

**A POPULAR EXPOSITION
OF ELECTRICITY,
WITH SKETCHES OF SOME
OF ITS DISCOVERIES**

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A Popular Exposition of Electricity, with Sketches of Some of Its Discoveries by Michael S. Brennan

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MICHAEL S. BRENNAN

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A POPULAR EXPOSITION
OF
ELECTRICITY 1.

*WITH SKETCHES OF SOME OF ITS
DISCOVERERS.*

BY
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PREFACE.

THE recent extraordinary progress of electricity, its stimulus to commerce, and its mysterious possibilities, make it, *par excellence*, the science of sciences of our day. All should be familiar with its essential principles at least.

Many learned and excellent treatises have been devoted to the subject, but so illustrated with complex and intricate mechanical diagrams as to frighten away the timid and uninitiated.

My sole aim in this little book is simplicity. The mechanical part of the science is continually changing; new patents are being daily issued, so that a thorough and full description of the multiplex machinery, except for a professional, would be time wasted. I have, therefore, devoted my

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care almost entirely to the explanation of principles, to the exclusion of mechanics.

I consider, moreover, that complicated diagrams, by drawing away the mind from the subject-matter in hand, confuse rather than simplify.

I have aimed throughout at manifesting the identity of all the forms of electricity, and have accordingly so arranged the matter that each succeeding form naturally flows from its predecessor.

I have also given short sketches of the men who have added most to the science by their great discoveries, and placed the man as closely as possible to his work.

Women should be especially interested in electricity. It is woman's science. A woman was the discoverer of its dynamic branch. The wife of Galvani, the bright daughter of the eminent Galeazzi, is the initial link in the golden chain of illustrious discoverers who have given to us the modern science of electro-dynamics.

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ELECTRICITY AND ITS DISCOVERERS.

CHAPTER I.

MAGNETISM.

ELECTRICITY, under the form of magnetism, seems to have been both recognized and utilized by mankind from all antiquity. There is a dim tradition that the magnetic chariot, *tohi nan*, was used in a rude form by the Chinese as far back as the reign of the Emperor Hoangti, twenty-six hundred years before our era. A wagon of this kind, to guide the traveler over the great wastes of Asia, was certainly in use eleven hundred years before Christianity.

In this apparatus a freely floating needle moved the arm and hand of a small figure, which pointed toward the south. This wagon was in use in Asia down to the fifteenth century.