

**OUTLINES OF MEDICAL AND  
SURGICAL ELECTRICITY, AND SHORT  
NOTICES OF THE PRINCIPAL DISEASES  
IN WHICH ELECTRICITY HAS BEEN  
EMPLOYED SUCCESSFULLY**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649666010

Outlines of Medical and Surgical Electricity, and Short Notices of the Principal Diseases in Which Electricity Has Been Employed Successfully by Hugh Campbell

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**HUGH CAMPBELL**

**OUTLINES OF MEDICAL AND  
SURGICAL ELECTRICITY, AND SHORT  
NOTICES OF THE PRINCIPAL DISEASES  
IN WHICH ELECTRICITY HAS BEEN  
EMPLOYED SUCCESSFULLY**



OUTLINES  
OF  
MEDICAL AND SURGICAL  
ELECTRICITY,

AND SHORT NOTICES OF THE  
PRINCIPAL DISEASES IN WHICH ELECTRICITY HAS  
BEEN EMPLOYED SUCCESSFULLY.

BY  
HUGH CAMPBELL, M.D.  
LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON.



HENRY RENSCHAW,  
356, STRAND, LONDON.  
1875.

[All rights reserved.]

160. g. 62

LONDON:  
SAVILL, EDWARDS AND CO., PRINTERS, CHANCERY STREET,  
COVENT GARDEN.

## P R E F A C E.

---

THE object of these outlines is to present to the Profession a *précis* of the leading facts in Electro-Physics and Electro-Physiology on which the theory and practice of Electro-Therapeutics are founded.

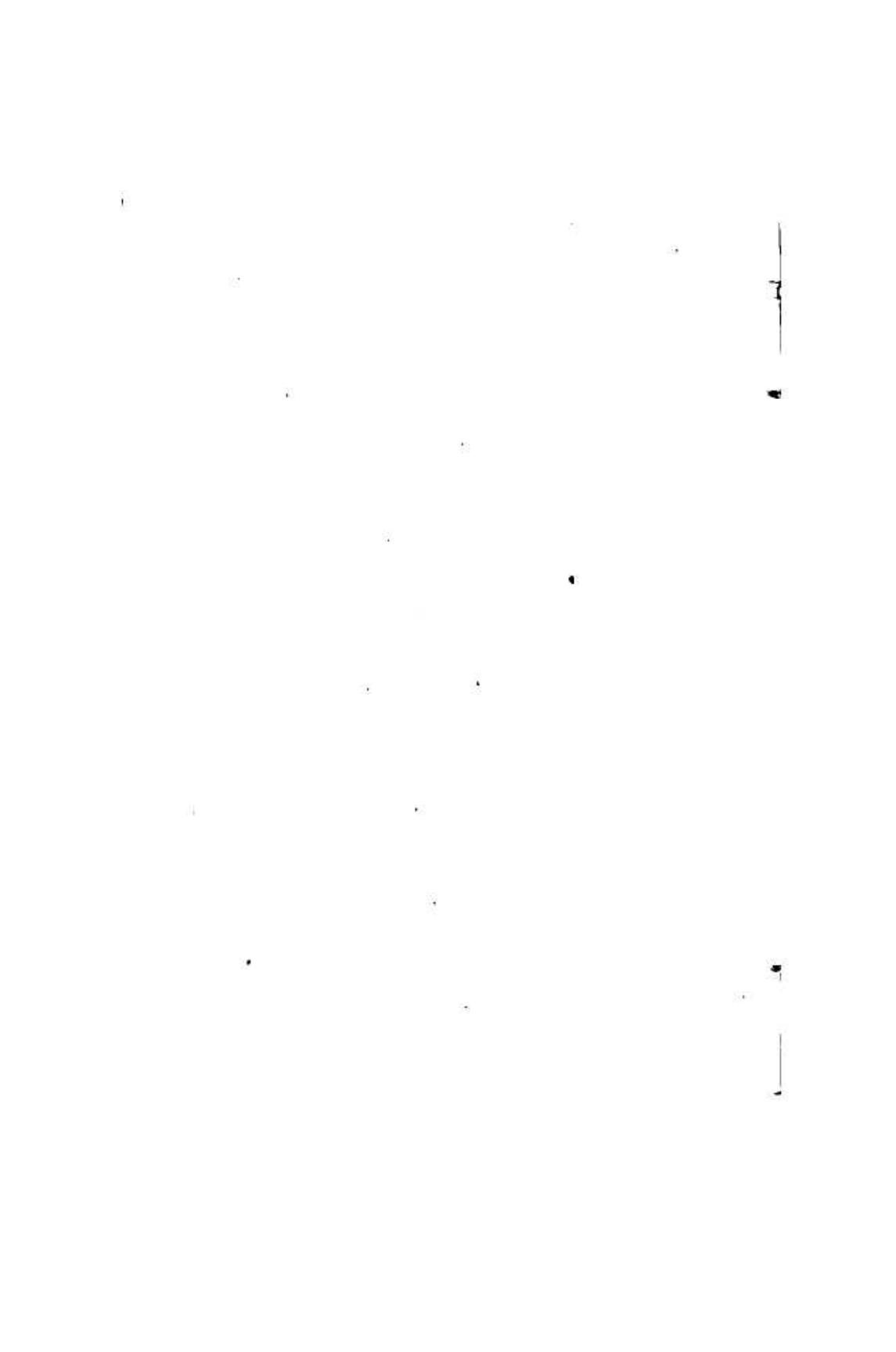
The employment of electricity in medicine and surgery has now reached that point of recognition by the profession, when no medical man can be considered a master of his art who remains in ignorance of its principles.

