Transactions of the Cambridge Philosophical Society

RECENT PAPERS

Vol. XXII.

- No. XXIII. On a General Infinitesimal Geometry, in reference to the Theory of Relativity. By WILHELM WIRTINGER (Vienna). Pp. 10. Price 2/6.
 - "XXIV. On the Fifth Book of Euclid's Elements (Fifth Paper). By M. J. M. Hill, Sc.D., LL.D., F.R.S., Astor Professor of Mathematics in the University of London. Pp. 14. Price 2/6.
 - "XXV. The Influence of Electrically Conducting Material within the Earth on Various Phenomena of Terrestrial Magnetism. By S. Chapman, M.A., Trinity College, and T. T. WHITEHEAD. Pp. 20. Price 3/6.
 - "XXVI. The Escape of Molecules from an Atmosphere, with special reference to the Boundary of a Gaseous Star. By E. A. Milne, M.A., Trinity College, Cambridge. Pp. 35. Price 5/-.
 - " XXVII. Some Problems of Diophantine Approximation:

 The Analytical Properties of Certain Dirichlet's Series Associated with the Distribution of Numbers to Modulus Unity. By G. H. HARDY, M.A.,

 Savilian Professor, University of Oxford, and J. E. LITTLE-wood, M.A., Trinity College, Cambridge. Pp. 16. Price 3/6.
 - "XXVIII. Free Paths in a Non-uniform Rarefied Gas with an Application to the Escape of Molecules from Isothermal Atmospheres. By J. E. Jones, 1851 Exhibition Senior Research Student, Trinity College, Cambridge. Pp. 22. With Title-page and Index to Vol. xxII. Price 5/6.

Vel. XXIII.

- No. I. On Approximate Continuity. By M. H. A. Newman, B.A., St John's College, Cambridge. Pp. 18. Price 3/6.
 - II. A Mathematical Theory of Natural and Artificial Selection. By J. B. S. HALDANE, M.A., Trinity College, Cambridge, Pp. 23. Price 4/-.
 - III. On the Form of the Solution of the Equations of Dynamics. By T. M. CHERRY, B.A., Trinity College, Isaac Newton Student. Pp. 28. Price 4/-.
 - IV. On the Motion of Spheres, Circular and Elliptic Cylinders through Viscous Liquid. By W. J. Harrison, M.A., Clare College, Cambridge. Pp. 18. Price 3/-.
 - " V. Researches in the Theory of Determinants. By Major P. A. MacMahon, R.A., F.R.S., Pp. 47. 7/-.
 - WI. The Optical Constants of Matter. By C. G. DARWIN, M.A., F.R.S., Christ's College, Tait Professor of Natural Philosophy in the University of Edinburgh, Pp. 31, Price 5/-.
- "
 VII. Some Examples of Trajectories Defined by Differential Equations of a Generalised Dynamical Type. By T. M. Cherry, Ph.D., Fellow of Trinity College, Cambridge. Pp. 32. Price 5/-.

CONTENTS.

	PAGE
A generalization of Feuerbach's theorem. By Mr J. P. Gabbatt, Peter-	601
Characteristics of complexes of conics in space of four dimensions. By	
Mr C. G. F. James, Trinity College Note on the Lorentz group. By Mr J. Brill, St John's College	621 630
The symmetric functions of which the general determinant is a particular case. By Major P. A. MACMAHON, Sc.D., F.R.S., St John's College	633
On simplexes doubly incident with a quadric. By R. VAIDYANATHASWAMY. (Communicated by Professor H, F, Baker).	655
On the phrase "equally probable." By Mr W. Burnside, Honorary Fellow of Pembroke College	669
A note on wireless signal strength measurements made during the solar eclipse of 24 January, 1925. By Mr E, V. Appleton and M. A. F.	000
BARNETT. (With One Text-figure) The action of the electrical counter. By K. G. EMELEUS, B.A., St John's	672
College. (Communicated by Dr J. CHADWICK.) (With Four Text-figures).	676
An extension of Wallace's, Miquel's and Clifford's theorems on circles. By Mr F. P. White, St John's College.	684
Triple binary forms; the complete system for a single (1, 1, 1) form with its geometrical interpretation. By Mr W. SADDLER, St John's College. (Communicated by Mr H. W. TURNBULL)	688
A geometrical treatment of the correspondence between lines in threefold space and points of a quadric in fivefold space. By Mr H. W.	
TURNBULL, Trinity College . Theory of statistical estimation. By Mr R. A. FISHER, Gonville and	694
Caius College On the idea of frequency. By Mr W. Burnside, Honorary Fellow of	700
The bursting of soap-bubbles in a uniform electric field. By Professor C. T. R. Wilson, and Mr G. I. Taylor, Trinity College. (With	
Plates VI and VII) The passage of electrons through small apertures. By J. F. LEHMANN	728
and T. H. Oscood. (Communicated by Professor Sir E. RUTHER- FORD, F.R.S.) (With Four Text-figures)	731
An apparatus for the investigation of the effect of poisonous substances, and mixed vapours on catalytic activity. By F. H. Constable, B.A., Strathcona Research Student, St John's College, (With Three	
Text-figures). On pedal quadrics in non-euclidean hyperspace. By Mr J. P. Gabbatt,	738
Peterhouse	751
rectangular cross section in which heat is generated at a uniform rate. By J. D. Cockoroff, B.A., St John's College. (With Five Text-	
The theory of the influence of magnetic fields on the stopping power of	759
gases for a-particles. By R. DE L. KRONIG. (Communicated by Mr R. H. FOWLER) On Hausdorff's proof of the extended Riesz-Fischer theorem. By Mr	773
S. Pollard, Trinity College	777
of linear substitutions on $\frac{1}{2}$ $(p-1)$ symbols, when p is a prime of the form $4n+3$. By Mr W. BURNSIDE, Honorary Fellow of Pembroke	
College . On groups of linear substitutions which contain irreducible metacyclical	779
subgroups. By Mr W. Burnside, Honorary Fellow of Pembroke College	788
A theoretical study of the stopping power of hydrogen atoms for a-particles. By Mr R. H. Fowler, Trinity College, (With One Text-figure).	793
Proceedings at the Meetings held during the Session 1923—1924 Statement of Accounts of the Cambridge Philosophical Society, from	804
https://doi.org/10.1017/59395904170070064 Published online by Cambridge University Press	814