

**ELEMENTARY TREATISE ON
NATURAL PHILOSOPHY. IN FOUR
PARTS. PART III. ELECTRICITY
AND MAGNETISM, PP. 505-783**

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A. PRIVAT DESCHANEL & J. D. EVERETT

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ELEMENTARY TREATISE
ON
NATURAL PHILOSOPHY.

BY
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TRANSLATED AND EDITED, WITH EXTENSIVE ADDITIONS,

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IN FOUR PARTS.

PART III.

ELECTRICITY AND MAGNETISM.

ILLUSTRATED BY

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THE accurate method of treating electrical subjects which has been established in this country by Sir Wm. Thomson and his coadjutors, has not yet been adopted in France; and some of Faraday's electro-magnetic work appears to be still very imperfectly appreciated by French writers. The Editor has accordingly found it necessary to recast a considerable portion of the present volume, besides introducing two new chapters (XXXIX^A, and XLI^A.) and an Appendix. Potential and lines of force are not so much as mentioned in the original.

The elements of the theory of magnetism have been based on Sir Wm. Thomson's papers in the *Philosophical Transactions*; and the description of the apparatus used in magnetic observatories has been drawn from the recently published work of the Astronomer Royal. The account of electrical units given in the Appendix is mainly founded on the Report of the Electrical Committee of the British Association for the year 1863.

M. Deschanel's descriptions of apparatus, of which some very elaborate examples occur in the present volume, left little to be desired in point of clearness. In no instance has it been found necessary to resort to the mere verbal rendering of unintelligible details.

ERRATUM.

In Fig. 366 the paper armatures are wrongly placed. Their broad parts should be exactly opposite the combs PP' , and their points ff' which project through the windows should be turned the opposite way to that represented in the figure, so that the revolving plate may pass them before it passes the combs.

CONTENTS—PART III.

ELECTRICITY.

CHAPTER XXXV. INTRODUCTORY PHENOMENA.

Fundamental phenomena.—Conductors and non-conductors.—Duality of electricity.—
Electric pendulum.—Electricities of opposite kind.—Both excited at once.—Two-fluid
and one-fluid theories, pp. 505-512.

CHAPTER XXXVI. ELECTRICAL INDUCTION.

Induction.—Charging by induction.—Faraday's theory of induction by contiguous particles.
—Attraction of unelectrified bodies.—Induction favours attraction.—Repulsion the safer
test of kind.—Electroscopes.—Pith-ball.—Gold-leaf electroscopes, . . . pp. 513-518.

CHAPTER XXXVII. MEASUREMENT OF ELECTRICAL FORCES.

Coulomb's torsion-balance.—Repulsion.—Law of inverse squares.—Fallacious objections.
—Attraction.—Force proportional to amount of charge.—Electricity resides on external
surface.—Experimental proofs.—Limitations of the rule.—Currents.—Electricity
induced on internal surface.—Ice-pail experiment.—No force within a conductor.—
Faraday's cubical box.—Inference regarding law of inverse squares.—Electrical density
and distribution.—Coulomb's experiments.—Density on points and edges.—Dissipation
of charge, pp. 519-532.

CHAPTER XXXVIII. ELECTRICAL MACHINES.

Early history.—Ramsden's machine.—Limit of charge.—Quadrant electroscopes.—Amal-
gam for rubbers.—Nairne's machine.—Winter's machine.—Armstrong's hydro-electric
machine.—Holtz's machine.—Electrophorus.—Bertsch's machine, . . pp. 533-545.

CHAPTER XXXIX. VARIOUS EXPERIMENTS WITH THE ELECTRICAL MACHINE.

Electric spark.—Brush.—Why crooked.—Preceded by polar tension.—Duration of spark.
—Wheatstone's experiment with revolving mirror.—Spark in rarefied air.—Electric egg.
—Discharge in Torricellian vacuum.—No discharge in perfect vacuum.—Colour of spark.
—Spangled tube and pane.—Electric shock.—Tickling sensation.—Mechanical effects.
—Kinnersley's thermometer.—Heating effects.—Inflammation of coal-gas.—Explosion
of gaseous mixture.—Volta's pistol.—Decomposition of ammonia.—Wind from points.
—Electric whirl.—Electric watering-pot, pp. 546-555.

CHAPTER XXXIX^A. ELECTRICAL POTENTIAL, AND LINES OF ELECTRIC FORCE.

Introductory remarks on potential.—Relation of potential to force.—Line of force.—
Intensity of force equal to rate of variation of potential.—Relation between potential
and work.—Equipotential surfaces.—Tubes of force.—Force varies inversely as section
of tube.—Analogy to filaments of a flowing liquid.—Cases of conical tubes and cylindrical
tubes.—Force proportional to number of tubes per unit area.—Force just outside a

charged conductor is $4\pi r$.—Relation of induction to lines and tubes of force.—Potential equal to sum of quotients of quantity by distance.—Potential of sphere is charge divided by radius.—Capacity of a conductor.—Capacity of sphere is equal to radius.—Capacity varies as linear dimensions.—Connection between potential and induced distribution.—A hollow conductor screens its interior from external influence.—Electrical images, pp. 559–566.