To many actively engaged in practice, who cannot find leisure sufficient to master a new study in all its details, it is hoped these outlines will furnish a safe and ready guide to the scientific employment of this potent agent.

To others more at leisure it will, I trust, be the means of directing their attention to a most interesting and important study. For their benefit I append, on the last page, a list of the principal authors consulted by me in the preparation of this work, all of whom may be read with advantage, but particularly the last, who for all practical purposes exhausts our present knowledge of the subject.

HUGH CAMPBELL.

38, QUEEN ANNE STREET,  
CAVENDISH SQUARE.





# CONTENTS.

---

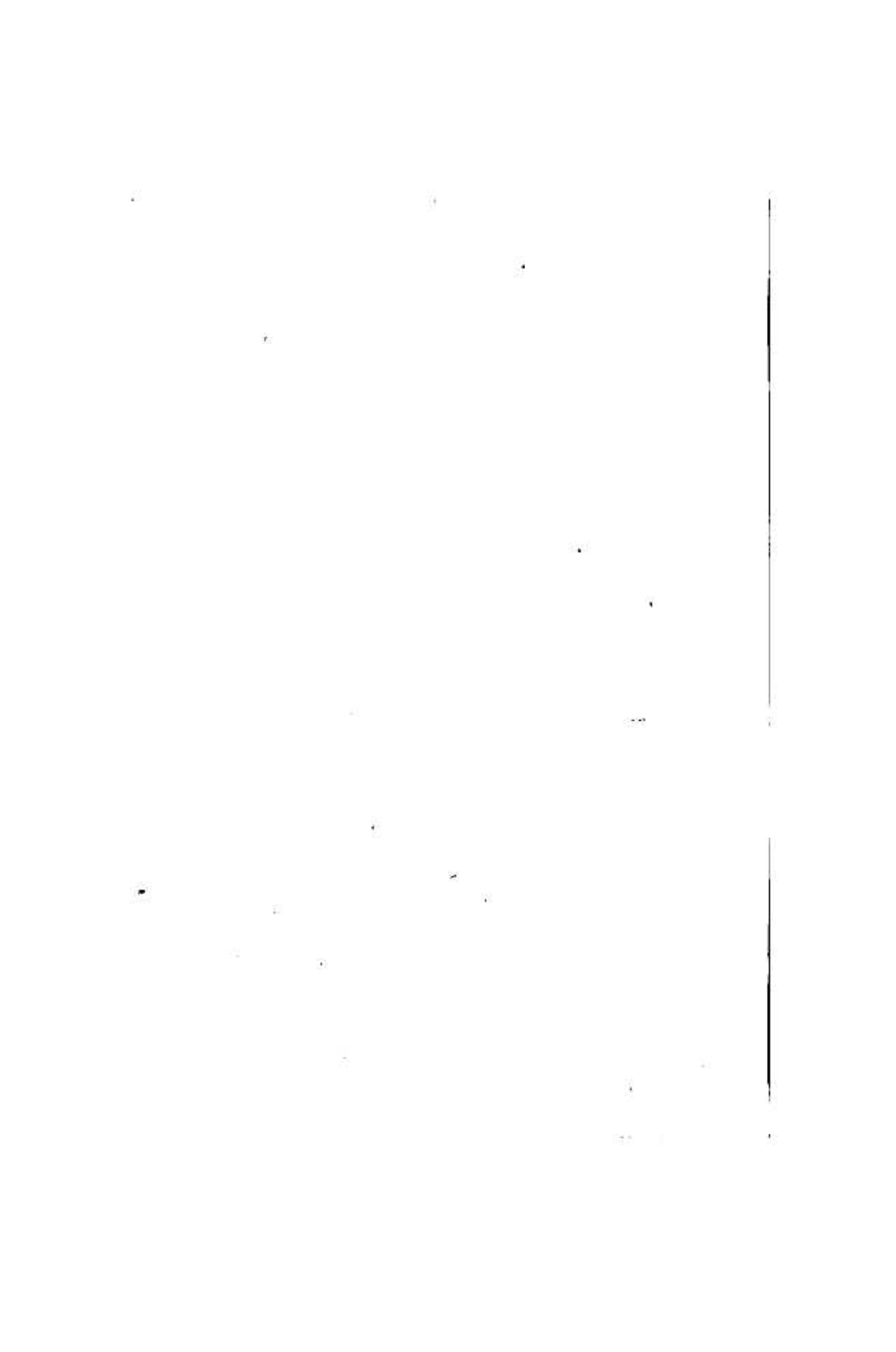
## PART I.

