



## Über dieses Buch

Dies ist ein digitales Exemplar eines Buches, das seit Generationen in den Regalen der Bibliotheken aufbewahrt wurde, bevor es von Google im Rahmen eines Projekts, mit dem die Bücher dieser Welt online verfügbar gemacht werden sollen, sorgfältig gescannt wurde.

Das Buch hat das Urheberrecht überdauert und kann nun öffentlich zugänglich gemacht werden. Ein öffentlich zugängliches Buch ist ein Buch, das niemals Urheberrechten unterlag oder bei dem die Schutzfrist des Urheberrechts abgelaufen ist. Ob ein Buch öffentlich zugänglich ist, kann von Land zu Land unterschiedlich sein. Öffentlich zugängliche Bücher sind unser Tor zur Vergangenheit und stellen ein geschichtliches, kulturelles und wissenschaftliches Vermögen dar, das häufig nur schwierig zu entdecken ist.

Gebrauchsspuren, Anmerkungen und andere Randbemerkungen, die im Originalband enthalten sind, finden sich auch in dieser Datei – eine Erinnerung an die lange Reise, die das Buch vom Verleger zu einer Bibliothek und weiter zu Ihnen hinter sich gebracht hat.

## Nutzungsrichtlinien

Google ist stolz, mit Bibliotheken in partnerschaftlicher Zusammenarbeit öffentlich zugängliches Material zu digitalisieren und einer breiten Masse zugänglich zu machen. Öffentlich zugängliche Bücher gehören der Öffentlichkeit, und wir sind nur ihre Hüter. Nichtsdestotrotz ist diese Arbeit kostspielig. Um diese Ressource weiterhin zur Verfügung stellen zu können, haben wir Schritte unternommen, um den Missbrauch durch kommerzielle Parteien zu verhindern. Dazu gehören technische Einschränkungen für automatisierte Abfragen.

Wir bitten Sie um Einhaltung folgender Richtlinien:

- + *Nutzung der Dateien zu nichtkommerziellen Zwecken* Wir haben Google Buchsuche für Endanwender konzipiert und möchten, dass Sie diese Dateien nur für persönliche, nichtkommerzielle Zwecke verwenden.
- + *Keine automatisierten Abfragen* Senden Sie keine automatisierten Abfragen irgendwelcher Art an das Google-System. Wenn Sie Recherchen über maschinelle Übersetzung, optische Zeichenerkennung oder andere Bereiche durchführen, in denen der Zugang zu Text in großen Mengen nützlich ist, wenden Sie sich bitte an uns. Wir fördern die Nutzung des öffentlich zugänglichen Materials für diese Zwecke und können Ihnen unter Umständen helfen.
- + *Beibehaltung von Google-Markenelementen* Das "Wasserzeichen" von Google, das Sie in jeder Datei finden, ist wichtig zur Information über dieses Projekt und hilft den Anwendern weiteres Material über Google Buchsuche zu finden. Bitte entfernen Sie das Wasserzeichen nicht.
- + *Bewegen Sie sich innerhalb der Legalität* Unabhängig von Ihrem Verwendungszweck müssen Sie sich Ihrer Verantwortung bewusst sein, sicherzustellen, dass Ihre Nutzung legal ist. Gehen Sie nicht davon aus, dass ein Buch, das nach unserem Dafürhalten für Nutzer in den USA öffentlich zugänglich ist, auch für Nutzer in anderen Ländern öffentlich zugänglich ist. Ob ein Buch noch dem Urheberrecht unterliegt, ist von Land zu Land verschieden. Wir können keine Beratung leisten, ob eine bestimmte Nutzung eines bestimmten Buches gesetzlich zulässig ist. Gehen Sie nicht davon aus, dass das Erscheinen eines Buchs in Google Buchsuche bedeutet, dass es in jeder Form und überall auf der Welt verwendet werden kann. Eine Urheberrechtsverletzung kann schwerwiegende Folgen haben.

## Über Google Buchsuche

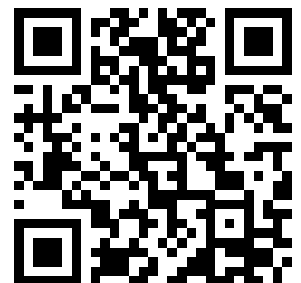
Das Ziel von Google besteht darin, die weltweiten Informationen zu organisieren und allgemein nutzbar und zugänglich zu machen. Google Buchsuche hilft Lesern dabei, die Bücher dieser Welt zu entdecken, und unterstützt Autoren und Verleger dabei, neue Zielgruppen zu erreichen. Den gesamten Buchtext können Sie im Internet unter <http://books.google.com> durchsuchen.

---

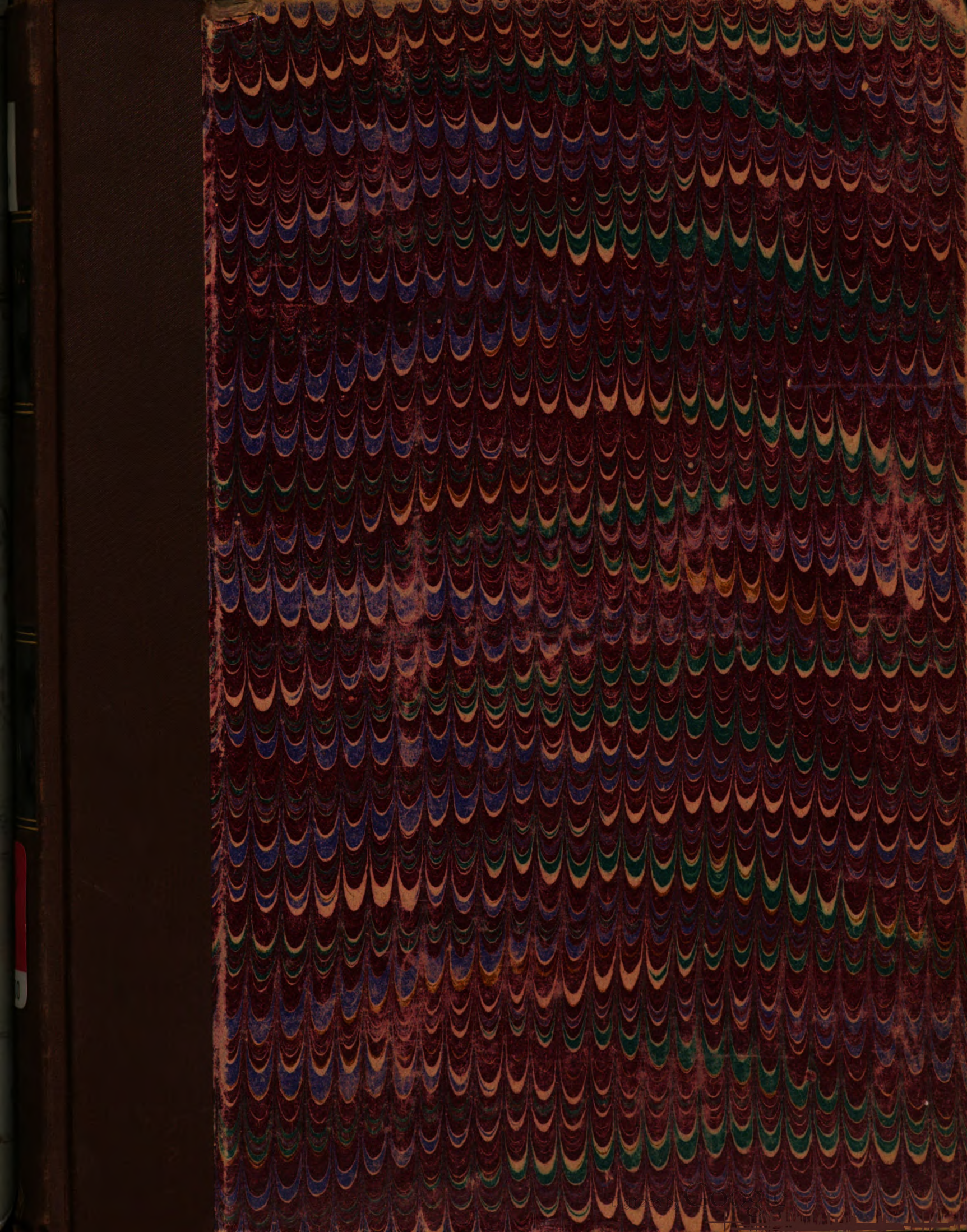
This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google™ books

<https://books.google.com>

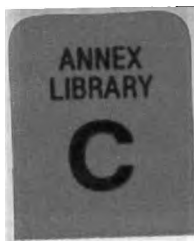








L  
16  
= 23 +  
v 53



015200

**Cornell University Library**  
BOUGHT WITH THE INCOME  
FROM THE  
SAGE ENDOWMENT FUND  
THE GIFT OF  
**Henry W. Sage**  
1891

A. 144563 ..... 15/2/1901

0421

23/2/66

CORNELL UNIVERSITY LIBRARY



3 1924 071 543 320



THE  
EDUCATIONAL TIMES,

AND

*Journal of the College of Preceptors.*

VOL. LIII.

*From January to December 1900.*

LONDON :  
FRANCIS HODGSON, 89 FARRINGDON STREET, E.C.

1900.

A. 144563

LONDON:

PRINTED BY C. F. HODGSON & SON.

2 NEWTON STREET, HIGH HOLBORN, W.C.

# INDEX.

## ARTICLES, &c.

Appointments, 23, 136, 175, 212, 248, 280, 314, 370, 411, 449, 488.  
 Arnold-Forster, H. O., on School Maps, 179.  
 Assistant-Mastering, Latter End of, 317.  
 Astronomy as a Moral Force, 249.  
 Bevan, J. O., on Education at the Paris Exhibition, 490.  
 Bradfield College, Jubilee of, 284.  
 Bradfield Greek Play, 315.  
 Chats on Child Study, III., Children and Pictures, 26.  
**COLLEGE OF PRECEPTORS**—  
 Distributions of Diplomas, Prizes, and Certificates, 177, 450.  
 General Meetings, 67, 308.  
 Meetings of Council, 33, 79, 140, 186, 217, 251, 288, 323, 421, 460, 484.  
 Certificate Examinations.—Pass List, Christmas, 1899, 93, 146; Midsummer, 1900, 333, 421.  
 Professional Preliminary Examinations.—Pass List, March, 1900, 187; September, 1900, 421.  
 Teachers' Diploma Examinations.—Pass List, Christmas, 1899, 80; Midsummer, 1900, 324.  
 Junior Forms Examinations.—Pass List, Christmas, 1899, 109; Midsummer, 1900, 343.  
 Commercial Education in Secondary Schools, 213.  
 Conference of Teachers, 70.  
 Consultative Committee, 310.  
**CORRESPONDENCE**—  
 Battle of the Scripts—P. E. Kingsford, &c., 132.  
 Commercial Departments in Schools—T. A. Orkan, 34.  
 Elementary *cum* Secondary Schools—A. E. H., 208.  
 Examination Dates—W. Ireland, 484.  
 Geographical Association—A. J. Herbertson, 170.  
 National Home-Reading Union—M. C. Mondy, 420.  
 Offer from Canada—Strathcona, 365.  
 Over-pressure, The Authors of, 34.  
 Practical Use of Phonetics—Victor Spiers, 207; B. Dumville, 244.  
 Public School Training—G. Cecil, 483.  
 Registration of Music Teachers—Teacher, 366.  
 Science at Eton—M. W. Hill, 366.  
 Secondary Inspection—F. P. B. Shipham, 289.  
 Slaying the Slain—C. Winchmore, 34.  
 Unmanageable Girls—M. A. Cantab, 420.  
 What is Grammar?—Edom Qhite, 244.  
 What is *not* Grammar—T. Le M. Douse, 289.  
 Discipline, Some Difficulties in, 131.  
 Douse, T. Le M., on What is Grammar? 168.  
 Education Gossip, 22, 65, 136, 174, 212, 248, 279, 313, 370, 410, 448, 488.  
 English Education Exhibition, 61.  
 Eve, H. W., on French Syntax Simplification, 482.  
**EVERING MEETINGS** at the College of Preceptors, Papers read at:—  
 Some Lessons from Thring's Life: by Sir Joshua Fitch, 24.  
 Licensing of Teachers: by Prof. Foster Watson, 138.  
 School Maps: by H. O. Arnold-Forster, 179.  
 Commercial Education in Secondary Schools: by A. Kahn, 213.  
 Unstable Questions of Method in the Teaching of Elementary Science: by Dr. Wormell, 240.  
 Secondary Inspection: by Dr. R. P. Scott, 281.  
 The Teaching of Patriotism: by Dr. J. J. Findlay, 442.  
 Education at the Paris Exhibition: by Rev. J. O. Bevan, 490.  
**Findlay, J. J., on the Teaching of Patriotism**, 442.  
**Fitch, Sir J., on Some Lessons from Thring's Life**, 24.  
 Pictures, 21, 65, 136, 175, 211, 247, 279, 313, 369, 409, 447, 487.

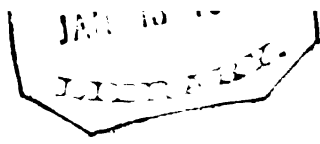
Forecasts and Comments, 21, 65, 135, 175, 211, 247, 279, 313, 369, 409, 447, 487.  
 French Syntax, State Simplification of, 413, 482.  
 Grammar, What is it? 168.  
 Jonson, Ben., on Education, 26.  
 Kahn, A., on Commercial Education, 213.  
 Keller, Helen, 372.  
**LEADING ARTICLES**—  
 Anglo-French Education, 361.  
 Assistant-Masters, 163.  
 Bill, A., and a Committee, 303.  
 Buss, Frances Mary, 202.  
 Crown of the Primary, 235.  
 Education Minister, 163.  
 Five Years' Record, 399.  
 Hap-hazard? 271.  
 Higher Elementary Schools, 201.  
 London University, 400.  
 Mason, C. P., The late, 56.  
 Modern Language Congress, 272.  
 New Beginning, 125.  
 New Parliament, 437.  
 State and the Public School, 437.  
 School Boards and Secondary Education, 477.  
 Technical Universities, 55.  
 Useful Evidence, 304.  
 Year of Conclusions, 13.  
 Licensing of Teachers, 138.  
 Literary Gossip, 23, 66, 137, 176, 213, 249, 280, 315, 371, 411, 449, 489.  
 London Mathematical Society, 38, 84, 150, 190, 226, 260, 292, 328, 425, 464, 504.  
 London Truant School, 405.  
 Marchant, E. C., on the Greek Play at Bradfield, 315.  
**MATHEMATICAL QUESTIONS AND SOLUTIONS**—Aivar, K. G. P., 224; Anthony, E., 82; Archibald, R. C., 378, 379, 423; Arnold, I., 35, 81, 224, 290, 326, 462; Barnville, J. J., 423; Bates, G. N., 290; Beyens, Prof., 258, 462; Bhattacharyya, Prof., 257, 421, 462; Biddle, D., 188, 224, 258, 501; Birtwistle, G., 36, 326; Blaikie, J., 187, 290; Briery, M., 82; Bryant, R., 36, 82; Cama, B. N., 149, 257, 379; Carroll, Lewis, 258; Chartres, R., 379, 422; Christie, R. W. D., 82, 378, 422, 502; Cochez, Prof., 36, 81, 187, 257; Cooney, W. S., 325, 501; Crofton, Prof., 36, 82, 189; Cullen, J., 82, 148, 258, 290, 326, 462, 502; Cunningham, Lieut.-Col. A., 82, 148, 188, 224, 290, 326, 422, 461, 501; Curjel, H. W., 36, 82, 148, 188, 223, 224, 257, 258, 289, 290, 325, 326, 378, 379, 423, 461, 462; Davis, R. F., 225, 423, 462; De Polignac, Prince C., 187; De Vries, J., 187, 289, 291; Droz-Furny, Prof., 35, 148, 223, 258, 289, 291, 378, 422; Edmondson, T. W., 188; Elliott, Prof., 325, 500; Flood, P. W., 82; George, A., 187; George, M., 35; Gharpurey, H. G., 223; Ghosh, Prof., 36, 82, 148, 224, 378, 501; Goldenberg, Prof., 223; Greenstreet, W. J., 289, 422, 462; Hammond, J., 187; Hardy, G. H., 149, 188, 325, 462, 501; Hilver, C. E., 377; Hudson, W. H. H., 187; Huntington, E. V., 379; Joss, C., 81, 223; Knowles, R., 35, 223, 257, 291, 378, 422; Lachlan, R., 423; Lawson, J. S., 36; Lenoire, Prof., 188, 258; Mac'coll, H., 82, 258, 377; Malet, J. C., 325, 461; Marks, Constance I., 223, 290, 378, 379; Martin, A., 188; Mathews, Prof., 147, 500; Miller, W. J. C., 502; Milnes, P., 289; Mitcheson, T., 36, 326, 422, 423; Morel, Prof., 35, 148; Morley, Prof., 461; Muggeridge, D. G., 223; Nanson, Prof., 290; Neuberger, Prof., 223, 289, 290, 379, 462; N. M. W., 223; Orchard, Prof., 461; Paranjpye, R. P., 81, 223, 258, 289, 462; Penchell, F. H., 82, 148, 224, 257, 289, 379, 423, 462; Preston, G. W., 378; Ramachari, V. S., 148; Rau, R., 462; Reay, L. E., 81, 148, 188, 223, 258, 290; Rees, E. W., 35, 223, 257; Remshaw, A., 81; Rouch, T. T., 36, 188, 224, 258, 378, 421; Roberts, R. A., 35, 223; Salutation, 36, 326, 378, 461; Sanjana, Prof., 81, 188, 258, 289, 325, 326, 379, 422, 423, 502; Smith, J. G., 289; Savage, Prof., 377; Scott, G., 35, 148; Sharpe, J. W., 81, 147; Sircom, Prof., 188, 257; Smith, J. G., 422; Stanham, W. C., 501; Stegall, J. E. A., 258; Sylvester, Prof., 257;

Taylor, H. M., 187, 325; Taylor, J. H., 36, 187, 224, 257, 289, 290, 378, 422; Third, J. A., 81, 148, 290, 422, 501, 502; Thomson, W. L., 290; Thyagarajayar, V. R., 257; Tucker, R., 188, 223, 290, 291, 379, 423; Van der Heyden, A. F., 81, 188, 224, 462; Walker, J. J., 188; Ward, P. L., 223, 258, 290; Webb, H. A., 35, 188, 258, 422; Whitworth, W. A., 189, 258, 379; Wiggins, T., 148, 289; Wilcox, A. M., 148, 187; Wilson, G. W., 147, 224, 257, 289, 325; Woodall, H. J., 257, 378.  
 Month, The, 16, 58, 128, 166, 204, 237, 274, 306, 363, 402, 439, 479.  
 Notes, 14, 56, 126, 164, 202, 236, 272, 304, 362, 401, 438, 477.  
 Paris Exhibition, Education at, 490.  
 Paris, Notes from, 250.  
 Patriotism, Teaching of, 442.  
 Prussian Academy, 207.  
 Registration of Teachers, 415.  
 Scandinavian School Meeting, 404.  
 School Maps, 179.  
 Science Teaching, Questions of Method in, 240.  
 Scott, Dr., on Secondary Inspection, 281.  
 Secondary Inspection, 281.  
 Some Criticisms, 450.  
 Story, A. T., on Astronomy as a Moral Force, 249.  
 Symposium on Education, 311.  
 Technical Education in Germany, 27.  
 Thoughts on Retiring, 67.  
 Thring's Life, Some Lessons from, 24.  
 Triumph of Education, 372.  
 Two Hundred Years Ago, 216.  
 Universities, 25, 60, 130, 167, 206, 239, 276, 365, 441, 481.  
 Vocabulary Making, 206.  
 Watson, Foster, on John Webster, 316.  
 Watson, Foster, on The Licensing of Teachers, 138.  
 Webster, John (Foster Watson), 316.  
 Women's Work at Oxford, 27.  
 Wormell, Dr., on Elementary Science Teaching, 240.  
**REVIEWS, NOTICES, &c.**  
**REVIEWS.**  
 Abbott's History of Greece, Part III., 217.  
 Æschylus (Sidgwick), 253.  
 Æschylus' Suppliants (Headlam), 183.  
 Alfred in the Chronicles (Conybeare), 141.  
 Anderson and Storr's French Words, 320.  
 Appian's Roman History (White), 78.  
 Aristophanes' Frogs (Huntingford), 285.  
 Aristotle's Ethics (Burnet), 220; (Muir, head), 375.  
 Aristotle's Poetics (Tucker), 77.  
 Baker's Historical French Grammar, 142.  
 Balfour's Nineteenth Century, 373.  
 Barnett's Greek Drama, 285.  
 Bots and Swan's Facts of Life, Part I., 455.  
 Bismarck (Headlam), 77.  
 Bradby's Rugby, 286.  
 Bury's History of Greece, 417.  
 Cairns' Introduction to Rhetoric, 30.  
 Canadian Atlas, 374.  
 Carpenter's Elements of Rhetoric, 30.  
 Cicero's Letters (Shuckburgh), Vols. I. and II., 28; Vol. III., 375.  
 Cicero's Old Age and Friendship (Shuckburgh), 454.  
 Clark's History of Epic Poetry, 285.  
 Clutton-Brock's Eton, 495.  
 Conran and Kendall's English History, 30.  
 Corpus Poetarum Latinorum (Postgate), 253.  
 Cronwell (Firth), 286.  
 Cust's Eton College, 76.  
 Dante (Gardner), 219.  
 Dictionary of National Biography, Vol. LXIII., 318.  
 Dresser's Education, 494.  
 Fitch's Educational Aims and Methods, 251.  
 Fitz-Simon's The Gods of Old, 28.  
 Frew's Object Lessons in Geography, Part II., 319.  
 Fruit's Mind of Poe's Poetry, 143.  
 Geikie's Field Geology, 418.  
 Gibbon's Decline and Fall (Bury), 252.  
 Green's British Empire, 373.

Gregorovius' Rome, Vol. VII., Part II., 374.  
 Haberlandt's Ethnology, 219.  
 Hannah's Eastern Asia, 218.  
 Homer's Odyssey (Butler), 494.  
 Jenks's History of Politics, 212.  
 Koch's Roman History (Barnett), 183.  
 Lewis's Crystallography, 30.  
 Koch's Roman History (Barnett), 183.  
 Lowell's Colonial Civil Service, 253.  
 Lucretius (Bailey), 141.  
 Lyde's School Geographies, 319.  
 MacCunn's The Making of Character, 219.  
 Macdonell's Sanskrit Literature, 252.  
 McDougall's Historical Reader, 373.  
 Mackinnon's Edward the Third, 182.  
 Macmillan's Early Childhood, 219.  
 Maguire's Military Geography, 142.  
 Maher's Psychology, 495.  
 Mair's Speaking, 183.  
 Making of the British Colonies, 373.  
 Matheson's Roman History, 183.  
 Milton (Raleigh), 495.  
 Modern Language Association's Report, 416.  
 More Finds in Egypt, 182.  
 Omond's Romantic Triumph, 181.  
 Peacock's Canada, 374.  
 Plato's Education of the Young (Hosannet), 319.  
 Plato's Republic (Tucker), 418.  
 Pollard's England under Somerset, 493.  
 Powell and Tout's History of England, 465.  
 Richardson, Samuel (Thomson), 453.  
 Richelieu (Perkins), 454.  
 Royal Osborne Geographical Readers, Book VI., 319.  
 Ruskin, John (Mevnell), 320.  
 Sayce's Babylonians and Assyrians, 220.  
 Scott's Studies in Fossil Botany, 418.  
 Smith's History of Greece (Marindin), 217.  
 Smith's Transition Period, 285.  
 Smyth's Greek Melic Poets, 219.  
 Spalding's London School Board, 415.  
 Spence's History of the English Church, 219.  
 Stock's Logic, 181.  
 Sweet's History of Language, 219.  
 Tennyson's Early Poems (Collins), 285.  
 Thorp and Nicholl's Use of the Voice, 183.  
 Thwaites (Jones), 141.  
 Tol's Charterhouse, 286.  
 Unwritten Laws (Pitcairn), 29.  
 Waliszewski's Russian Literature, 181.  
 Ware's Educational Reform, 142.  
 Warner's Nervous System of the Child, 219.  
 Welton's Logical Bases of Education, 77.  
 Winch's Problems in Education, 452.  
 Woodward's British Empire, 30.  
 Wordsworth's South Africa, 219.  
 Wyatt's English Literature, 417.  
 Xenophon's Hellenica (Underhill), 320.  
**GENERAL NOTICES.**  
 Adventurers All, 499.  
 Adventures in the South Pacific, 500.  
 Æschylus' Prometheus Vincit (Plaintow and Mills), 144.  
 After Worcester, 499.  
 Alexander's Army and Navy Musical Drill, 256.  
 Alge and Rippmann's First German Book, 32.  
 Alge and Rippmann's German Reader, 32.  
 Allan Adair, 500.  
 Allen's Tales from Tennyson, 376.  
 Almond's Christ the Protestant, 32.  
 Annual Land, 500.  
 Annandale's Concise Dictionary, 186.  
 Arey's Elementary Chemistry, 184.  
 Arnold's Continuous Story Reader, 496; Geographical Scenes, 186; Laureate Poetry Books, 288; Local Readers, West Country, 287; Passages for Dictation, 257.  
 Arnold-Forster's Our Great City, 255.  
 Arrian's Cursing (Johnson), 419.  
 Art Studies of Animals, 256.  
 Bab's Baby, 459.  
 Bully's German Commercial Reader, 457.  
 Baring-Gould's Crock of Gold, 33.  
 Bates's Character Building, 222.  
 Beak's French Reader, 145.  
 Bell's Cathedral Series, St. Paul's, 185; Carlisle, 185.