CHAPTER XL. ELECTRICAL CONDENSERS.

Condensation.—Collecting and condensing plate.—Capacity of condenser.—Discharge of condenser.—Jointed discharger.—Invention of Leyden jar.—Energy which runs down in discharge.—Residual charge.—Jar with movable coatings.—Discharge by alternate contacts.—Condensing power.—Rice's experiments.—Free and bound electricity.—Influence of dielectric.—Specific inductive capacity.—Faraday's determinations.—Polarization of dielectric.—Thickness of dielectric.—Volta's condensing electroscopium.—Leyden battery.—Lichtenberg's figures, pp. 567–582.

CHAPTER XLI. EFFECTS PRODUCED BY THE DISCHARGE OF CONDENSERS.

Shock to a number of persons.—Coated pane.—Universal discharger.—Heating of metallic threads.—Electric portrait.—Velocity of electricity.—Watson's experiment.—Wheatstone's determination.—Trials with Atlantic cable.—Unit-jars of Lanc and Harris.—Perforation of card and glass.—Explosion of mines, pp. 583–590.

CHAPTER XLII. ELECTROMETERS.

Electrometers measure potential.—Attracted-disk electrometers.—Absolute electrometer.—Portable electrometer.—Quadrant electrometer.—Replenisher.—Cage electrometer, pp. 591–598.

CHAPTER XLIII. ATMOSPHERIC ELECTRICITY.

Franklin's discovery.—Duration of lightning.—Thunder.—Shock by influence.—Lightning-conductors.—Use of point.—Ordinary electricity of the atmosphere.—Methods of obtaining indications.—Arrow, burning-match, conducting-ball, water-jet.—Action of match and jet explained.—Interpretation of indications.—They measure density of electricity on earth's surface.—This is induced by electricity overhead.—Results of observation.—At Kew Observatory.—At Windsor, Nova Scotia.—At Brussels and Kreuznach.—Conjectures regarding the source of atmospheric electricity.—Volta's theory of hail.—Theories regarding waterspouts, pp. 599–611

MAGNETISM.

CHAPTER XLIV. GENERAL STATEMENT OF FACTS AND LAWS.

Lodestone and magnetic iron ore.—Artificial magnets.—Force greatest at ends.—Poles and neutral part.—Lines formed by filings.—Curve of force-intensity.—Magnetized needle.—Azimuth.—Meridian.—Magnetic declination.—Dip, or inclination.—Mutual action of poles.—Names of poles.—North-seeking and south-seeking, or austral and boreal.—Ambiguity of terms north and south.—Magnetic induction.—Magnetic chain.—Polarity of broken pieces of magnet.—Imaginary magnetic matter of two opposite kinds.—Magnetic potential and lines of magnetic force.—Uniform magnetization.—Direction of magnetization.—Ideal simple magnet.—Strength of pole.—Magnetic field.—Moment of magnet.—Terrestrial couple on magnet.—Moment of uniformly magnetized bar is sum of moments of its parts.—Intensity of magnetization.—Actual magnets.—Their magnetization is weakest at the ends.—Their moment defined, pp. 612–622.

CHAPTER XLIV. EXPERIMENTAL DETAILS.

The earth's force simply directive.—Horizontal, vertical, and total intensities.—Torsion-balance.—Observation of declination.—Declination theodolite.—Declination magnet.—Observation of dip.—Dip-circle.—Kew dip-circle.—Observation of intensity.—By vibrations, and statically.—Absolute determinations.—Bifilar magnetometer.—Balance magnetometer.—Magnetic meridians and lines of equal dip.—The earth as a magnet.—Biot's hypothesis of a short central magnet.—Changes of declination and dip.—Magnetic storms.—Ship's compass.—Methods of magnetization.—Consequent points.—Lifting power.—Compound magnet.—Molecular changes accompanying magnetization.—All bodies either paramagnetic or diamagnetic.—Magneto-crystalline action, pp. 623-641.

CURRENT ELECTRICITY.

CHAPTER XLV. GALVANIC BATTERY.

Voltaic electricity.—Voltaic element.—Battery.—Galvani's discovery.—Volta's pile.—Couronne de tasses.—Cruikshank's trough.—Wollaston's battery.—Hare's deflagrator.—Polarization of plates.—Daniell's battery.—Bunton's and Grove's.—Amalgamated zinc.—Sawdust battery.—Dry pile.—No current without consumption.—Bohnenberger's electroscope.—Thermo-electric currents.—Thermo-electric order.—Comparison of electro-motive forces.—Reversal at high temperatures.—Thermo-pile.—Thermo-electric observation of temperature, pp. 642-656.

CHAPTER XLVI. GALVANOMETER.

