

**NATURAL
PHILOSOPHY
FOR SCHOOLS**

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Natural Philosophy for Schools by Dionysius Lardner & T. Olver Harding

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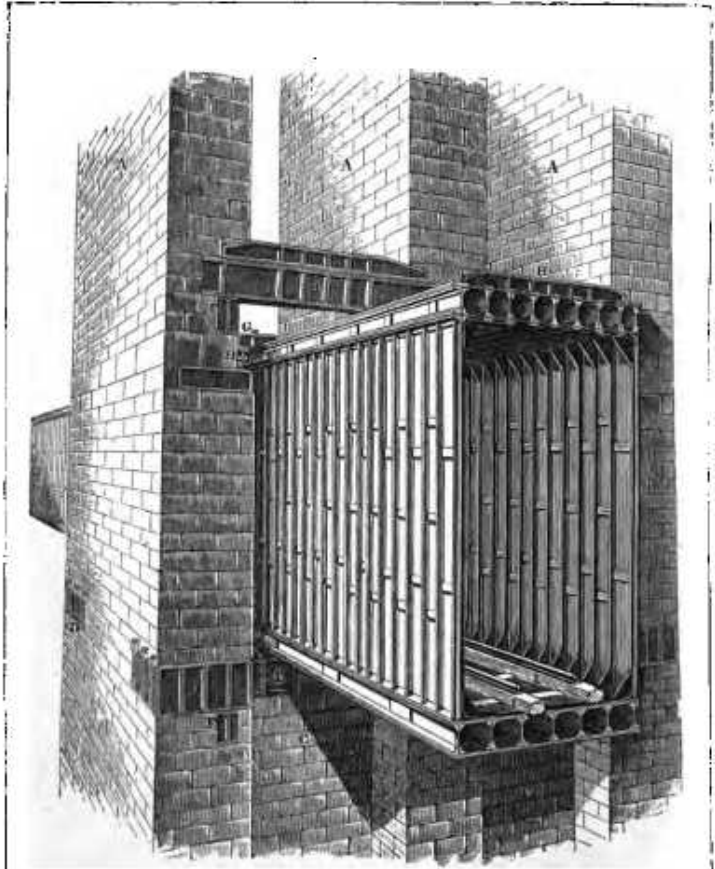
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**NATURAL
PHILOSOPHY
FOR SCHOOLS**



BRITANNIA TUBULAR BRIDGE.

NATURAL PHILOSOPHY

FOR

SCHOOLS.

BY

DIONYSIUS LARDNER, D.C.L.

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ELEVENTH THOUSAND.

REVISED AND EDITED BY

T. OLVER HARDING, B.A. LOND.

OF UNIVERSITY COLLEGE, LONDON.

WITH THREE HUNDRED AND THIRTY-FIVE ILLUSTRATIONS.



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TO

THE NEW EDITION.

IN PREPARING this Edition for the press, the Editor has endeavoured in no way to alter the character of the work, and accordingly no great addition has been made to its contents. Here and there a paragraph has been inserted which was evidently omitted by inadvertence in the former edition; but most of the alterations have been made only where demanded by the present state of science.

Where the new matter inserted occupies a whole paragraph, it has been distinguished by square brackets [], but less alterations have only rarely been so marked.

A collection of Examples on the mechanical part of the work has been appended, which, it is hoped, will be found to add materially to the value of those chapters. They assume a knowledge only of the First Book of Euclid and of the easier cases of Simple Equations.

August 1, 1868.



PREFACE.

THIS volume has been compiled to supply the want felt by a large number of teachers in public and private schools of a Class Book for Junior Students. Its purpose is to convey, in clear and concise terms, general notions of all the principal divisions of Physical Science, illustrated copiously by diagrams, showing the forms and arrangement of apparatus and the manner of performing the most important experiments.

Each of the subjects briefly explained here is fully developed in all its details, and more amply illustrated, in the corresponding parts of the "Hand Book of Natural Philosophy," which should always be in the hands of the teacher, who, by oral instruction, will then be enabled to develop each point, and illustrate it more or less fully, according to the capacity of the pupil.

It may be hoped that this volume may be the means of extending instruction in the first notions of Physics into Ladies' Schools. Female teachers in general will find even the Hand Book easily intelligible, and by it will be enabled to use the present volume for the instruction of their pupils.

The Table of Contents is so composed that the teacher can form from it Questions for the examination of his Class, the Answers to which will be found in the corresponding paragraphs of the volume.