- Bell's Continental Churches - Chartres, 458.  
 Bell's History Readers, 256.  
 Benson's English Grammar, 458.  
 Bertenshaw's French Unseens, 321.  
 Berthou's Modern French Prose, 221.  
 Bird's Jesus the Carpenter of Nazareth, 79.  
 Blackie's Conversational Readers, 498 : Drawing Sheets, 458 : Handbooks of English, 322 : Shaded Drawings, 222 : Sciences Handbook, Standard VI., 375 : Standard Class Maps, 458.  
 Blunt's General Intelligence Papers, 146.  
 Blythe's Geometrical Drawing, Part II., 377.  
 Bo-Peep, 500.  
 Bos's Agricultural Zoology, 496.  
 Bourne's Comparative Anatomy, Vol. I., 420.  
 Boutflower's Aysgarth Sermons, 256.  
 Boy Crusoes, 500.  
 Boy's Own Annual, 460.  
 Brennan's From Blake to Arnold, 222.  
 British Antologies (Spenser), 79.  
 Brooke-Hunt's Prisoners of the Tower, 32.  
 Brown's Easy Greek Syntax, 321.  
 Brown's First Form Grammar, 185.  
 Brownie, 400.  
 Bunting's Freehand Ornament Drawing, 32.  
 Buss's Morning and Evening Prayer, 186.  
 Buss's Text-Book of Holy Communion, 322.  
 Cesar de Bello Civili, Book III. (Peskett), 321.  
 Cesar de Bello Gallico, Book I. (Bartram), 144 : Book III. (Colson and Gwyther), 178 : Book V. (Shuckburgh), 143 : (Reynolds), 286 : Book VI. (Humphreys), 496.  
 Carpenter's Rhetoric, 457.  
 Cartwright's Brushwork Copy Books, 498.  
 Cartwright's Domestic Science, 420.  
 Cartwright's Practical Chemistry, 376.  
 Cassell's Guide to London, 256 : (Guide to Paris, 256 : Saturday Journal, 500).  
 Castle's Workshop Mathematics, Part II., 497.  
 Caxton's Historical Readers, Book V., 420.  
 Celia's Conquest, 500.  
 Charge, 459.  
 Chatty Object Lessons, 185.  
 Chatty Readings in Science, 185.  
 Chetham's Chemistry, Second Year, 376.  
 Children's Hour, 79.  
 Children's Treasury, 500.  
 Chrystal's Algebra, Part II., 255.  
 Cicero in Catilina (Auden), 287.  
 Cicero pro Lege Manilia (Nicol), 144.  
 Cicero, Selections from (Charles), 419.  
 Clowes and Coleman's Chemistry, 376.  
 Colin's Contes et Saynetes, 255.  
 Comenius (Monroe), 498.  
 Constable and Mills' Algebra, 255.  
 Conty's Paris Exhibition Guide, 222.  
 Conway's Stories of Great Men, 419.  
 Cooper's Practical Chemistry, 184.  
 Coppock's Volumetric Analysis, 184.  
 Cornford's English Composition, 420.  
 Cranmer (Innes), 256.  
 Crown Copy Books, 288.  
 Cumberbatch's Latin Prose, 456.  
 Cunuder's Eclectic French Method, 456.  
 Cyclopaedia of Mechanics, 498.  
 Cynthia's Bonnet-Shop, 459.  
 Daudet's Tartarin (Stiepmann), 497.  
 Daudet's Tour des Maures (Wall), 221.  
 Delbos's Metric System, 322.  
 De Pressensé's Joyeuse Nichée (Alge), 456.  
 De Segur's Princesse Rosette (Cocking), 144.  
 Des Voisin's Pierre Cœur (Payen-Payne), 456.  
 Dewey's School and Society, 376.  
 Droll Doings, 460.  
 Dugan's Picture-Map of the World, 457.  
 Dumas's Histoires d'Animaux (Bertenshaw), 322.  
 Dürer (Knackfuss), 376.  
 Durlée's Plane Trigonometry, 497.  
 Dutt's Civilization of India, 255.  
 Eardley-Wilmot's Our Navy, 32.  
 Earl's Natural Philosophy, 78.  
 Ebner's Herr Walther (North), 287.  
 Edser's Heat, 78.  
 Educational Drawing Copies, 498.  
 Educational Reader, 498.  
 Edwards's Commercial Law, 288.  
 Emlage's Mechanics of Solids, 497.  
 Eutropius, Books I. and II. (Laming), 221.  
 Eve and Baudiss's French Grammar Supplement, 497.  
 Every Inch a Briton, 499.  
 Ewart's First Stage Botany, 420.  
 Farmer's Scarlet and Blue, 256.  
 Fasnacht's French Grammar, 255.  
 Feairnside's History of England, 146.  
 Findlay's Laudate, 420.  
 Fink's History of Mathematics (Bennan and Smith), 496.  
 Flux's Building of the Empire, 256.  
 Forte's Italienisches Lesebuch, 221.  
 Fortunes of Peggy Treherne, 460.  
 Frazer's Asinette, 456.  
 French's Practical Chemistry, Part I., 184.  
 Fuchs's Russisches Lesebuch, 322.  
 Garlic and Dexter's Object Lessons, Standards I.-III., 458.  
 Garlic's Penmanship, 256.  
 Geoff Blake, 499.  
 Gill's Cartographic Maps, 458.  
 Girl's Own Annual, 460.  
 Girl Without Ambition, 499.  
 Gold in the Furnace, 459.  
 Goldsmith's Anthology (Arber), 457.  
 Goodrich's Topics on History, 287.  
 Gordon (Synge), 498.  
 Grace and Rosenberg's Coordinate Geometry, Part II., 31.  
 Grafenberg's Spanisches Lesebuch, 221.  
 Great Irishmen, 420.  
 Gregory and Simmons's Physics, Part II., 184 : Second and Third Stages, 496.  
 Guinness's Key to the Apocalypse, 222.  
 Gunpowder Treason, 500.  
 Hachette's Gift Books, 33.  
 Hadley's Magnetism and Electricity, 78.  
 Hall's Greek Testament Reader, 254.  
 Hamilton and Kettle's Geometry, 322.  
 Harrison's Earth Knowledge, 145.  
 Hartog's French Grammar, 456.  
 Hauff's Scheik von Alessandria (Rippmann), 185.  
 Havelok (Holthausen), 498.  
 Heads or Tails, 499.  
 Heine's Buch der Lieder, 376.  
 Henderson and Parker's Chemistry, 184.  
 Henderson's Magnetism and Electricity, 496.  
 Herman's Geometrical Optics, 497.  
 Herodotus, Book II. (Stout), 254.  
 Higher School Arithmetic, Junior, 497.  
 Highton's Qualitative Analysis, 184.  
 Hill's Euclid, Books V. and VI., 322.  
 Hill's Introduction to Science, 254.  
 Hill's Millinery, 288.  
 Hill's Great Books, 256.  
 Hoffmann's Schiller's Jugendjahre (Hamby), 145.  
 Homer's Odyssey (Marvin), 500 : Book II. (Nairn), 144.  
 Horace's Odes, Book III. (Latter), 419 : (Gwynn), 184 : Book IV. (Gwynn), 31.  
 Horace's Satires (Hayes and Plaistowe), 254.  
 House that Grew, 459.  
 Hudson's Divine Pedigree of Man, 287.  
 Hume's Modern Spain, 32.  
 Hutchinson's German Without Tears, 145 : Book II., 457.  
 Huxley's Physiology (Foster and Lea), 184.  
 In Far Bolivia, 500.  
 In Pinatone Land, 500.  
 In the Irish Brigade, 459.  
 In the King's Service, 499.  
 Ireson's Book-Keeping, 458.  
 Iron Heart, 499.  
 Isosceles de Bigis (Woodhouse), 183.  
 Johnson's Military Drill, 186.  
 Johnston's (T. R.) Scripture Scenes, 222.  
 Johnston's (W. & A. K.) Charts, 222 : Pictures for Object Lessons, 458.  
 Johnstone's Ancient Greece, 455.  
 Jonathan Toms, 459.  
 Jones the Mysterious, 499.  
 Jumble School, 500.  
 Kaiser and Thonaille's German Prepositions, 376.  
 Kaiser's German Composition, 457.  
 Kastner and Atkins's French Literature, 321.  
 Kastner's Select French Passages, 145.  
 Kennedy's Beasts, 32.  
 King Alfred Readers, 377.  
 Krieg und Frieden (Bernhardt), 497.  
 Kurz's Die Humanisten (Voegelin), 287.  
 Laboulaye's Contes Bleus (Fontaine), 497.  
 Lacombé's French Literature, 287.  
 Lamartine's Revolution Française (Super), 255.  
 Lamb's Elia, Second Series (Hallward), 420.  
 Lang's Grey Fairy Book, 460.  
 Le Bris' French Infinitive, 456.  
 Lehfeldt's Physical Chemistry, 78.  
 Leisure Hour, 500.  
 Lewis's Manual of Composition, 256.  
 Lié's Prononciation Française, 376.  
 Life on the Ocean Wave, 500.  
 Life's Anchor, 499.  
 Lindsay's Kitty's Garland, 288.  
 Litta's French Conversational Manual, 322.  
 Little Folks, 500.  
 Little Ray of Sunshine, 460.  
 Little Twin Dragons, 460.  
 Livy, Book V. (Hort), 221 : (Laming), 184 : Book VI. (Laming), 455.  
 Livy's Hannibal's First Campaign (Traves), 78.  
 Loney's Elements of Hydrostatics, 497.  
 Lomenans' Pictorial Geography Readers, 222.  
 Lord's Mothers' Songs, 32.  
 Love and Mr. Lewisham, 288.  
 Lucian's Charon and Timon (Mills), 287.  
 Luzel's Deux Legendes Bretonnes (Durhamel), 321.  
 Lyde's Asia, 457.  
 Lydon's Model Drawing, 498.  
 Lycias's Eratosthenes, &c. (Thompson and Mills), 221.  
 Lyster's First Stage Hygiene, 420.  
 Macaulay's Frederic the Great (Flux), 145.  
 Macaulay's Lord Clive (Downie), 222.  
 McDougall's Outlines of Geography, 287.  
 McDougall's Physics and Chemistry, 375.  
 Maclean and Marchant's Electricity and Magnetism, 496.  
 Maclean's Natural Philosophy, 496.  
 Macmillan's Registers, 458.  
 Making of Europe, 32.  
 Mallock's Modern Cookery, 322.  
 Malot's Remi en Angleterre (Verrall), 144.  
 Manson's French Literature, 79 : German Physiology, 185.  
 Mark Hamilton's Daughters, 79.  
 Marr's Study of Scenery, 145.  
 Marshall's The Frog (Fowler), 221.  
 Marshall's New English Series, 222.  
 Masse's Abbey Church of Tewkesbury, 256.  
 Mathew's First Sketch of English History, 79.  
 Maunders's Greenwich Observatory, 457.  
 Macklejohn's Europe, 146.  
 Mellow's English Literature, 145.  
 Mermee's Coup de Pistolet (Mitchell), 456.  
 Miles's How to Prepare Essays, 186.  
 Miller's Commentary on the Gospels, 221.  
 Miss Nonentity, 459.  
 Moelwyn-Hughes and Struve's German Method, 456.  
 Molière's Le Bourgeois Gentilhomme (Spencer), 321.  
 Moran's Animal Biology, 79.  
 Morrison's Chronicle of the Year's News, 222.  
 Moule's Journeys to Jerusalem, 460.  
 Murch's Combined Readers, 33.  
 Muret-Sanders's German Dictionary, 185.  
 Murray's Handy Classical Maps, 31, 183, 375.  
 Murray's Plane Trigonometry, 145.  
 My Lady Marcia, 498.  
 Nelson's Picture Books, 400, 560 : Pictures of the Empire, 458.  
 Nesfield's English Grammar, 186.  
 Newman's Friendship, 459.  
 Nine's My First French Book, 79.  
 Noah's Ark Geography, 500.  
 Nodier's Tresor des Fèves (Le François), 456.  
 Normand's L'Emeraude des Incas (Binnis), 221.  
 Norton's Courtesy, 186.  
 Ocean Adventurer, 459.  
 One of Butler's Horse, 498.  
 Orsi's Modern Italy, 185.  
 Our Darling's First Book, 460.  
 Out with Garibaldi, 459.  
 Overton's Geographical Method, Book II., 256.  
 Ovid's Metamorphoses (Pearce), 254 : Vinea, 321 : Book I. (Allcroft and Hayes), 143 : Books I. and II. (Peck), 184.  
 Ovid's Tristia (Simpson), 143 : Book III. (Woolrych), 286.  
 Parker and Haswell's Zoology, 254.  
 Parker's Practical Zoology, 254.  
 Pearce's Tales of Ancient Thessaly, 144.  
 Pearce's Universal Writing-Books, 288.  
 Pennell's Over the Alps, 377.  
 Phœdrus' Fables (Chambers), 419.  
 Phillips' County Readers, Kent, 458 : Diagram Hand-Maps, 186 : Handy-Volune Atlas, 458 : Object-Lesson Pictures, 458 : School Board Atlas, 498 : Semi-Upright Copy-Books, 458.  
 Pope's Essay on Criticism (Ryland), 186.  
 Praeger's Child's Picture Grammar, 460.  
 Princess and Fairy, 185.  
 Quiller-Couch's Tales from Shakespeare, 145.  
 Racine's Athalie (Eve), 144.  
 Raffles, Sir Stamford (Egerton), 322.  
 Ranson's French Grammar, 221.  
 Remy's Essays and Essay-Writing, 287.  
 Reubmann and Seiler's Human Frame, 457.  
 Red Jacket, 499.  
 Red, White, and Green, 498.  
 Reddie's Abbotsholme, 288.  
 Religious Education, 288.  
 Rhoda, 459.  
 Ricks's First Elements of Science, 222.  
 Robertson-Scott's People of China, 457.  
 Rolleston's English History Note-Book, 458.  
 Romance of the South Pole, 459.  
 Roscoe and Horden's Inorganic Chemistry, 78.  
 Rosenberg's Mechanics of Solids, 496.  
 Rotech's Ocean of Air, 457.  
 Rouse and Sime's Attic Greek, 419.  
 Rutley's Mineralogy, 376.  
 Rylands's Studies of Heads, 323.  
 St. Peter, First Epistle of (Masterman), 498.  
 Sallust's Catiline (Hall), 419.  
 Sand's Ailes de Courage (Proper), 79.  
 Scanderlato's Lezioni Italiane, 376.  
 Schiller's Maria-Stuart (Müller), 497 (Schoenfeld), 31.  
 School Days and Holidays, 459.  
 Schoolmistress of Haven's End, 499.  
 Scott's Old Mortality (Nicklin), 323.  
 Scott's Organic Education, 256.  
 Secombe's Age of Johnson, 79.  
 Secondary Education (Knight), 222.  
 Seven Muids, 499.  
 Shakespeare, The Swan, 145.  
 Shakespeare's As You Like It (Johnson), 222 : (Verity), 33.  
 Shakespeare's Romeo and Juliet (Downen), 498.  
 Shakespeare's The Tempest (Johnson), 222.  
 Shonstone's Inorganic Chemistry, 376.  
 Shoosmith's Geography, Part I., 287.  
 Sister of the Red Cross, 500.  
 Sisters Three, 499.  
 Skat's Specimens of English Prose, 79.  
 Smith and Bryant's Euclid, 31.  
 Smith's Boyhood of a Naturalist, 32.  
 Smith's Commercial Geography, 458.  
 Smith's Teaching of Mathematics, 255.  
 Snelham's Studies in Bookkeeping, 458.  
 Snelgrove's Object-Lessons in Botany, Book III., 457.  
 Somerville and Byrne's German Writer, 145.  
 Songe d'Or (Weekley), 322.  
 Sophocles's Antigone (Wells), 375.  
 Spencer's Seal-France, 184.  
 Spier's First French Book, 321.  
 Stanford's Orographical Map, 458.  
 Stein's German Exercises, Part II., 497.  
 Story of Dick, 256.  
 Stroud's Practical Physics, 78.  
 Sunday at Home, 500.  
 Swann's English Literature, 287.  
 Tacitus's Agricola (Walters), 31.  
 Taker and Rogot's German Idioms, 497.  
 Tarback and Major's Sand Modelling, 33.  
 Tarr and McMurry's Home Geography, 256.  
 Taylor's Synthetical Maps, 377.  
 Technical Instruction Handbook, 457.  
 Temple Reader, Junior, 458.  
 Tenyson (Rowe and Webb), 377.  
 Thomas's Latin Verse Book, 183.  
 Thorogood's Manipulation of the Brush, 420.  
 Three Fair Maids, 499.  
 Thompson's Electricity and Magnetism, 375.  
 Thornton's Physiology, Section II., 184.  
 Three Witches, 460.  
 Through a Needle's Eye, 500.  
 Thucydides's Histories, Book VI. (Marchant), 31.  
 Tom Andrews, 499.  
 Tom Wallis, 459.  
 Tom's Boy, 500.  
 Trotman's Inorganic Chemistry, 376.  
 True Tales of Fairyland, 500.  
 Tweeddale's Geographies, 458.  
 Underhill's Seale Media, 184.  
 Up the Creeks, 459.  
 Van Dyke's Ships and Havens, 460.  
 Varley's Queen, 496.  
 Victoria, Queen (Oliphant), 498.  
 Virgil's Æneid, Book I. (Escott), 254 : Book II. (Wainwright), 144 : Book III. (Sandford), 375 : (Wainwright), 254 : Book IV. (Warman), 144 : Book V. (Sidgwick), 143 : Book VI. (Phillipson), 419 : Books VII.-XII. (Coast), 286 : (Page), 321.  
 Virgil's Georgics, Book I. (Winbolt), 455 : Book IV. (Sargeant), 143.  
 Von Widenbruch's Opfer des Berufs (Perry), 287.  
 Walker's Commercial Correspondence, 377.  
 Walker's Physical Chemistry, 78.  
 Wallace's Timber and Tools, 288.  
 Walpole's Handbook to Joshua, 255.  
 Walther's Allgemeine Meereskunde (Sterling), 255.  
 Warren's French Prose, 255.  
 Waverley Historical Reader, 256.  
 Wells's Latin Prose Composition, 143.  
 Werner-Spanhooff's Lehrbuch der Deutschen Sprache, 255.  
 Wilson's Latin Sentences, 419.  
 Winke für junge Kaufleute, 376.  
 With Buller in Natal, 458.  
 With Rifle and Bayonet, 459.  
 World and its Commerce, 185.  
 Wulfson's Geographical Questions, 186.  
 Xenophon's Anabasis, Book I. (Marchant), 375 : Book V. (Edwards), 143.  
 Ye Mariners of England, 498.  
 Yeats's Brush-work Studies, 33.  
 Yorke's Magnetism and Electricity, 78.  
 Young and Lieberman's Calculus, 496.  
 Young's Elementary Physiography, 221.  
 Zschokke's Wirthshaus zu Cransac (Joynes), 457.





# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 465.

JANUARY 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.—

The Half-Yearly General Meeting of the Members of the Corporation will be held at the College, Bloomsbury Square, W.C., on Saturday, January 20th, 1900, at 5 p.m.  
C. R. HODGSON, B.A., *Secretary*.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 2nd of January, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 6th of March, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—In addition to the Doreck Scholarship of £20, the following Prizes will be completed for:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary*.

## PRELIMINARY EXAMINATION OF

**MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 6th, 7th, and 8th of March, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary*.

## COLLEGE OF PRECEPTORS.—

### EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary*.

## COLLEGE OF PRECEPTORS.

(Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS.

The First Course of Lectures (Twenty-sixth Annual Series), by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic in University College, London, on "Intellectual Education," will commence on Thursday, February 15th, at 7 p.m.

\* \* A Doreck Scholarship, of the value of £20, will be awarded at the Diploma Examination at Christmas next, to the candidate who, having attended two courses of the Training Class Lectures during the preceding twelve months, and having passed the full examination for a College Diploma, stands first in the examination in Theory and Practice of Education.

The Fee for the Course is Half-a-guinea.

The Lectures will be delivered on Thursday Evenings at 7 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.  
C. R. HODGSON, B.A., *Secretary*.

## COLLEGE OF PRECEPTORS,

BLOOMSBURY SQUARE, LONDON, W.C.

### CONFERENCE OF TEACHERS

AT THE

IMPERIAL INSTITUTE, SOUTH KENSINGTON, S.W.

Saturday, January 6th, 1900.

The Council of the College of Preceptors, having accepted the invitation of the authorities of the English Education Exhibition to take part in a Series of Conferences to be held in the Conference Hall of the Imperial Institute after the opening of the Exhibition by H.R.H. the Prince of Wales on January 5th, have arranged to hold a Conference of heads of schools connected with the College, on Saturday, January 6th, when the question of

### The Conditions of the Formation of a Register of Secondary Schools

will be discussed.

The Chair will be taken by Sir JOSHUA FITCH, at 11 a.m.

The subject will be introduced by R. WORMELL, Esq., D.Sc., M.A., F.C.P., and Papers will be read:—

"On the Essentials of Sanitary School Premises." By ARTHUR NEWSHOLME, M.D., F.R.C.P., D.P.H. (Lond.), Medical Officer of Health for Brighton.

"On Examination Tests, Oral and Written." By H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester.

"On Local Examinations as conducted in France." By Miss E. WILLIAMS.

The sanitary sufficiency of School Premises, the adequacy of the Teaching Staff and Appliances for Teaching, &c., will form the subject of discussion at the Morning sitting—from 11 a.m. to 1 p.m.

The question of Examinations (oral and written) as a means of testing the results of the Teaching will be discussed at the Afternoon sitting—from 3 to 6 p.m.

All Teachers, whether members of the College or not, are cordially invited to attend, and to take part in the discussion.  
C. R. HODGSON, B.A., *Secretary*.

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## NOTICE.—The "EDUCATIONAL

TIMES" for February will contain the CLASS LISTS of CANDIDATES who have passed at the recent CHRISTMAS EXAMINATIONS of the College of Preceptors.

The Volume for 1899 is now ready, price 7s. 6d. Cases for binding the Volume may also be had, price 1s. 6d.; by post, 1s. 8d.

## LONDON COLLEGE OF MUSIC.

(Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FORMUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LERDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS IN PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in April next, when certificates will be granted to all successful candidates. Last day for entry, March 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

The NEW SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), is now ready and may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, *Secretary*.

## LONDON B.A. AND B.Sc., 1899.

AT B.A.

107

U.C.C. Students

PASSED,

Forming

61.1 per cent.

OF THE LIST,

AND GAINING

11 Places

in Honours.

AT B.Sc.

43

U.C.C. Students

PASSED,

Forming

57.3 per cent.

OF THE LIST,

AND GAINING

12 Places

in Honours.

### FOR CANDIDATES WHO HAVE FAILED

A Short Course for B.A. and B.Sc., 1900, is provided.

Fee for the whole Course (B.A.) in all Subjects, 28. 8s. 0d.

Fee for the whole Course (B.Sc.) in all Subjects, 27. 17s. 6d.

Single Subjects can be taken.

Prospectus, and full particulars of Classes, post free on application to

THE SECRETARY,  
University Correspondence College London Office,  
32 Red Lion Square, Holborn, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)  
Principal—H. R. REICHEL, M.A.

The Session began October, 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—i.e. £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to  
JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

## UNIVERSITY OF WALES.

### MATRICULATION EXAMINATION, 1900.

The University Court will shortly appoint MATRICULATION EXAMINERS as follows:—

English Language and the History of England and Wales	*Professor J. W. Hales, M.A. *Professor J. K. Laughton, M.A.
Mathematics	*R. B. Hayward, M.A., F.R.S. Major P. A. McMahon, R.A., F.R.S. E. S. Shuckburgh, M.A. *Professor E. A. Sonnenschein, M.A.
Latin	*R. D. Hicks, M.A.
Greek	Professor John Rhys, M.A., LL.D.
Welsh	H. E. Berthon, B. es L.
French	*Professor Kuno Meyer, Ph.D., M.A.
German	*Professor G. M. Minchin, M.A., F.R.S.
Dynamics	*H. P. Morley, D.Sc., M.A.
Chemistry	Professor J. Reynolds Green, D.Sc., F.R.S.
Botany	

The Examiners whose names are marked with a \* have served for the full period of three years.

Particulars will be given by the Registrar of the University, Brecon, to whom applications must be sent on or before January 30th, 1900.

IVOR JAMES,

Registrar of the University of Wales, Brecon.  
December, 1899.

## UNIVERSITY COLLEGE, BRISTOL.

### DEPARTMENTS:

Chemistry.	Biology.	Modern Languages.
Mathematics.	History and	Oriental Languages.
Physics.	Literature.	International Law.
Engineering.	Classics.	Medicine.
Geology.		

The Second Term will begin on January 16th.

Sessional Courses are organized for the Matriculation, Preliminary Scientific, Intermediate Arts, and Intermediate Science Examinations of the University of London, and for the B.A. and B.Sc. Degree work. Composition Fee for each of the above Courses now reduced to £13. 13s. per Session.

Registration Fee, One Guinea.

Complete Three Years' Courses are arranged for Mechanical and Electrical Engineering, a Two Years' Course in Civil and Mining Engineering, and Courses for Students intending to become Architects and Surveyors. The Chemical and Physical Laboratories and the Workshops will be open Two Evenings a week.

Special Day and Evening Courses in all Departments are given by the Professors and Lecturers.

THE WORK OF WOMEN STUDENTS IS UNDER THE SUPERVISION OF A LADY TUTOR.

For full information see Prospectus, which will be forwarded free on application to

JAMES RAFTER, Secretary.

## UNIVERSITY MATRICULATION AND COLLEGE OF PRECEPTORS.—Mr. E. BAYNES BADCOCK, M.A. Cambridge (Sen. Opt.), prepares for Examinations privately and in Classes. One or two Boarders can be taken.—62 Warwick Gardens, Kensington, W.

## THE SANITARY INSTITUTE.

### Examination for School Teachers.

The next Examination in PRACTICAL HYGIENE FOR SCHOOL TEACHERS will be held in London on February 8th, 9th, 10th, 1900. The Examination includes:—Part I. Personal Hygiene and Physiology.—Part II. Hygiene in Schools and Private Dwellings.—And Part III. Hygiene in Education.

Forms and particulars can be obtained at the Offices of the Institute, Margaret Street, London, W.

E. WHITE WALLIS, Secretary.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.  
SESSION 1899-1900.

The Lent Term will begin on Thursday, January 18. Lectures are given in all branches of General and Higher Education. A single Course of Lectures in any subject may be attended, or Students can enter for (1) a University Course in Arts or Science in preparation for the Examinations for Degrees of the University of London; (2) a College Course; (3) a Professional Training in Teaching (prepares for the Examinations for Teaching Diplomas granted by the Universities of Cambridge and London); (4) a Course of Scientific Instruction in Hygiene (designed to furnish work with the training for such posts as are now open to them); (5) the Art School. Six Laboratories are open to Students for Practical Work.

Arrangements will be made for Students who have Matriculated in January.

Students can reside in the College.  
Further information on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.  
DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.

(Recognized by the Cambridge Syndicate.)

Head of the Department—

Miss HANNAH ROBERTSON, B.A.,  
to whom all applications should be addressed.

The Session for 1900 begins on January 18.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

A Course of Ten Lectures for Teachers on the Teaching of Elementary Physiology, followed by a class for practical work, will be given by J. S. Atkins, M.A., M.B., on Saturday mornings at 10 a.m., beginning on January 20.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

### THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEFIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## HOME AND COLONIAL

### SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—THE REV. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS.—This College provides a complete course of training for well-educated women who intend to become Teachers. The Course includes attendance at Professor Laurie's Lectures on Education at the University of Edinburgh, and practice in Class Teaching in several schools. Several Bursaries of £30 are offered annually. Students may enter in January and October for a Course of Three Terms. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## THE JOINT AGENCY FOR MEN TEACHERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Agencies for Assistant-Masters and Tutors hitherto conducted by the College of Preceptors, the Teachers' Guild, and the Assistant-Masters' Association, have been amalgamated and placed under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c.

The rates of Commission charged to Assistant-Masters are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

## THE MANCHESTER CLERICAL, MEDICAL, AND SCHOLASTIC

### ASSOCIATION, Limited,

8 KING STREET, MANCHESTER.

PRINCIPALS of Schools are invited to send particulars of Vacancies for Assistants. School Transfers negotiated. For terms, apply—SECRETARY.

## SCHOLASTIC REGISTRY (very

select).—Masterships. Sale and Purchase of Schools. Private Tuition. All Scholastic Work. Large and rich connexion.—Rev. F. H. CARLISLE, M.A., 8 Serjeants' Inn, Fleet Street, London.

## KELLAND TRAINING COLLEGE

FOR TEACHERS, HIGH SCHOOL, AND KINDERGARTEN, LEICESTER.

Principals—Miss MORGAN, N.F.U. (Higher).

Miss J. MORGAN, B.A. (Lond.).

Head Kindergarten Mistress—

Miss JOHNSON, N.F.U. (Higher).

Preparation for the National Froebel Union Certificates. Cambridge Teacher's Diploma. Entrance Scholarships. Grounds comprise Tennis Court, Croquet Lawn, &c.

## ROYAL INDIAN ENGINEERING

COLLEGE, COOPERS HILL, STAINES.

The Course of Study is arranged to fit an Engineer for employment in Europe, India, and the Colonies. About Forty Students will be admitted in September, 1900. The Secretary of State will offer them for competition. Twelve Appointments as Assistant Engineers in the Public Works Department, and Four Appointments as Assistant Superintendents in the Telegraphs Department, One in the Accounts Branch, Public Works Department, and One in the Traffic Department, Indian State Railways.

For Particulars apply to SECRETARY at College.

## MR. H. A. NESBITT (joint-author

of "The Science and Art of Arithmetic," by A. SONNENSCHIEIN and H. A. NESBITT, M.A., has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic, 16 South Hill Park Gardens, Hampstead, N.W.

**UNIVERSITY TUTORIAL COLLEGE,**

Red Lion Square, Holborn, W.C.

**LONDON UNIVERSITY EXAMINATIONS.**



**MORNING, AFTERNOON,  
AND  
EVENING CLASSES**

FOR THE

**Matriculation,**

**Inter. Arts, Science and Law,**

**Prelim. Sci. (M.B.),**

**B.A., B.Sc., and LL.B.**

**Examinations of London University.**

**CHEMICAL, PHYSICAL, and BIOLOGICAL LABORATORIES.**

During the year 1899 eighty-three Students of University Tutorial College passed the Matriculation Examination, and nearly two hundred were successful at the Science Examinations of London University, with twenty-six places in Honours.

The next Term commences Monday, January 22nd, 1900.

Full particulars on application to

**THE VICE-PRINCIPAL,**

University Tutorial College,

**32 Red Lion Square, Holborn, W.C.**

**Diploma Correspondence College.**

The ONLY College that coaches SOLELY for

**A.C.P., L.C.P.,  
F.C.P.**

**SUCCESSES: 108 at A.C.P.; 80 at L.C.P.  
(7 in Honours).**

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**LONDON MATRICULATION and**

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

**PRIVATE TUITION, Classes, or Correspondence Tuition for all Examinations.** Fee for course of ten lessons in any subject by correspondence, 12s. 6d. (a reduction when more than two subjects are taken at same time). Many recent successes.—P. J. MORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

**TUITION BY CORRESPONDENCE.**

—HOME STUDY COURSES.—A Course of Twelve Lessons, 12s. for one subject; and 10s. for each additional subject. English Grammar and Composition, British History, Geography, Book-keeping, Latin, Arithmetic, Mensuration, Euclid, Algebra, Trigonometry, Mechanics, &c. For Prospectus and full particulars, apply—TUTOR, Correspondence Institute, 122 Bruntsfield Place, Edinburgh.

**CARLYON COLLEGE.**

**KERIN & LYNAM,  
55 AND 56 CHANCERY LANE.**

**LONDON UNIVERSITY CLASSES.**

MATRICULATION CLASSES, INTER. ARTS and SCIENCE, PREL. SCI., B.A. and B.Sc. CLASSES. New Term last week in January.

Classes and Tuition for **Legal and Medical Preliminaries, University and Hospital Scholarships, Civil Service Examinations, A.C.P., L.C.P., F.C.P., Higher Local, Oxf. and Camb., First M.B.: Royal Univ., Ireland, L.L.A.**

CLASSES FOR LADIES. PRACTICAL CLASSES in PHYSICS, CHEMISTRY and BIOLOGY.

Papers Corrected for Schools.

Private tuition for all Examinations.

Inter. Sc. Hons. and B.Sc. Botany Class, B.A. Classical Honours Class.

The Principal may be seen between 11.15 and 1 any day, and 2.30 and 5 p.m. any day (except Saturday), or by appointment at any other time.

For Prospectus and list of lecturers apply to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Pro Planicio" and "Phædo," Author of "London Matriculation Course."

**SUCCESSES.**

1892-1899. — London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; Science Scholarships, 5; Arts Scholarships, 4; R.U.I., 50; Indian Civil, Oxford and Cambridge, and many other Successes.

**M.A. LONDON (Classics), 1898 and 1899,  
2.**

**H.A. LONDON, 1899, 12 successful  
(11 on Official List; more than any other London Institution).**

**CAMBRIDGE TRAINING COLLEGE  
FOR WOMEN.**

The Council are about to appoint a LECTURER at a stipend of £90 a year, with residence. Special knowledge of Modern Languages, and experience in teaching them according to modern methods, are required. Preference will be given to a candidate having a degree or an equivalent certificate. It is desirable, but not essential, that the Lecturer should enter on her duties at Easter.

Applications must be sent by January 15th, 1900, to the PRINCIPAL, from whom further particulars can be obtained.

**RUTHIN COUNTY SCHOOL FOR**

**GIRLS.—WANTED, in January, FORM MISTRESS, specially qualified to teach Instrumental Music. Salary £80 per annum, out of which £35 shall be paid to the Headmistress for Board and Residence. Applications, with copies of recent testimonials, to be sent to the CLERK by the 12th January, 1900.**

**ED. ROBERTS,  
Clerk to the School Governors,  
Solicitor, Ruthin.**

**GOVERNESS STUDENT Required**

in a Ladies' School. Examinations. Premium moderate. Apply—48 Hallgate, Doncaster.

**EPPS'S COCOA.**

**GRATEFUL. COMFORTING.**

**Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 2-lb. and 4-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.**

**BREAKFAST. SUPPER.**

**EPPS'S COCOA.**

**THE BURLINGTON CLASSES.**

**27 Chancery Lane, London.**

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.)

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**PREPARATION BY CORRESPONDENCE**

FOR

**MATRICULATION,  
B.A., & B.SC.,**

(London Univ., Royal Univ., Dublin Univ.)

**L.L.A.**

(Degree for Ladies—St Andrews)

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

**Fees may be based on success, and paid by arrangement.**

**Correspondence Courses may begin at any time, the tuition being individual.**

**Preliminary Courses, carefully arranged, for beginners.**

**Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.**

FOR TERMS, TESTIMONIALS, &c.

ADDRESS—

**MR. J. CHARLESTON, B.A.,**

BURLINGTON CLASSES,

**27 Chancery Lane,**

**London.**

## UNIVERSITY EXAMINATION POSTAL INSTITUTION.

Manager—MR. E. S. WEYMOUTH, M.A. LOND.  
Offices—27 SOUTHAMPTON STREET, STRAND, LONDON, W.C.

The University Examination Postal Institution has special Courses to prepare through the post for the

### A.C.P., L.C.P., AND F.C.P.;

also for the **TEACHERS' DIPLOMA** (Cambridge or London University); also for London University Medical Examinations, and the Oxford and Cambridge Locals.

### RECENT SUCCESS.—274

Candidates prepared successfully through the post for the **CAMBRIDGE HIGHER LOCAL** Examination, during 1895-9 (five years), 54 gaining a mark of distinction. **Only three failures** during the last six years for all Teachers' Diploma Examinations; numerous successes.

The Institution is now publishing a series of books having special reference to the

### CAMBRIDGE HIGHER LOCAL

Examination. Particulars on application. Write for the **GUIDE TO THE CAMBRIDGE HIGHER LOCAL EXAMINATION**, by the Tutors of the University Examination Postal Institution; containing particulars as to books recommended for 1899 and for 1900, and General Suggestions for a Method of Study and Statistical Tables. (New Edition, March, 1899.) 1s. net; or post free, 1s. 1d.

## EXAMINATION PAPER

AS USED BY THE

### COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets ... .. per Ream, 2s. 6d.  
" " " 960 " " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.  
Remittance should accompany Order.

**HEWARD & SHELBOURNE, Wholesale and Retail Stationers,**  
63 HIGH HOLBORN, LONDON, W.C.

**JOSEPH GILLOTT'S** Gold Medals, Paris, 1878, 1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing); and (for Vertical Writing) 1045, 1046.

STEEL PENS.

 Headmasters should apply for

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

### DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

**BOXES OF WATER AND OIL COLOURS,**

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## CAREY'S "GRADUS AD PARNASSUM,"

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, Price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

BY JOHN S. RAWLE, F.S.A.,  
Late Examiner to the Department of Science and Art.

## SECOND GRADE PRACTICAL GEOMETRY, PLANE & SOLID, CURVES, SCALES & PATTERN DRAWING.

REVISED AND ENLARGED. NOW READY.

Containing the additional matter as required by the Departmental Circular of March, 1895, and forming a complete Text-Book for the Science and Art Examinations.

250th Thousand. MORE THAN 600 DIAGRAMS.

Price 1s. Bound in cloth, 2s.

Class Sheets for Practical Geometry	...	...	...	...	1s.
Practical Geometry Test Papers	...	...	...	...	4d.
Freehand Drawing Test Papers	...	...	...	...	1s.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO.

## WORKS BY ALFRED HILEY, M.A.

### 1. MENSURATION AND LAND SURVEYING.

Fourteenth Edition. Pp. 244. Answers at end. Price 2s. 6d.

This Work has been placed by the London School Board on their Requisition List for the Use of Pupil Teachers.

"Altogether an admirable manual."—*Schoolmaster*.

"This eminently concise and practical introduction to Mensuration."—*Educational Review*.

### 2. RECAPITULATORY EXAMPLES IN ARITHMETIC.

Sixteenth Edition. Pp. 243. 2s.

This work can now be had either with or without Answers. It contains Test Examples on each rule, and 1,736 Miscellaneous Questions, including 105 full Examination Papers set by University Local Examiners and others.

"Excellent collection of Arithmetical Examples."—*Schoolmaster*.

"Both works are marvels of cheapness and goodness."—*Journal of Education*.

Published by LONGMANS & CO., LONDON.

By the Headmaster of Loretto School.

## CHRIST THE PROTESTANT; AND

OTHER SERMONS. By HELY HUTCHINSON ALMOND, M.A.

Oxon., Hon. LL.D. Glasgow, Headmaster of Loretto School.

Crown 8vo, 5s.

"Wiser and more inspiring words were never addressed to those whose views of life and whose character were in process of formation. . . . Full of incisive and ripe wisdom. . . . Should be in the hands of all boys and of all parents and masters."

—Professor MARCUS DOPS in the *British Weekly*.

"The difficult question of clerical or lay headmasters would be simplified if we could always have laymen who have such a grasp of religious truth, and such a power of expressing it, as we find here."—*Spectator*.

"As school sermons—as far as we can judge from the written letter—these discourses are excellent."—*Spectator*.

"In directness and simplicity, and in fervour and earnestness of conviction and sympathy, they are such as not to be easily matched in homiletical literature."

—*Pall Mall Gazette*.

## WILLIAM BLACKWOOD & SONS, Edinburgh & London.

FREE GUIDE TO THE

### CAMBRIDGE HIGHER LOCAL EXAMINATION,

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

Ready in the course of January, 70 pp., containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free on application to the Manager of the Institute, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.,

275 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to the June, 1899, Examination, 55 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

# THE COLLEGE OF PRECEPTORS' EXAMINATIONS—JULY AND DECEMBER, 1900. GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS.

