

NOTES IN MECHANICAL ENGINEERING

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Notes in Mechanical Engineering by Henry Adams

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HENRY ADAMS

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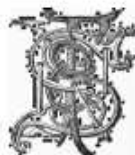
COMPILED PRINCIPALLY FOR
THE USE OF STUDENTS ATTENDING THE LECTURES
IN THIS SUBJECT
AT THE CITY OF LONDON COLLEGE.

BY

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PREFACE.

“THE City and Guilds of London Institute for the Advancement of Technical Education” having, in the year 1880, issued a programme of instruction in various subjects, upon the basis of the system so well developed by the Government Department of Science and Art, the author became enrolled as a teacher of Mechanical Engineering in connection with the Institute, and delivered a series of lectures in that subject at the City of London College. His efforts to render the course attractive and useful were fairly successful, as he was able to draw upon a very large collection of diagrams prepared for machine construction and other allied science subjects; and these, supplying the ground work of the illustrations, enabled him to devote some time to the preparation of others specially applicable to the circumstances of the case. However, the very abundance of the information proved in itself a drawback, as the majority of the students, coming totally unprepared by previous training for taking notes, and having but little aptitude for dealing with formulae, or even for the classification of facts, were unable to assimilate the technical food placed before them. The first course of thirty lectures was illustrated by one hundred and fifty-five diagrams besides blackboard sketches, and yet embraced only the first four lines of the syllabus issued by the Committee, while so far from being exhaustive of that

portion of the subject, the author felt that he had merely been able to direct attention to some of the more important facts and principles.

If students would give the matter a little consideration, it would be apparent to them that the teacher's work must of necessity be supplemented by a large amount of home work on their part. If they could only be sufficiently impressed with the fact that science cannot be *absorbed*, but must be *learnt*, the labour of *teaching* would be considerably lightened.

The present work may be described as an effort to write out a part of the student's notes for him, in the hope that he will thereby be enabled to give a more undivided attention to the illustrations and descriptions of mechanical details and operations put before him in the lectures. It is not intended in any way to supersede the ordinary text-books, but simply to supplement them in the form of a student's own notes, which should represent a summary of his reading and study. The notes are compiled from various sources; in many cases the authority is given, in others the information is original or has been derived from sources of which no record has been kept. Although the text has been carefully read through, there are doubtless some errors which have escaped notice, and which the author will be glad to have pointed out. He will also be grateful for any suggestions from students or others with regard to increasing the efficiency of this as a STUDENT'S NOTE BOOK.

60, QUEEN VICTORIA STREET, E.C.
1st October, 1883.

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* Although the classification adopted by the Committee, as given in the published syllabus of the Mechanical Engineering Examination, is open to objection, it has been thought better, in the present interest of students preparing for that examination, to retain this syllabus intact. It has therefore been divided into sections, and condensed information, consisting of facts and formula, is placed under each head. Further particulars are given upon the illustrative diagrams, especially in Parts II. to VI.

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