THE STORY OF ELECTRICITY FOR AMATEURS AND STUDENTS

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The Story of Electricity for Amateurs and Students by James W. Steele

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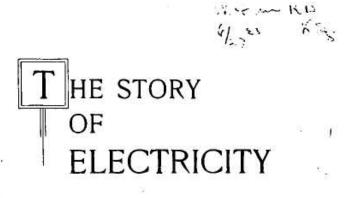
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JAMES W. STEELE

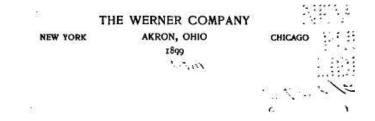
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Trieste



FOR AMATEURS AND STUDENTS

> BY JAMES W_STEELE AUTHOR OF "Steam, Steel, and Electricity"



CONTENTS

THE STORY OF ELECTRICITY.

The oldest and the youngest of the sciences.— Origin of the name.— Ancient ideas of Electricity.— Later experiments.— Crude notions and wrong conclusions.— First Electric Machine.— Frictional Electricity.— The Leyden Jar.— Extreme ideas and Fakerism.— Franklin, his new ideas and their reception.— Franklin's Kite.— The Man Franklin.— Experiments after Franklin, leading to our present modern uses.— Galvani and his discovery.— Volta, and the first « Battery.»— How a battery acts.— The laws of Electricity, and how they were discovered.— Induction, and its discoverer.— The line at which modern Electricity begins.—Magnetism and Electricity. — The Electro-Magnet. — The Molecular theory.— Faraday, and his Law of Magnetic Force.

MODERN ELECTRICITY.

CHAPTER I. The Four great qualities of Electricity which make its modern uses possible.— The universal wire.—

3

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CONTENTS

Conductors and non-conductors.—Electricity an exception in the ordinary Laws of Nature.—A dual nature: "Positive" and "Negative."—All modern uses come under the law of Induction.—Some of the laws of this induction.—Magnets and Magnetism.— Relationship between the two.—Magnetic "poles."—Practical explanation of the action of induction.—The Induction Coil.—Dynamic and Static Electricity.— The Electric Telegraph.—First attempts.—Morse, and his beginnings.—The first Telegraph Line.—Vail, and the invention of the dot-and-dash alphabet.—The old instruments and the new.—The final simplicity of the telegraph.

- CHAPTER II. The Ocean Cable. Differences between land lines and cables. — The story of the first cable. — Field and his final success. — The Telephone. — Early attempts. — Description of Bell's invention. — The Telautograph. — Early attempts and the idea upon which they were based. — Description of Gray's invention. — How a Telautograph may be made mechanically.
- CHAPTER III. The Electric Light.— Causes of heat and light in the conductor of a current.— The first Electric Light.— The Arc Light, and how constructed.— The Incandescent.— The Dynamo.— Date of the invention. — Successive steps.— Faraday the discoverer of its principle.— Pixü's machine.— Pacinatti.— Wilde.— Siemens and Wheatstone.— The Motor.— How the Dynamo and Motor came to be coupled.— Review of first

4

CONTENTS

attempts.— Kidder's battery.— Page's machine.— Electric Railroads.— Electrolysis.— General facts.— Electrical Measurements.— « Death Current.»— Instruments of Measurement.— Electricity as an Industry.— Medical Electricity.— Incomplete possibilities.— What the « Storage Battery » is.

а,

CHAPTER IV. Electrical invention in the United States.— Review of the careers of Franklin, Morse, Field, Edison and others.—Some of the surprising applications of Electricity.—The Range-Finder.—Cooking and heating by Electricity.

25

5

16

THE STORY OF ELECTRICITY

THERE is a sense in which electricity may be

said to be the youngest of the sciences. Its modern development has been startling. Its phenomena appear on every hand. It is almost literally true that the lighting has become the servant of man.

But it is also the oldest among modern sciences. Its manifestations have been studied for centuries. So old is its story that it has some of the interest of a mediæval romance; a romance that is true. Steam is gross, ma-

terial, understandable, noisy. Its action is en-

ERIPUIT CÆLO FULMEN, SCEP-

TRUMQUE TYRANNIS.

THE STORY OF ELECTRICITY

tirely comprehensible. The explosives, gunpowder, begriming the nations in all the wars since 1350, nitroglycerine, oxygen and hydrogen in all the forms of their combination, seem to be gross and material, the natural, though ferocious, servants of mankind. But electricity floats ethereal, apart, a subtle essence, shining in the changing splendors of the aurora yet existent in the very paper upon which one writes; mysteriously everywhere; silent, unseen, odorless, untouchable, a power capable of exemplifying the highest majesty of universal nature, or of lighting the faint glow of the fragile insect that flies in the twilight of a summer night. Obedient as it has now been made by the ingenuity of modern man, docile as it may seem, obeying known laws that were discovered, not made, it yet remains shadowy, mysterious, impalpable, intangible, dangerous. It is its own avenger of the daring ingenuity that has controlled it. Touch it, and you die.

Electricity was as existent when the splendid scenes described in Genesis were enacted before the poet's eye as it is now, and was entirely the same. Its very name is old. Before there were men there were trees. Some of these exuded gum, as trees do now, and this gum found a final resting place in the sca, either by being carried thither by the currents of the streams

STEAM, STEEL AND ELECTRICITY

beside which those trees grew, or by the land on which they stood being submerged in some of the ancient changes and convulsions to which the world has been frequently subject. In the lapse of ages this gum, being indestructible in water, became a fossil beneath the waves, and being in later times cast up by storms on the shores of the Baltic and other seas, was found and gathered by men, and being beautiful. finally came to be cut into various forms and used as jewelry. One has but to examine his pipe-stem, or a string of yellow beads, to know it even now. It is amber. The ancient Greeks knew and used it as we do, and without any reference to what we now call "electricity" their name for it was ELEKTRON. The earliest mention of it is by Homer, a poet whose personality is so hidden in the mists of far antiquity that his actual existence as a single person has been doubted, and he mentions it in connection with a necklace made of it.

But very early in human history, at least six hundred years before Christ, this elektron had been found to possess a peculiar property that was imagined to belong to it alone. It mysteriously attracted light bodies to it after it had been rubbed. Thales, the Franklin of his remote time, was the man who is said to have discovered this peculiar and mysterious quality of the yellow