<b>SCRIPTURE HISTORY.</b>		<i>s. d.</i>
<b>St. Luke.</b> Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo, cloth containing—		1 6
1. <i>Introduction.</i> —Author, Life and purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazirite Vow, &c., &c.		
2. <i>Text of the Gospel</i> , with marginal and foot notes.		
3. <i>Comments on the Revised Version.</i>		
4. <i>Glossary, and Chapters on our Lord's Teachings.</i>		
5. <i>Appropriately coloured Sketch Maps.</i>		
<b>Acts of the Apostles.</b> New Edition. Part I. Chapters I.—XVI. Edited by the Rev. F. MARSHALL, M.A. ....		1 6
<b>Acts of the Apostles.</b> (complete). New Edition. Edited by the Rev. F. MARSHALL, M.A. ....		2 6
<b>Acts of the Apostles.</b> New Edition. Part II. Chapters XVII.—end. Note.—Each of the above editions having been re-edited and enlarged, the form and arrangement differs from any previous edition of these works.		
<b>The O. and C. Genesis.</b> With Notes ... ..		1 0
<b>Preparation Papers on St. Luke.</b> Per packet ... ..		0 8
<b>Preparation Papers on Acts of the Apostles.</b> Per packet ... ..		0 8
<i>The great popularity of this series is evidenced by their adoption for class use in the following Schools and Colleges:—</i>		
Wellington Grammar School; Mathematical School, Rochester; Dean Close School, Cheltenham; Merchant Taylors' School, Crosby; King's High School, Warwick; Framlingham College; Dunstable Grammar School; The King Edward's Schools, Birmingham; Royal St. Anne's Schools, Redhill; Congregational School, Caterham; Tiffin's School, Kingston; Tension's School, W.C.; The Grocers' Company School, Hackney Downs; The Grammar Schools, Ashby-de-la-Zouch; Alderman Newton's School, Leicester; Downside College, Bath; Newport Grammar School, Isle of Wight; Crediton Grammar School; Devon County School; Marlborough School, Stroud; Newcastle High School; Darlington Grammar School; Maidenhead College; Elmfield College, York; St. Martin's High School, W.C.; Christ's Hospital Girls' School, Hertford; Retford Grammar School; St. Albans Grammar School; Ipswich Middle School; Clergy Orphan School, Canterbury; Kendrick's School, Reading; The Kent Colleges at Canterbury and Folkestone; Maidstone Girls' Grammar School; Rochester Girls' Grammar School; University School, Southampton; King Edward's Middle School, Norwich; Bury Grammar School; Bury High School; Bury St. Edmund's School; Rotherham Grammar School; Magdalen College School, Brackley; Queen's School, Basingstoke; Woodhouse Grove School, Appley Bridge; Rydal Mount, Colwyn Bay; Handel College, Southampton; Trafalgar House School, Winchester; Southampton Grammar School; Farnham Grammar School; Kingswood School, Bath; Spalding Grammar School; Borden School, Sittingbourne; Simon Langton School, Canterbury; Royal Masonic School, S.W.; Tottenham Grammar School; Colfe's School, Lewisham; Hele's School, Exeter; Royal Grammar School, Guildford; Aske's Hatcham School; Wolverley Grammar School; St. John's School, Leatherhead; High School, Middlesbrough; Rugeley Grammar School; Truro College; Barbourne College, Worcester; Latymer Upper School, Hammersmith; Albyn's School, Dulwich.		
<b>GEOGRAPHY.</b>		<i>s. d.</i>
<b>The Student's Geography.</b> By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition ... ..		4 6
<i>Physical, Descriptive, Political, Industrial, Commercial, Social.</i>		
<i>Also published in Sections as follows:—</i>		
<b>Section I.—Europe, including British Isles, and Physical and Commercial Introduction</b> ... ..		2 6
<b>Section I.a.—British Isles</b> ... ..		1 6
<b>Section II.—Asia, Africa, America, and Australasia</b> ... ..		2 6
<b>Section III.—Asia</b> ... ..		1 0
<b>Section IV.—Africa</b> ... ..		1 0
<b>Section V.—America</b> ... ..		1 6
<b>Section VI.—Australasia</b> ... ..		0 9
<b>The Imperial Geography.</b> 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes ... ..		2 6
<b>The O. and C. Geography</b> (Revised Edition). By GEORGE GILL. With numerous Coloured Maps ... ..		1 0
<b>A New Junior Geography.</b> By GEORGE GILL. With Coloured Maps and Illustrations. Written expressly for the Junior Forms Examination ... ..		1 0
<b>The Geography of the British Colonies.</b> By GEORGE GILL. With Coloured Maps of all the Colonies ... ..		2 6
<b>The Victoria Atlas.</b> By GEORGE GILL, F.R.G.S. Containing 101 Maps ... ..		1 0
<b>HISTORY.</b>		
<b>The Imperial History of England.</b> By ROBCOE MORGAN, B.A. ... ..		2 6
<b>The O. and C. History of England</b> ... ..		1 0
<b>Outlines and Dates of English History.</b> By A. A. GUNNIS ... ..		1 0
<i>This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &amp;c.</i>		
<b>History Notes.</b> By GEORGE GILL, F.R.G.S. With Maps ... ..		0 6

<b>ENGLISH.</b>		<i>s. d.</i>
<b>Shakespeare's As You Like It.</b> Edited by the Rev. F. MARSHALL, M.A. ... ..		1 6
<i>Containing—</i>		
<i>Introduction.</i> —Source, Editions, Date, Scene of the Play; the Unities, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes.		
<i>Text</i> with marginal and foot notes, and paraphrase of difficult passages.		
<i>Appendix.</i> —Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.		
<b>Scott's Lay of the Last Minstrel.</b> Edited by the Rev. G. PRESTON, M.A., First Class Classical Tripos (Editor of Macaulay's "Lays of Ancient Rome"). Crown 8vo, cloth ... ..		1 0
<i>Containing Introduction, Text</i> with marginal and foot notes, <i>Appendix, and Maps.</i> [Nearly Ready.]		
<b>Scott's Marston.</b> Edited by the Rev. F. MARSHALL, M.A. [In the Press] ... ..		2 6
<b>For Junior Forms.</b>		
<b>Macaulay's Lays of Ancient Rome.</b> Containing Prophecy of Capus, Ivy, and the Armada. Edited by the Rev. G. PRESTON, M.A. Cloth, crown 8vo ... ..		1 6
<i>Containing Introduction, Text</i> with marginal and foot notes, <i>Appendix, and Coloured Maps.</i>		
<b>The O. and C. Grammar.</b> By the Rev. CHARLES BROOKE, M.A. ... ..		1 0
<b>Preparation Papers in English Grammar.</b> Per packet of 60 papers ... ..		0 8
<b>BOOK-KEEPING.</b>		
<b>Sarll's Practical Book-keeping.</b> 128 pp., cloth ... ..		1 0
<i>An Elementary Text-Book, illustrating the arrangement of the Bought, Sales, Cash, Bill Books and Ledger; consisting of Graded Exercises, followed by Examination Papers set by the College of Preceptors, accompanied by full-worked and outline keys.</i>		
<b>Sarll's Double Entry Book-keeping.</b> 256 pp., cloth ... ..		2 0
<b>Sarll's Exercises in Double Entry Book-keeping.</b> 128 pp., cloth ... ..		1 0
<i>The above with all introductory matter, full explanations, outline keys, &amp;c.</i>		
<b>Manuscript Books published to accompany the above.</b>		
<b>For Practical:—Cash Book</b> ... .. 5d.	<b>Ledger</b> ... ..	0 7
	<b>Ledger (100 Accounts)</b> ... .. 7d.	
<b>For Double Entry:—Journal</b> ... .. 5d.	<b>Ledger</b> ... ..	0 7
	<b>Short and Introductory Exercises</b> ... .. 7d.	
<b>Key to Double Entry Book-keeping</b> ... ..		3 0
<b>Key to Practical Book-keeping</b> ... ..		2 0
<b>ARITHMETIC AND MATHEMATICS.</b>		
<b>Marshall's Student's Euclid,</b> complete. By the Rev. F. MARSHALL, M.A. ... ..		2 6
<b>Marshall's Examination Euclid.</b> Books I.—IV. ... ..		1 0
<b>The O. and C. Algebra</b> ... ..		1 6
<b>Preparation Papers in Algebra.</b> By A. CUDWORTH, M.A. ... ..		0 8
<b>The O. and C. "Practical Arithmetic,"</b> 176 pp., crown 8vo (New Edition), cloth, enlarged (with Answers, 1s. 6d.) ... ..		1 0
<b>Answers, in cloth</b> ... ..		0 6
<i>Every Answer in Electrotypic Edition guaranteed correct.</i>		
<b>The O. and C. "Tests in Arithmetic,"</b> (with Answers, 1s. 6d.). Answers only, 6d. ... ..		1 0
<b>A Graded Examination Arithmetic,</b> 160 pp., cloth ... ..		1 0
<b>With Answers</b> ... ..		1 6
<b>Answers, in cloth</b> ... ..		0 6
<b>The Metric System.</b> Practical Guide to, containing Appendix, &c. ... ..		0 2
<b>The Metric Chart</b> (60 by 40), in 4 tints, mounted and varnished ... ..		10 6
<b>The Long Tot Book,</b> by the Rev. CHARLES BROOKE, M.A. ... ..		0 3
<b>The Cross Tot Book,</b> by the Rev. CHARLES BROOKE, M.A. ... ..		0 3
<b>Cambridge Local Papers in Arithmetic,</b> by C. CUDWORTH, M.A., per packet ... ..		0 8
<b>LATIN AND FRENCH.</b>		<i>s. d.</i>
<b>The O. and C. Latin, Part I.</b> (Accidence) ... ..		1 0
<b>The O. and C. Latin, Part II.</b> (Exercises) ... ..		1 0
<b>The O. and C. Latin, Part III.</b> (Translations) ... ..		1 0
<b>Commercial French Correspondence</b> ... ..		1 0
<b>The O. and C. French, Part I.</b> ... ..		1 0
<b>The O. and C. French, Part II.</b> ... ..		1 0
<b>Phœdrus, Books I. and II.</b> ... ..		1 0
<b>Eutropius, Books I. and II.</b> ... ..		1 0
<b>Cæsar, Book VI.</b> ... ..		1 0
<b>Vergil—Æneid, Book VI.</b> ... ..		1 0
<b>Oïcro de Senecute</b> ... ..		1 0
<b>Preparation Papers in French</b> ... ..		0 8
<b>Preparation Papers in Latin</b> ... ..		0 8
<b>MUSIC.</b>		
<b>Theory of Music, Part I.</b> ... ..		1 0
<b>Theory of Music, Part II.</b> ... ..		1 0
<b>Imperial Theory of Music</b> ... ..		2 6
<b>NATURAL SCIENCE.</b>		
<b>Physical Measurements</b> ... ..		2 6
<b>or in Three Parts</b> ... ..		0 9
<b>Elementary Physics</b> ... ..		2 6
<b>Applied Mechanics</b> ... ..		2 6
<b>Mechanics of Solids</b> ... ..		2 0
<b>Mechanics of Fluids</b> ... ..		2 0
<b>Magnetism and Electricity</b> ... ..		2 6
<b>Physiological Charts, Set of Three</b> ... ..		21 0
<b>Elementary Chemistry</b> ... ..		2 6
<b>Chemical Laws and Problems</b> ... ..		2 6
<b>Chemistry of Common Objects</b> ... ..		2 6
<b>Chemistry Notes</b> ... ..		1 0
<b>DRAWING.</b>		
<b>Science and Art Geometry, Part I.</b> ... ..		1 4
<b>Science and Art Geometry, Part II.</b> ... ..		1 4
<b>The School of Art Geometry</b> ... ..		1 0
<b>New Government Drawing Copies</b> ... ..		1 4
	<i>per packet</i> ... ..	
<b>South Kensington Demonstration Sheets</b> ... ..		15 0

## GILL'S "CARTOGRAPHIC" WALL MAPS FOR SECONDARY SCHOOLS.

Edited by GEORGE GILL, F.R.G.S.

**Size,**  
**30 x 60 in.**

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

*Now Ready.*

**Price 16s.**

\* ENGLAND AND WALES. \* SCOTLAND. \* IRELAND. EUROPE. INDIA. \* AFRICA. ASIA. WORLD (Mercator). \* N. AMERICA. THE SERIES, CONSISTING OF TWELVE MAPS, WILL BE COMPLETED SHORTLY.

\* Set Geography for the College of Preceptors' Examination.

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases. Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# MESSRS. BELL'S LIST OF BOOKS

Suitable for the Examinations of 1900.

\* \* Messrs. Bell's Complete Educational Catalogue will be sent to any address on application.

## UNIVERSITY OF CAMBRIDGE LOCAL EXAMINATIONS.

JUNIOR AND SENIOR, December, 1900.

- Virgil.—Aeneid.** Book VI. Edited by J. T. PHILLIPSON, M.A. With numerous Illustrations. With or without Vocabulary. 1s. 6d. [*Preparing.*]
- Virgil.—Aeneid.** Books V. and VI. CONINGTON'S Edition, abridged. By the Rev. J. G. SHEPPARD, D.C.L. 1s. 6d.  
Translation by A. HAMILTON BRYCE. 1s.  
Text only, complete. Edited by CONINGTON. 2s.
- Caesar.—De Bello Gallico.** Book VI. Edited by J. T. PHILLIPSON, M.A. With Maps and Illustrations. With or without Vocabulary, 1s. 6d.
- Caesar.—De Bello Gallico.** Books VI. and VII. With Notes by GEORGE LONG, M.A. 1s. 6d.  
Translation by W. A. McDEVITTE, B.A. 1s.  
Text only, complete. Edited by GEORGE LONG, M.A. 1s. 6d.
- Cicero.—De Senectute.** Edited by GEORGE LONG, M.A. 1s. 6d.  
Translation by G. H. WELLS, M.A. 1s.  
Text only. By GEORGE LONG, M.A. 1s. 6d.
- Horace.—Epistles.** Edited by A. J. MACLEANE, M.A. 2s.  
Translation by A. HAMILTON BRYCE, LL.D. 1s.  
Text only. Complete. By A. J. MACLEANE, M.A. 1s. 6d.
- Livy.** Book XXI. Edited by L. D. DOWDALL, M.A. 2s.
- Livy.** Translated. Vol. II. 5s.
- Euripides.—Hecuba.** Edited by F. A. PALEY, LL.D. 1s. 6d.  
Translation by E. P. COLERIDGE. 1s.  
Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.
- Homer.—Odyssey.** Translated by T. A. BUCKLEY. 5s.
- Thucydides.** Translated by the Rev. H. DALE. Vol. I. 3s. 6d.  
Text only, complete. By J. W. DONALDSON, D.D. 2 Vols. 2s. each.
- Xenophon.—Anabasis.** Book V. Edited by J. F. MACMICHAEL. New Edition, revised by J. E. MELHUSH, M.A., with Life, Introduction, and Itinerary and Map. 1s. 6d.  
Translation by the Rev. J. S. WATSON. 1s.  
Text only, complete. Edited by J. F. MACMICHAEL. 1s. 6d.
- Goethe.—Hermann und Dorothea.** Edited by E. BELL, M.A., and E. WOLFFEL. 1s. 6d.  
Translation by E. A. BOWRING. 1s.
- Bacine.—Athalie.** Edited by F. E. A. GASC. 6d.  
Translation by R. B. BOSWELL, M.A. 1s.
- Notes on Shakespeare's As You Like It.** By T. DUFF BARNETT, B.A. 1s.
- Milton.—Paradise Lost.** Books III. and IV. Edited by R. G. OXENHAM, M.A. Sewed, 1s. 6d.; cloth, 2s.

## UNIVERSITY OF CAMBRIDGE HIGHER LOCAL EXAMINATIONS.

June and December, 1900.

- Virgil.—Georgics.** Books III. and IV. CONINGTON'S Edition, abridged by the Rev. J. G. SHEPPARD, M.A. 1s. 6d.  
Translation by A. HAMILTON BRYCE. 1s.  
Text only, complete. Edited by Professor CONINGTON. 2s.
- Horace.—Odes.** Edited by A. J. MACLEANE, M.A. 2s.  
Translation by A. HAMILTON BRYCE. 2 Vols. 1s. each.  
Text only, complete. Edited by A. J. MACLEANE, M.A. 1s. 6d.
- Cicero's Orations.** Translated by C. D. YONGE, M.A. Vol. III. (containing "Pro Milone"). 5s. Vol. II. (containing "De Lege Manilia"). 5s.
- Tacitus.—Agricola.** Edited by P. FROST, M.A. 2s. 6d.
- Tacitus.—Agricola.** Translated. 5s.
- Euripides.—Bacchae.** Edited by F. A. PALEY, LL.D. 1s. 6d.  
Translation by E. P. COLERIDGE. 1s.  
Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.
- Demosthenes.—De Corona.** Translated by C. RANN KENNEDY. 1s.
- Sophocles.—Antigone.** Edited, with Introduction and Notes, by G. H. WELLS, M.A. With numerous Illustrations. [*In the Press.*]
- Sophocles.—Antigone.** Edited by F. A. PALEY, M.A. 1s. 6d.  
Translation by E. P. COLERIDGE. 1s.  
Text only, complete. By F. A. PALEY, M.A., LL.D. 2s. 6d.
- Ten Brink's Early English Literature.** Vol. I. to Wyclif. Vol. II. (Wyclif, Chaucer, Earliest Drama, Renaissance). Vol. III (Lancaster and York, Renaissance up to the Death of Surrey). 3 Vols. 3s. 6d. each.
- Notes on Shakespeare's Hamlet.** By T. DUFF BARNETT, B.A. 1s.
- Burke's Reflections on the French Revolution.** 1s.
- The Age of Johnson.** By THOMAS SECCOMBE. 3s. 6d.
- The Age of Wordsworth.** By Professor C. H. HERFORD, Litt.D. 3s. 6d.
- Molière.—Les Précieuses Ridicules. Le Misanthrope. Les Femmes Savantes. Le Bourgeois Gentilhomme. L'Avare.** Gombert's Edition, revised by F. E. A. GASC. 6d. each.

## UNIVERSITY OF CAMBRIDGE HIGHER LOCAL EXAMINATIONS (continued).

June and December, 1900.

- Molière.—Les Précieuses Ridicules. Le Misanthrope. Les Femmes Savantes. Le Bourgeois Gentilhomme. L'Avare.** Translated by C. HERON WALL. 1s. each.
- Lessing.—Minna von Barnhelm.** Translated by E. BELL, M.A. 1s.
- Lessing.—Nathan the Wise.** Translated by R. DILLON BOYLAN. 1s.
- Goethe.—Egmont and Iphigenia.** Translated by ANNA SWANWICK. 1s. each.
- Goethe.—Hermann und Dorothea.** Edited by E. BELL, M.A., and E. WOLFFEL. 1s. 6d.  
Translation by E. A. BOWRING. 1s.
- Goethe.—Tour in Italy.** Translated. 3s. 6d.
- Pascal's Thoughts.** Translated by C. KEGAN PAUL. 3s. 6d.
- Schiller.—William Tell.** Translated by Sir THEODORE MARTIN, K.C.B. 1s.
- Schiller.—Historical Sketches.** Translated by L. DORA SCHMITZ. 3s. 6d.
- Schiller.—Poems and Ballads.** Translated by E. A. BOWRING. 3s. 6d.
- Schiller.—Wallenstein.** Edited by C. A. BRUCHHEIM, Ph.D. 5s.  
Translation by S. T. COLERIDGE and J. CHURCHILL. 2 Vols. 1s. each.
- Dante.—The Inferno.** The Italian Text with a literal prose Translation by JOHN A. CARLYLE, M.D. 5s.
- Dante.—The Purgatorio.** The Italian Text with a literal prose Translation by W. S. DUGDALE. 5s.
- Dante.—The Inferno, and The Purgatorio.** Translated by CARY. 1s. each.
- Kluge's Etymological Dictionary of the German Language.** Translated from the German by J. F. DAVIS, D.Lit. Small 4to. 7s. 6d.
- A Handbook of German Literature.** By MARY E. PHILLIPS, LL.A. Revised, with an Introduction, by A. WEISS, Ph.D., Professor of German at the R.M.A., Woolwich. Crown 8vo. 3s. 6d.
- Conics, The Elementary Geometry of.** By C. TAYLOR, D.D. Seventh Edition, revised. 4s. 6d.
- Conic Sections Treated Geometrically.** By W. H. BESANT, Sc.D., F.R.S. Ninth Edition. 4s. 6d.—KEY, 5s. net.
- Elementary Hydrostatics.** By W. H. BESANT, Sc.D., F.R.S. Sixteenth Edition. 4s. 6d.—KEY, 5s. net.
- The Building of the British Isles: a Study in Geographical Evolution.** By A. J. JUKES-BROWNE. Illustrated by numerous Maps and Woodcuts. Second Edition, revised. 7s. 6d.
- Music, a Text-Book of.** By H. C. BANISTER, formerly Professor of Harmony and Composition at the Royal Academy of Music. Sixteenth Edition. 5s.

## UNIVERSITY OF OXFORD LOCAL EXAMINATIONS.

July, 1900.

- Caesar.—De Bello Gallico.** Book V. Edited, with Introduction and Notes, by A. REYNOLDS, M.A. With numerous Illustrations and Maps. With or without Vocabulary. 1s. 6d. [*Preparing.*]
- Caesar.—De Bello Gallico.** Books IV. and V. Edited by GEORGE LONG, M.A. 1s. 6d.  
Translation by W. A. McDEVITTE, B.A. 1s.  
Text only, complete. Edited by GEORGE LONG, M.A. 1s. 6d.
- Cicero.—Catinian Orations I. and II.** Edited, with Introduction and Notes, by F. HERRING, M.A. Illustrated. 1s. 6d.  
Translation by C. D. YONGE, M.A. 5s.
- Horace.—Odes.** Edited by A. J. MACLEANE, M.A. 2s.
- Horace.—Odes.** Book III. Edited, with Introduction and Notes, by H. LATTER, M.A. With Illustrations. With or without Vocabulary. 1s. 6d. [*Preparing.*]  
Translation by A. HAMILTON BRYCE. 1s.  
Text only, complete. Edited by A. J. MACLEANE, M.A. 1s. 6d.
- Livy.**—Book XXII. Edited by L. D. DOWDALL, M.A. 2s.
- Virgil.—Aeneid.** Books IX. and X. CONINGTON'S Edition, abridged. 1s. 6d.  
Translation by A. HAMILTON BRYCE, LL.D. 1s.  
Text only, complete. Edited by CONINGTON. 2s.
- Xenophon.—Anabasis.** Books III. and IV. Edited by J. F. MACMICHAEL. Revised by J. E. MELHUSH, M.A. 1s. 6d.  
Translation by Rev. J. S. WATSON, M.A. 1s.  
Text only, complete. Edited by J. F. MACMICHAEL. 1s. 6d.
- Euripides.—Medea.** Edited by F. A. PALEY, M.A., LL.D. 1s. 6d.  
Translation by E. P. COLERIDGE, B.A. 1s.  
Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.
- Notes on Shakespeare's As You Like It.** By T. DUFF BARNETT, B.A. 1s.
- Mansoni.—I Promessi Sposi.** Translated from the Italian. 5s.
- Elementary Botany.** By PERCY GROOM, M.A., F.L.S. Second Edition. 3s. 6d.



# MESSRS. BELL'S LIST OF BOOKS

Suitable for the Examinations of 1900.

\*\* Messrs. Bell's Complete Educational Catalogue will be sent to any address on application.

## OXFORD AND CAMBRIDGE SCHOOLS EXAMINATION BOARD.

HIGHER CERTIFICATE EXAMINATION, July, 1900.

- Cicero.—Philippics.** Translated by C. D. YONGE, M.A. 5s.  
**Horace.—Odes.** Book II. Edited, with Introduction and Notes, by C. G. BOTTING, B.A. With Illustrations. With or without Vocabulary. 1s. 6d. [Preparing.]  
**Horace.—Odes.** Book III. Edited, with Introduction and Notes, by H. LATTER, M.A. With Illustrations. With or without Vocabulary. 1s. 6d. [Preparing.]  
**Horace.** Edited by A. J. MACLEANE, M.A. 2s.  
 Translation by A. HAMILTON BRUCE, LL.D. 3s. 6d.  
**Horace.** Text only, complete. By A. J. MACLEANE, M.A. 1s. 6d.  
**Livy.** Books XXI. and XXII. Edited by L. D. DOWDALL, M.A. 2s. each. [In the Press.]  
 Translation by J. B. BAKER, M.A. 2s.  
**Plautus.—Trinummus.** Edited by W. WAGNER, Ph.D. 4s. 6d.  
**Plautus.—Trinummus and Miles Gloriosus.** Translated by H. T. RILEY, M.A. 5s.  
**Tacitus.—Histories.** Translated. 5s.  
**Virgil.—Aeneid.** Books VII. and VIII., and Books IX. and X. CONINGTON'S Edition, abridged. 1s. 6d. each.  
 Text only, complete. Edited by CONINGTON. 2s.  
 Translation by A. HAMILTON BRUCE, LL.D. 1s.  
**Caesar.—De Bello Gallico.** Book IV. Edited by the Rev. A. W. UPCOTT, M.A. With Illustrations and Maps. With or without Vocabulary. 1s. 6d.  
**Caesar.—De Bello Gallico.** Book V. Edited by A. REYNOLDS, M.A. With Illustrations and Maps. With or without Vocabulary. 1s. 6d. [Preparing.]  
 Translation by W. A. McDEVITTE, B.A. 1s.  
 Text only, complete. By G. LONG, M.A. 1s. 6d.  
**Aristophanes.—Plutus.** Edited by M. T. QUINN, M.A. 3s. 6d.  
 Translation by M. T. QUINN, M.A. 1s.  
**Euripides.—Hecuba and Bacchae.** Edited by F. A. PALEY, M.A. 1s. 6d. each.  
 Translations by E. P. COLERIDGE, B.A. 2 Vols. 1s. each.  
 Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.  
**Homer.—Odyssey.** Translated by BUCKLEY. 5s.  
**Plato.—Apology.** Edited by W. WAGNER, Ph.D. 2s. 6d.  
 Translation by the Rev. H. CARY. 1s.  
**Herodotus.** Translated by CAREY. 3s. 6d.  
 Text only, complete. By J. W. BLAKESLEY, B.D. 2 Vols. 2s. 6d. each.  
**Sophocles.—Antigone.** Edited by G. H. WELLS, M.A. With Illustrations. [In the Press.]  
**Sophocles.—Oedipus Tyrannus and Antigone.** Edited by F. A. PALEY, M.A. 1s. 6d. each.  
 Translations by E. P. COLERIDGE. 2 Vols. 1s. each.  
 Text only, complete. By F. A. PALEY, M.A., LL.D. 2s. 6d.  
**Thucydides.** Translated by the Rev. H. DALE. Vol. I. 3s. 6d.  
 Text only, complete. Edited by J. W. DONALDSON, D.D. 2 Vols. 2s. each.  
**Molière.—Le Médecin malgré lui and Le Bourgeois Gentilhomme.** Edited by F. E. A. GASC. With Arguments and Notes. 6d. each.  
 Translation by C. HERON WALL. 2 Vols. 1s. each.  
**Mignet's French Revolution.** Translated. 3s. 6d.  
**Schiller.—Thirty Years' War.** Translated by the Rev. A. J. W. MORRISON, M.A. 3s. 6d.  
**Schiller.—William Tell.** Translated by Sir THEODORE MARTIN, K.C.B. 1s.  
**Lessing.—Nathan the Wise.** Translated by R. DILLON BOYLAN. 1s.  
**Hann.—The Caravan.** Translated by S. MENDEL. 1s.  
**Notes on Shakespeare's Richard II.** By T. DUFF BARNETT, B.A. 1s.  
**Notes on Shakespeare's Midsummer Night's Dream.** By T. DUFF BARNETT, B.A. 1s.

## LONDON UNIVERSITY EXAMINATIONS.

MATRICULATION, June, 1900, and January, 1901.

- Caesar.—De Bello Gallico.** Book IV. Edited by the Rev. A. W. UPCOTT, M.A. With Illustrations and Maps. With or without Vocabulary. 1s. 6d.  
**Caesar.—De Bello Gallico.** Book V. Edited by A. REYNOLDS, M.A. With Illustrations and Maps. With or without Vocabulary. 1s. 6d. [Preparing.]  
**Caesar.—De Bello Gallico.** Books IV. and V. Edited by GEORGE LONG, M.A. 1s. 6d.  
 Translation by W. A. McDEVITTE. 2 Vols. 1s. each.  
 Text only, complete. By G. LONG, M.A. 1s. 6d.  
**Virgil.—Aeneid.** Book II. Edited by L. D. WAINWRIGHT, M.A. With Illustrations. With or without Vocabulary. 1s. 6d.  
**Virgil.—Aeneid.** Books I. and II. CONINGTON'S Edition, abridged. 1s. 6d.  
 Translation by A. HAMILTON BRUCE, LL.D. 1s.  
 Text only, complete. Edited by CONINGTON. 2s.  
**Euripides.—Hecuba.** Edited by F. A. PALEY, LL.D. 1s. 6d.  
 Translation by E. P. COLERIDGE, B.A. 1s.  
 Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.  
**Aeschylus.—Prometheus Vincetus.** Edited by F. A. PALEY, LL.D. 1s. 6d.

## LONDON UNIVERSITY EXAMINATIONS (continued).

Intermediate, 1900.

- Cicero.—De Officiis.** Translated by C. R. EDMONDS. 3s. 6d.  
**Horace.—Odes and Epodes.** Edited by A. J. MACLEANE. 2s.  
 Translation by A. HAMILTON BRUCE, LL.D. 2 Vols. 1s. each.  
 Text only, complete. By A. J. MACLEANE, M.A. 1s. 6d.  
**Plato's Works.** Vol. IV. (containing Ion). Translated by G. BURGESS. 5s.  
**Sophocles.—Antigone.** Edited by G. H. WELLS, M.A. With Illustrations. [In the Press]  
**Sophocles.—Antigone.** Edited by F. A. PALEY, LL.D. 1s. 6d.  
 Translation by E. P. COLERIDGE, B.A. 1s.  
 Text only, complete. By F. A. PALEY, M.A., LL.D. 2s. 6d.  
**Notes on Shakespeare's Midsummer Night's Dream.** By T. DUFF BARNETT, B.A. 1s.

B.A., 1900.

- Cicero's Orations.** Translated by C. D. YONGE, M.A. Vol. II. (containing "Pro Sulla"). 5s.  
**Lucretius.** Edited by H. A. J. MUNRO, M.A. 2 Vols. 18s.  
 Translation by H. A. J. MUNRO, M.A. 6s.  
 Text only, complete. By H. A. J. MUNRO, M.A. 2s.  
**Thucydides.** Translated by H. DALE, M.A. Vol. I. 3s. 6d.  
 Text only, complete. By J. W. DONALDSON, D.D. 2 Vols. 2s. each.  
**The Age of Johnson (1748-1798).** By THOMAS SECCOMBE. 3s. 6d.  
**Johnson's Life of Dryden.** Edited by F. RYLAND, M.A. 2s. 6d.  
**Johnson's Life of Pope.** Edited by F. RYLAND, M.A. 2s. 6d.  
**Molière's Works.** Translated by C. HERON WALL. 3 Vols. 3s. 6d. each.  
**Goethe's Works.** Translated by various hands. 14 Vols. 3s. 6d. each.  
**Psychology.** An Introductory Manual. By F. RYLAND, M.A. Specially adapted for London Examinations. Seventh Edition. With List of Books for Students and Examination Papers. 4s. 6d.  
**Ethics.** An Introductory Manual for the Use of University Students. By F. RYLAND, M.A. 3s. 6d.  
**Logic.** An Introductory Manual. By F. RYLAND, M.A. 4s. 6d.

## COLLEGE OF PRECEPTORS PUPILS' CERTIFICATE EXAMINATIONS.

July and December, 1900.

- Caesar.—De Bello Gallico.** Book V. Edited, with Introduction and Notes and Exercises, by A. REYNOLDS, M.A. With numerous Illustrations and Maps. 1s. 6d. [Preparing.]  
**Caesar.—De Bello Gallico.** Book VI. Edited, with Introduction and Notes and Exercises, by J. T. PHILLIPSON, M.A. With numerous Illustrations and Maps. 1s. 6d.  
**Caesar.—De Bello Gallico.** Edited by GEORGE LONG, M.A. Books IV. and V., and Books VI. and VII. 1s. 6d. each.  
 Translation by W. McDEVITTE, B.A. 1s.  
 Text only, complete. By G. LONG, M.A. 1s. 6d.  
**Cicero.—De Senectute.** By GEORGE LONG, M.A. 1s. 6d.  
 Text only. By G. LONG, M.A. 1s. 6d.  
 Translation by G. H. WELLS, M.A. 1s.  
**Livy.—Book XXII.** By Rev. L. DOWDALL, M.A. 2s.  
**Virgil's Aeneid.**—Books V. and VI. CONINGTON'S Edition, abridged. 2s.  
**Virgil's Aeneid.**—Book IX. CONINGTON'S Edition, abridged. 1s. 6d.  
 Books IV.—VI., and Books VII.—IX. Translated by A. HAMILTON BRUCE. 1s. each.  
 Text only, complete. By J. CONINGTON, M.A. 2s.  
**Horace's Odes.**—Book III. Edited, with Introduction and Notes, by H. LATTER, M.A. Illustrated. 1s. 6d. [Preparing]  
 Translation by A. HAMILTON BRUCE, LL.D. 1s.  
 Text only, complete. By A. J. MACLEANE, M.A. 1s. 6d.  
**Eutropius.**—Books I. and II. Edited, with Introduction and Notes, by J. G. SPENCER, B.A. With numerous Illustrations. 1s. 6d.  
**Xenophon's Anabasis.**—Books II. and III., and Books IV. and V. Edited by J. F. MACMICHAEAL. 1s. 6d. each.  
 Translation by Rev. J. S. WATSON, M.A. 1s.  
**Euripides.—Medea.** By F. A. PALEY, M.A., LL.D. 1s. 6d.  
 Translation by E. P. COLERIDGE, B.A. 1s.  
 Text only, complete. By F. A. PALEY, M.A., LL.D. 3 Vols. 2s. each.  
**Notes on Shakespeare's As You Like It.** By T. DUFF BARNETT, B.A. (Lond.). 1s.

# PROFESSOR MEIKLEJOHN'S SERIES.

**The Art of Writing English.** A Manual for Students. With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A. Second Edition. Crown 8vo, 340 pp. . . . . 2s 6d.

"The Art of Writing English' teems with good advice."—*Literary World*.  
"Whatever Prof. Meiklejohn writes is sure to be vigorous and racy, and, on the subject of English composition, he is peculiarly well qualified to speak."—*The Journal of Education*.

**One Hundred Short Essays in Outline.** By Professor MEIKLEJOHN. Second Edition. Crown 8vo, 110 pp. . . . . 1s.

These Outline Essays have been prepared to assist Candidates for Queen's Scholarships, for the Civil Service, and in other Examinations. They show the young students how to put their matter into the right perspective, and how to make clear and brief statements. They treat of such subjects as Athletics, The Bank of England, The Bicycle, Competition, The Navy, Newspapers, &c., &c.—in short, subjects generally set in Public Examinations.

**A New Geography on the Comparative Method.** With Maps and Diagrams and an Outline of Commercial Geography. By J. M. D. MEIKLEJOHN, M.A. Twenty-third Edition. 130th Thousand. Crown 8vo, 630 pp. . . . . 4s. 6d.

"A most useful manual for examiners, and full of stimulating matter for students of geography. Its picturesqueness of description and vividness of style make it almost as interesting and enjoyable reading as a book of travels."—*The Journal of Education*.  
"For all that is best worth knowing no better book than this could be studied."—*The Educational News*.

**A School Geography; with Special Reference to Commerce and History.** With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A., sometime Adam de Brome Exhibitioner of Oriel College, Oxford, F.R.G.S. Crown 8vo, 410 pp. . . . . 2s. 6d.

This book is suited to scholars of from thirteen to sixteen years of age. It is not an abridgement of the New Geography, but a separate and substantive work. The Comparative Method has been followed throughout. Nearly a hundred small maps and diagrams have been inserted in the text. The United Kingdom has been treated with the greatest fullness, the other countries of the world in their due proportion.