	PAGE
CHAP. I. MAGNETISM AND ELECTRICITY . . . . .	1
" II. STATIC AND CURRENT ELECTRICITY . . . . .	6
" III. ANIMAL ELECTRICITY . . . . .	24
" IV. ELECTRO-PHYSIOLOGY . . . . .	30
" V. GENERAL EFFECTS OF ELECTRICITY ON THE HUMAN BODY, AND DIFFERENCES IN THE THERAPEUTICAL ACTIONS OF THE GAL- VANIC AND FARADIC CURRENTS . . . . .	45
" VI. CENTRAL, LOCAL, AND GENERAL ELECTRI- ZATION . . . . .	53
" VII. ELECTRO-DIAGNOSIS . . . . .	61
" VIII. ELECTROLYSIS AND THE GALVANIC CAUTERY, &C. . . . .	65
" IX. TERMS EMPLOYED IN ELECTRO-PHYSICS, ELECTRO-PHYSIOLOGY, AND ELECTRO- THERAPEUTICS . . . . .	73

---

## PART II.

DISEASES IN WHICH ELECTRICAL TREATMENT MAY BE EMPLOYED WITH ADVANTAGE, EITHER ALONE, OR AS AN ADJUNCT TO OTHER REMEDIES . . . . .	79
LIST OF THE MORE IMPORTANT AUTHORS CONSULTED IN THE PREPARATION OF THIS WORK . . . . .	123



OUTLINES  
OF  
MEDICAL AND SURGICAL  
ELECTRICITY.

PART I.

CHAPTER I.

MAGNETISM AND ELECTRICITY.

THE presence of a subtle, imponderable fluid pervading everything in nature, and influencing more or less all its operations, is made manifest to us by phenomena which, while they are clearly traceable to one ultimate cause, vary sufficiently to be classed under two distinct heads, to which the names of Magnetism and Electricity are given.

What the ultimate composition of this all-pervading fluid is, remains an unsolved problem; various theories have been suggested to explain its nature; the one most generally received assumes it to consist of two distinct fluids, each composed of infinitesimal molecules which repel each other, while they attract the molecules of

Magnetism and electricity varieties of one fluid.

Theories of its composition.