

A SCHOOL ELECTRICITY

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A school electricity by C. J. L. Wagstaff

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BY

C. J. L. WAGSTAFF, M.A. (CANTAB.)

HEADMASTER OF THE HABERDASHERS' HAMPSTEAD SCHOOL

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at the University Press

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Gift of the Optometry Dept

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TO
H. A. W.

PREFACE

THIS book is the outcome of notes on a course of lessons at Oundle School. It was by accident that they came into the hands of the University Press for, though I intended to print them for my own use, I had no intention of publishing them.

These lessons were essentially practical: that is to say, there was always laboratory and lecture apparatus at my disposal and all the experiments here described were actually done, some in the laboratory by the boys, some in the classroom. Consequently many important parts of the subject which I did not think suited to class experiment were omitted. No reference therefore will be found in this book to X-rays, telephones and electric waves.

Without an over-large stock of expensive apparatus it is not easy for all boys in a class to do the same experiment at one lesson: nor is it necessary, for most boys now know something in a general way about electricity and in selecting experiments for them to perform I do not feel it necessary to adhere so closely to a logical order as I should were they on entirely new ground. I would suggest however to others who may use this book that at first the lessons should be largely demonstrations: later individual laboratory work may predominate, boys repeating for themselves experiments shewn previously in the theatre by their master.

I believe very strongly in the early use of instruments (e.g. ammeters and voltmeters) which give direct readings in addition to those which only compare (e.g. galvanometers as generally used). It is a great advantage to a beginner to be able to name his current in amperes or his E.M.F. in volts. Of course the complete equipment of a laboratory is expensive, but good instruments which with suitable shunts and resistances cover wide ranges are now so easily obtained and can be used in so many different experiments that I have no