**The Comparative Atlas.** By J. G. BARTHOLOMEW, F.R.G.S., and Edited by Professor MEIKLEJOHN. Containing 64 Plates and a General Index . . . . . 2s. 6d.

"No atlas that we know at anything like the price gives so much so well."  
*The Teachers' Monthly*.

"This is certainly the most comprehensive work ever published at the moderate price of half-a-crown. From the attractive frontispiece, representing the flags of all nations, to the final page on geographical etymology, there is not a wasted inch."—*The Teachers' Review*.

**A New History of England and Great Britain.** With Maps and Tables. By J. M. D. MEIKLEJOHN, M.A. Fourteenth Edition. Crown 8vo, 740 pp. . . . . 4s. 6d.

"I like your History very much. It is suggestive, and does not ignore the social and literary side of things."—*Miss A. F. Andrews, Malda Vale High School for Girls, W.*

"I am very pleased with the concise statements and orderly marshalling of facts; such an improvement on our ordinary Histories."—*B. A. Little, Esq., M.A., The College, Buxton*.

**The English Language: its Grammar, History, and Literature.** By J. M. D. MEIKLEJOHN, M.A. Eighteenth Edition. Enlarged, with Exercises and additional Analyses. Crown 8vo, 470 pp. . . . . 4s. 6d.

"For the First Class College of Preceptors your work is most excellent and valuable."—*The Rev. F. Marshall, M.A., Almondsbury Grammar School*.

"I gave it to a girl candidate for an English scholarship; she got first place, and valued the help she got from the book."—*W. Johnson, Esq., B.A., Elmfield College, York*.

**A New Arithmetic.** By G. A. CHRISTIAN, B.A. Lond., and G. COLLAR, B.A., B.Sc. Lond. Crown 8vo, 562 pp. Fourth Edition . . . . . 4s. 6d.

"We also welcome it because in several of its chapters—such, for example, as those on factors, decimal fractions, involution and evolution, surds, and logarithms—it seems to us to mark a distinct advance on the majority of its predecessors."—*The School Guardian*.

"We consider it so satisfactory that we have at once placed it on our list of books."—*The Rev. G. E. S. Walpole, D.D., Principal, Bede College, Durham*.

**A Short Arithmetic.** By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. . . . . 1s.

With Answers, 1s. 6d.

"In the preparation of the 'Short Arithmetic' the authors have chiefly had in view the requirements of pupils varying in age from twelve to sixteen. Examples have been selected from a very wide area. These include the University Local Examinations, the University School Examinations, Examinations of the College of Preceptors and of the Education Department, and the Examinations for County Council Scholarships."

**A School Algebra for Junior Forms.** By F. OSCAR LANE, B.Sc. Lond., Assistant-Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. . . . . 1s. 6d.

With Answers, 266 pp. 2s. 0d.

"A very trustworthy book for beginners, extending to indices, surds, and progressions."—*The University Correspondent*.

**Europe: its Physical and Political Geography, with Chapters on Latitude and Longitude, Day and Night, and the Seasons.** Adapted to the requirements of the Code, with a Double-Page Map, in Colour. By M. J. C. MEIKLEJOHN, B.A., F.R.G.S. 96 pp. . . . . 6d.

**Africa: its Geography, Resources, and Chronicle of Discovery up to 1897.** By M. J. C. MEIKLEJOHN, B.A. Oxon. Third Edition. Crown 8vo, 76 pp. . . . . 4d.

"This little book is, for its size, remarkably full of information about Africa, and gives pithy explanations of such current expressions as 'sphere of influence' and 'hinter-land,' &c.—*The Teachers' Aid*.

**The British Colonies and Dependencies: their Resources and Commerce.** With Chapters on the Interchange of Productions and Climatic Conditions. By M. J. C. MEIKLEJOHN, B.A. Third Edition. Crown 8vo, 96 pp. . . . . 6d.

"This manual is terse and full; intelligently paragraphed and skillfully managed typographically. It does credit to the compiler, and we hope this work may gain the recognition it really merits."—*The Educational News*.

**A Short Geography, with the Commercial Highways of the World.** Fifteenth Edition. Crown 8vo, 196 pp. . . . . 1s.

"Terse, practical, informative, and statistic. This shilling Geography is exactly what a School Geography needs to be."—*The Teachers' Aid*.

Clearness and conciseness exemplified."—*The Private Schoolmaster*.

**A Short History of England and Great Britain.** B.C. 55 to A.D. 1890. Eleventh Edition. Crown 8vo . . . . . 1s.

"In the 'Short History' there is plenty of anecdote, ballad, and stray gems of literature; and we find, though not with its usual emphasis, the Professor's expertness in the use and disposition of type."—*Education*.

**A Short Grammar of the English Tongue, with Three Hundred and Thirty Exercises.** Tenth Edition . . . . . 1s.

This little book is written in the clearest and simplest style for beginners. It contains:—

- |                                 |   |
|---------------------------------|---|
| i. The Simplest Definitions.    | iv. Graduated Methods of Parsing.       |
| ii. Slowly graduated Exercises. | v. Bad Grammar Corrected, with Reasons. |
| iii. Clearly printed Tables.    | vi. Analysis, with Plain Diagrams.      |

**A New Spelling Book.** With Side Lights from History. Eighth Edition. Crown 8vo, 152 pp. . . . . 1s.

"We agree with the main principle here followed—that spelling should be learnt through the eye rather than through the ear."—*The School Guardian*.



## WILLIAMS & NORGATE'S SCHOOL BOOKS.

### THE FRENCH LANGUAGE.

**DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. I.—First Year: Anecdotes, Tales, Historical Pieces. Edited, with Notes and a complete Vocabulary, by LÉON DELBOS, M.A., H.M.S. "Britannia." Twelfth Edition. 166 pp. Crown 8vo, cloth, 2s.

**DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. II.—Second Year: Historical Pieces and Tales. Edited, with Notes, by LÉON DELBOS, M.A., H.M.S. "Britannia." Sixth Edition. 180 pp. Crown 8vo, cloth, 2s.

"It would be no easy matter to find a French reader more completely satisfactory in every respect than that of M. Delbos."—*Athenæum*.  
"The notes are critical and explanatory. The book is well printed and excellently got up."—*Educational Times*.

**DELBOS.—LITTLE EUÈNE'S FRENCH READER.** For Beginners. Anecdotes and Tales. Edited, with Notes and a complete Vocabulary. Third Edition. Crown 8vo, cloth, 1s. 6d.

**EUÈNE'S THE STUDENT'S COMPARATIVE GRAMMAR OF THE FRENCH LANGUAGE.** With an Historical Sketch of the Formation of French. For the Use of Public Schools. With Exercises. By G. EUÈNE FASSACHT, late French Master, Westminster School. Twentieth Edition, thoroughly Revised. Square crown 8vo, cloth, 5s. Or, separately, Grammar, 3s.; Exercises, 2s. 6d.

**EUÈNE'S FRENCH METHOD.** Elementary French Lessons. Easy Rules and Exercises preparatory to the "Student's Comparative French Grammar." By the same Author. Sixteenth Edition. Crown 8vo, cloth, 1s. 6d.

**EUÈNE'S COMPARATIVE FRENCH-ENGLISH STUDIES.** Grammatical and Idiomatic. Being an entirely re-written Edition of the "French Exercises for Middle and Upper Forms." Eleventh Edition. Cloth, 2s. 6d.

**VICTOR HUGO.—LES MISÉRABLES.** Les Principaux Épisodes. Edited, with Life and Notes, by J. BOELLE, Officier d'Académie. Second Edition. 2 Vols. Crown 8vo, each 3s. 6d.

**VICTOR HUGO.—NOTRE-DAME DE PARIS.** Adapted for the use of Schools and Colleges. By J. BOELLE. 2 Vols. Crown 8vo, each 3s.

**FRENCH COMPOSITION THROUGH LORD MACAULAY'S ENGLISH.** Edited, with Notes, Hints, and Introduction, by JAMES BOELLE, B.A. Univ. Gall., Senior French Master, Dulwich College, &c. Crown 8vo, cloth.

Vol. I. Frederick the Great. 3s.  
Vol. II. Warren Hastings. 3s. 6d.  
Vol. III. Lord Clive. 3s.

"This, we may say at once, is an exceedingly useful idea, well carried out, and one of the best things of its class that we have seen. . . . We can pronounce the equivalence of the idioms recommended to be quite unusually just."—*Saturday Review*.

### THE GERMAN LANGUAGE.

**WEISSE'S COMPLETE PRACTICAL GRAMMAR OF THE GERMAN LANGUAGE.** With Exercises on Conversation, Letters, Poems, and Treatises, &c. Fourth Edition, almost entirely re-written. Crown 8vo, cloth, 6s.

"We have no hesitation in pronouncing this the fullest and most satisfactory German grammar yet published in England."—*Journal of Education*.

**WEISSE'S SHORT GUIDE TO GERMAN IDIOMS.** Being a Collection of the Idioms most in use. With Examination Papers. Second Edition. 8vo, cloth, 2s.

**MÖLLER (A.).—A GERMAN READING BOOK.** A Companion to Schlatter's "German Class Book." New Edition. Corrected to the Official German Spelling. With a complete Vocabulary. 12mo, cloth, 2s.

**HEIN'S GERMAN EXAMINATION PAPERS.** Comprising a complete set of German Papers set at the Local Examinations in the four Universities of Scotland. By G. HEIN, Aberdeen Grammar School. Crown 8vo, cloth, 2s. 6d.

**A SHORT SKETCH OF GERMAN LITERATURE.** Prepared for the Scottish Leaving Certificate Examinations. By VIVIAN PHILLIPPS, B.A., Fettes College. Second Edition, Revised. Pott 8vo, 1s.

#### ULRICH'S GERMAN CLASSICS:—

Schiller's Wilhelm Tell.	Goethe's Faust.
" Jungfrau von Orleans.	" Gotz von Berlichingen.
" Wallensteins Tod.	" Lessing's Nathan der Weise.
" Neffe als Onkel.	

Sewed, 9d. net; cloth, 1s. net. Cloth, 1s. 6d. net.

**ULRICH'S GERMAN PROSE.** With Notes on Syntax and Translation, followed by a complete Vocabulary. By ANTON J. ULRICH, Master of Modern Languages at the King's School, Warwick. Revised by JOHN GIBSON, M.A. Crown 8vo, cloth, 2s. 6d.

"A cheap and useful little volume."—*Journal of Education*.  
"This is a distinctly good composition book."—*Guardian*.  
"The selections for translation are admirable in every way."—*Educational Review*.

**KEY TO GERMAN PROSE.** 3s. 6d.

**ULRICH'S GERMAN DECLENSIONS.** 1s. net.

NOTE.—Mr. Ulrich's School Books obtained a Silver Medal at the Antwerp Exhibition.

WILLIAMS & NORGATE,

14 HENRIETTA STREET, COVENT GARDEN, LONDON;  
20 SOUTH FREDERICK STREET, EDINBURGH;  
AND 7 BROAD STREET, OXFORD.

## From JOHN C. NIMMO'S LIST.

### THE SEMITIC SERIES.

An important New Series of Standard Handbooks on the Babylonians, Assyrians, and Allied Semitic Races of Ancient History.

EDITED BY

JAMES ALEXANDER CRAIG,

Professor of Semitic Languages and Literatures and Hellenistic Greek,  
University of Michigan, U.S.A.

The First Volume ready January 1900.

**BABYLONIANS AND ASSYRIANS.** Life and Customs. (With special reference to the Contract Tablets and Letters.) By the Rev. A. H. SAYCE, Professor of Assyriology at Oxford.

In crown 8vo, cloth, gilt top, 5s. net each Volume.

#### PUBLISHER'S NOTE.

Recent scientific research has stimulated a widely increasing interest in the study of the Babylonians, Assyrians, and allied Semitic races of ancient history among scholars, students, and the general reading public. It has provided us with a picture of a hitherto unknown civilization, and a history of one of the great branches of the human family. The object of the present series is to present, compactly and in popular scientific form, a knowledge of the more important facts in the History, Religion, Government, Jurisprudence, Language, Customs, Art, Archaeology, &c., of the peoples dealt with, in a way that will be serviceable to the reading public generally, as well as to teachers and masters of every grade, students, the clergy, and others. The series is also one that can be especially recommended as suitable for school and college libraries throughout the country, on account of the compactness and accessibility of the information presented and the high standard of accuracy maintained. The authors are selected from the most eminent authorities in Europe and America, each being a specialist in his subject. Each volume will be complete in itself, and the series, taken as a whole, will neglect no phase of the general subject. A special feature is that the authors go, in almost every instance, to the original sources for their information, and thus avoid the errors liable to arise in following those who derive their knowledge from other sources.

#### LIST OF THE VOLUMES.

- I. HEBREWS. History and Government. By Prof. J. F. McCURDY, University of Toronto, Canada.
- II. HEBREWS. Ethics and Religion. By Prof. ARCHIBALD DUFF, Airedale College, Bradford.
- III. THE SUMERIANS. Language, History, and Religion. By Prof. FRITZ HOMMEL, University of Munich, Germany.
- IV. BABYLONIANS AND ASSYRIANS. History to the Fall of Babylon. By Prof. FRITZ HOMMEL, University of Munich, Germany.
- V. BABYLONIANS AND ASSYRIANS. Religion. By Prof. J. A. CRAIG, University of Michigan, U.S.A.
- VI. BABYLONIANS AND ASSYRIANS. Life and Customs. (With special reference to the Contract Tablets and Letters.) By Prof. A. H. SAYCE, University of Oxford. [Ready in January.]
- VII. BABYLONIANS AND ASSYRIANS. Excavations and Account of Decipherment of Inscriptions. By Prof. A. V. HILPRECHT, University of Pennsylvania, U.S.A.
- VIII. ARABIA. Discoveries in; and History and Religion until Mohammed. By Dr. EDUARD GLAZER, University of Munich, Germany.
- IX. DEVELOPMENT OF ISLAMIC THEOLOGY, JURISPRUDENCE, AND THEORY OF THE STATE. By Prof. D. B. MACDONALD, Hartfield Theological Seminary, U.S.A.

In addition to the above, the following volumes are to be included in the Series, and others may be added from time to time:—

- X. PHENICIA. History and Government, including Colonies, Trade, and Religion.
- XI. PALESTINE AND SYRIA. Important Discoveries in Recent Years.
- XII. ARABIC LITERATURE AND SCIENCE SINCE MOHAMMED.
- XIII. THE INFLUENCE OF SEMITIC ART AND MYTHOLOGY ON WESTERN NATIONS.

LONDON: JOHN C. NIMMO, 14 KING STREET, STRAND.

# MESSRS. LONGMANS & CO.'S LIST.

## Mathematics and Science.

By J. HAMLIN SMITH, M.A.

**A Treatise on Arithmetic.** With an Appendix on Approximation, in which a New Method of Decimalisation of Money is given with a view to Shortening and Simplifying much of the Work in Commercial Arithmetic. Crown 8vo, 3s. 6d. (Copies may be had without the Answers.) A KEY, 9s.

**Exercises in Arithmetic.** Arranged and Adapted to the Sections in Hamblin Smith's "Treatise on Arithmetic." Crown 8vo, 1s. 6d.; with Answers, 2s. A KEY, 6s. 6d.

**A Shilling Arithmetic.** For the use of Elementary Classes and Preparatory Schools. Cr. 8vo, 1s.; with Answers, 1s. 6d.

**Elementary Algebra.** New Edition, with a large number of Additional Exercises. With or without Answers. Crown 8vo, 3s. 6d.; Answers separately, 6d. A KEY, crown 8vo, 9s.

\*\*\* The Old Edition can still be had.

**Exercises on Algebra.** Small 8vo, 2s. 6d. (Copies may be had without the Answers.)

**Elementary Trigonometry.** Crown 8vo, 4s. 6d. A KEY, 7s. 6d.

**Elementary Statics.** Crown 8vo, 3s.

**Elementary Hydrostatics.** Crown 8vo, 3s. A KEY to Statics and Hydrostatics, 6s.

By Prof. GANOT. Translated and Edited by E. ATKINSON, Ph.D., F.C.S.

**Elementary Treatise on Physics, Experimental and Applied.** With 9 Coloured Plates and 1,057 Woodcuts. Crown 8vo, 15s.

**Natural Philosophy for General Readers and Young Persons:** a Course of Physics divested of Mathematical Formulae, expressed in the language of daily life. With 7 Plates, 624 Woodcuts, and an Appendix of Questions. Crown 8vo, 7s. 6d.

## History.

By CYRIL RANSOME, M.A.

**Short History of England.** From the Earliest Times to the Present Day. For the use of Middle Forms of Schools. With Tables, Plans, Maps, Index, &c. Crown 8vo, 3s. 6d.

Or, in Two Parts, 2s. each: Part I. To the Death of Elizabeth, A.D. 1603. Part II. A.D. 1603 to 1895.

JUST PUBLISHED. PRICE ONE SHILLING.

**A Summary of Ransome's Short History of England.** With 22 Maps and Plans and 36 Genealogical Tables.

By SAMUEL RAWSON GARDINER, M.A., LL.D.

**A Student's History of England.** From the Earliest Times to 1885. Vol. I.: B.C. 55—A.D. 1509. With 173 Illustrations. Crown 8vo 4s. Vol. II.: 1509-1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.: 1689-1885. With 109 Illustrations. Crown 8vo, 4s. Complete in one Volume, with 378 Illustrations, crown 8vo, 12s.

**Preparatory Questions** on the above. By R. SOMERVELL, M.A., Assistant-Master at Harrow School. Crown 8vo, 1s.

**A School Atlas of English History.** With 66 Maps and 22 Plans of Battles, &c. Fcap. 4to, 5s.

**Outline of English History,** B.C. 55 to A.D. 1895. With 96 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By the Rev. J. FRANCK BRIGHT, D.D.,  
Master of University College, Oxford.

**A History of England.**

Period I.—**Medieval Monarchy:** The Departure of the Romans to Richard III. From A.D. 449 to 1485. Crown 8vo, 4s. 6d.

Period II.—**Personal Monarchy:** Henry VII. to James II. From 1485 to 1688. Crown 8vo, 5s.

Period III.—**Constitutional Monarchy:** William and Mary to William IV. From 1689 to 1837. Crown 8vo, 7s. 6d.

Period IV.—**The Growth of Democracy:** Victoria. From 1837 to 1880. Crown 8vo, 6s.

## History—continued.

By C. W. C. OMAN, M.A., F.S.A.

**A History of Greece.** From the Earliest Times to the Macedonian Conquest. With Maps and Plans. Crown 8vo, 4s. 6d.

### EPOCHS OF ENGLISH HISTORY.

YORK POWELL'S EARLY ENGLAND to the NORMAN CONQUEST, 1s.

CREIGHTON'S (Mrs.) ENGLAND A CONTINENTAL POWER, 1066-1216. 9d.

ROWLEY'S RISE of the PEOPLE and the GROWTH of PARLIAMENT, 1214-1485. 9d.

CREIGHTON'S (Bishop) TUDORS and the REFORMATION, 1485-1603. 9d.

GARDINER'S (Mrs.) STRUGGLE against ABSOLUTE MONARCHY, 1603-1688. 9d.

ROWLEY'S SETTLEMENT of the CONSTITUTION, 1689-1784. 9d.

TANCOCK'S ENGLAND during the AMERICAN and EUROPEAN WARS, from 1765-1820. 9d.

BROWNING'S MODERN ENGLAND from 1820-1885. 9d.

**Epochs of English History.** Complete in One Volume, with 27 Tables and Pedigrees and 23 Maps. Fcap. 8vo, 5s.

### EPOCHS OF ANCIENT HISTORY.

10 Vols., with Maps, 2s. 6d. each.

BEESELY'S GRACCHI, MARIUS, and SULLA.

CAPE'S EARLY ROMAN EMPIRE.

CAPE'S ROMAN EMPIRE of the SECOND CENTURY.

COX'S GREEKS AND THE PERSIANS.

CURTESI'S RISE of the MACEDONIAN EMPIRE.

COX'S ATHENIAN EMPIRE.

IHNE'S ROME to its CAPTURE by the GAULS.

MERIVALE'S ROMAN TRIUMVIRATES.

SANKEY'S SPARTAN AND THEBAN SUPREMACIES.

SMITH'S (BOSWORTH) ROME AND CARTHAGE.

### EPOCHS OF MODERN HISTORY.

19 Vols., with Maps, 2s. 6d. each.

AIRY'S ENGLISH RESTORATION and LOUIS XIV., 1648-1678.

CHURCH'S BEGINNING of the MIDDLE AGES.

COX'S CRUSADES.

CREIGHTON'S AGE OF ELIZABETH.

GARDINER'S HOUSES OF LANCASTER AND YORK.

GARDINER'S THIRTY YEARS' WAR.

GARDINER'S FIRST TWO STUARTS.

GARDINER'S (Mrs.) FRENCH REVOLUTION, 1789-1795.

HALE'S FALL of the STUARTS, and WESTERN EUROPE, from 1678 to 1697.

JOHNSON'S NORMANS in EUROPE.

LONGMANS' FREDERICK the GREAT and the SEVEN YEARS' WAR.

LUDLOW'S WAR of AMERICAN INDEPENDENCE, 1775-1783.

MCCARTHY'S EPOCH of REFORM, 1830-1850.

MOBERLY'S THE EARLY TUDORS.

MORRIS'S AGE of ANNE.

MORRIS'S THE EARLY HANOVERIANS.

SEEBOHM'S PROTESTANT REVOLUTION.

STUBBS' THE EARLY PLANTAGENETS.

WARBURTON'S EDWARD THE THIRD.

## Psychology.

By JAMES SULLY, M.A.

**Outlines of Psychology.** Crown 8vo, 9s.

**The Teacher's Handbook of Psychology.** Crown 8vo, 6s. 6d.

**Studies of Childhood.** 8vo, 10s. 6d.

**Children's Ways:** being Selections from the Author's "Studies of Childhood," with some additional matter. With 25 Figures in the Text. Crown 8vo, 4s. 6d.

## French.

By A. A. SOMERVILLE, B.A.

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

By LÉON CONTANSEAU, M.A.

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

# MESSRS. LONGMANS & CO.'S LIST.

## Classics.

By Dr. B. H. KENNEDY.

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. & J. E. KENNEDY, and H. WILKINSON M.A. Cr. 8vo, 1s. 6d.  
A KEY, for the use of Masters only. 2s. 9d. net, post free.

By ARTHUR SIDGWICK, M.A.

**A First Greek Writer.** Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.**

With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus.

**Euripides.**—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alcestis. Bacchæ. Hecuba. Medea.

**An Introduction to Greek Verse Composition.** With Exercises. By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By G. G. BRADLEY, D.D., Dean of Westminster.

**Aids to Writing Latin Prose.** Containing 144

Exercises. With an Introduction comprising Preliminary Hints, Directions, Explanatory Matter, &c. Edited and Arranged by T. L. PAPILLON, M.A. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. G. LIDDELL, D.D., and ROBERT SCOTT, D.D.

**Greek-English Lexicon.** 4to, 36s.

**Greek-English Lexicon.** Abridged from the above. square 12mo, 7s. 6d.

By H. R. HEATLEY, M.A.

**Longmans' Illustrated First Latin Reading-Book and Grammar.** With 67 Illustrations by LANCELOT SPRED. Crown 8vo, 1s. 4d.

**Graecula.** A First Book of Greek Translation. With Rules, Short Sentences, Stories for Translation, and a Vocabulary. Fcap. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Easy Latin Prose Exercises.** Consisting of Detached Sentences and Continuous Prose. Fcap. 8vo, 2s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. R. HEATLEY, M.A., and H. N. KINGDOM, M.A.

**Gradatim.** An Easy Latin Translation Book for Beginners.

With Vocabulary. Fcap. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Excerpta Facilia.** A Second Latin Translation Book.

Containing a Collection of Stories from various Latin Authors.

With Notes at end, and a Vocabulary. Fcap. 8vo, 2s. 6d.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

By H. R. HEATLEY, M.A., and J. ARNOLD TURNER, M.A.

**Selections from Ovid.** With Notes and Vocabulary. 16mo, 1s. 6d.

## Classics—continued.

By T. K. ARNOLD, M.A.

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

By FRANCIS DAVID MORICE, M.A.

**Stories in Attic Greek.** With Notes and Vocabulary. Crown 8vo, 3s. 6d.

By F. RITCHIE, M.A.

**First Steps in Greek.** Crown 8vo, 2s.

**A Practical Greek Method for Beginners.**

By F. RITCHIE, M.A., and E. H. MOORE, M.A. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Easy Greek Grammar Papers.** Fcap. 8vo, 1s. 6d.

**First Steps in Latin.** Crown 8vo, 1s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Fabulae Faciles.** A First Latin Reader. Containing Detached Sentences and Consecutive Stories. With Notes and Vocabulary. Crown 8vo, 2s. 6d.

**Imitative Exercises in Easy Latin Prose.** Based on "Fabulae Faciles." Crown 8vo, 1s. 6d.

**Exercises in Latin Prose Composition.** Crown 8vo, 2s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Easy Continuous Latin Prose.** Crown 8vo, 3s. 6d.

**First Latin Verse Book.** Crown 8vo, 2s.

**Easy Latin Passages for Translation.** Small 8vo, 2s. [Just published.]

**Latin Grammar Papers.** Fcap. 8vo, 1s.

**Discernenda.** List of Latin Words liable to be Confounded. I. Verbs; II. Miscellaneous. Crown 8vo, 9d.

[Just published.]

## English Grammar and Literature.

By ALEXANDER BAIN, LL.D.

**A First or Introductory English Grammar.** 18mo, 1s. 4d.

KEY with additional Exercises. 18mo, 1s. 9d.

**A Higher English Grammar.** Fcap. 8vo, 2s. 6d.

**A Companion to the Higher English Grammar.** Being intended as a help to the thorough mastery of English. Crown 8vo, 3s. 6d.

**English Composition and Rhetoric.** Original Edition. Crown 8vo, 4s.

**English Composition and Rhetoric.** Enlarged Edition. (Two Parts.) Part I.: The Intellectual Elements of Style. Crown 8vo, 3s. 6d. Part II.: The Emotional Qualities of Style. Crown 8vo, 3s. 6d.

**On Teaching English,** with Detailed Examples and the Definition of Poetry. Crown 8vo, 2s. 6d.

By THOMAS ARNOLD, M.A.

**A Manual of English Literature,** Historical and Critical. Seventh Edition, Revised. Crown 8vo, 7s. 6d.

# Clarendon Press, Oxford.

1. On Rag-made Paper, cloth, 6s. net.
2. On Oxford India Paper, cloth, 7s. 6d. net.

**Nova Anthologia Oxoniensis.** Translations into Greek and Latin Verse. Edited by ROBINSON ELLIS, M.A., and A. D. GODLEY, M.A.

New Issue. Crown 8vo, cloth, 7s. 6d.

ROMAN POETS OF THE AUGUSTAN AGE.

**Horace and the Elegiac Poets.** By W. Y. SELLAR. With a Memoir of the Author by ANDREW LANG, M.A.

A limited number of the 8vo Edition remain on sale. With Portrait, 14s.

Now Ready. In Three Sizes.

**The Complete Works of Molière.**

1. Crown 8vo, on Rag-made Paper. Cloth, 5s.
2. Crown 8vo, on Oxford India Paper. Cloth, 9s. 6d.
3. In Miniature, 32mo. 4 Vols. in case. Cloth, 14s.

Just Published. Crown 8vo, cloth limp, 1s. 6d.

**Glossarial Index to the Works of Geoffrey Chaucer.**  
By the Rev. WALTER W. SKEAT, Litt.D.

Crown 8vo, Separate Issue, with numerous Maps, 5s.

**The History of South Africa to the Jameson Raid.**  
Being Vol. IV., Part I. of "A Historical Geography of the British Colonies." By C. P. LUCAS, B.A.

**Shakespeare.—As You Like It.** Edited by W. ALDIS WRIGHT, D.C.L. 1s. 6d.

**Scott.—Marmion.** Edited, with Introduction and Notes, by T. BAYNE. Extra fcap. 8vo, 3s. 6d.

— **Lady of the Lake.** Edited, with Preface and Notes, by W. MINTO, M.A. Extra fcap. 8vo, 3s. 6d.

— **Lay of the Last Minstrel.** By the same Editor. With Map. Second Edition. Extra fcap. 8vo, 2s.; in parchment, 3s. 6d.

**Helps to the Study of the Book of Common Prayer.** Being a Companion to "Church Worship." By W. R. W. STEPHENS, B.D. Crown 8vo, cloth, 2s.; also in leather bindings.

**Notes on the Gospel of St. Luke, for Junior Classes.** By E. J. MOORE SMITH, Lady Principal of the Ladies' College, Durban, Natal. Stiff covers, 1s. 6d.

**Old Testament History for Schools.** By T. H. STOKOE, D.D. Part I. (Second Edition).—From the Creation to the Settlement in Palestine. Part II.—From the Settlement to the Disruption of the Kingdom. Part III.—From the Disruption to the Return from Captivity. 2s. 6d. each, with Maps.

**An Elementary Latin Grammar.** By J. BARROW ALLEN, M.A. New Edition, Revised and Enlarged. 2s. 6d.

**German Passages for Unprepared Translation.** For the use of Candidates for Army, Civil Service, and other Examinations. Selected and Arranged by EDUARD EHBEKE. Extra fcap. 8vo, stiff covers, 3s.

**Niebuhr.—Griechische Heroen-Geschichten** (Tales of Greek Heroes). With English Notes and Vocabulary by EMMA S. BUCHHEIM. Second Revised Edition. Extra fcap. 8vo, cloth, 2s.; stiff covers, 1s. 6d. Edition A.—Text in German Type. Edition B.—Text in Roman Type.

**Cicero.—De Senectute.** Edited, with Introduction and Notes, by L. HUXLEY, M.A. Extra fcap. 8vo, 2s.

**Livy.—Book XXII.** With Introduction, Notes, and Maps. By M. T. TATHAM, M.A. 2s. 6d.

**Horace.** With a Commentary. (In a size suitable for the use of Schools.) Vol. I. The Odes, Carmen Saeculare, and Epodes. By E. C. WICKHAM, D.D. Second Edition. Extra fcap. 8vo, 6s.

**Virgil.—Aeneid. Books IV.—VI.** By T. L. PAPILLON, M.A., and A. E. HAIGH, M.A. Crown 8vo, stiff covers, 2s.

— **Aeneid IX.** Edited, with Introduction and Notes, by A. E. HAIGH, M.A. Limp, 1s. 6d.; In Two Parts, 2s.

## Forthcoming Volumes of the Oxford Classical Texts.

(Scriptorum Classicorum Bibliotheca Oxoniensis.)

**Thucydides Historiae.** Libri I.—IV. Recensuit H. STUART JONES.

**Platonis Opera.** Tom. I. Recensuit J. BURNET.

**Lucreti de Rerum Natura Liber.** Recensuit C. BAILEY.

**Taciti Opera Minora.** Recensuit H. FURNEAUX.

Nearly Ready.

**Aeschyli Tragoediae et Fragmenta.** Recensuit A. SIDGWICK.

Second Edition, Revised. In 2 Vols., cloth, 15s.

**Thucydides.** Translated into English, with Introduction, Marginal Analysis, Notes, and Index. By B. JOWETT, M.A., late Master of Balliol College.

Crown 8vo, cloth, 5s.

**Select Fragments of the Greek Comic Poets.** Edited by A. W. PICKARD, Cambridge, Fellow of Balliol College.

**Euripides.—Hecuba.** With Introduction and Notes. By C. H. RUSSELL, M.A. 2s. 6d.

**Euclid Revised.** Containing the Essentials of the Elements of Plane Geometry as given by Euclid in his First Six Books. Edited by R. C. J. NIXON, M.A. Third Edition. Crown 8vo, 6s.

Sold separately as follows:—

Book I., 1s. Books I., II., 1s. 6d.  
Books I.—IV., 3s. Books V., VI., 3s. 6d.

**Elementary Plane Trigonometry.** By R. C. J. NIXON, M.A. Crown 8vo, 7s. 6d.

**Practical Work in General Physics.** By W. G. WOOLLCOMBE, M.A., B.Sc. Crown 8vo, 2s. each Part.

Part I.—General Physics.  
Part II.—Heat.  
Part III.—Light and Sound.  
Part IV.—Magnetism and Electricity.

**Class-Book of Chemistry.** By W. W. FISHER, M.A., F.C.S. Fourth Edition. Crown 8vo, 4s. 6d.

**Book-keeping.** New and Enlarged Edition. By Sir R. G. C. HAMILTON and JOHN BALL. Cloth, 2s.

Ruled Exercise Books adapted to the above may be had, price 1s. 6d.; also, adapted to the Preliminary Course only, price 4d.

**A Manual of Current Shorthand, Orthographic and Phonetic.** By HENRY SWEET, M.A. Crown 8vo, 4s. 6d.

ALSO PUBLISHED BY HENRY FROWDE.

**Old Testament Manuals.** By the Rev. H. M. CLIFFORD, M.A. Oxon. Genesis, Exodus, 1s. 6d. each; Joshua and Judges, Ruth and I. Samuel, 9d. each; II. Samuel, I. Kings, II. Kings, Ezra, and Nehemiah, 1s. each. All fcap. 8vo, limp cloth.

These are the only Manuals which omit from the Text the passages not usually read in public. Also the only ones that have

- (i.) The Notes opposite the Text.
- (ii.) References to every Person and Place mentioned in each Book.
- (iii.) Questions upon each book, with References to the Answers.

Over 70,000 copies have been sold in England for educational purposes, and they have been highly commended by the Headmasters of Harrow, Rugby, Shrewsbury, Cheltenham, and 100 other Masters and Mistresses and Clergy. These Manuals are as cheap as any that are published, varying in price from 9d. to 1s. 6d. each. They will be found very suitable for Class Teaching in Day and Sunday Schools, for Family Reading, for Parents with their Children, and for Private Study.

ALSO IN PREPARATION FOR EXAMINATION.

