard, my collaborator for many years, for his kind and diligent perusal of the proofs and for many helpful suggestions.

J. H. L.

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