

**THE AEROPLANE. A
CONCISE
SCIENTIFIC STUDY**

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The aeroplane. A concise scientific study by A. Fage

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BY

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PREFACE TO THIRD EDITION.

THAT a third edition of this book is called for within eight months of the publication of the second is gratifying to both Author and Publisher alike. Even in this brief time a few alterations to the text are deemed necessary, together with several new illustrations; whilst to increase the value of the book three Appendices are given, viz. :—

- (1) A graphical method of calculating the aerodynamical performance of an aeroplane.
- (2) A table of the results of some experiments on the skin friction on various surfaces.
- (3) A collection of data which are often needed in aeronautical calculations.

Grateful thanks are expressed for the appreciative reviews which appeared in the technical press, and for the kind welcome accorded both in this country and overseas, which indicate that the book is proving of service.

A. F.

TEDDINGTON, *December 1916.*

PREFACE.

THIS book has been written to meet the requirements of engineers who are desirous of an introduction to the study of aeronautics. The fundamental principles of mechanics are unalterable, although the many interpretations and practical applications of such laws are the fruit of scientific labour. The new science of aeronautics, which has necessitated a fuller understanding of the dynamics of the air, must now be regarded as a branch of engineering, although each step forward into the realm of aeronautical research seems but to reveal an ever-increasing unexplored region. The many unsound theories often advanced by well-intentioned people, who have had little opportunity to traverse the paths of aeronautical research, rather tend to confuse a new reader. The reports of the several aeronautical laboratories have been drawn upon in the preparation of this book, and, as far as possible, no controversial matter has been discussed. Moreover, sketches and descriptions of aeroplane construction, which are of minor importance compared with a full understanding of the underlying principles of aeronautics, have only been considered briefly. The author is greatly indebted to Mr L. Bairstow of the National Physical Laboratory for his helpful criticism and encouragement, and to Mr A. Landells, who kindly assisted in the laborious task of reading the proofs.

A. F.

TEDDINGTON.

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