## CONTENTS.

	Page		Page
A Year of Conclusions .....	13	Chats on Child Study. III. Children and Pictures .....	26
Notes .....	14	Technical Education in Germany .....	27
Summary : The Month .....	16	Women's Work at Oxford .....	27
Forecasts and Comments :—Fixtures .....	21	Reviews .....	28
Education Gossip .....	22	Cicero and his Correspondents ; Oh, Ye Gods ! ; Ideals of a School- master ; School and College Histories ; The Geometry of Crystals ; Rhetoric.	
Appointments and Vacancies .....	23	General Notices .....	31
Literary Gossip .....	23	Meeting of the Council of the College of Preceptors .....	33
Some Lessons from Thring's Life. By Sir Joshua Fitch. Paper read at the Evening Meeting of Members .....	24	Correspondence .....	33
Universities .....	25	Conference of Science Teachers ; Over-Pressure ; Commercial Depart- ments in Schools ; Slaying the Slain ; Lewis Carroll.	
Ben Jonson on Education .....	26	Mathematics .....	35

## The Educational Times.

### *A Year of Conclusions.*

If 1898 was characteristically a year of discussion, 1899 has been a year of conclusions, and 1900 ought to be a year of fruition. At all events in the domain of educational politics, the past year has seen the definite formulation and legislation of sundry new departures, which had been carefully and patiently discussed, and which are now, we think, generally accepted, even by many who looked on them with some alarm or misgiving. Amongst what we have called the conclusions of the year are the passing of the Board of Education Bill, the elaboration of a scheme for reorganizing the Education Department, to come into effect three months hence, the housing of London University at South Kensington, and the remodelling of the University by a statutory Commission.

The Education Act, as we maintained from the first, is far from being a halting and half-hearted measure : it ought rather to be regarded as revolutionary and epoch-making. It brings the whole area of "education in England and Wales" under the superintendence of a Board which will practically be a single unfettered Minister of the Crown. It virtually puts in his hands the educational functions of the Charity Commissioners and the Science and Art Department—hereafter to be known as the South Kensington Department of the Board of Education, or, briefly, "The Board of Education, South Kensington." It creates a Consultative Committee, and ordains inspection and registration under the authority of the Board, with an implied necessity for the examination of schools and the training of teachers. It even (practically) calls into existence Local Authorities over the whole area ; for, by the first clause, it gives the Board superintendence over the educational functions of the County Councils, and it releases their grants from the technical restriction. Again, it involves the appointment of one Parliamentary Secretary to the Board who will not be the Secretary of the Elementary Department.

Now, all this is all but the complete Ministry of Education. So far from the Act making a mere start in the direction of reorganization, and being an instalment of a new administration, it has essentially reorganized everything. Nothing more is necessary beyond the creation of Local Authorities, responsible to the Board, and not to the County Councils. Since these Authorities are to look to the Board of Education, it matters

comparatively little how they are to be created, so long as the majority does not represent the elementary School Boards, and so long as they include representatives of County Councils, School Boards, Universities, teachers, and women. All these are indispensable. When the Local Authorities are created the Ministry of Education will be fully equipped, and Parliament will have done its work. The rest is the mere routine of evolution.

As the Universities are the final charge and responsibility of the Board, the new metropolitan University will be a crucial test of its powers and capacities. The remodelling of the Education Department and the remodelling of London University will be effected simultaneously and side by side. Board and University will acquire their virile strength together as we turn over the page of the nineteenth century, and begin to write the history of the twentieth. The Board must help the University to be strong, and the University must serve the Board, being central to the kingdom, in its most populous area, and with its constitution still young and plastic, by supplying the "norma" of highest-grade education in the continuous national scale over which the Board will exercise control from its beginning to its end.

The other Universities have their respective and definite characters and aims, some closely resembling those which we have just imagined for the University of London, others differing more or less widely. But, under the elasticity of the new organization, not even the ancient Universities of Oxford and Cambridge will fail to supply the highest-grade education of the continuous scale, for the Board school boy is already able, and the Board school girl ought to and will be able, to climb from scholarship to scholarship, and to end on a level with those who have arrived by way of the preparatory and the public school. Under the same elasticity which we have long enjoyed as a nation, and which we have maintained by our prudent scheme of reorganization, conserving all that is worth keeping, and linking the new with the old, we shall see all types of English schools continuing to do their special work, drawing aid from the State if they accept the State's control, relying on their present resources and connexions if they choose to preserve their actual independence, but all profiting alike by raised ideals and reinforced energies.

Throughout the discussions of the past few years we have always contended that efficient schools of every variety, dependent and independent, public and private, would be safe

under a reorganized Department. Their common interests are many, their antagonism will be slight. Whilst the State builds and supports a new type on unoccupied ground, effective schools of the older types will continue to be filled by very much the same kind of boys and girls as those who fill them to-day. No doubt there may be cases of hardship here and there, but they will scarcely deserve to be regarded as the necessary result of a change of system.

On the whole, then, we can feel confident as we look forward to the "nineteen hundreds" for the fruition of the tree which has been planted and watered with so much assiduous care.

### NOTES.

THE Headmasters' Conference met this year on December 21 and 22, at the College of Preceptors. The Rev. H. W. Moss, Headmaster of Shrewsbury, presided. There was a large attendance of Headmasters of "Conference" schools in various parts of the country, including the Headmasters of Winchester, Rugby, Charterhouse, Marlborough, Merchant Taylors', Clifton, Liverpool College, Nottingham High School, Bedford, Bradford, Durham, Felsted, Haileybury, Lancing, Stonyhurst, Blackheath, Godolphin, Chigwell, Mill Hill, Manchester, Tonbridge, and Wolverhampton. The Chairman congratulated the Conference on the passing of the Board of Education Act, and then submitted the first resolution, as follows:—

That, in the opinion of this Conference, it is important that the Local Authorities to be constituted for educational purposes (1) should be empowered to deal with education of all kinds—primary, secondary, and technical; (2) should have charge of areas sufficiently large to permit of a complete organization of educational work; (3) should be so constituted as to do justice to all the interests involved in such organization.

Mr. Moss thought his hearers would all agree that those who had profited most by the teaching of elementary schools should have access to the higher forms of teaching, and boys should be enabled to pass from both primary and secondary into technical schools. "In reckoning up educational possibilities, it was necessary to take into account the large number of private and preparatory schools established throughout the country. Women's education, again, was a very important branch of the subject. Unless there was a discriminating impartial authority, it was quite certain that power and resources would be wasted." Mr. Moss believed that a comprehensive educational system logically implied an authority whose purview should include all the different kinds of education within its district.

THERE was much discussion on the resolution above quoted; and, in the end, it was abandoned by almost every member of the Conference. Canon Armour, of Crosby, observed that its fundamental principle was that the Local Authority should deal with education of all kinds. If, therefore, it were passed in that form, those who might ultimately appoint the Local Authorities might accept the principle and reject its second section. He should be inclined to make the second section the fundamental proposition. His fear was that several county boroughs were not large enough for the complete organization of education—"primary," secondary, and technical. He moved the following amendment, which was eventually carried as a substantive resolution:—

That, in the opinion of this Conference, it is important that the Local Authorities to be constituted for educational purposes should

have charge, by the grouping of counties and county boroughs, of areas sufficiently large to permit of complete organization of educational work.

The contrast between this and the original resolution is rather striking. The large majority of the Headmasters were clergymen, and they seem to have been impressed by the scheme of the Birmingham Archidiaconal Council, which the Bishop of Coventry sent to us last month, and which divides England into ten educational areas. Dr. Wilson, of Lancing, expounded this scheme; but the Chairman declared that it was not in his mind when he moved the resolution. He was frankly for county areas and a common Local Authority. Mr. Rundall and several other members considered it futile to expect that the Government would adopt any larger areas than those of the counties.

A RESOLUTION in favour of training was then moved by Dr. Rendall:—

That this Conference heartily sympathizes with the establishment of professorships, lectureships, and other University or collegiate agencies for the training of secondary school teachers, and presses upon all those preparing for the profession the importance of systematic training in the theory and practice of education.

Dr. Rendall said some work in the direction indicated had been done, but the work must be better done and more effectively organized. It must be carried out by men of experience, weight, light, leading, and genius, and not, as hitherto, be a mere appendage—a little excrescence of the older Universities. Until this was done, the training of teachers would not hold the place it deserved. Effective lectureships and professorships should be established in connexion with the higher educational institutions. It was a side of higher education on which County Councils and those entrusted with the disposal of funds could most effectually assert themselves. Mr. Bell and Mr. Upcott supported, but the Rev. C. Eppstein (Reading) opposed the motion. He said that the question was very wide, and it was only raised because England had been seized with a sort of panic, owing to the idea that she was being ousted from the markets of the world. The effect of the proposal would be that they would lose that elasticity and freedom which had characterized our public schools for many years. Headmasters fought shy of trained teachers, and would not have them in their schools. This was on the familiar lines of the old-fashioned, unbending headmasters of five or ten years ago, who are by this time nearly all extinct. "Untrained men have been good enough for me" used to be the argument of reactionary headmasters—comparable to nothing so much as the proud humility of the father of the modern Board-school boy:—"I never had no book-larning." Dr. Rendall's resolution was carried with two dissentients.

THIS did not exhaust what the Headmasters had to say on the training of secondary teachers. They carried by a considerable majority the following resolution moved by Mr. Swallow, of Chigwell:—

That this Conference is of opinion that, after the expiration of five years from the commencement of the Board of Education Act, no new member of the profession should be qualified for a place on the register of secondary teachers who has not undergone a systematic course of training.

Mr. Swallow reminded the Conference that two efforts had been made in late years to establish training colleges, and both had signally failed. He was convinced each failure was due in the first instance to the fact that there had been no sufficient demand for trained teachers to create a supply. This was a

matter in which headmasters of public schools in particular could help their weaker brethren. "They should press this matter on the profession now for two reasons: first, they should show the public that they were in earnest, and then they could not afford to wait, because they would not be allowed to do so. There was a provision in the recent Act that the Consultative Committee should prepare a register of teachers, and it was almost certain that the Committee would insist on some proof of capacity for their work being given by the teachers registered. Surely the Committee would not be satisfied with a University degree." Mr. Lyttelton supported the proposal, which, he urged, was not in any way likely to limit the number of competent young teachers. With such a restriction on admission to the register, there will be no difficulty whatever in providing the means of secondary training.

KING'S COLLEGE, LONDON, is making a courageous effort to maintain its scientific departments abreast of the requirements of the age. Judging, however, from the first list of subscriptions for this purpose which has appeared in the *Times*, the £20,000 required will take some time to collect. It is to be hoped that the forthcoming dinner to be held in Lincoln's Inn Hall, under the presidency of the Leader of the House of Commons, in aid of the movement, will induce some of our wealthier citizens, and especially Churchmen, to assist an institution which, although its professoriate must be recruited from Churchmen, deserves the support of the country generally. There is no doubt that the medical school and the scientific departments have suffered in the past owing to ecclesiastical influences which have not been at all times progressive. The scientific side of the College would have everything to gain by being freed from any trace of religious tests. Scientific departments which are not adequately equipped and provided with the best teachers can be of but little real use. In his recent prize-giving speech at the School of Science at Merton—unless both the *Standard* and the *Times* reporters were "nid, nid, noddin'"—Lord Russell of Killowen, the Lord Chief Justice, made a curious blunder, all the more amusing as, we think, the occasion was his first formal entry into the ranks of the champions of secondary education. He spoke of a scheme for a Board of Education being "shadowed forth" by the Duke of Devonshire, and seemed unaware of the passing of the Bill. We have always understood that lawyers make a point of not reading a statute until they are called upon to construe it; but it seems that peers who are also judges are privileged not to know of the coming into existence of their own creations. The Chief Justice's severe labours on the Venezuelan Arbitration would, however, amply excuse any ignorance he may show of the contents of the statutes of 1899.

WE were glad to notice his strong words in favour of preserving the full play of voluntary effort in education. As he said, we do not want boys to be uniform like sausages—a result which a uniform system of education must naturally tend to produce. The Chief Justice is, indeed, *laudator temporis acti*, and he regretted the disappearance of the old apprenticeship system, which was our forefathers' scheme of technical education, just as, not long ago, in a speech on legal education, he regretted that the prolonged legal training in a pleader's

chambers was a thing of the past. He spoke the usual comforting words for the benefit of the unsuccessful ones, which it is well that boys should hear on such occasions. In spite of our belief in the power of education, we can hardly accept his contention that perseverance and strength of character will outstrip genius. Yet, although the last may soar to the skies, the first two qualities will often remove mountains, and the real province of educational effort lies in the development of these. But the Chief Justice's wide and varied experience of life does not enable him to show schoolmasters the solution of this ancient problem.

THE Lord Chief Justice's career is such a splendid example of what perseverance and strength of character can achieve in a learned profession without the advantages of University training that no better instance is wanted to show the importance of these as educational aims. To rise from a solicitor's office to be premier Judge of the High Court must have required both determination and the force of a strong personality—which, when he was only Mr. Charles Russell, sometimes, it is said, overbore even the Judges before whom he practised. Doubtless, occasionally, such characters become brusque and impatient of the less decided and assertive ways of men of milder temperament. It is the rugged result which Nature's uncontrolled hand usually achieves. But, if a University training develops a finer and more sympathetic manner, it may also produce the subtle, cynical wit which is far removed from the mellow generosity of real culture. Lord Russell of Killowen's predecessor, the late Lord Coleridge, with his literary tastes and old-fashioned, courteous manner, suggesting almost the quintessence of affectation, might be said to combine both the above results of University training. What more biting thing could be said of a public man than this by Lord Coleridge: "X. is almost an orator, he is almost a lawyer—indeed, he is almost a gentleman"?

THE understanding arrived at between the Oxford University Extension Delegacy and the Educational Committee of the Co-operative Union is bearing fruit. The Delegacy was represented at the Co-operative Congress at Liverpool in May of last year, and co-operative representatives have twice recently visited Oxford, to confer with the Delegacy on matters of educational policy. One result of these conferences is to be seen in the appointment of Mr. Joseph Owen, B.A., as a class teacher in economics, industrial history, and political science, with a view to improving the teaching of these subjects among co-operative members. Examinations will be held in these subjects, and the students who do sufficiently well will obtain certificates, enabling them to lecture on these matters as accredited teachers. Mr. Joseph Owen has been well chosen as the first Oxford lecturer in this new series. Himself a brilliant Extension student, he has but recently completed a most honourable career at Balliol, obtaining a First Class in the Honours School of Modern History, and a research studentship at the London School of Economics.

THE following ingenious answers come fresh from school. A sight translation exercise: "Pourquoi jettent-ils des pierres dans mon jardin? Pour m'ennuyer," was rendered: "Why do they throw stones into my garden? For my manure." In a



Sunday school, the question: "What did David play upon?" got the ready answer from a very small boy: "He played upon the floor." A teacher, desiring to "elicit" the word "anxious" from her class, asked: "What do we get when we are expecting somebody?" and received the disconcerting reply: "A telegram." The dangers of definitions are illustrated by the fact that a ladder was proposed by a Board-school boy as an example of a transparent object, which had just been defined as "something you can see through."

## SUMMARY.

### THE MONTH.

THE Headmasters' Conference and the Modern Languages Association both met on December 21. With the former we deal in our leading columns. At the meeting of the Association, Prof. Skeat, the President, was in the chair; and among others present were Dr. Richard Garnett (the in-coming President), Sir Walter Besant, Prof. J. W. Hales, Mr. Israel Gollancz, Mr. A. T. Pollard (City of London School), Mr. Sidney Lee, Prof. Buchheim, Dr. Furnivall, Mr. Francis Storr, Prof. Walter Rippmann, Dr. H. Frank Heath, Mr. Gerrans, Mr. W. G. Lipscomb (Hon. Secretary), Dr. Karl Breul, Prof. Fiedler, Mr. Michael Sadler, Prof. Schüddekopf, and Mr. Joseph Knight. Prof. Skeat gave an interesting address on the importance of "Early English" studies, and was emphatic on the value of phonetics.

It was a fact that all the most valuable improvements made in recent years in the science of etymology had mainly resulted from the study of phonetics, accompanied by a close and careful observation of the written forms found in our early MSS. The teachers of modern languages had at last found out the true clue to the study—namely, that it was the spoken utterance which really constituted the word and the sentence, and that the written characters were mere symbols convenient for recalling such words and sentences to our recollection, but, at the same time, subservient and subordinate. He would exhort all his hearers to pay the highest regard to the actual pronunciation of the spoken words, and to seize every opportunity of addressing themselves to the ears of their pupils rather than to their eyes.

Prof. Skeat was presented with a replica of the portrait which has been painted for Christ's College, Cambridge. Amongst the resolutions of the Association was one declaring that the compulsory study of both French and German was desirable in all secondary schools, and indispensable on the modern sides, or in schools other than classical.

THE English Education Exhibition, at the Imperial Institute, has been arranged in the following five main divisions:—(1) Education, as controlled by School Boards and Boards of Managers of public elementary schools, together with training colleges for teachers in primary schools. (2) Secondary education, including (a) boys' preparatory schools; (b) private schools for girls and boys; (c) endowed and proprietary schools for girls; (d) endowed, proprietary, grammar, and public schools for boys; (e) secondary training colleges. (3) Technical education, with schools of art. (4) University and higher education. (5) Educational institutions and other bodies, not falling under any of the above heads. The exhibits are intended to represent the education of the present day, and also to illustrate the history and traditions of education. One great feature will be the number of specimens of the work of pupils and students in art and in manual and artistic crafts, and also in ordinary literary training. Under the latter head will be comprised sets of ordinary exercises, note-books, and examination papers, illustrative of the actual work done in the different schools and colleges represented. The Exhibition will also include a number of portraits and busts of great historical and artistic interest, representing many of the great men and women who have been identified with educational progress, and also a number of antiquarian treasures from the great public schools. Among other memorials of peculiar interest may be mentioned the original moral philosophy papers shown up by Mr. Gladstone in the Schools at Oxford. The Exhibition has been supported, most warmly and generously by the great

institutions of the country, and visitors may expect to enjoy the sight of a quite unique collection of objects of educational value and interest. The expert who desires to test and compare the work of our schools of every grade and type will have the fullest materials on which to work; and the ordinary citizen, to whom a school note-book is anything but attractive, will be able to gratify his artistic interests, to glean some trifles of historical knowledge, and even to satisfy his curiosity by the spectacle of an educational cinematograph. Arrangements are being made by many educational bodies for holding a series of meetings, conferences, and lectures on educational subjects at the Imperial Institute during the period of the Exhibition. One section of the Exhibition will be devoted to the display of the works of educational publishers and commercial firms connected with education.

PROF. HENRY E. ARMSTRONG deprecates, in a letter to the *Times*, the suggestion that the Science and Art Department should relinquish its hold on secondary schools:—

The great fault to be remedied in our system—whether primary or secondary—is its excessively bookish and academic character; the inspectors of the Education Department have been for the most part University men—often well read but nothing more. . . . The inspectors of the Science and Art Department, on the other hand, of late years at least, have been forced into contact with practical affairs, and the spirit of research which dominates and constitutes science has of necessity influenced their work; moreover, they have considerable experience of secondary schools, their presence having been welcomed in many of these, as the Department has had money to dispense, whilst the operations of the Education Department have been almost entirely confined to elementary schools.

Prof. Armstrong insists also on the need for stricter discipline in schools, and declares that, if the Government had appreciated the gravity of the position of this country in the matter of education, a wider and more representative Committee would have been appointed to reform the Department.—Mr. D. R. Fearon, C.B., Secretary to the Charity Commissioners, has been added to the Organizing Committee.

EARLY in the month, at a meeting in the lecture theatre of the Victoria and Albert Museum, Sir John Gorst, on behalf of some five hundred subscribers, presented a testimonial to Sir John Donnelly, on his retirement from the Science and Art Department. Sir John Gorst said that he had been a colleague of Sir John Donnelly about four years, and had received from him on all occasions the most loyal co-operation, which had been enhanced by a very strong personal friendship. About three years ago an attack was made ostensibly on the Department of which he was the head, but it really had a considerable amount of personal animus in it. There was an inquiry, by a Committee of the House of Commons, in which Sir John Donnelly was virtually put upon his trial, and he could only say that, in the opinion of his official chiefs—the Duke of Devonshire's opinion was the same as his own—from that inquiry Sir John Donnelly emerged with the conclusion in the minds of those who had read the evidence, that he had been a most loyal servant of the Department, that his administration of the Department had deserved the approbation of the country, and that the insinuations made against him were absolutely baseless.

THE inaugural dinner of the Bristol University College Colston Society was held at Clifton on December 7. The chair was taken by the Bishop of Hereford, and the guest of the evening was Mr. Bryce, M.P. Mr. Bryce said that among all the triumphs and laurels of progress, on which two years ago they were meditating when they celebrated the sixtieth anniversary of the Queen's reign, there was nothing of which on the intellectual and moral side they might be more proud in England than of the progress their Universities and colleges had made.

They ought not to seek to bind down institutions like this, which were intended to flourish and grow for all time, by giving a college any special direction which would prevent its freest development. A new institution was, of course, bound to lay hold of those lines of activity which would most bring it into connexion with the practical life of to-day, and give it the largest hold on the practical interests of the people amongst whom it worked. They had not yet, much as had been done by some of the University colleges in some of the cities, reached the



limit of the practical utility and value in municipal life which these colleges might have. A college might develop a faculty of commerce, and he would be glad if they had the pecuniary resources to see this done in Bristol. There was a great deal to be said for the plan of having several colleges associated in one University. We were on the eve in England of much larger gifts to educational purposes than heretofore, and, to meet the deplorable tendency to centralization, we should have a larger number of independent intellectual centres to give variety and richness in our intellectual life, which it could not have if drawn into one centre.

On December 8, Sir Edward Clarke, M.P., presented the prizes at the annual distribution of the Southwark Evening Continuation Schools, under the London School Board. Sir Edward said that he left school at thirteen, and he never went to a University, so that he exactly understood what boys felt upon leaving school and in wanting to continue their education. It was in the continuation schools that the great hope of the young boy and girl students lay. When a boy left school he was only just beginning to learn, and, unless the opportunity of further education was grasped, the advantage of the school life would absolutely disappear. He found his chance in evening classes for young men in the City of London College and the Church of England Young Men's Society; and the chance of the boys leaving Board schools to-day was in the continuation classes. The capacity for acquiring knowledge was greater between the ages of fourteen and twenty-one than at any other age, and, if these years were wasted, the grandest opportunities for success in life were lost. The great advantage of training in school was not in that which was learned, but in the habit of learning acquired, and the secret of success in life was not in being able to do extraordinary things, but in doing ordinary things extremely well.

THE report of the Association for Promoting the Education of Women in Oxford records that the Delegacy of Local Examinations has issued new regulations for the examination of women. The first examination is discontinued; candidates will, however, be able to qualify for admission to the University examinations through the Oxford Higher Local, through Responsions, the Senior Local, the Joint Board Higher Certificate, or other qualification accepted by the Delegacy. A change has also been made in the Honour Examination in Modern Languages. For the future each student will be examined in one language, instead of two. By this change the examination will be more closely assimilated to the University Honour School of English Language and Literature.

FOUNDERS' DAY was celebrated at the Charterhouse on December 12, when a sermon was preached by the Rev. Dr. Rendall, Headmaster of Charterhouse School. At the close of the service a hundred Old Carthusians dined together in the hall adjoining the chapel. The Master of the Charterhouse (Canon Haig Brown) presided, having Sir Richard Webster, Bart., M.P., on his left hand, and the Bishop of Rochester on his right. Following the toast of "Church and Queen," Mr. Page, one of the assistant-masters, proposed "The Navy, the Army, and Reserve Forces," paying a tribute to Colonel Baden-Powell, for whose education he was partly responsible, and pointing out that among the dead Carthusians was Colonel Keith Falconer, who had added his name to the roll of heroes. The Master, in proposing "Florent æternum Carthusiana domus," said that eighty-eight Old Carthusians were now fighting in South Africa. Sir Richard Webster, in replying to the toast of "The Governing Body," extolled the work accomplished for the good of the school by Canon Haig Brown.

LORD RUSSELL OF KILLOWEN (Lord Chief Justice of England) presented the prizes to the successful students at the Rutlish School of Science, Merton, on December 12. The school was built by means of funds bequeathed for local charitable purposes by Mr. William Rutlish, who flourished in the reign of Queen Elizabeth. The Charity Commissioners were responsible for the scheme, having handed over to the Rutlish Trustees an amount sufficient to provide the fabric. The building was completed and opened to students three years ago, and subsequently subsidized by the Surrey County Council. Lord Russell, in the course of his address, said it was originally designed that the proceeds of the benefaction should be used for the advancement, by apprentice-

ship, of youths in the district, but it had been found in recent years that the money could not be properly applied to that object.

He would, however, interpolate the observation which he had made before, and which he had heard others more experienced than himself endorse, that, whatever the reason for it, the decay in the practice of apprenticing to the trades and handicrafts was a public loss and a public evil. He very much doubted whether, under existing conditions, we were producing in these days a class of handicraftsmen as well qualified, in at least the mechanical part of their business, as in former times.

FURTHER ON, referring to the new Board and to the organization of secondary education, Lord Russell said:

No doubt there was room, under the powers of an act of Parliament, by means of a Board of Education, to systematize, to bring into line, the whole character of the education of the country, preventing leakage and waste, and bring up the system to the level of the requirements of our time. He doubted not that much could be done in that respect. While he said that, he by no means desired to see a stereotyped system of teaching and a stereotyped set of books to be taught all over the country. He thought the voluntary effort of education played in this connexion a very important part. It prevented absolute sameness and uniformity in the system of teaching, so that boys were not turned out of school as sausages were turned out of a sausage machine—of exactly the same weight and the same length—but the same play was left to individual character and to individual teaching, which presented not only a pleasing, but a wholesome, variety of teaching.

PROF. FORSYTH, of Cambridge, gave an address on "The Aims of Education" at the prize distribution of Liverpool College. Principal Dyson claimed Prof. Forsyth (who was Senior Wrangler) as an old student of the college. He also referred to the departure of the Rev. H. de B. Gibbins, the Headmaster, to take up the appointment of Headmaster of Kidderminster Grammar School. During the four years Mr. Gibbins had been connected with the college, the number of scholarships had greatly increased, as well as the number and quality of successes and other distinctions. Mr. Gibbins's successor was the Rev. W. Hardman, M.A., senior assistant-master at Hammersmith Godolphin School. Prof. Forsyth dwelt on the value of education as a preparation for conduct in life, alike in its business, in its interests outside the business of life, and in the use of the leisure of life.

Public opinion was sometimes apt to look upon technical education as replacing education; whereas it was its supplement, and could be given very much better when a real and broad foundation had already been laid, such as was given in the grammar school and the commercial school. The aims of education were to teach acquisition, discipline, and culture. The standard and means might be different, but the object and spirit and ideal were one—to develop the faculty of reasoning, then the faculty of observation, and afterwards the faculty of expression. He urged that the teaching of English composition should be more largely practised, and remarked that the study of the geography and history of the British Empire would be far more useful to the nation than much of the music-hall patriotism of which we got so much nowadays.

At a recent meeting in Edinburgh of the Secondary Teachers' Association, Dr. J. Strachan read a paper on "Home Lessons from a Medical Point of View." Dr. Strachan expressed the conviction that home lessons were an evil, and ought to be discontinued.

His chief objection against the imposition of home lessons was that they were an addition of one, two, or more hours to the school day, which, in his opinion, was already too long. Home lessons always fell to be learned at a time of night when the young mind had not the capacity for the work, and that attempt to over-rule Nature was productive of great evil. He expressed disapproval of punishment and prizes, holding that the fear of the former and the desire for the latter were the cause and source of such serious school delinquencies as lying, cheating, copying, and cribbing, which could not but have a most pernicious effect on the future. As regarded the effect of home lessons on the health of the children, he intimated the impaired eyesight resulting from severe study in youth, and contended that the great prevalence of insanity had also a significance in this connexion, and ought to give pause to those in authority who were piling on motives for pressure in brain work.

In the discussion that followed, Mr. McDonald (Daniel Stewart's College) thought Dr. Strachan's arguments only applied to injudicious home lessons, while Miss Hunter (Secretary) said the

British parent would not do without home lessons for his children.

PROF. ANWYL, of Aberystwyth, gave an address on "Education" on the annual speech day of Llanidloes Intermediate Schools. He said that very often it was as difficult to understand men's words in English as in a strange tongue. As life advanced it became fuller of complex situations and of those crises where a strong mind was required to direct one in the true path.

If a man was to live in this complex civilization of ours, he must be strengthened from the very earliest years of life to keep cool in the face of difficulty, and to be able to decide rapidly and work energetically. Therefore he thought that the work done by children in school should very largely be directed towards strengthening the powers of the mind, whether it were by the study of a dead and difficult language or the attempt to wrestle with a knotty problem in science or mathematics. But the discipline of education was not simply the discipline of the understanding. It meant also the training of the judgment, the love of what was right, and the determination to follow what was right. A great element in school life was the opportunity it afforded for training character. The battling out of life's difficulties in youth by children with those of their own years was a most excellent preparation for the work of life. But, before school life could have its proper influence upon a child's character, the child must be allowed to stay longer in school. He thought those parents who prematurely withdrew their children from school did them a very great injustice.

In connexion with the new University of Birmingham, a deputation was appointed to visit the United States and Canada, with the view of inquiring into the working of some of the leading Universities. When Mr. Andrew Carnegie made his donation of £50,000 he suggested that some of the features of the American Universities should be incorporated in the proposed Birmingham University, and Mr. G. H. Kenrick, Prof. Poynting (Professor of Physics), and Prof. Burstall (Professor of Engineering at Mason University) were deputed to make the necessary inquiries. They left Birmingham on November 1, and have visited the Cornell University, the Massachusetts Institute of Technology at Boston, the McGill University at Montreal, and all the leading colleges and schools in Chicago, Baltimore, Pennsylvania, and the United States generally, concluding their tour at New York. The deputation will present a report to the University Committee, embodying their views.

DR. J. J. FINDLAY, in his report to the Governors of the Cardiff Intermediate School for Boys, refers to the "house system" which he has established since his appointment as Headmaster:—

We are holding fast to the principles on which it is based, and which were originally due to the genius of Dr. Perceval (the present Bishop of Hereford) when Headmaster of Clifton, but we are letting our house life grow from term to term on lines adapted to our needs. It is certainly exercising a pronounced influence upon the character of our boys; it is adapted to boy nature; it develops the best qualities of public spirit and unselfishness; it represses those narrowing tendencies of caste which, in many towns, have alienated the grammar school from civic interests; in short, it recognizes the life of a school as that of a vigorous corporate society. All this, we are well assured, is already felt and appreciated by our parents, and will be realized far more as time goes on. Naturally enough this social life finds its most energetic outlet in school games, and among the best fruits of the "house" system must be reckoned a healthy tone relating to all matters of athletic and physical exercise. The deplorable excesses to which sports often nowadays lead are here checked at the outset; on the other hand, the temptation to sedentary habits is overcome by habituating our boys to delight in open-air pursuits.

THE report of the Governors of Holloway College for 1898-9 states that the number of students in residence during the session, taking the average of the three terms, was 111. The average of 1887-8 (the first year of the college) gave less than thirty-three students. The list of University honours won in the course of the past year includes Firsts in Mathematical Moderations, the Final Mathematical School, English and Modern Languages (Oxford), as well as a First in French (London). The places on the Governing Body void by the resignation of Mr. R. C. Christie and Sir M. Grant-Duff respectively have been filled by Prof. F. W. Oliver, whom the Senate of the University of London appointed, and Dr. A. W. Ward, co-opted by the Governors.

THE

## Educational Review.

*An important new feature will be the introduction of an article in each issue on one of the subjects set for the Oxford and Cambridge Local Examinations.*

CONTENTS FOR JANUARY, 1900.

### Notes and Topics.

**Articles:** Technical and Secondary Education. By WILLIAM GARNETT, Secretary to the Technical Education Board of the London County Council.—The Cambridge Junior Local Syllabus. I. Arithmetic. By W. P. WORKMAN, M.A., Headmaster of Kingswood School, Bath.—How I Learnt to Teach. III. By CLOUDESLEY BRERETON, M.A., L.ès L.—Chataqua.

**University Letters:** Oxford, Cambridge, and London.

**Reviews of New Books.**

**List of New Books.**

**Announcement of a Five-Guinea Prize for the best List of Books for the Cambridge Junior Local Examination.**

Published on the 10th of each month.

Price 4d. By post, 5d. Annual Subscription, 5s. post free.

LONDON:

At the Office of the Educational Review,  
203 STRAND, W.C.

## Recent Publications.

**The Navy League Map of the World.** 21s.

**Illustrations of Plants of Commerce.** Eleven in Series. 3s. 6d. each.

**The Howard Vincent Map of British Empire.** New Edition. 21s.

**Artistic Colour and Brush Work.** Two Sets. 5s.

**Sewing and Knitting Diagrams.** Seven in Series. 3s. 6d. each.

**Wall Chart of Personal History of our Lord Jesus Christ.** 7s. 6d.

**Illustrations of Geometry.** Sheets 1 and 2 ready. 7s. 6d. each.

**Large Wall Maps of Africa and South Africa.** New Edition. 12s. each.

**Britain On and Beyond the Sea.** Handbook to Navy League Map. 1s. 6d.

**Unrivalled Atlas.** New Edition. 3s. 6d.

**Series of Cooking Diagrams.** Six in Series. 3s. 6d. each.

Catalogues of Maps, Atlases, Globes, and List of Object-Lesson Pictures post free to any address.

**W. & A. K. JOHNSTON,** GEOGRAPHERS TO THE QUEEN,  
EDUCATIONAL & GENERAL PRINTERS,  
EDINA WORKS, EASTER ROAD; AND 20 SOUTH SAINT ANDREW STREET,  
EDINBURGH.  
5 WHITE HART STREET, WARWICK LANE, LONDON, E.C.

# MACMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

## MACMILLAN'S MANUALS FOR TEACHERS.

**THE LOGICAL BASES OF EDUCATION.** By J. WELTON, M.A., Professor of Education in the Yorkshire College, Victoria University. Globe 8vo, 3s. 6d.

