

**A PRACTICAL INTRODUCTION TO
MEDICAL ELECTRICITY: WITH A
COMPENDIUM OF ELECTRICAL
TREATMENT TRANSLATED FROM
THE FRENCH OF DR. ONIMUS**

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A Practical Introduction to Medical Electricity: With a Compendium of Electrical Treatment
Translated from the French of Dr. Onimus by A. de Watteville

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A. DE WATTEVILLE

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WITH A
COMPENDIUM OF ELECTRICAL TREATMENT TRANSLATED FROM THE FRENCH
OF
DR. ONIMUS

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ILLUSTRATED WITH ABOVE ONE HUNDRED DIAGRAMS AND WOODCUTS.

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PREFACE.

THIS little book is intended as a companion to the Medical battery. My only ambition in presenting it to medical students and practitioners is that it may justify its title, and be found a practical guide to electro-therapeutics, and a suitable introduction to the study of the larger treatises.

Though containing no new facts, nor original theories, a few words of explanation with regard to some points may not be unnecessary.

In the first chapter I endeavour to give a sketch of the main physical facts which have a direct bearing upon the application of electricity to the human body. Franklinism (static or frictional electricity) is not even mentioned, its use being now abandoned in electro-therapeutics. Galvanism, and faradism, on the other hand, are treated of in a manner which may appear somewhat novel to the reader. "In England" says Professor Jenkin, "at the present time, it may almost be said that there are two sciences of electricity—one that is taught in ordinary text-books, and the other a sort of floating science known more or less perfectly to practical electricians The science of the schools is so dissimilar from that of the practical electrician, that a student might have mastered De la Rive's treatise, and yet feel as if listening to an unknown tongue in the company of practical men. It is also not a little curious that the science known to the practical men was, so to speak, far more scientific than the science of the text-books. These latter contain an apparently incoherent series of facts, and it is only by some considerable mental labour that after reading the long roll of disjointed experiments, the student can even approximately understand any one experiment in its entirety The difference between the electricity of schools and of the testing office has been mainly brought about by the absolute necessity of practice for definite measurement. The lecturer is content to say, under such and such circumstances, a current flows, or a resistance is increased. The practical electrician must know how much current, and how much resistance, or he knows nothing; the difference is analogous to that between qualitative and quantitative analysis. This measurement of electrical magnitudes absolutely requires the use of the word and idea potential, and of various units each with an appropriate name, in terms of which each electrical magnitude can be expressed." I have quoted these words because they explain better than I could have done it, what is, or at least what ought to be, the position of electro-physiology, and of electro-therapeutics, with regard to the electricity of the schools.

The first chapter then, is intended to convey some idea of that "practical science," and point out some of its applications to elec-

tro-therapeutics, the rational practice of which is impossible without some knowledge of the physical conditions under which we act. The physiological and other effects of the current are also briefly sketched, and some diagrams introduced, which I hope will be found useful.

In the second chapter, the reader will find a pretty full description of the various apparatus, batteries and accessories, with some practical remarks upon their relative merits and their management. The illustrations have been supplied to me by the various makers whose names they bear. I wish to tender them my best thanks for the readiness with which they have assisted me in rendering this part of my work more attractive and useful. Special mention must be made here also of Dr. Tibbit's kindness in lending me the blocks illustrating his apparatus. Some of the latest improvements will be found figured and described in the Appendix.*

In the third chapter the reader will find some practical remarks on the method of electro-diagnosis, and a succinct account of the results and views which have found an able exponent in Prof. Erb, of Heidelberg. To his courtesy I owe the permission of reproducing the valuable diagrams which have appeared in the volumes (xi and xii) he has contributed to Ziemssen's Cyclopaedia. In the paragraph on reaction of degeneration, I have followed as closely as possible Prof. Erb's own description.

The chapter on electrification is intended to give a general idea of the art of electro-therapeutics, with special directions as to the details of the various methods used.

The fifth and last chapter consists of a series of short paragraphs on the application of electricity to the various diseases in which it has proved a valuable agent of cure. This part of the book is due to the pen of Dr. Onimus, who herein summarises the results of his extensive clinical experience, based upon his well known physiological researches, which will be found partly collected in his "Traité d'Electricité Médicale." I have introduced but insignificant changes in the translation, with the exception of the attempt I have made at an electrical posology, the sole responsibility of which must therefore rest upon me.

Some figures referred to in the course of chapter V. are appended to it, illustrating the most important "motor points" of the body.

13 OLD CAVENDISH STREET, W.
JUNE, 1878.

* Those who believe that "Electricity is life" will perhaps miss the customary descriptions of the galvanic chains and bands. My reasons for omitting them are stated at page 105. Pulvermacher's wares are, by the way, likely to be entirely cast into the shade by the latest efforts of an ingenious Frenchman, to whose inventiveness we owe the production of "an electro-magnetic shirt provided with a galvanic chain at the upper part, a mouth-piece to be inserted in the mouth, another to be fixed in the anus; and if the dress only extends to the thighs a chain may be employed for the legs with a ring at the end to be secured to the big toe"!!

CONTENTS.

CHAPTER I.

