

**THE RUDIMENTS OF CIVIL
ENGINEERING:
FOR THE USE OF
BEGINNERS. PART I. PART II**

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The Rudiments of Civil Engineering: For the Use of Beginners. Part I. Part II by Henry Law

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HENRY LAW

**THE RUDIMENTS OF CIVIL
ENGINEERING:
FOR THE USE OF
BEGINNERS. PART I. PART II**

THE
RUDIMENTS
OF
CIVIL ENGINEERING,
FOR
THE USE OF BEGINNERS.

BY HENRY LAW,
CIVIL ENGINEER.

PART I.

New Edition,
WITH CORRECTIONS AND ADDITIONS.

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JOHN WEALE, 59, HIGH HOLBORN.

M.DCCC.LII.

PREFACE

TO THE FIRST EDITION.

THE title assumed for this little work will sufficiently explain its objects, and prevent any undue expectations on the part of the reader. It forms one of a series of works whose object is to convey a knowledge of the rudiments of the Arts and Sciences to those who were previously entirely ignorant upon such subjects.

It cannot be denied, that youth is the time to acquire knowledge with the least difficulty, the mind being then easily acted upon, and susceptible of receiving strong impressions; and the memory, not having been strained or overburdened, is then strong and vigorous. While, however, this truth has not been denied with regard to the acquisition of those branches of instruction usually given to children in schools, it has seldom been admitted when a knowledge of the Arts and Sciences has become the object of attainment, and instruction on those subjects has usually been reserved for maturer years. With what reason, however, this distinction has been made, and why the youthful mind, which easily acquires and powerfully retains the difficult and incongruous orthography of our native tongue, or the no less dry and uninteresting details of the Latin or Greek Acci-

dence, should be incapable of acquiring a knowledge calculated, above every other, to engage its attention, and excite its interest, I cannot perceive. Such an assumption is entirely gratuitous; and I believe that if a course of instruction in the Rudiments of Natural Philosophy were to be introduced into all our schools, it would be found to facilitate the advancement of the pupils in every one of their other and less interesting studies. Those who are best acquainted with children know that the mind of a child is so strong and vigorous that it may be (and in truth always is, though not always with profit) constantly employed and occupied, without injury or fatigue, but not on the same object: it is change, variety in the subject of study, that is alone necessary to render its acquisition easy and without fatigue; and such an agreeable change would be afforded by blending science with the less interesting branches of an ordinary school education.

In order to render the present work adapted to the purposes for which it is intended, the subject has been treated in as familiar and easy a manner as its peculiar nature would admit; while, however, this, its primary object, has not been lost sight of, it is hoped that the work may not be found entirely devoid of interest or information to the more advanced student.

H. L.

London, June 20, 1848.

PREFACE

TO THE SECOND EDITION.

IN preparing a second edition of this little work for the press, it has been carefully examined, and such errors as were found have been corrected; besides which, several important additions have been made. In order that the work might be accessible to all, algebraical formulæ were carefully excluded in the former edition; and the whole of the rules were verbally expressed. It has, however, been thought that some formulæ, which could not be conveniently given in any other form, and which, at the same time, would be of frequent use to those conversant with algebra, might be introduced with advantage, but in order not to perplex others, they have been added in the form of notes. Amongst the most considerable additions may be mentioned the section on the Motion of bodies about Centers, and on the Moment of Inertia of bodies.

H. L.

OLD WINDSOR, 15th April, 1850.

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