\* \* \* This Book meets the Requirements of the Teachers' Certificate Examination.

**THE CYNTHIA OF PROPERTIUS.** Being the First Book of his Elegies. Done into English Verse by SEYMOUR GREIG TREMENEHERE, one of H.M. Inspectors of Schools. Crown 8vo, 4s. net.  
*Spectator*.—"Mr. Tremenehere has, we think, achieved a decided success in a very difficult task. . . . An uncommonly readable translation."

### MATHEMATICS AND SCIENCE.

BOOKS I-IV. NOW READY.

**Euclid's Elements of Geometry.** Edited for the use of Schools by CHARLES SMITH, M.A., and SOPHIE BRYANT, D.Sc. Globe 8vo. Books I-IV, 3s. Book I, 1s. Books I and II, 1s. 6d. Books III, and IV, 2s.  
*School Guardian*.—"A handy and well-arranged edition. . . . Useful collections of interesting and important problems and theorems are added at the end of the text proper of each book, together with sets of exercises of some difficulty, while easier exercises are appended to the various propositions themselves. The diagrams are clear, and the varieties of type carefully chosen; indeed, the whole appearance of the pages is a model of what a geometrical text-book should be."

**Experimental Science (PHYSIOGRAPHY, Section I).** An Elementary Course of Physics and Chemistry adapted to the Syllabus of the Science and Art Department. By Professor R. A. GREGORY and A. T. SIMMONS, B.Sc. Lond. Globe 8vo, 2s. 6d.  
*Educational News*.—"We have much pleasure in calling the attention of students to this excellent manual."

PART II. NOW READY.

**Exercises in Practical Physics for Schools of Science.** By Professor R. A. GREGORY and A. T. SIMMONS, B.Sc. Lond. In Two Parts, Globe 8vo, 2s. each.

**Chemistry for Organized Schools of Science.** By S. PARRISH, B.Sc., A.R.C.S. Lond. With Introduction by D. FORSYTH, M.A., D.Sc. Globe 8vo, 2s. 6d.

*Educational News*.—"Will be found of great service to students of elementary chemistry working on the new Science and Art Syllabus. . . . As a laboratory guide, the volume will be found particularly useful. The experiments are varied and suggestive. The illustrations are well done. We cordially commend the work to students of the elementary stage and their teachers."

### FRENCH.

**A Historical French Grammar.** By Professor ARSÈNE DARMESTETER. Edited by Professor ERNEST MURET and Professor LEOPOLD SUDRE. Authorised English Edition by Professor ALPHONSE HARTOG. Crown 8vo, 12s. 6d.

*Educational Times*.—"MM. Muret and Sudre have done their work very thoroughly. . . . The outcome appears to be eminently satisfactory."

**Siepmann's Elementary French Series.**

**Verne.—Le Tour du Monde en Quatre-Vingts Jours.**

Par JULES VERNE. Adapted and Edited by LOUIS A. BARBÉ, B.A., Headmaster of the Modern Language Department in the Glasgow Academy. Authorised Edition. Globe 8vo, 2s.

*Educational Times*.—"Deserves praise. The tale is well known, and will be eagerly read, for there is enough action to satisfy the most high-spirited boy. He will be grateful that the Editor has written brief notes and supplied a vocabulary from which he can get all the help he is likely to require."

**Siepmann's Advanced French Series. New Volumes.**

**About.—Le Roi des Montagnes.** Adapted and Edited by ERNEST WEEKLEY, M.A., late Scholar of Trinity College, Cambridge, Professor of French at the University College, Nottingham. Globe 8vo, 2s. 6d.

*Guardian*.—"Professor Weekley has provided it with a good set of the sort of exercises which have made the earlier numbers of Siepmann's Series so well known and popular. His notes show the hand of the scholar and the teacher, and his introduction is commendably brief and to the point."

**Coppée.—Contes Choisis.** Par FRANÇOIS COPPÉE, de l'Académie Française. Edited by MARGARET F. SKEAT, late Student of Newnham College. Globe 8vo, 2s. 6d. WORD AND PHRASE BOOK, sewed, 6d.

*Educational Times*.—"Miss Skeat is to be congratulated. . . . She has chosen her stories well, and given infinite pains to rendering the notes complete, and the vocabulary helpful. . . . The vocabulary is an excellent piece of work."

**Vogüé.—Cœurs Russes.** Edited by EUGÈNE PELLISSIER, Professeur Agrégé au Lycée du Havre. Globe 8vo, 2s. 6d. WORD AND PHRASE BOOK, sewed, 6d.

*Schoolmaster*.—"The book is got up in the most thorough fashion."

PART III. NOW READY.

**A Three-Year Preparatory Course in French.** Covering all the Requirements for Admission to Universities, Colleges, and Schools of Science. By CHAS. F. KROECH, Professor of Languages in Stevens Institute of Technology. Crown 8vo. First and Second Years, 3s. 6d. each. Third Year, 5s.  
*Educational Times*.—"We should like every teacher to buy it for himself. . . . We welcome Professor Kroech's book heartily, and wish it many readers."

### HISTORY.

**A History of England for High Schools and Academies.** By KATHARINE COMAN, Ph.B., and ELIZABETH K. KENDALL, M.A. Crown 8vo, 7s. 6d. net.

**French History for Schools.** By KATHARINE STEPHEN, Vice-Principal of Newnham College, Cambridge. With Coloured Maps. Globe 8vo, 3s. 6d.

*Educational News*.—"Illustrated by nine excellent, useful Maps, and furnished with a copious and valuable Index of twenty-eight columns. The History is exceptionally good."

**Syllabus of a Course of Eighty-Seven Lectures on Modern European History (1600-1890).** By H. MORSE STEPHENS, Professor of Modern European History in Cornell University. Extra crown 8vo, 8s. 6d.

**CAMBRIDGE LOCAL EXAMINATIONS, 1900.**

**The Gospel according to St. Luke.** THE GREEK TEXT. With Introduction and Notes. By Rev. J. BOND, M.A. 2s. 6d.

**The Acts of the Apostles.** AUTHORISED VERSION. With Notes. By T. E. PAGE, M.A., and Rev. A. S. WALPOLE, M.A. 2s. 6d.

— THE GREEK TEXT. With Notes by T. E. PAGE, M.A. 3s. 6d.

**Shakespeare.—As YOU LIKE IT.** With Introduction and Notes. By K. DEIGHTON. 1s. 9d.

**Scott.—MARMION.**—With Introduction and Notes. By M. MACMILLAN, B.A. 3s.; sewed, 2s. 6d.

**Milton.—PARADISE LOST.** Books III. and IV. With Introduction and Notes. By M. MACMILLAN, B.A. 1s. 3d. each; sewed, 1s. each.

**Merimée.—COLOMBA.** Edited by G. E. FASNACHT. 2s.

**Goethe.—HERMANN UND DOROTHEA.** With Introduction and Notes. By J. T. HATFIELD. 3s. 6d.

**Virgil.—ÆNEID.** Book VI. With Notes and Vocabulary. By T. E. PAGE, M.A. 1s. 6d.

**Cæsar.—DE BELLO GALLICO.** Book VI. With Notes and Vocabulary. By C. COLBECK, M.A. 1s. 6d.

**Horace.—EPISTLES AND ARS POETICA.** Edited by A. S. WILKINS, Litt.D. 5s.

**Livy.—BOOK XXI.** With Notes and Vocabulary. By W. W. CAPES, M.A., and J. E. MELHUIS, M.A. 1s. 6d.

**Cicero.—DE SENECTUTE.** With Notes and Vocabulary. By E. S. SHUCKBURN, M.A. 1s. 6d.

**Xenophon.—ANABASIS.** Book V. With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.

**Euripides.—HECUBA.** With Notes and Vocabulary. By Rev. J. BOND, M.A., and Rev. A. S. WALPOLE, M.A. 1s. 6d.

**Thucydides.—BOOK III.** Edited by E. C. MARCHANT, M.A.

[In Preparation.]

NO. 13 NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

Price 6d.

CONTENTS.

A Retrospect.—**Pioneers in Education. I.**: The Practical Aspect of the Educational Works of Richard Mulcaster. By Prof. FOSTER WATSON, M.A.—**The Ideal Headmaster.** By Rev. CANON FOWLER, M.A.—**Home Work in Girls' Day Schools.** By SARA BURSTALL, B.A.—A Teacher's Library of Geography. By HUGH ROBERT MILL, D.Sc., F.R.S.E.—Chapters in History. VIII. The Tudor Period. By A. JOHNSON EVANS, M.A.—The Teaching of Analysis. III. By E. W. HURST, B.A.—**New Science Buildings at Felsted School.** (Illustrated.) By A. E. MUNBY, M.A.—**Teachers' Notes on English History, 1603-1715. III.**: The Reign of Charles I., 1625-1649. By C. S. FRANKS, M.A., and L. J. MCNAIR, B.A.—The Salaries of Elementary School Teachers.—A New Day-School of Commerce.—The School Pulpit.—**The Life of a Public School.** By THE WARDEN OF RADLEY COLLEGE.—Items of Interest: General; Foreign; Current History.—The British Empire. Practical Geography. (Illustrated.)—Reviews of Recent School Books. (Illustrated.)—**London Matriculation, June, 1900. Monthly Test Papers, No. 1.—Junior Oxford Local Examination, July, 1900. Monthly Test Papers, No. 1.—Preliminary Oxford Local Examination, July, 1900. Monthly Test Papers, No. 1.**

\* \* \* Also ready, Volume I, containing Nos. 1-12, January to December, 1899. Demy 4to, 480 pp. Index. Price 7s. 6d. net. Cloth cases for binding Volume I. are also ready. Price 1s. net.

## CAMBRIDGE UNIVERSITY PRESS.

COLLEGE OF PRECEPTORS' EXAMINATIONS, JULY AND DECEMBER, 1900.

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

*Athenæum*.—"The Pitt Press Shakespeare can stand in competition with any of the numerous editions of the sort now showered upon reviewers."

*School World*.—"Every page shows careful scholarship and a ripe literary judgment. It would be difficult to praise this series too highly."

**As You Like It.** 1s. 6d. With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge.

## CAMBRIDGE MILTON FOR SCHOOLS.

*Guardian*.—"This edition will, we feel sure, long continue to be the standard school text of 'Paradise Lost.'"

**Paradise Lost. Books III. and IV.** Edited, with Introduction and Notes, by A. W. VERITY, M.A. 2s.

## PITT PRESS SERIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
<b>Macaulay</b> .....	Lays of Ancient Rome (with Ivy and The Armada)	J. H. Flather	1 6
<i>School World</i> .—In thorough keeping with the other volumes of this series, an evidence of patient labour, and no mean tribute to Macaulay himself. . . . The notes are brief and pointed, and two useful maps are appended. The introduction is brief, but exceedingly well done."			
<b>Scott</b> .....	Marmion	J. H. B. Masterman	2 6
<i>Guardian</i> .—"Far and away the best school edition of the poem we have seen; and it will be difficult, probably impossible, to improve on it."			
<b>Scott</b> .....	Lay of the Last Minstrel	J. H. Flather	2 0
<b>Caesar</b> .....	De Bello Gallico, Books IV.-V. (Subject, Book I.)	A. G. Peskett	1 6
"	De Bello Gallico, Book VI.	"	1 6
<b>Cicero</b> .....	De Senectute	J. S. Reid	3 6
<b>Horace</b> .....	Odes, Book III.	J. Gow	2 0
<b>Livy</b> .....	Book XXII.	M. S. Dimsdale	2 6
<b>Vergil</b> .....	Aeneid, Books VI. and XII.	A. Sidgwick	each 1 6
<b>Euripides</b> .....	Medea	C. E. S. Headlam	2 6
<b>Lucian</b> .....	Menippus and Timon	E. C. Mackie	3 6
<b>Xenophon</b> .....	Anabasis, Books III. and V.	A. Pretor	each 2 0

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*School Guardian*.—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars; their names are a guarantee of their work. We are quite sure that the students preparing for the Queen's Scholarship and Certificate Examinations will not be the only students who will find these text-books of value; they will find their way into numberless preparatory schools and lower forms of public schools; they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary; the student, having elementary his knowledge, needs only the book in hand and a simple grammar."

The following editions have COMPLETE VOCABULARIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
<b>Caesar</b> .....	De Bello Gallico, Books V. and VI.	E. S. Shuckburgh	each 1 6
<b>Vergil</b> .....	Aeneid, Books VI. and XII.	A. Sidgwick	1 6
<b>Xenophon</b> .....	Anabasis, Books III. and V.	G. M. Edwards	1 6

## CAMBRIDGE BIBLE FOR SCHOOLS AND COLLEGES.

BOOK.	EDITOR.	PRICE.
<b>Gospel according to St. Luke</b> .....	P. W. Farrar	4 6
<b>Acts of the Apostles</b> .....	J. R. Lumby	4 6

*Smaller Editions, 1s. each.*

## CAMBRIDGE GREEK TESTAMENT FOR SCHOOLS AND COLLEGES.

BOOK.	EDITOR.	PRICE.
<b>Gospel according to St. Luke</b> .....	P. W. Farrar	6 0
<b>Acts of the Apostles</b> .....	J. R. Lumby	6 0

## BOOKS SUITABLE FOR VARIOUS EXAMINATIONS, 1899-1900.

**Euripides.—Bacchæ.** With Introduction, Critical Notes, and Archæological Illustrations, by J. E. SANDYS, Litt.D. Third Edition. Crown 8vo, 12s. 6d.

## THE PITT PRESS SERIES.

AUTHOR.	BOOK.	EDITOR.	PRICE.
<b>Aristophanes</b> ...	Clouds, Wasps	C. E. Graves	each 3 6
"	Plutus	W. C. Green	3 6
<b>Demosthenes</b> .....	Olynthiacs	T. E. Glover	2 6
<b>Euripides</b> .....	Medea	C. E. S. Headlam	2 6
"	Hecuba	W. S. Hadley	2 6
<b>Herodotus</b> .....	Book VI.	E. S. Shuckburgh	4 0
"	Book VIII., Chaps. 1-89	"	2 6
<b>Homer</b> .....	Odyssey, Book XI.	J. A. Nairn	<i>In the press.</i>
<b>Plato</b> .....	Apologia Socratis	J. Adam	3 6
<b>Sophocles</b> .....	Oedipus Tyrannus	R. C. Jebb	4 0
<b>Thucydides</b> .....	Book III.	A. W. Spratt	5 0
<b>Xenophon</b> .....	Anabasis, Books I., III., IV., V.	A. Pretor	each 2 0
"	" " II., VI., & VII.	"	2 6
"	" " I.-II. invol.	"	4 0

## LATIN.

<b>Caesar</b> .....	De Bello Gallico, Comm. II.-III.	A. G. Peskett	2 0
"	" " I.-III.	"	3 0
"	" " I.-III., VI., & VIII.	"	each 1 6
"	" " IV.-V.	"	1 6
<b>Cicero</b> .....	Philippica Secunda	"	3 6
"	Pro Lege Manilia	J. C. Nicol	1 6
"	Pro Sulla	J. S. Reid	3 6
"	De Amicitia, De Senectute	"	each 3 6
"	De Officiis, III.	H. A. Holden	2 0
<b>Horace</b> .....	Epistles, Book I.	E. S. Shuckburgh	2 6
"	Odes and Epodes	J. Gow	5 0
"	Odes, Books I. and III.	"	each 2 0
"	" " Books II. and IV.	"	1 6
<b>Livy</b> .....	Book IX.	H. M. Stephenson	2 6
"	Books XXI. and XXII.	M. S. Dimsdale	each 2 6
<b>Lucretius</b> .....	Book V.	J. D. Duff	2 0
<b>Plautus</b> .....	Trinummus	J. H. Gray	3 6
<b>Tacitus</b> .....	Histories, Book I.	G. A. Davies	2 6
<b>Vergil</b> .....	Aeneid, Books I.-XII.	A. Sidgwick	each 1 6
"	Georgics I.-II., III.-IV.	"	each vol. 2 0
"	Complete Works. Vol. I. Text & Introductions.	"	3 6
"	" " Vol. II. Notes	"	4 6

## FRENCH.

AUTHOR.	BOOK.	EDITOR.	PRICE.
<b>About</b> .....	Le Roi des Montagnes	A. R. Ropes	2 0
<b>Bolleau</b> .....	L'Art Poétique	D. Nichol Smith	2 6
<b>Cornelle</b> .....	La Suite du Menteur	G. Masson	2 0
<b>De Staël</b> .....	Le Directoire	{ G. Masson and G. W. Prothero }	2 0
<b>Malot</b> .....	Remi et ses Amis	M. de G. Verrall	2 0
"	Remi en Angleterre	"	2 0
<b>Mérimée</b> .....	Colomba	A. R. Ropes	2 0
<b>Molière</b> .....	L'Avare	E. G. W. Braunholtz	2 6
"	Les Précieuses Ridicules	"	2 0
"	" <i>Abridged Edition.</i>	"	1 0
"	Le Misanthrope	"	2 6
"	Le Bourgeois Gentilhomme	A. C. Clapin	1 6
<b>Fonsard</b> .....	Charlotte Corday	A. R. Ropes	2 0
<b>Macine</b> .....	Athalie	H. W. Eve	2 0
<b>Souvestre</b> .....	Le Serf	A. R. Ropes	1 6

## GERMAN.

<b>Benedix</b> .....	Doctor Wespe	K. H. Breul	3 0
<b>Freytag</b> .....	Der Staat Friedrichs des Grossen	W. Wagner	2 0
<b>Goethe</b> .....	Hermann und Dorothea	{ W. Wagner and J. W. Cartmell }	3 6
"	Iphigenie auf Tauris	K. H. Breul	3 6
<b>Hauff</b> .....	Die Karavane	A. W. Schlottmann	3 0
<b>Klee</b> .....	Die Deutschen Heldensagen (Hagen und Hilde, und Gudrun)	H. J. Wolstenholme	3 0
<b>Kohlrausch</b> .....	Das Jahr 1813	W. Wagner	2 0
<b>Lessing</b> .....	Minna von Barnhelm	H. J. Wolstenholme	3 0
<b>Riehl</b> .....	Die Gnerben und Die Gerechtigkeit Gottes	"	3 0
"	Culturgeschichtliche Novellen.	"	3 0
<b>Schiller</b> .....	Wilhelm Tell	K. H. Breul	2 6
"	" <i>Abridged Edition.</i>	"	1 6

## ENGLISH.

<b>The Cambridge Milton for Schools.</b>	Arcades and Comus	A. W. Verity	3 0
"	Ode on the Nativity, L'Allegro, Il Penseroso, Lycidas	"	2 6
"	Paradise Lost, Books I. and II.	"	2 0
"	" " Books III. & IV.	"	2 0
<b>More</b>	Utopia	J. R. Lumby	3 6
<b>The Pitt Press Shakespeare for Schools.</b>	<b>A Midsummer Night's Dream</b>	A. W. Verity	1 6
"	<b>Julius Caesar</b>	"	1 6
"	<b>Tempest</b>	"	1 6
"	<b>King Richard II.</b>	"	1 6

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

SUITABLE BOOKS IN THE  
University Tutorial and Preceptors' Series.

## SPECIAL SUBJECTS.

### Latin and Greek.

**CAESAR.—GALLIC WAR, Book V.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. Vocabulary, 1s.

**CAESAR.—GALLIC WAR, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary, 1s.

**CICERO.—DE SENECTUTE.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary, 1s.

**HOMER.—ODYSSEY, Books XI, XII.** By J. H. HAYDON, M.A. Lond. and Camb., and F. G. PLAISTOWE, M.A. Lond. and Camb. Text and Notes. 2s. 6d.

**HORACE.—ODES, Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Text and Notes. 1s. 6d. Vocabulary, 1s.

**VERGIL.—AENEID, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. and Camb. Text and Notes. 1s. 6d. Vocabulary, 1s.

**VERGIL.—AENEID, Book IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d.

### English.

**SHAKESPEARE.—AS YOU LIKE IT.** Edited, with Introduction and Notes, by Prof. W. J. ROLFE, D.Litt. With Engravings. 2s.

## GENERAL SUBJECTS.

**BOOK-KEEPING, PRACTICAL LESSONS IN.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d.

**BOOK-KEEPING, THE PRECEPTORS'.** By the same author. *[In preparation.]*

**ENGLISH GRAMMAR, THE PRECEPTORS'.** With numerous Exercises. By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond. *[In preparation.]*

**ENGLISH LANGUAGE, THE.** Its History and Structure. By W. H. LOW, M.A. Lond. *Fifth Edition.* 3s. 6d.

**FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.

**FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. ès Sc. 1s. 6d.

**FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. *Second Edition.* 1s. 6d.

**LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. *[In the press.]*

**LATIN READER, THE PRECEPTORS'.** *[In preparation.]*

**MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.

**TRIGONOMETRY, THE PRECEPTORS'.** By WILLIAM BRIGGS, M.A., LL.B., F.R.A.S., and G. H. BRYAN, Sc.D. 2s. 6d.

*Complete Catalogue of the University Tutorial Series, and List of Books Classified for COLLEGE OF PRECEPTORS', London University, Science and Art Department, and other Examinations, free on application.*

London: W. B. CLIVE, 13 Booksellers Row, Strand, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	" 2 10 0	.....	"	3 0 0
Quarter Page	" 1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 8s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 6d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

January 1, 1900.

THE Half-yearly General Meeting of members of the College of Preceptors will be held at the College on Saturday, January 20, at 3 p.m.

\* \* \*

THE Annual Dinner of members and their friends, which was to have taken place on the day of the Half-yearly meeting, has been suspended for the present year.

\* \* \*

As previously announced, there will be no Winter Meeting at the College this year.

\* \* \*

THE Examination of teachers for the Diplomas of the College will begin to-morrow, January 2.

\* \* \*

THE preparations for the English Education Exhibition are now complete. The Prince of Wales has consented to open the Exhibition—which is to be held at the Imperial Institute—on Friday, January 5. The lectures and conferences on educational subjects which have been arranged to take place at the Institute during the continuation of the Exhibition will extend over three weeks.

\* \* \*

A CONFERENCE of members of the College and of heads of schools sending in their pupils to its local examinations will be held in the Conference Hall of the Imperial Institute on Saturday, January 6. The subject of discussion will be the formation of a register of efficient secondary schools, whether by Central or Local Authority.

\* \* \*

THE subject will be introduced by R. Wormell, Esq., D.Sc., M.A., F.C.P., and papers will be read "On the Essentials of Sanitary School Premises," by Arthur Newsholme, M.D., F.R.C.P., D.P.H. (Lond.), Medical Officer of Health for Brighton; "On Examination Tests, Oral and Written," by H. L. Withers, Esq., M.A., Professor of Education at Owens College, Manchester; "On Oral Examinations as conducted in France," by Miss E. Williams. The sanitary sufficiency of school premises, the adequacy of the teaching staff and appliances for teaching, &c., will form the subject of discussion at the morning sitting—from 11 a.m. to 1 p.m. The question of examinations (oral and written) as a means of testing the results of the teaching will be discussed at the afternoon sitting—from 3 to 6 p.m. All teachers, whether members of the College or not, are invited to attend, and to take part in the discussion.

\* \* \*

THE annual meeting of the Private Schools' Association will be held on January 12, in the rooms of the College of Preceptors.

\* \* \*

At the Royal Institution, Mr. C. V. Boys, F.R.S., will continue his course of Christmas lectures on January 2, 4, 6, and 9. The subject is: "Fluids in Motion and at Rest."

\* \* \*

At University College, London, the Faculty of Medicine resumes work on January 3, the Slade School on January 8, the Faculties of Arts, Laws, and Science on January 16. Prof. Foxwell's lectures begin on the 16th, Prof. Ker's on the 17th, Mr. Stopford Brooke's on the 18th, Prof. Sully's on the 19th, Prof. Housman's on the 23rd, and Prof. Gardner's on the 29th.

On January 31 Prof. Butler begins a course on Macchiavelli, and on February 7 Dr. Moore gives the first of twelve lectures on Dante.

\* \* \*

THE Association of Principals and Lecturers in Training Colleges under Government Inspection holds its eighth annual general meeting at the Imperial Institute on January 11 and 12. The Bishop of London will deliver an address on the Thursday afternoon.

\* \* \*

THE Lent Term of the London School of Economics and Political Science will extend from January 16 to March 26. There will be sixteen special courses confined to full students of the school, the lecturers including Prof. Hewins, Mr. Cannon, Mr. C. P. Sanger, Mr. A. L. Bowley, Mr. G. Lowes Dickinson, Mr. E. A. Whittuck, and Mr. Hubert Hall. There will also be twenty-five supplementary courses, including one on "The Development of the Machinery of Education in England," by Mr. Wallas, beginning on January 22.

\* \* \*

THE Modern Languages Holiday Courses Committee of the Teachers' Guild announce that it has been decided to repeat the courses at Lisieux and Tours in August, 1900. The encouragements to revisit Lisieux are numerous and great. The Committee believe that the Tours course will gradually grow in favour, in spite of the greater distance of that city. The courses will be of the same duration as in 1899, viz., at Lisieux twenty consecutive week-days, omitting French general holidays; and at Tours three weeks, with an extension to four weeks, if desired. It has been arranged to open a third course of twenty days in 1900 at Elbeuf (on the Seine, near Rouen), where the Committee will have the advantage of the presence of M. Léon, late Secretary of the French Committee at Lisieux, as local organizer. The representatives of the English Committee for the courses in 1900 will be—at Lisieux: E. Buck, Esq., M.A., St. Edmund's School, Canterbury; at Tours: S. de Ste. Croix, Esq., M.A., St. Edmund's School, Canterbury; and at Elbeuf: E. W. Hensman, Esq., M.A., Headmaster of the Rawlins School, Quorn, Loughborough. There will be an examination at the end of the courses at Lisieux and Elbeuf, arranged by a body independent of the Guild.

\* \* \*

THE jubilee of the North London Collegiate School and the Camden School for Girls will be celebrated on April 4. A service of thanksgiving and commemoration will be held in St. Paul's Cathedral on the eve of the anniversary, and the following day will be celebrated as a day of jubilee, with receptions to parents, old pupils, and friends.

\* \* \*

NOTICE has been given by the Vice-Chancellor of Cambridge University that ten Stewart of Rannoch Scholarships, each of the value of £25 a year and tenable for three years, will be offered for competition in May. Four of these are open, two being for proficiency in Hebrew, and two in sacred music. The other six are for natives of Wilts, Somersct, Gloucester and Bristol.

For the January Examination of teachers for Diplomas of the College of Preceptors there are 263 candidates, which is an increase of 53 on the number entered in January, 1899. At the Midsummer examination the number was 176, the total for the year being 433.

\* \* \*

THE provision of facilities for secondary training and for the examination and graduation of students of pedagogy in the University of London has been the subject of much discussion during the past few months. It is not anticipated that the Statutory Commission will advise the creation of a Faculty of Education; but we understand that a Joint Committee will watch the course of events in the interest of the various bodies already concerned in the training of secondary teachers.

A CONFERENCE of representatives from the principal London colleges was held recently, at the instance of the Royal College of Science, with a view to keep before the London University Commission some recommendations in the report of the previous Commission. It is hoped, the *Athenæum* says, that these will find their place among the instructions to the future Senate. The most important is the provision that the colleges may separately examine and certify their own students at the earlier stages, while the final examinations for degrees must be the same for all.

\* \* \*

WHAT is a "high school?" The Bishop of Manchester, distributing prizes at the Whalley Range Higher-Grade School, said that he did not generally care about criticizing terms in current use, but he might say frankly that he did not much like the titles "high school" or "higher-grade school," because their opposites were low school or lower-grade school. "Those words certainly had a suspicion of the implication of inferiority, and he believed it was better to take a more democratic title, and talk of primary schools and secondary schools, inasmuch as primary only implied priority and not inferiority." We fear it is a case of "vitia in contraria currunt." "Primary" and "secondary" are engaged. There is some fine promiscuous criticism for any one who will go into the whole subject of educational nomenclature.

\* \* \*

THE latest concession to Ireland has had a curious reflex action on England. The Education Department recently decided to recognize as valid the certificates held by Irish elementary-school teachers, whose qualifications, as a whole, are inferior to those of English-trained teachers. Taking advantage of this change in the Code, says the *Schoolmistress*, the managers of St. Mary's Roman Catholic Schools, Bradford, have dismissed the whole of their teaching staff, and have appointed in their places members of the Christian Brotherhood.

\* \* \*

THE first act of Lord Strathcona and Mount Royal as Lord Rector of Aberdeen was to move (and secure) the adoption of the University Extension scheme, which involves the removal of the old Greyfriars Church, and its rebuilding on a neighbouring site. This has been a question of considerable difficulty for some time past.

\* \* \*

ON December 15 the Archbishop of Canterbury laid the foundation stone of new buildings for the King's School, Canterbury, which is the oldest public school in the country.

\* \* \*

THOUGH the new scheme for Lady Holles's School has not been formulated by the Charity Commissioners, the *City Press* hears that, in certain respects, a decision has been come to. The school in the past has been of the standard of a National school; but in the future Lady Holles's Trust will be associated with a school for the middle classes. Consequently the money that has hitherto been devoted to the clothing and feeding of a certain number of the pupils will no longer be required for the purpose. It has, therefore, been decided by the governing body to utilize the income for the foundation of scholarships to enable deserving pupils, at the close of their school career, to continue their education at secondary schools. This utilization of the money is certainly the best possible.

\* \* \*

MR. W. H. CUMMINGS, Principal of the Guildhall School of Music, presided recently at a conference held at the Guildhall School of Music to consider the question of the teaching of class-singing and sight-singing in secondary schools. The conveners of the meeting hold that no girl or boy can be considered properly educated who, at the age of fourteen or fifteen, is unable to sing at sight an easy song or tune from the five-line staff.

\* \* \*

ENTHUSIASTS are already filling up the programme of inter-

Education  
Gossip.



national and inter-University sports for 1900. The Athletic Association of the University of Pennsylvania will send a team to take part in the "Olympic Games" at the Paris Exposition, and in the contests in London, where they will compete with Oxford and Cambridge athletes.

Appointments and Vacancies. SIR HUBERT PARRY has been appointed Professor of Music in the University of Oxford, in succession to Sir John Stainer. Sir Hubert is the author of "The Art of Music," and of many articles in Grove's "Dictionary." He is a popular and characteristically English composer.

MR. ARTHUR ANTHONY MACDONELL, M.A., Taylorian Teacher of German in the University of Oxford, has been appointed to the Professorship of Sanscrit, in succession to the late Sir Monier Monier-Williams, for whom he had acted as deputy. Mr. Macdonell took the degree of Ph.D. at Leipzig with a Sanscrit dissertation. In addition to Classical Honours at Oxford, he gained the Taylorian Scholarship in German (1876), the Davis Chinese Scholarship (1877), the Boden Sanscrit Scholarship (1878), and was appointed Teacher of German in 1880. He is the author of numerous works on Sanscrit philology and Vedic mythology.

THE Council of King's College, London, have appointed Prof. N. J. C. Tirard to the Chair of Medicine, vacant by the resignation of Prof. J. Burney Yeo, M.D., and Dr. W. A. Turner to be an Assistant Physician at King's College Hospital.

At Cambridge the appointment by the Board of Agricultural Studies, in consultation with the President of the Royal Agricultural Society, of Sir E. Clarke, Hon. M.A. St. John's, as Gilbey Lecturer on the History and Economics of Agriculture for one year was confirmed. The Board of General Studies was authorized to appoint Mr. H. Woods, M.A. St. John's, as University Lecturer in Palaeontology for five years.

ARCHDEACON WYNNE has been selected as Donnellan Lecturer at Dublin for the year 1900-1.

MR. A. W. W. DALE, son of the late Dr. Dale, of Birmingham, a member of the Council of the Senate and of the Board of Examinations at Cambridge, has accepted the position of President of Liverpool University College, in succession to Dr. Glazebrook.

MR. E. TAYLOR JONES, D.Sc., has been appointed Professor of Physics in Bangor University College, in succession to Prof. Gray.

DR. ADOLF NEUBAUER, M.A., Hon. Fellow of Exeter, has resigned the post of Sub-Librarian of the Bodleian, which he has held since the year 1873. During that time he has been in charge of the Oriental department, and he is well known as an Oriental scholar. Mr. A. E. Cowley, M.A., who has been acting as Dr. Neubauer's substitute, is nominated to succeed him as Sub-Librarian.

SIR WILLIAM C. MACDONALD, of Montreal, has founded a Chair of Geology for McGill University, in that city, as a memorial of the late Sir William Dawson, whose contributions to the science of geology are well known. According to the terms of the gift, the income of the endowment will be paid to Lady Dawson during her lifetime, and on her death will become available for the maintenance of the new Chair.

DR. SAVAGE has been appointed Lecturer in Bacteriology at Cardiff University College.

MR. W. F. COOPER, Clare College, Cambridge, has been nominated by the Special Board for Biology and Geology to occupy the University table at the Zoological Station at Naples until February 1. The same Board have adjudged the Walsingham Medal to H. H. W. Pearson, B.A. Caius, and J. Bancroft, B.A. of King's College.

THE REV. FELTRIM E. DUCKWORTH, M.A. Selwyn College, Cambridge, late assistant-master of Rossall School, has accepted the Headmastership of Fermoy College, county Cork, vacant by the death of the late Rev. Frank Stonham, M.A.

MR. COOKE, M.A. of King's College, Cambridge, succeeds Mr. Kennedy as Headmaster of Aldenham School.

MR. WILLIAM HENWOOD, M.A. of Queens' College, Cambridge, who for the past five and a half years has held a mastership at the Wyggeston School, Leicester, has been elected Headmaster of Needham Market Grammar School, Suffolk.

A VACANCY is created in the (joint) Rectorship of the Aberdeen Grammar School by the resignation of Dr. Moir.

WE omitted last month to record the appointments of Mr. T. Read as Headmaster of Brighton Grammar School, and of Mr. E. J. Vic, B.A., as Headmaster of the Bluecoat Endowed School, Stockton-on-Tees.