THE CURRENT.

	Page
GALVANISM. Difference of potential. The galvanic element	1
Electromotive force	3
Specific resistance. Ohm's law. Internal and external resistance	4
Current-strength	5
Electrical units: the ohm, volt and veber	6
PARADISM. Phenomena of induction in straight and coiled wires	7
Structure and action of induction apparatus	9
THE GRAPHICAL METHOD	11
MEASUREMENT OF ELECTRO-MOTIVE FORCE	14
MEASUREMENT OF RESISTANCE	14
Rheostats	15
MEASUREMENT OF CURRENT STRENGTH. Voltmeter	17
Galvanometers	18
Graduation and uses of medical galvanometer	20
ARRANGEMENT OF ELEMENTS	22
CONSTANCY OF ELEMENTS. Polarisation	25
High tension currents	27
DERIVED CURRENTS	27
DENSITY OF CURRENT	28
DIFFUSION OF CURRENTS	28
Distribution of potential	29
THE HUMAN BODY AS A CONDUCTOR	30
MECHANICAL EFFECTS OF CURRENT. Osmosis	32
PHYSICAL EFFECTS	33
CHEMICAL EFFECTS. Electrolysis	33
PHYSIOLOGICAL EFFECTS; A. of current	34
B. of changes of current.—Stimulation of nerve and muscle	35
Difference between direct and indirect muscular stimulation	37
PHYSICAL DIFFERENCES BETWEEN GALVANISM AND PARADISM	37
EFFECTS OF POLES AND OF DIRECTION	38

CHAPTER II.

APPARATUS.

GENERAL OBSERVATIONS ON MEDICAL BATTERIES	40
Requisites of a good battery	41
The battery at fault	42
Large <i>versus</i> small elements	42

	Page
THE BUNSEN AND GROVE CELLS	43
THE SULPHATE OF COPPER CELL	44
THE CHLORIDE OF SILVER CELL	48
THE PEROXIDE OF MANGANESE CELL	51
Coxeter's improved battery	56
THE PEROXIDE OF IRON CELL	57
THE SULPHATE OF LEAD CELL	59
THE SULPHATE OF MERCURY CELL	59
SINGLE FLUID CELLS	60
COMBINED BATTERIES	64
GALVANO-FARADIC APPARATUS	65
Amalgamation	75
Trouvé's interruptor apparatus	77
MAGNETO-FARADIC APPARATUS	78
ACCESSORIES. Current-graduation	80
Plug, or pin and hole collector	81
Sledge collector	82
Dial collector	82
Rheophores	84
Connections	85
Electrodes	85
Interruptors	91
Current reverser or commutator	92
Current alternator	93

CHAPTER III.

ELECTRO-DIAGNOSIS.

THE NORMAL POLAR REACTIONS	94
REACTIONS IN DISEASE ; REACTION OF DEGENERATION	95
THE PRACTICE OF ELECTRO-DIAGNOSIS	101

CHAPTER IV.

ELECTRISATION.

GENERAL REMARKS	103
GALVANISATION	105
FARADISATION	108
GENERAL ELECTRISATION	109
THE POSITIVE CHARGE	111

CHAPTER V.

TREATMENT.

SENSORY NEUROSES. Neuralgia	113
Facial neuralgia	113
Tic Douloureux	114

CONTENTS.

ix

	Page
Occipito-cervical neuralgia	114
Cervico-brachial neuralgia	114
Intercostal neuralgia	114
Lumbo-abdominal neuralgia	115
Sciatic neuralgia	115
Uterine neuralgia	115
Vesico-urethral neuralgia	116
Megrim	116
Ancient Neuralgias	116
Cutaneous Anaesthesia	117
Facial anaesthesia	117
MOTORY NEUROSES. Tic convulsif	117
Spasm of neck-muscles	118
Cramps	118
Writers cramp	118
Contractures of the extremities	118
Tetanus	119
Chorea	119
Paralysis Agitans	119
Epilepsy	120
Catalepsy	120
PERIPHERAL PARALYSES. Paralyses following compression or contusion	120
Paralysis of motor nerves of the eye	120
Paralysis of facial nerve	121
Paralysis of musculo-spiral	121
Paralysis of anterior tibial	122
VARIOUS NEUROSES. Hysteria	122
Angina pectoris	122
Exophthalmic goitre	123
DISEASES OF THE NERVOUS CENTRES. Hemiplegia	123
Spinal irritation	124
Myelitis	124
Locomotor ataxy	124
Infantile paralysis	125
Spinal paralysis of the adult	125
Spinal meningitis	125
Progressive muscular atrophy	125
PARALYSES FOLLOWING ACUTE DISEASES OR INTOXICATIONS.	
Saturnine intoxication	126
Abdominal myalgia	126
Sequelæ of acute diseases	126
DISEASES OF MUSCLES. Muscular fatigue	127
Contractures	128
Rheumatism	128
Simple muscular atrophy	128
Club-foot	129
DISEASES OF THE DIGESTIVE ORGANS. Gastralgia	129
Dilatation of stomach	129
Nervous vomiting	130
Enteralgia	130
Intestinal obstruction	130