Ersted's discovery of deflection of needle by current.—Ampère's rule.—Lines of magnetic force due to current.—Force on current in magnetic field.—Numerical estimate of currents.—Galvanometers.—Sine galvanometer.—Tangent galvanometer.—Schweigger's multiplier.—Differential galvanometer.—Astatic needle.—Thomson's mirror galvanometer.—Reduction of galvanometer indications to proportional measure, pp. 656-664.

CHAPTER XLVII. OHM'S LAW.

Statement of Ohm's law.—Meaning of "electro-motive force."—Meaning of "resistance."—Resistances of wires.—Specific resistance. Pouillet's experimental proofs.—Reduced length.—Rheostat.—Electrical and thermal conductivities proportional.—Resistances of liquids.—Resistance in battery cells.—Advantage of large plates.—Arrangement of cells in battery.—Divided circuits.—Wheatstone's bridge.—Potential in different points of battery and connecting wire.—Measurement of resistance of battery.—Measurement of electro-motive force, pp. 665-679.

CHAPTER XLVIII. ELECTRO-DYNAMICS.

Meaning of "electro-dynamics."—Ampère's stand.—Three elementary laws.—Continuous rotation produced by a circular current.—Action of an indefinite rectilinear current.—Action upon a rectangular current.—Sinuous currents.—Mutual action of two elements of currents.—Magneto-electric explanation.—Maxwell's rule.—Action of the earth on currents.—Solenoids.—Their declination and dip.—Their mutual action.—Action between solenoid and magnet.—Astatic circuits.—Ampère's theory of magnetism.—Rotation of a magnet on its axis.—Magnetization of iron and steel by currents.—Electro-magnets.—Residual magnetism, pp. 680-698.

CHAPTER XLIX. HEATING EFFECTS OF CURRENTS.

Heating of wires.—Joule's law.—Relation of heat in circuit to chemical action in battery.—Distribution of heat in circuit.—Mechanical work done by current diminishes heat.—

Electric light.—Changes in the carbons.—Properties of the voltaic arc.—Intensity of the light.—Applications.—Duboscq's regulator of the electric light.—Foucault's regulator.—Thermal effect at junctions, pp. 699-709.

CHAPTER L. ELECTRO-MOTORS—TELEGRAPHS.

Electro-magnetic engines.—Bourbouze's.—Frumont's.—Electric telegraph.—History of its invention.—Batteries.—Wires.—Return wire dispensed with.—Single-needle telegraph.—Dial telegraphs.—Breguet's.—Alarum.—Wheatstone's universal telegraph.—Morse's telegraph.—Receiving instrument.—Digney's ink-writer.—Key.—Telegraphic alphabet.—Relay.—Hughes' printing telegraph.—Bain's electro-chemical telegraph.—Casell's autographic telegraph.—Submarine telegraphs.—Retardation by induction.—Thomson's receiving instruments.—Wheatstone's automatic system.—Specimen of message.—Limits of speed.—Application of electricity to clocks.—Jones' system of control, pp. 710-737.

CHAPTER LI. ELECTRO-CHEMISTRY.

Decomposition by passage of a current.—Voltmeter.—Transport of elements.—Anion and cation.—Grotthius' hypothesis.—Electrolysis of binary compounds.—Electrolysis of salts.—Secondary actions.—Electrolysis of water.—Definite laws of electrolysis.—Polarization of electrodes.—Gas-battery.—Secondary pile.—Electrolytes never conduct without decomposition.—Electro-metallurgy.—Electro-gilding and electro-plating.—Electro-type.—Applications of electrotype, pp. 738-749.

CHAPTER LII. INDUCTION OF CURRENTS.

Currents induced by commencement or cessation of neighbouring currents.—By variations of strength.—By variations of distance.—By movement of a magnet.—By change of strength in a magnet.—Direction of induced current specified by Lenz's law.—By reference to lines of magnetic force.—Quantitative statement by reference to number of force-tubes cut through.—Relation of induced current to work done.—Movement of lines of force with change of magnetization.—Motion in uniform field.—Unit of resistance defined.—Movement of lines of force with change of strength.—Induction of currents by means of terrestrial magnetism.—Delezenne's circle.—British Association experiment.—Induction of a current on itself.—Extra currents.—Ruhmkorff's induction-coil.—Spark from induction-coil.—Discharge in rarefied gases.—Geisler's tubes.—Action of magnets on luminous discharge.—Magneto-electric machines.—Pirri's.—Clarke's.—Machines for lighthouses.—Siemens' armature.—Wilde's machine.—Siemens' and Wheatstone's.—Accumulation by successive action, and accumulation by mutual action.—Ladd's machine.—Currents in Wheatstone's dial telegraph.—Arago's rotations and Faraday's explanation.—Copper dampers.—Faraday's experiment of the copper cube.—Electro-medical machines.—No hypothesis assumed in using lines of force, pp. 750-778.

APPENDIX, ON ELECTRICAL AND MAGNETIC UNITS.

Mutual relations of units of different kinds.—Derived units and their dimensions.—Electrostatic system of derived units.—Electro-magnetic system.—Dimensions of the same quantity different in the two systems.—Ratio of the two units of quantity of electricity is equal to velocity of light, pp. 779-783.