OWING to the retirement of Miss Dugdale, the Provost and Fellows of Denstone College have appointed Miss Marcia Alice Rice, of St. Hugh's Hall, Oxford, and the Godolphin School, Salisbury, to be Headmistress of St. Anne's, Abbots Bromley, one of the Woodard Schools for Girls. Miss Rice has taken a full "University" course at Oxford, where she obtained a First Class in the Final Honours School of English Language and Literature.

THERE is a vacancy for a Lecturer of English in the Lyceum attached to Malta University. A Roman Catholic will be preferred. Applications up to January 5 to the Director of Education, Malta.

Literary Gossip. It is always satisfactory to hear of the offer of substantial prizes for essays on historical and literary subjects. Competitions of this kind have often enabled clever young men and women to make a mark at the outset of their career. At the last meeting of the Irish Literary Society, the Hon. Charles Russell, as Treasurer of the Society, announced that, thanks to the generosity of one of the Vice-Presidents, Mr. William Gibson, two prizes, one of fifty, the other of twenty, guineas, open to general competition, are offered for the best essays on "The Sieges of Derry and Limerick." Lord Russell of Killowen and Mr. Lecky, M.P., will be the judges in the competition, the conditions of which can be obtained from the Secretary of the Irish Literary Society, 8 Adelphi Street, Strand.

HERE is another competition. The Board of Education of Sierra Leone offer a prize of £20, to be given to the writer of a small history of Sierra Leone which shall be adjudged by a Committee appointed by the Board to be the best submitted to it in public competition and to be suitable as a text-book for use in the schools of the colony, and shall be approved by the Governor for this purpose. If a work is submitted which fulfils these conditions, the preliminary cost of its publication will be undertaken by the Board, the copyright remaining the property of the author, who will receive all profits accruing from the sale of the work when the cost of publication shall have been repaid.

given under the auspices of the Arts Students' Association to the Students in the Faculty of Arts in University College, Liverpool, by Walter Raleigh, King Alfred Professor of Literature." It is published at "The University Press of Liverpool," and is, we believe, the first product of the new press. Prof. Raleigh's subject was "The Study of Arts in a Modern University."

\* \* \*

ON the principle that quality is better than quantity, it is absurd to make little quibbles over the genial epilogue of the Westminster Play. No doubt the quantity of the *a* in *Eboracum* is long; but, if you have to bring "The Belle of New York" into elegiacs, what are you to do? Westminster did as follows:

Adsum, en, Eboraci bella puella Novi.

And again—

O salve Eboraci pulchra puella Novi.

\* \* \*

THE REV. J. O. BEVAN has printed in pamphlet form the Lecture delivered by him at the College of Preceptors in November, of which we printed a summary last month. His new title is: "How to Save our Private Schools; or Suggestions for the Consolidation of Private Schools in the face of the Board of Education Act."

\* \* \*

AT a recent special sitting of the Jersey States a Bill was brought in to allow the optional use of English in the Assembly. Another member introduced a measure declaring English (instead of French) to be the official language of Jersey from May 24 next, the Queen's birthday. Both measures will be discussed when the States meet this month.

\* \* \*

SEVERAL members of the Gaelic League are engaged on the editing of Irish literary texts for publication. Amongst the texts in course of preparation is an edition of the poems of Geoffrey Keating. The editor has gone through about a hundred manuscripts in Trinity College, Maynooth, and the Royal Irish Academy, in order to arrive at a text. The public ought certainly be grateful for such self-sacrificing labours to place within their reach the ancient MS. literature of Ireland.

\* \* \*

"THOMAS AND MATTHEW ARNOLD," by Sir Joshua Fitch, which was published by Mr. Heinemann in his "Great Educators Series," has been for some little time out of print. A new edition revised by the author will be issued shortly, both in its original form and as a separate volume in a special binding.

\* \* \*

ANOTHER work of interest that Mr. Heinemann has in hand is a translation of M. Seignobos' recently finished "History of Europe from 1814 to 1896." The author's aim is to write an "explanatory" history, showing the organization of the various nations and parties, and how the political questions of each age have been solved.

\* \* \*

MR. ALFRED RUSSEL WALLACE, whom the reading public associate chiefly with his contributions to science, has written an introduction to Mathilde Blind's "Ascent of Man," a new edition of which Mr. Fisher Unwin promises in a few days. It is understood that the volume, which contains, by the way, a fine medallion portrait of the poet, will be followed shortly by a selection from Miss Blind's poems.

\* \* \*

EARLY in the new year Mr. Nimmo will publish the first volume, by Prof. Sayce, of "The Semitic Series," intended to present compactly and in popular form the more important facts in the history, religion, government, language, customs, &c., of the Babylonians, Assyrians, and allied Semitic races. The first volume is: "Babylonians and Assyrians—Life and Customs (with special reference to the Contract Tablets and Letters)," by the Rev. A. H. Sayce, Professor of Assyriology at Oxford. Other volumes will follow at regular intervals; each will be complete in itself, and the series, taken as a whole, will neglect no phase of the general results of recent scientific research. The various authors are specialists in their subjects.

For some time past Prof. J. B. Bury has been at work on a "History of Greece, from the earliest times to the death of Alexander the Great." This will be published by Messrs. Macmillan. It is based on original authorities tested in the light of modern research, and is expected to contain the fullest account that has yet been included within the compass of a single volume of the political history of Greece.

### SOME LESSONS FROM THRING'S LIFE.

ON Wednesday, December 6, at the evening meeting of members of the College of Preceptors, Sir Joshua Fitch gave a lecture on "Some Lessons from Thring's Life." Dr. Wormell took the chair. We print a brief summary of this lecture, which will be included in a forthcoming volume of Sir Joshua Fitch's lectures and addresses, to be published by the Cambridge University Press, under the title of "Educational Aims and Methods."

The lecturer referred, in the first place, to the very interesting paper which Dr. Wormell had previously given to the members of the College on "Edward Thring," and spoke of its fullness and practical usefulness. But the character of the Headmaster of Uppingham was many-sided, and there were still some aspects of it which justified further consideration. There was, for example, his effort to rid the University of Cambridge of an anomalous usage, which, though it happened to be of personal advantage to himself, he regarded as unfavourable to the true interests of learning, and unworthy of the University. This was the custom of admitting to a degree without examination the scholars of Eton who were Fellows of King's College. Thring himself fulfilled this condition, and was distinguished both as a classical scholar and as Captain of Montem. But he wrote earnestly against the continuance of this exceptional privilege, and ultimately succeeded in procuring its abolition. His work as a curate in Gloucester, and his strong interest in the elementary schools of that city, awakened in him, not only an unexpected faculty for teaching, but a belief, which he retained through life, that the true principles of education are applicable to all classes of schools, even the humblest; and that the classical master in a great public school might learn much from the methods of instruction and discipline which are adopted in a good National or Board school.

Uppingham, to which Thring went at the age of thirty-two, absorbed the chief energy and activity of his life until the end. In the course of that life he transformed what had been an obscure country grammar school, of no great wealth or repute, into one of the most remarkable and successful public schools in the kingdom, with ample accommodation for three hundred scholars, ten boarding houses, library, laboratories, a gymnasium, workshops, and a noble chapel. From the first he resolutely refused to sanction any increase beyond that number, as he believed that it was indispensable to know all the scholars individually, and that in a larger school such knowledge was impossible. "I have no right," he said, "to take a boy away from his parents unless I can know him well." Thring was fortunate in having several loyal colleagues—notably Mr. J. H. Skrine—who had faith in him, and who made large sacrifices of their own private means, with a view to the erection of boarding houses, and otherwise, to the extension of the school's usefulness. The story of the financial and other difficulties attending his enterprises, as well as of the comparative apathy of the local governing body, have been narrated with somewhat needless fullness by Mr. G. H. Parkin, his faithful friend and biographer. Some characteristic details were, however, cited by the lecturer—in particular, the dramatic incident of the flight for life of the whole school, with thirty masters and their families, to a remote village on the coast of Wales, was described in detail, and shown to furnish a striking illustration of Thring's masterfulness, his readiness of resource, and his power of overcoming difficulties.

With regard to his methods of teaching, some of the most striking features were: (1) his insistence on the value of English grammar as a help in classical instruction, and as providing, with due comparison of Greek and Latin forms, the best discipline in the logic of language; (2) his anxiety to provide for every boy some opportunity for the exercise of any special gift or aptitude which he possessed, so that, in addition to the ordinary and time-honoured discipline in language, history, divinity, and mathematics, there should be provision for drawing and design, for manual training, for the study of music, for physical science, and for natural history; (3) his faith in the possibilities of good, which were to be found in even the least interesting and hopeful



and his conviction that it was the duty of the teacher to discover what each boy was good for, and to find employment for his best faculties; (4) his strong sense of the schoolmaster's work as a religious duty, and of the paramount importance of character-forming as opposed to what he called "knowledge-worship." Many characteristic passages were quoted from Thring's books and diaries, lighted up, as they often were, by grotesque and quaint fancies, but always characterized by deep seriousness, and by a keen and affectionate insight into child-mature, and by a knowledge of the special temptations and difficulties of a school-boy's and of a student's life. Of his extra-scholastic activity many examples were given. He was practically the founder of the Headmasters' Conference in 1849, and was afterwards the first of the heads of great public schools to welcome the Conference of Headmistresses, and to give to them a sympathetic address. His efforts to establish a settlement in one of the poorest parts of London, and the formation of a local society in the town of Uppingham for lectures, reading, and social improvement, and his lectures and addresses to societies of teachers, both in England and in America, all showed him to be a pioneer in some of the most important educational movements of our time, and entitled him to a high and enduring place in the educational history of the century.

### UNIVERSITIES.

(From our Correspondents.)

**Cambridge.** THE end of the October term has been saddened by news of the death of one of the best known and most popular of our residents. After a prolonged period of ill-health, Mr. W. A. Gill, Tutor of Magdalene, and Junior Esquire Bedell, passed away, regretted and mourned by the large number of friends he had gained by his devotion to duty and courtesy towards all those with whom he was brought into contact. Two other losses are to be mentioned, but, in these cases, the causes are happier in their nature: Mr. A. W. W. Dale, Tutor of Trinity Hall, goes to Liverpool to take up the position lately held by Mr. R. T. Glazebrook; while Mr. W. N. Shaw, of Emmanuel, has been chosen to succeed Mr. Scott at the Meteorological Office.

Much dissatisfaction has been caused in Cambridge at the fact that the name of Prof. Moule has been prematurely coupled with the impending appointment to the Bishopric of Liverpool. Unanimous as the feeling is that Dr. Moule's would be an ideal appointment, it is practically established that Press rumours as to episcopal appointments have the effect of putting the candidate out of the running altogether. If, however, in spite of all this, Dr. Moule should be appointed, there is no doubt that from all sections of Churchmen in Cambridge the most hearty congratulations to the worthy Professor would be forthcoming.

The Botanic Garden Syndicate have at last yielded to the dictates of common sense, and issued a new set of regulations for governing admission to the Gardens. For the future, all respectable people are to be admitted from 8 a.m. to dusk, though not later than 8 p.m. during the summer months; but the most important alteration is that smoking is to be allowed, except in the plant houses.

The University three years ago established a Lectureship in the Hausa Language, and, as the period for which the appointment was first made has now expired, it is proposed to renew the experiment. The Hausa Committee have reported that, in consequence of the Government assuming the direct control of the Niger Company's territories, the Hausa language will soon take a definite place in the training of Civil Servants for West Africa: this argument will undoubtedly prevail, and no opposition can with any show of reason be raised to the appointment, as the funds are provided by the Hausa Association.

Rumours are also in the air of changes in the relations of the Army to the University: at present, the encouragement given to men in residence to prepare for the Army is inadequate; the intending candidate is obliged to sacrifice his University career if he wishes to make marks in a Civil Service competition. The result in practice is that the better men prefer to take the certainty of success in a University course to the doubtful chances of an Army examination. It is quite possible that the present enlightened authorities at the War Office will be able to find a solution of the difficulty, and recognize the University tests of literary acquirements as sufficient, while imposing tests of military efficiency similar to those employed with other candidates.

The advanced-student system has already borne good fruit. Dr. Grafton Elliot-Smith, the first of the scientists sent to Cambridge by the Australian Universities, has not only been elected to a Fellowship at St. John's, but has now been appointed to the important post of Demonstrator of Anatomy in the University. The growth of our Medical School proceeds by leaps and bounds; it is the one department of University work which prevents us from earning the reproaches of the educated public. It must not, however, be forgotten that the undeniably high standard set by the medical authorities here has caused considerable grumbling; but there is absolute firmness on the part of those responsible for the present condition of affairs, and there is no fear that our medical degrees will lose their value in the eyes of the public through a decrease in the requirements of the examiners or a laxity in interpreting the rules which govern them.

The scientific researches commenced by the late Prof. Kanchathack on the subject of tuberculosis are now being continued with methodical care by Dr. Sladen and Prof. Woodhead; patient research without fuss or advertisement will be found in the end to produce results of great and permanent value. The important fact to be dwelt on at the present moment is that a comparatively small sum would be necessary now to eliminate from all the herds in England those animals the tuberculous character of which is liable to cause active danger to human life. But Government Departments move slowly, and in the case of the tuberculosis experiments there is no one who has an axe to grind; private enterprise is now beginning what hereafter will have to be completed by public exasperation.

The Carne collection of minerals was recently acquired by the University through the efforts of Prof. Lewis, and the wisdom of the purchase has already been proved by the fact that Mr. A. Hutchinson was able to inform the Philosophical Society at its last meeting of the discovery of a new mineral, which has been named Stokesite, in honour of Sir George Gabriel Stokes: it is a colourless transparent crystal of the prismatic system, and was found on a specimen of Cornish axinite. ¶

The small number of First Classes in the Special Examination Lists shows that the Examiners are resolutely determined to grant this distinction only in cases of real merit. Twenty-one candidates obtain First Classes, and sixteen of these were obtained in the first parts of the respective Specials, leaving five only for the second part, which confers the degree. It is now realized that, for the weaker men, a good poll degree, say a First Class in the General, and a First in each part of the Special, has a considerably higher value than a low Third in most of the Triposes. Whewell Scholarships have been awarded as follows:— (1) H. M. Wiener, Caius; (2) R. W. Seward, King's. Seatonian Prize: Rev. John Hudson, M.A. Peterhouse. Crosse Scholarship: C. T. Wood, B.A. Pembroke.

**Wales.** IN connexion with Welsh education there has been but little of importance to chronicle recently. The

Annual Collegiate Meeting of the University Court was held this year at Bangor, and in conjunction with it the ceremony of conferring the degrees of the University. A meeting of the Guild of Graduates, which had been postponed from last April, owing to the death of the Warden, Mr. T. E. Ellis, was held a short time before the meeting of the University Court, in order to elect the officers of the Guild. The new Warden is Prof. J. E. Lloyd, M.A., a former student of Aberystwyth, and of Lincoln College, Oxford, and now Registrar and Professor of History at Bangor.—The Central Board met this year at Newport, and spent most of the time in private session in the work of drawing up the Annual Report upon the work of the schools for presentation to the Charity Commissioners. The General Report upon the Inspection and Examination of County Schools, which contains information available to the general public, deserves careful study by all who are interested in the future of secondary education. Last year, 93 county schools, under the Welsh Act, were inspected by the Central Welsh Board in compliance with the Treasury regulations. Of these 93 schools, 61 were visited by the Chief Inspector under the Welsh Board (Mr. Owen Owen, M.A.) and 32 by Mr. James Headlam, sometime Fellow of King's College, Cambridge, whom the Board appointed as temporary inspector. In Wales and Monmouthshire there are now 22 schools for boys, 21 for girls, 43 dual schools, and 7 mixed schools. The term "mixed" applied to a school indicates that boys and girls are taught together in the ordinary subjects of the school curriculum. The term "dual" indicates that there are two departments under one responsible head, one department for

boys and one for girls, with separate entrances, class-rooms, and playgrounds for boys and girls respectively; but that the school managers may, if they think fit, make arrangements for boys and girls being taught together in all or any of the classes. In practice, the dual schools of Wales vary very considerably. Some are practically "mixed" schools, while others have almost complete separation of the boys and girls; though in no case is the chief mistress in charge of the girls' department technically a headmistress with separate responsibility for the girls as a whole. The 93 schools which appear on the list are under the charge of 72 headmasters and 21 headmistresses. To the student of secondary education it is interesting to note the following facts with regard to the credentials of the teachers in the county schools of Wales. The headmasters hold degrees as follows:—London, 34; Cambridge, 16; Oxford, 9; London and Cambridge, 4; London and Oxford, 3; Glasgow, 2; Royal University of Ireland, 1; London and Leipzig, 1; London and Strassburg, 1. At present there is one without a degree. The headmistresses hold degrees as follows:—London, 12; Victoria, 1. At present there are three without a degree. The assistant-masters hold degrees as follows:—London, 44; Oxford, 22; Cambridge, 20; Victoria, 8; Wales, 3; London and Wales, 3; London and Victoria, 1; Oxford and Victoria, 1; Royal University of Ireland, 1; Dublin, 1; Durham, 1. There are, at present, 61 without a degree. The assistant-mistresses hold degrees as follows:—London, 54; Victoria, 7; Royal University of Ireland, 2; London and Durham, 1; Wales, 1; Cambridge and Zurich, 1. There are at present 101 without a degree. Further, five headmistresses and seventeen assistant-mistresses have passed examinations at Oxford or Cambridge which, if those Universities gave the titles of degrees to women, would have entitled them to the B.A. degree. The appointment of a headmaster or a headmistress without a degree (or, in the case of the latter, the Oxford or Cambridge equivalent) is a breach of the scheme. Assistant masters and mistresses, however, need not be graduates, and it is probable that many of the non-graduate assistant masters and mistresses are certificated teachers or the possessors of certificates showing a fair standard of attainment. Certificated teachers are often appointed owing to their professional skill and experience, which are often in striking contrast with the crude efforts of more learned but untrained and unpractised graduates. The London degree seems to be in marked favour, partly on account of the comprehensive character of its curriculum even for the pass standard. One cannot read these figures without recognizing the necessity for watchfulness against two dangers: the first, that the work of many of the schools may be of primary or higher-grade rather than of true secondary standard; and the second, that the staffs of the schools will not contain many masters of high special attainments capable of preparing children in such subjects as classics and mathematics for scholarships at Oxford or Cambridge. It is true that these boys will be the few, but secondary education aims at giving the best advantages to the able few, as well as a sound education to the less able many.

### BEN JONSON ON EDUCATION.

BEN JONSON was a man of many parts and wide capacity. We know him as playwright, epigrammatist, translator, song-writer; we have even heard that he tried his hand at the useful art of bricklaying and served for some time as a soldier in the Low Countries. Perhaps, however, it may be matter for surprise that to his other characters he added that of educational theorist and parents' adviser. That he did so any one may discover for himself who cares to turn to the dusty volumes of his published works, and to those particular pages entitled "Explorata," or "Discoveries." What these discoveries are may be gathered from the title-page of the work where they are described as "Discoveries made upon men and matters as they have flowed out of his daily readings, or had their reflux to his peculiar notion of the times. By Ben Jonson. Printed 1641. London." It is, in fact, a little store-tower of wit and shrewd wisdom that we come upon here, and many readers who find his plays uninteresting or tedious may turn with genuine pleasure and profit to these quaint "Discoveries." All manner of topics are touched upon or discussed—the art of writing and of oratory, the follies and sins of human nature, the wisdom and inspiration of the ancients, the relation of individual judgment to authority, and many other matters find a place in Ben Jonson's philosophy.

Near the end of the "Discoveries," we come upon a little homily on education for the benefit of a certain nobleman who had asked Jonson's advice on the tuition of his sons. It will be remembered that Jonson was himself a scholar of Westminster School, and had the most grateful memories of his old schoolmaster, William Camden, the antiquary.

Something of his gratitude to Camden he has shown in the poem addressed to him beginning with the lines:

"Camden! most reverend head to whom I owe  
All that I am in arts, all that I know."

This passage also shows his high estimate of education and of the work of the true educator. "The price of many things is far above what they are bought and sold for. Life and health, which are both inestimable, we have from the physician; learning and knowledge, the true tillage of the mind, from our schoolmasters. But the fees of the one, or the salary of the other, never answer the value of what we received, but serve to gratify their labours." Some of the ideas in Jonson's little discourse sound strangely modern and philosophical—more philosophical indeed than the views of many nineteenth-century teachers. He shows a consideration for the nature of the child, as well as of the subject, which is distinctly modern; and his summary of the advantages of class teaching is excellent: "It pleaseth your lordship," he begins, "to ask my opinion touching the education of your sons, and especially the advancement of their studies. . . ." Studies have their infancy as well as creatures. We see in men even the strongest compositions had their beginnings from milk and the cradle, and the wisest tarried sometimes about apting their mouths to letters and syllables. In their education, therefore, the care must be greater had of their beginnings, to know, examine, and weigh their natures, which, though they be proner in some natures to some disciplines, yet are they naturally prompt to taste all by degrees and with change. For change is a kind of refreshment in studies, and infuseth knowledge by way of recreation. Thence the school itself is called a play or game. Scholars should not be affrighted or deterred in their entry, but drawn on with exercise and emulation. A youth should not be made to hate study before he know the causes to love it, or taste the bitterness before the sweet, but called on and allured, intreated, and praised. Yea when he deserves it not." This is perhaps, going a little far, but it is at least in the right direction, in those days of undue severity and hardness. "For which cause," he goes on, "I wish them sent to the best school and a public [school], which I think the best."

This was the day of private tutors; so Jonson finds it necessary to defend the public-school system and set forth its merits and advantages: "Your lordship, I fear, hardly hears of that as willing to breed them in your eye and at home, and doubting their manners may be corrupted abroad. They are in more danger in your own family among ill servants (allowing they be safe in their schoolmaster) than amongst a thousand boys however immodest. Would we did not spoil our own children and overthrow their manners ourselves by too much indulgence. To breed them at home is to breed them in the shade, where in a school they have the light and heat of the sun. They are used and accustomed to things and men, and when they come forth into the commonwealth they find nothing new or to seek. They have made, too, friendships and aids—some to last till their age. They hear what is commanded to others as well as themselves: much approved, much corrected; all which they bring to their own store and use and learn as much as they hear. Eloquence would be but a poor thing if we should only converse with singulars [i.e., individuals]. Therefore," says Jonson, triumphantly, "I like no private breeding; I would send them where their industry should be daily increased by praise and kindled by emulation. It is a good thing to inflame the mind, and, though ambition itself be a vice, it is often the cause of great virtue. Give me that wit whom praise excites, glory puts on, or disgrace grieveth: he is to be nourished with ambition, pricked forward with honour, checked with reprehension, and never suspected of sloth."

Alas! most sanguine of men, to be never suspected of sloth is a good deal to ask in a world where Emerson has said: "Every man is as idle as he dares." But hear Jonson on athletics and their place in the temple of education: "Though he be given to play, it is a sign of spirit and liveliness, so there be a mean had of their sports and relaxations." One wonders whether Jonson would have thought this happy mean observed in the present-day public schools.

He concludes with these quaintly wise and gracious words of good counsel: "And from the rod or ferule I would have them free, as from the menace of them, for it is both deformed and servile." Well might the schoolboy of his day have echoed the praise of his brief but telling epitaph: "O rare Ben Jonson!"

M. S.

### CHATS ON CHILD-STUDY.

#### III. CHILDREN AND PICTURES.

PROF. EARL BARNES and others have done a great deal in gathering facts about a child's notions of drawing and appreciation of pictures. Symbolic and diagrammatic, rather than imaginative, again seem to be the characteristics of a child's drawing, and Prof. Sully has worked out and illustrated this point in a clear and popular form. But, as long as our picture-books for children are as wrong as they are at present, there is much work still to be done in applying the conclusions of psychologists. The old days, when "any book, so long as it is simple, will do for the children" was the guiding principle of a parent's choice, when ill-drawn beasts in impossible colours frolicked over the page, and Dainty Dick was reduced from fat to thin

in twenty clear stages—such days were halcyon compared with the present. Nowadays, with so much child-study in the air, a parent is not so light-hearted, but spends great care in selecting a book which suits his own æsthetic feelings in regard to childhood, rather than one which he feels sure his own child would prefer. The market is flooded with books to meet this demand. Over most of them "confusion" is writ large. The illustrations are often nightmares of fantastic detail, with no attempt to throw light on the text. Often the text itself is in old English, or some other type that a child cannot easily read. The book itself is sometimes too small for a child to handle comfortably, sometimes too expensive for him to be allowed to hug and finger and pore over. Let the little fellow wash his hands, but let him have the book to care for and treasure in his own way.

The points to be kept in view in illustrating for children are, first, to seize upon some very definite idea; and, secondly, to express it as clearly as possible. Knowledge of anatomy and perspective are not so valuable to the draughtsman as a power of dramatic arrangement. Detail may be crowded in to any extent, provided that the very smallest has some meaning that the child can easily grasp when told, or weave a fancy round for himself. Again, colouring, however simple, is a source of delight that only a lover of children understands; three coloured pictures are worth thirty uncoloured. One of the best illustrated books for children I have come across, and one which seems to satisfy every requirement, is Boutet de Monvel's "Joan of Arc." It has, above all, a good story shortly told, numerous large pictures gorgeously, yet tastefully, coloured, and plenty of significant detail. It is a pity that some of our stirring stories from English history have not been similarly treated. Coloured plates, of course, increase the expense of a book; but I would urge, in this connexion, that one of the pressing needs of the present day is a greater respect for books. If they are cheap and flimsy, and too frequently bought, children will never learn to care for and love them. A really good book once a year is a far better outlay than the same money spent in one a quarter. But another way of meeting the difficulty of coloured plates is to prepare books with bold, outlined illustrations, which could be easily coloured by the parent or a friend, or by one of the elder children, with help and suggestions from the younger ones. To go a step further, a still greater attraction to a child is a book entirely home-made. A collection of nursery rhymes, for instance (no bought book contains all one's favourites), roughly written in "print," and illustrated as a parent's own fancy directs, might prove to be the greatest treasure of the nursery.

It is a common mistake to suppose that children's books and pictures must necessarily be about children. The fact is, they are not fond of analyzing their own ways and manner of talk, and always prefer to read about grown-up people, so long as the grown-up people are treated from a child's point of view. It is just the knack of treating them in this way that constitutes the whole art of writing and drawing for children. But it is an art that does not come easily to the nineteenth-century analytic mind; and, to get the perfectly childlike standpoint, we must go to the childhood of the race, the early myths and the early pictures, which never fail to awaken a sympathetic chord in a child's nature. In taking children to the National Gallery, it will be found that the most pleasure will be afforded by pictures of the early Italian masters, if they are intelligently explained. The perspective is queer, but that does not offend the little fellow whose own perspective is in a similar stage: the rocks and trees are such as never were on sea or land, but it is quite clear that they are rocks and trees nevertheless. Each saint has a story behind him which we hope the intelligent parent can relate; every detail, even to the pomegranate in the Infant's hand, has a precise meaning; while the lavish and exquisite colour, not to speak of the gold, appeals to a child's love of the gorgeous.

Another common mistake in regard to children's books and pictures is the treatment of humour. There seems to be very little basis for generalization as to children's sense of humour, except in a negative direction. Laughter is very misleading. It is never a measure of the sense of humour at any age. Even babies will chuckle as though at some good joke, apparently from mere physical well-being, and children are always ready to go into fits of laughter if any one sets them off; but, probably, their sense of humour never soars beyond the desire for "comic relief," that the writers of miracle-plays and the early painters of solemn subjects indulged in. Satan in the one, and a grotesque imp in the other, satisfied the uneducated craving to relieve the serious strain. To most children the charm of "Alice in Wonderland" lies in her adventures and bright talk; the actual wit is lost on them. What child, for instance, appreciates the mock-turtle with the calf's head, or the delicate parody of Wordsworth's "Leech-gatherer"? Again, Caldecott's picture-books please because they are simple and good, but most of the humorous touches are lost on a child. We are so eager to point out things to children that it is seldom we wait to observe what a child will laugh at of his own accord. To put one's hat on upside down is generally provocative of more genuine mirth than the best joke in the world. The sense of humour must be cultivated, that is certain; but, as in the case of all else worth having, the growth is very gradual, and, with young children, all one can do is to prepare a soil of habitual cheerfulness and content, with merriment over disturbing trifles.

M. V. H.

## TECHNICAL EDUCATION IN GERMANY.

MISS MARY C. DAWES writes to us from Bonn:—"Those interested in technical education will, doubtless, have marked in the daily papers the noteworthy speech of the German Emperor on the occasion of the celebration of the centenary of the Technical High School of Berlin-Charlottenburg which took place in October, the festivities beginning on the 19th, and lasting for a week. The Emperor's address concluded with the reverent reflection that every science leads us back to the cause of all things, to the Almighty Creator, 'before whom we must bow down in humble thankfulness.' Teachers and pupils should hold fast this conviction, and God's blessing would not fail their work. With this wish he bade the institute Godspeed upon its second century.

"Another notable incident was the unveiling of the monuments of Werner Siemens and Alfred Krupp in the presence of their respective sons. In a commemoration speech on Alfred Krupp, Councillor Servaes told his audience that the man to whom German industry owed so much was born in 1812, and was pronounced by his dying father competent to be placed at the head of his steel-founding works as early as 1826. The works were small, and great were the obstacles that had to be surmounted; but, supported by his faithful mother, the youth undertook the management of them. In his own words, which the speaker quoted: 'From my fourteenth year I had on my shoulders the cares of a father of a family. Working by day, by night I had to brood over ways and means of overcoming difficulties. Whilst working at high pressure, often the whole night through, I lived on potatoes, coffee, and bread-and-butter, without any meat.' It needed twenty-five years of such unflinching endurance and perseverance before a state of tolerable comfort was secured. The growth of the works was so slow that they had only 10 men in 1832, whilst their number, which had risen to 122 in 1845, was only 72 in 1848. But, by one stroke, Krupp's works were to attain the first place amongst the steel foundries of the world, and this by exhibiting at the London Exhibition a block of 4,500 lb., the 'record' achievement of those days. It won the 'Council Medal,' which has not since been awarded to the iron and steel industries. This was the starting point of a rapid growth, which resulted by 1887, the year of Alfred Krupp's death, in the employment of 20,960 men, who, with their families, represented a population of 73,769 souls, the care for whose material and spiritual welfare is well known to have been their master's constant concern.

"Never did Alfred Krupp forget or despise the smallness of his beginnings. It was from his first modest home that his remains were followed to the grave by thousands of his 'fellow-workers,' and within these walls is the office of his only son and heir, to whom their associations make them a sanctuary. The *Geheimrath* Riedler, the Rector of the High School, speaking both of Krupp and Siemens, said: 'These heroes of the technical sciences—Krupp and Siemens—the great pioneers and masters, . . . are immortal examples for us in our duty and our aims. They are our patterns of creative energy of a world-wide scope, opening out new vistas to the problems of general culture and the study of nature. . . . The Technical High School . . . should feel that then only does its activity work in the right direction when furthering the needs of technical application, economical progress, and national aims. It is in this sense that Krupp and Siemens are our true and great forerunners.'

"At a subsequent stage of the proceedings, the same speaker drew attention to the fact that the rulers of Prussia, beginning with the 'great *Kurfürst*,' had always been ardent patrons of Germany's technical progress; and he thanked the reigning Emperor for his constant support and favour, notably shown on this anniversary by his decree which bestows on the school the power of conferring degrees."

## WOMEN'S WORK AT OXFORD.

THE Report and Calendar of the Association for the Education of Women in Oxford, which have just been issued, show an increase of twenty in the number of students on the books. The total number of students who obtained Honours in 1899 is fifty-four, more than a quarter of the whole body of students resident in that year. The ordinary work of the Association has been continued, and the Nettleship Library, which is open to all registered students and members, has been developed, the financial position of the Association being so satisfactory that the Council have been enabled to make substantial grants for the purpose. Arrangements have also been made to reduce to some slight extent the fees paid for lectures and to make a grant to the Poor Students' Fund.

This report further draws attention to some important changes made by the Delegates of Local Examinations, the body through which women are admitted to University examination. The First Examination for Women is to be discontinued. This examination was introduced twenty-two years ago as an alternative to Responsions, which were at that time not open to women. In itself

it was of little value, but women who passed it were qualified to enter for the higher examination, and it was employed as an entrance test for students who wished to come into residence. The examinations that can be taken in its place are specified in the regulations issued by the Delegacy. Those which admit of French and German being substituted for Latin and Greek are either more difficult or are held once in the year only, and it is much to be desired that more students should, before coming to Oxford, take Responsions, or obtain an exemption accepted by the University in the case of men.

The value of Latin to students of English and history is now very generally acknowledged, and the degree course is more frequently taken. Unfortunately, however, girls often postpone serious work in classics until they come up, and, consequently, waste a good deal of time; while a few months' work under a competent teacher would make it possible for them to start regular University work at once. Responsions are held four times in the year—in March, July, September, and December; so that failure does not, as in the case with several other examinations, mean a delay of a year.

The Delegates have also made an alteration in the only Honour examination they still conduct. After 1900, students will be required to offer either French, German, or Italian for Honours in Modern Languages; not two languages, as before. The standard of requirements in the language offered has been raised, and the whole examination must be taken at one time.

## REVIEWS.

### CICERO AND HIS CORRESPONDENTS.

*The Letters of Cicero.* Translated by E. S. Shuckburgh.  
Vols. I., II. (Bell & Sons.)

Mr. Shuckburgh has given us the first instalment of a complete translation of Cicero's letters, a task left unattempted, except in fragments, since Melmoth's version of the "Letters to several of his Friends," which appeared in the middle of the eighteenth century, and Heberden's, of the "Letters to Atticus," published early in the nineteenth. Since then great advances have been made in classical scholarship and in knowledge of antiquities—advances embodied in the excellent edition of Messrs. Tyrrell and Purser, to which Mr. Shuckburgh freely acknowledges his obligations. It is strange that we should have had to wait till nearly the end of the century for both a complete edition and a complete translation of the work that, of all others, enables us to enter most completely into the life and thoughts of a Roman statesman, scholar, and gentleman, at one of the most critical periods of the world's history—a period combining, if the comparison be permitted, the interest of *le grand siècle* with the interest of the French Revolution. Mr. Shuckburgh's work is careful and conscientious, and he has had at his disposal all the resources of modern scholarship. If we venture to point out what seem to us some defects, we are only complying with the anticipations of his very modest preface, the keynote of which is *opus adgreddior opimum casibus*. Our chief complaint against the translation is that it seems, in places, to savour too much of the examination-room, and to be wanting in that *verve* and freedom which would commend it to an English reader ignorant of the original. Take, for example, a passage from the "Letters to Atticus" (II. 1):

Tusculanum et Pompeianum valde me delectant, nisi quod me, illum ipsum vindicem, aeris alieni, aere non Corinthio, sed hoc circumforaneo obruerunt.

My Tusculan and Pompeian properties please me immensely, except that they have overwhelmed me—me, the scourge of debt!—not exactly in Corinthian bronze, but in the bronze which is current in the market.

"Tusculan and Pompeian properties" is a little heavy; "me, the scourge of debt," is bright. The failure is in the last part of the sentence. To a reader ignorant of the Latin *aeris alienum* it conveys no idea at all, or, if it conveys any, it implies that Cicero was, at any rate, well off for small change. Heberden's version is dull, but intelligible: "not with Corinthian brass, but debts of this ordinary brass money." Would it not have been better to turn the flank of the difficulty, and to put something like this: "have encumbered me, not with the works of Corinthian artists, but with the bills of Roman money-lenders"? Again, take a passage from a letter to Appius Claudius Pulcher (Fam., III. g), a noble friend who at any moment might become an enemy:

Et velim, reliquum quod est promissi ac muneris tui, mihi persolvas. Quum ipsam cognitionem juris augurii consequi cupio, tum mehercule tuis incredibiliter studiis erga me muneribusque delector.

I should wish you also to pay me the promised addition to your former present. I am both anxious to complete my knowledge of augural law, and am also, by Hercules, incredibly delighted with attentions and presents from you.

The first sentence is, to say the least, stiff, and does not give one the idea of a friendly or slightly deferential request to an author for a new volume of his book. Besides, it leaves us in doubt what the promised present is. In the second sentence, "by Hercules, incredibly delighted" is surely more Latin than English. Here we should be inclined to prefer Melmoth's

To this request I will join another, and remind you of executing your promise of sending me the completion of your treatise on augury. I ask this, not only as being desirous of informing myself as to the rites and principles of the sacred college, but as I receive with immense satisfaction every mark of your favour.

There is no ambiguity about this, and it is just what Dr. Melmoth himself might have written to a literary nobleman. One more example ("Att.," I. 14):

Res agebatur in circo Flaminio, et erat in eo ipso loco illo die nundinarum *παρρηγυρις*; quaesivit ex eo, placeretne ei iudices a praetore legi, quo consilio idem praetor uteretur.

The meeting was in the Circus Flaminius, and there was in the same place that day a crowd of market-people—a kind of *tiers état*. He asked him to say whether he approved of the jurymen being selected by the praetor, to form a jury for the praetor himself to employ.

The first sentence shows Mr. Shuckburgh at his best; the expansion is necessary and is made in a bright and popular way. The second sentence is less happy; it is just one of those cases, so familiar to teachers of Latin prose, where English is more terse than Latin. Would it not be quite adequate to say: "of the praetor selecting his own jurymen," or, a little more fully, "of the praetor selecting the jury to try the case with him"? The terse English expression "selecting his own jurymen" is just one of those of which one is accustomed to say, where one tries to turn it into Latin, *latet anguis in herba*. It is not quite fair, perhaps, to judge a work of such magnitude by a few passages taken at random; but it is difficult to resist the conclusion that Mr. Shuckburgh's translation, with all its merits, would have been improved by a lighter and a freer hand, and a more thorough command of terse and idiomatic English.

### OH, YE GODS!

*The Gods of Old, and the Story that they Tell.* By Rev. J. A. FitzSimon and V. A. FitzSimon, M.D. (Fisher Unwin.)

The reviewer, anxious to deal fairly with this extraordinary volume, must confess himself utterly at a loss, as, wavering between tears and laughter, he closes the strangest farrago of science and nescience that ever he was invited to pronounce upon. The authors—one a doctor of medicine, the other a clergyman—have read a considerable number of modern scientific works. They have also read the classical poets—or, rather, certain portions of them—and they know Genesis in the Septuagint. Being by nature altogether destitute of any poetical sense, they have apparently hit upon the preposterous notion of reconciling ancient poetry with Hebrew theology and nineteenth-century science. Or, rather, they go much further than that; for they positively believe that the poets were consciously clothing scientific truths in every detail of the mythology that they elaborated. If, for example, Polyphemus sings to Galatea: "Lac mihi semper adest niveum," we are bidden to remember that the "steam, gas, oil, and water spouting from the geysers and thermal springs are of a white or light straw colour." And, when the giant is made to say that he has found two bear cubs for the nymph, Ovid means, of course, that Chemical Force has discovered Magnetism and Electricity as special gifts to Elementary Matter! And, if only we grasp these and several other equally obvious facts, the story of Acis and Galatea "is a vivid description of a volcanic outburst and its after-effects, written with the master-hand of a poet and a scientist," instead of being "a silly and grotesque love story with a preposterous transformation." In order to understand *θεμιοτρονεί εκαστος* in "Odyssey" 114 (like most pseudo-scientists, the authors are intolerably careless), you would do well to "heat Sal Ammoniac with lime."

But perhaps the gem of the book is the interpretation of

Horace, "Odes" III. vii., the pretty little trifle beginning "Quid fles, Asterie?" "The personages mentioned in it," say our latest commentators, "have so failed to be recognized that all commentators are forced to agree with the following remark of Orellius [*sic*]: 'Asterie, Gyges, Chloe, and Enipeus are all imaginations of the poet's brain.' Quite true; but the imaginations of the true poet, ancient or modern, are bred of reality. There must be a theme for song, and the theme in this case was one of the geological mutations through which our earth has gone." And so a charming series of notes is concocted to "interpret" poor Horace. "Lament not, O Metamorphic rocks, for the Devonian formation," and so on.

The authors' notion of what constitutes evidence is, to say the least, as *naïve* as strange. They manufacture arguments entirely valueless, with perfect good faith, to support conclusions wholly unwarranted. "Here is a passage," they write, "that can be translated in conformity with the Undulatory theory [of Light] by rendering *aque tremulum* as 'undulating':—

Sicut aquæ tremulum labris ubi lumen aenis,  
Sole repercussum," &c.

Charming, no doubt, and most convenient rendering—only that it is obviously impossible, since the despicable rules of grammar require us to put *aque* with *labris*.

After inspecting these few samples, the reader, we trust, will not be startled when we assure him that the Messrs. FitzSimon sincerely believe that the ancient poets "had cognizance of and belief in the Trinity and a Christ to come," which belief they perhaps exhibited in their writings. Now, such a statement is, on the face of it, one that should not be lightly made; and so we look eagerly for the evidence on which it is based. And this is the stuff we are asked to accept as such:—"Ovid opens his 'Metamorphoses' with the line—

Ante mare et terras et quod tegit omnia cœlum.

This, by transposition of the letters, becomes—

Ante Deus cœlum et terram atq' omnia ore tegit

—"In the beginning God clothes heaven and earth and all things by His word." Spirit of Donnelly! and *atq'*, and *ore*, "by His word!" The "Theogony" of Hesiod, we are assured, opens with a line which may, by transposition of letters, be tortured into "Christ, indeed, the Shepherd, is both the Alpha and Omega."

The authors apparently have never heard of comparative philology. The etymologies they put down are constantly so utterly ridiculous that it is almost an insult to our readers' intelligence to offer specimens. We will content ourselves with one, which is by no means among the most preposterous: "*Λυσιμελής*, from *λύσις μέλω*, 'presiding over resolution,' as seen in the law styled 'the resolution of force.' We lack patience to demonstrate—what is sufficiently obvious without demonstration—the absurdity of this twaddle.

The titles of the authors, and the solemnity of the subjects which they handle with such self-assurance, forbid us to regard their production as either a parody of medieval reasoning or a laboured satire on modern pedantry. But, worthless as the book is to a serious inquirer, it may afford, in those lengthy parts of it which are filled with excerpts from and comments on classical poetry, a really hearty laugh to any weary student who lights upon it. In the hope that it may occasionally fulfil the function of a grotesque, it is, after all, worth keeping. The authors we would seriously counsel to read such books as Lang's "Custom and Myth," and Frazer's "Golden Bough"; and to reflect how the large parts of ancient poetry that they leave out of account—the Homeric Hymns, for example—are to be reconciled with their outrageous theory.

#### IDEALS OF A SCHOOLMASTER.

*Unwritten Laws and Ideals of Active Careers. Essays by Various Writers.* Edited by E. H. Pitcairn. (Smith, Elder, & Co.).

Perhaps the best way of enabling the reader to judge of the character and quality of this very readable volume, especially as the title is a little vague, will be to enumerate the eighteen writers, and the subjects of their essays. Sir Edward Malet writes on Ambassadors, Lord Monkswell on the House of Lords, Sir Reginald Palgrave on the House of Commons, Rear-Admiral Penrose-Fitzgerald on the Royal Navy, Major-General Maurice on the British Army, Lt.-General McLeod Innes on the Royal Engineers, Major-General O'Callaghan on the Royal Artillery, the Rev. W. B. Trevelyan on the Clergy, Sir Herbert Stephen on the

Judges, Mr. Birrell on Barristers, Sir R. Brudenell Carter on the Medical Profession, the Rev. A. Austen Leigh on Vice-Chancellors, Bishop Welldon on Schoolmasters, the Rev. G. G. T. Heywood on Boys at Public Schools, Mr. J. H. Tritton on Banking, Mr. Fuller Maitland on Musicians, Mr. G. F. Watts on Art, and Mr. Alfred Waterhouse on Architects. It is evident that men of this stamp could not fail to be interesting when they give us their ideas as to the unwritten laws of their several callings, and on the ideals which they have recognized for their own guidance. If it is inevitable that they should seem at times to "give away" their professional brethren or themselves, or, at least, to show how much a professional man may be bound by the twisting threads of etiquette, still, on the whole, their candour is delightfully refreshing, and it tends in almost every instance to raise our ideas of the status and standards of professional life in England.

Dr. Welldon—who wrote his essay on the eve of quitting Harrow, for the publication of the book has been somewhat delayed—sets out by saying that, among the recognized learned professions, none has risen more rapidly or remarkably in public estimation than the educational. The schoolmaster who respects himself is no longer treated as "a sort of higher servant" by the parents of his pupils.

Even now there are some who treat private tutors—and, still more frequently, private governesses—with the contemptuous indifference that is more acutely resented because it is externally polite. But, upon the whole, although the teachers of elementary schools live rather hard lives, and teachers of girls are less highly esteemed than those of boys, masters, and especially headmasters of the great public schools, enjoy as much respect as they deserve; it may even be said that some of them have rather more.

Amongst the qualifications of a schoolmaster, Dr. Welldon (who writes particularly of the masters of public schools) reckons a fair knowledge of literature, and he advises young masters to undertake some literary work, which will be likely to improve their scholastic ability.

A man who has been engaged, for however brief a time, in literary study or production comes back refreshed to his work of teaching. His intellectual life is not stationary, is not monotonous, and whatever he learns in pursuing his own subjects he can impart more or less directly to his pupils. For it must not be forgotten that the educational profession is, in its nature, intellectually cramping.

At the same time the ideal headmaster should be also in the best sense a man of the world. His knowledge of the world will act as a corrective of his scholarship, and will be "an antidote to worldly ways and worldly views." In addition, a headmaster should possess the special tact which is the secret of educational success. What this tact is, it is difficult to say. "It is generally born in a man; it is seldom, though sometimes, won by experience, but without it a man cannot succeed as a schoolmaster." There is no profession in which a good man may do so much harm. "His very virtues become vices; his goodness and kindness are themselves sources of failure, unless he knows when to relax and when to tighten the rein of discipline."

Dr. Welldon is very suggestive and helpful in considering the relations of a headmaster to his pupils, to his colleagues, and to parents.

The choice of good masters is everything. The longer I lived as a schoolmaster the less was my faith in systems, time-tables, and educational reforms, and the greater my faith in men. It is personality which tells.

In the relations of a headmaster with his boys, the two great needs are a firm discipline and a wise sympathy.

Sympathetic severity seems to me to sum up the true character of a schoolmaster. But, above all, a schoolmaster, and a headmaster especially, must be just; for, as courage is the virtue which boys admire most in each other, so it is justice which they admire most in their masters. A master who is not just, but oppresses one boy and favours another, is bound to fail. According to my experience, however, the difficult thing is not to be just, but to *seem* just. I have been sometimes tempted to paraphrase the famous line of Æschylus, which was said to refer to Aristides, and to remark of myself that I wish not so much to be just as to appear just.

We have quoted enough to show the value and wisdom of Dr. Welldon's essay, and must leave the reader to turn for himself to its admirable conclusions—as well as to turn to other essays in this noteworthy book, which will be found no less interesting than the one at which we have glanced.



## SCHOOL AND COLLEGE HISTORIES.

- (1) "Cambridge Series for Schools and Training Colleges." Edited by W. H. Woodward.—*A Short History of the Expansion of the British Empire, 1500-1870.* By W. Harrison Woodward, Christ Church, Oxford. (Cambridge University Press.) (2) *A History of England for High Schools and Academies.* By Katharine Conran, Ph.B., and Elizabeth K. Kendall, M.A. (New York and London: Macmillan.)

We have in these two volumes two contrasted methods of treating English history, the former of which is more specialized, and, in a sense, more ephemeral, than the other. Mr. Woodward gives us a history, not of the nation, and still less of the popular development, but of the mere movement of territorial expansion. And in doing this he does not seek to provide a digest of the facts relating to colonial history; for, as he justly says, a manual of information is not the same thing as a text-book, which should not merely store the mind with facts, but stimulate and guide the reader in drawing his own conclusions.

Mr. Woodward makes an appeal in his preface which would have been more timely a few years ago. After stating that this book is not intended for young students alone, he says:

It would be well if a narrative of the rise of our Empire were needed only by them. No civilized country treats its national history with such scant regard as Englishmen. It surprises foreigners to see how phlegmatically we ignore the story of the growth of our great dominion, an unconcern which reacts inevitably upon our schools of all types and grades. If Germany, for instance, had such a history as ours, it would be the central subject round which all their national education would revolve.

There is some truth in this, even to-day, but the sting of the reproach has been extracted by scores of recent writers who have dealt more or less systematically with the history of the colonies and of the British Empire. It is no longer quite convincing to talk of our ignoring the story of our world-wide dominion.

However that may be, Mr. Woodward tells this story *in usum scholarum* in an altogether admirable manner. His twelve chapters are a continuous and concise narrative of the progress of expansion, clearly set forth, kept distinct from other historical issues, and holding the attention of the reader throughout to the single theme and purpose of the book. The original settlement or conquest of our various dependencies is regarded as of greater historical value and interest than their subsequent developments, and it is on these earlier stages that Mr. Woodward chiefly dwells. He does not carry the history of India beyond 1858, nor of Canada beyond 1867, nor of Australia beyond the grant of responsible government. From this point of view the settlement and subsequent loss of the American colonies clearly belong to the scheme of the work, though their story may not for all readers be "more instructive than the orderly progress of Australia." One of the dangers of colonial history, as it is generally written in these days, is that it tends to sacrifice everything to the enterprise and heroism of the pioneers. Mr. Woodward says that "for real insight into motives and forces, the Elizabethan time perhaps has merits which the Victorian age lacks." But the Victorian age means sixty years of development and organization. One would think that, for historical purposes, almost enough had lately been said by way of apology for, or glorification of, our modes of acquiring dominion, and that a great deal more needed to be said of our indisputable genius for organizing and governing our possessions. We must repeat that, within the lines marked out by Mr. Woodward, he has written an excellent volume, thoroughly suited for school use.

Miss Conran and Miss Kendall, who are Professors of History in Wellesley College, have no such special object as Mr. Woodward has, and their volume of five hundred pages deals pretty comprehensively with the forces which have been at work in producing the England of to-day. They pay particular attention to laws and institutions, to the struggles for charters and Parliamentary powers, to revolutions, parties, the growth of democracy, and the condition of the people; and less to mere dynastic or aggressive wars, save in so far as these may have affected industrial prosperity or constitutional tendencies. This is a decidedly good book. It has an extraordinary number of maps, large and small, over a hundred pictures and portraits (some of these being scarcely worth printing), with lists of authorities, tables, and other aids to a willing student.

## THE GEOMETRY OF CRYSTALS.

*A Treatise on Crystallography.* By W. J. Lewis, M.A., Professor of Mineralogy at Cambridge. (Cambridge University Press.)

This is a very exhaustive and complete treatise on the geometry

of crystals. The classification is based on the principles of symmetry. The forms are represented graphically, and a very useful nomenclature is devised to represent their relations. The problem of Nature seems to have been to divide space into sections, so that each small section is similar and similarly situated to the larger sections which are built up out of the smaller. The conditions to be observed in this division of space lead to a few easily deducible properties of crystals, such as the following:—Crystals are homogeneous solid bodies, bounded by plane surfaces. The planes are parallel in pairs, for the bottom of one crystal must fit the top of another. They are necessarily arranged in *zones*, *i.e.*, in sets, the planes of each of which intersect one another in parallel edges. The physical properties, such as the cleavage, as well as cohesion, elasticity, optical and thermal characters, are found by means of Professor Lewis's geometry to be intimately connected with the symmetry of external form. The first step in the classification is to prospect the thirty-two possible classes of crystals so that each is a definite group. Beginning with forms in which the symmetry is least, the author passes upwards from one class to another, so that at each step there is the least addition to the symmetry of the preceding class. When no further classes can be obtained by this process, a fresh start is made with a class which has the least symmetry of a new kind. In this way all possible forms are exhausted, and all possible combinations of the pyramids, prisms, domes, and end-faces are made. The completeness of the grouping is only excelled by that of Nature herself. The nomenclature and symbolism are based on the works of such writers as Naumann, Miller, Groth, and others, but they are much improved by the author. The deductions from data of goniometrical measurement follow in the main the order of Kopp's "Einleitung in die Krystallographie," although this is not one of the works to which the author admits his indebtedness. The geometrical treatment by the stereographic projection and the anharmonic ratio of four tautozonal faces, which is associated with the name of Miller and with the Cambridge manuals of Miller and of Miller and Brooke, are carried here further than in any other treatise. From the measurements made, the theory shows how other data not so easily measured may be derived. For instance, five angles of the crystal oligoclase having been measured, it is required, as a problem, to determine from these five angles the parametral ratios and the angles between the axes of the crystal. Spherical trigonometry is brought into requisition, and the required results are then calculated. The work runs to 600 pages, and is a very interesting addition to the "Cambridge Natural Science Manuals" published by the University Press.

## RHETORIC.

- (1) *Elements of Rhetoric and English Composition.* First High School Course. By G. R. Carpenter, Professor of Rhetoric and English Composition in Columbia University. (Macmillan.) (2) *Introduction to Rhetoric.* By William B. Cairns, Ph.D., Instructor in English in the University of Wisconsin. (Boston: Ginn & Co.)

What, then, is Rhetoric? Prof. Carpenter gives alternative forms of definition: "Rhetoric is the art of effective communication by means of language," or "the art of expressing by words precisely what we mean." The second form, he says, is more simple than the first. But does it express the same meaning? And is either form satisfactory? Surely one can make effective communication by means of language without coming within the sphere of rhetoric; and one may express one's meaning with mathematical precision without a suspicion of rhetorical aid. Further, Prof. Carpenter, a couple of pages later, tells us that rhetoric is also, "to some extent, a science"; but such extent he himself assigns to English composition. When the two are spoken of as "parts of an educational system," rhetoric means "the principles of the art," and English composition means "the practical exercises by which we acquire skill in applying these principles." Instructor Cairns wisely acknowledges the impossibility of giving a perfect definition, and contents himself with saying that we may think of rhetoric as "the study that teaches us to speak or write our thoughts in the best manner," adding subsequently that "best" means "best adapted to our purpose." He does not trouble himself about English composition, but he divides rhetoric into style and invention; "style" covering a hotch-potch of matters of grammar, spelling, and other elements, and really looking not unlike Prof. Carpenter's "English composition," while "invention" covers the usual large branches of rhetoric (description, narration, exposition, argumentation, persuasion), although where the "invention" is prominent is not clearly apparent.



Perhaps it would be well to rest content with a description of rhetoric, where one is unable to devise a definition that will stand the simplest tests. It may be conceded that grammar and rhetoric run into each other, and then all that can be expected is a discrimination between the grammatical and the rhetorical aspects of the same collocation of words. For elementary classes we have here a considerable field of useful work. About a third of each of these volumes is devoted to this preliminary matter, and we do not say the space is too large; but we do think that much of it is as good as wasted. What on earth is the use of worrying over spelling, punctuation, "capitalization" (use of capitals), incorrect use of words, ordinary blunders of sheer grammar, analysis of sentences, and so forth? All such things are clearly outside anything that can usefully be called "rhetoric." What we usually designate the "figures of speech," or "rhetorical figures," are treated only in a casual and extremely fragmentary way; yet one would have expected that these would open the discussion, that they would be marshalled in some systematic order and explained and illustrated briefly but sufficiently. There is also a good deal of treatment of the sentence and the paragraph in their rhetorical aspects. This is very useful as far as it goes, but it might well have gone further. True, Prof. Carpenter gives it space enough; but what we should have desiderated would have been less pretentiousness of form and more effectiveness of matter. Mr. Cairns, as we have said, treats the great forms of composition—the grand subjects of rhetoric—in separate chapters, and his sketch will be useful for beginners. But Prof. Carpenter does not proceed so far as even to indicate their existence: except that he mentions "narrative" casually in dealing with sentences and paragraphs. One can only say that both volumes contain a miscellany of matter that will prove useful one way or another to the student of English, but that they are both crude performances regarded as expositions of rhetoric. Mr. Cairns's book is much more complete, and for elementary purposes needs mainly a drastic excision of preliminary matter that ought to be taught and arranged under other heads antecedent to rhetorical studies. Prof. Carpenter would have been better advised had he also excised severely and limited his treatment to the two main subjects of his book, sentences and paragraphs, dropping rhetoric into subordination. Still, there are schools in this country where even such a crude handling of the subject would be much better than nothing of the kind at all.

## GENERAL NOTICES.

### CLASSICS.

The production of school editions of the classics with illustrations is becoming a distinct branch of publishing enterprise. The principle of training the mind through the eye is so obviously sound that we can only wonder that English schools should have been kept waiting so long for pictures. But it is not to be denied that the task of finding appropriate pictures among the various objects that have come down to us from antiquity is not an easy one. Merely fancy pictures should clearly be ruled out; but this means that the very passages that call most distinctly for the aid of illustration are just the passages that there is no means of illustrating adequately. Still, on the whole, the publishing houses have made a brave beginning; and, being thankful for what they have done, we are not disposed to be over critical either of the subjects or of the production of the illustrations.

*The Odes of Horace, Book IV.*, by Stephen Gwynn (Blackie), contains eight little pictures, and the only one to which any serious objection can be raised is the bust labelled "Head of Hannibal." This bust is generally regarded as of very doubtful authenticity. The notes, occasionally a little long, are generally sound; but we are astonished that Mr. Gwynn supports *Tumque dum procedit* in 2, 49. There are very few grammatical notes, and a considerable quantity of translation.

*The Agricola of Tacitus*, by W. C. F. Walters (Blackie), forms a volume of the same series. So much trouble has evidently been spent on the preparation of this edition that it is an unpleasant duty to be forced to pronounce a verdict, on the whole, unfavourable. The illustrations, taken from the remains of Roman Britain, are well reproduced from photographs; but they do not, with one or two exceptions, properly illustrate the text. The notes are singularly uneven, some being quite advanced, others very elementary. A note is occasionally repeated, as, for instance, that on *chiasmus*; and the renderings, frequently given, are not very good. There are, however, some useful grammatical notes, and the subject-matter is carefully explained. Appendices on "Questions connected with the 'Agricola,'" and its purpose, are followed by an entirely elementary note on translating,

which seems intended for beginners. It is thus difficult to say for what students the book is meant.

From Mr. Murray we have "Murray's Handy Classical Maps"—*Gallia*. This map is admirably produced, and coloured on a sound principle. The scale also is considerably larger than that of the ordinary English classical maps; and the series seem to mark a welcome and long needed advance in our cartography. But it is to be regretted that the map of Gaul is not wholly abreast of the most recent scholarship, and does not carry us much beyond Kiepert's school atlas. For example, *Bibracte* is here still identified with *Augustodunum*; though the identification is now admitted by the specialists to be impossible. The indented map, on which what professes to be the route of Caesar and his army is marked, though it follows Kiepert, rests in many of the details on mere conjecture, the truth being that it is impossible to ascertain the exact line of Caesar's marches.

*The Histories of Thucydides, Book VI.*, translated by E. C. Marchant, M.A. (Bell & Sons), is an instalment of a full translation of "Thucydides," which Mr. Marchant is contributing to Bell's "Classical Translations." The English is admirably free, without any sacrifice of fidelity. There is an excellent introduction of a dozen pages, and a good map.

### MATHEMATICS.

*Euclid's Elements of Geometry, Books I.-IV.* Edited for the use of Schools, by Charles Smith, M.A., and Sophie Bryant, D.Sc. (Macmillan.)

The propositions of elementary geometry are here treated in Euclid's order, but without any scrupulous regard for the words of Simson. There is no repetition, and consequently considerable condensation as compared with most other "Euclids." Very suggestive and useful notes are added, and occasionally alternative proofs are given. Thus Euclid II. 12 and 13 have as alternatives the proofs which are analogous to I. 47. This is, in many respects, preferable to the less graphic method usually adopted. In Book II. the absurd cross diagonals are avoided, and in Book IV. the editors have used a wise discretion both as regards form of proof and as regards construction. Abbreviations are very freely used. Additional propositions of a well known and useful kind are added to each book, and the proofs are always very neat and sometimes novel. There is a little want of uniformity in the use of thick lines and thin in the figures, to distinguish the lines of construction added to the original figure, but this is a small matter.

*Practical Problems in Arithmetic.* Grouped and arranged for Group B, Standards V., VI., and VII., and Higher Rules. (Blackie.)

The questions are arranged according to types, and those formed by variations of the given type are, in each case, (A) mental, and (B) written. The books are of reasonable size—forty to fifty pages—and are well edited and clearly printed.

*The Elements of Coordinate Geometry. Part II., The Conic.* By J. H. Grace, M.A., and F. Rosenberg, M.A., B.Sc. (Clive.)

This work is based on Salmon's classical work, but it differs from Puckle's (facetiously called Puckled Salmon) in the care which the authors have taken to develop the subject more gradually, and to explain every point fully. The exercises are well graduated.

We have also, from Mr. Edward Arnold, a new and revised edition of *The Elements of Euclid, I.-VI.*, by R. Lachlan, Sc.D.—a good text-book for students of all classes.

### MODERN LANGUAGES.

*Schiller's Maria Stuart.* Edited by H. Schoenfeld. (New York The Macmillan Co.)

Schiller's drama has been so often edited as to leave little room for fresh illustration. In particular the excellent English editions of Dr. Breul and Dr. Buchheim have appeared within the last half-dozen years, the latter characterized by a thorough study of the materials at the poet's disposal. Prof. Schoenfeld seems to have drawn pretty freely on both editions, besides using the material accumulated by Düntzer and others; but he does not appear to have added much in the way either of research or of help to the young student. Still, it is a carefully worked out and useful edition. His strongest point is the suggestive way in which the connexion of the scenes with each other and with the action of the drama is brought out. Translations are sparingly given, and rightly so; such as find a place in the notes do not, however, always set before the student a high ideal of the style required for rendering poetry. "The abundance of forms streamed forth profusely from walls and ceiling"; "Has the verdict been rendered against me?" are scarcely good models; nor, if it is found necessary to translate

"Odi profanum vulgus et arceo,"

should we be put off with "I hate and repel the profane rabble"—a thoroughly schoolboy version. One curious example of the absence of that sound, general knowledge essential to an editor may be quoted. In the well known summary of Catholic doctrine we have

"Das seine Augen sehen müssen was  
Das Herz soll glauben"

—an obvious reference to the importance of symbols. The editor

quotes, à propos of this: "Nihil est in intellectu quod non prius fuerit in sensu"—the doctrine of Hobbes, diametrically opposed to Catholic philosophy. A moderate number of etymologies are given—some in a form likely to fix the student's attention; others in a less interesting way. Every etymology given in school notes—and they should be given but sparingly—ought to have some link to connect it with what the student may reasonably be supposed to know. The original meaning of *beklemmen*, by the way, is not, according to the best authorities, "to seize with claws." The book is nicely got up, with views of places and portraits of the chief characters. We noticed a few misprints, as "teaming" for "teeming" (page 226), "Britanny" for "Britain."

(1) *Dent's First German Book*. By S. Alge, S. Hamburger, and W. Rippmann. (2) *Dent's German Reader*. By S. Alge and W. Rippmann.

(1) These two books cover the first two years of the course advocated by the pioneers of the "reform" movement in Germany. The general principle is to compel the pupils from the very beginning to think more or less in German, and to connect the German words, not with their English equivalents, but with the subjects they represent. Accordingly, the basis of the "First Book" (in which English type is used) is Hölzel's "Pictures of the Seasons," though it is by no means limited to them. It is to be hoped that the wall-pictures are better than the reproductions of those at the end of the book. Even the originals might well be superseded by something more artistic. The book is in German throughout, even to the grammatical notes, which are happily not intended to be learnt by heart, like

"As in presenti perfectum format in ari."

Even the vocabulary avoids English, and gives a short sentence from the text to suggest the meaning of each word: for example, we find "Der Jäger schießt viele Hasen; es hat einen grossen Sack voll," instead of *schiessen*, shoot; *Sack*, sack, bag. Grammar is supposed to be taught incidentally, the pupil gradually forming his rules for himself under the guidance of the teacher. A summary, still in German, is given towards the end of the book. The selection of short poems to be learnt is excellent.

(2) The "Reader," in which German type is introduced, is constructed on the same principles as the "First Book," and contains, besides descriptions adapted to pictures of *die Stadt* and *die Wohnung*, stories and poetical extracts, all with appended questions and exercises. The vocabulary consists partly of illustrative sentences like those given in the "First Book," partly of German definitions of German words. Both works are compiled with great care. The system very properly makes great demands on the energy and liveliness of the teacher. The books might easily be utilized by those who are not such strict purists as the authors in the matter of excluding English. The plan of teaching seems better adapted to children beginning German at a comparatively early age—and it is much to be wished that it should be begun early—than to schoolboys of thirteen or fourteen, to whom the grammar of other languages is more or less familiar. Towards the accurate translation of German into English it does nothing, nor does it profess to; towards the converse process it forms an excellent step. If work of this kind could be got through early, not only would the practical use of a foreign language come more readily, but greater opportunities would be afforded, at a later stage, for the indispensable intellectual discipline which accompanies scholarly translation into and from one's own language.

#### MISCELLANEOUS.

"The Story of the Nations."—*Modern Spain (1788-1898)*. By Martin A. S. Hume. (Fisher Unwin.)

This very interesting volume contains the story of a nation during a century of "struggle upward out of the abyss into which despotism and bigotry had sunk it." There are more things than despotism and bigotry to account for the slow development of modern civilization in Spain; but that belongs to the earlier, as well as to the later, history of the country, and Mr. Hume confines himself to the record of a century. He starts with Charles IV. and his Minister Godoz, who allowed the ancient monarchy to be dragged at the tail of the French Republic, from which unhappy condition it was rescued, after a dozen disastrous years, by a popular revolt and the victories of Wellington. Revolutions and Carlist conspiracies fill up the annals of the middle decades; and, from the flight of Cristina to the flight of her daughter Isabel, the story of Spain is one of constant intrigue, confusion, and anarchy. The more recent story of Spain, from the restoration of Alfonso XII. and the granting of the Constitution in 1876, is told in a single chapter; and the Cuban insurrection, the war with the United States, and the loss of the Spanish colonies are dismissed in seven or eight pages. No doubt Mr. Hume considered that it was too early to chronicle these events with historical detachment and adequate detail. From that point of view the narrative of this volume may be said to close with the accession of the present King and the earlier regency of Queen Cristina. Even so, there is no question as to the actual interest and timeliness of this story of modern Spain.

*Our Navy for a Thousand Years*. By Captain S. Eardley-Wilmot, R.N. (Sampson Low, Marston, & Co.)

The author of this volume gives us a concise account of "all the

principal operations in which the British Navy has been engaged from the time of King Alfred to the recapture of Khartoum." He says, very truly, that no romance could well be more attractive to young and old than such a narrative, which teems with incidents of the most varied and exciting character. His aim has been to combine the story of the Navy itself with the chief events of our general history; and, of course, that is the best way of showing the real service of our ships to the nation. The purpose of the book has been very well carried out. It is readable from first to last, and is freely illustrated by naval scenes, fights, and portraits of ships.

*Prisoners of the Tower of London*. By Violet Brooke-Hunt. (Dent.) From Flambard, the first prisoner of the Tower, to Arthur Thistlewood and the other Cato Street conspirators, who were the last—and these were packed off to Newgate Street, as being unworthy of the dignity of a grand State prison—the author of this pleasant volume tells us as much as she has learned of the interesting succession of historical captives. She has written her story simply and without undue pretension; and, though it might have been told more learnedly and with a nearer approach to finality, there is no necessity to dwell on such a contrast. Many extremely interesting records have been brought together, and they are linked by a readable narrative. The book is well illustrated with portraits and views of the Tower.

*Freehand Drawing of Ornament*. By Robert Bunting. (C. A. Pearson.) This is a collection of drawing copies reproduced from original photographs, selected and arranged by Mr. Bunting, who is art master under the Tottenham School Board. There are twenty-two progressive copies, and they are admirable examples of the application of photography to the production of flat representations of the round. The book is preceded by some very clear and judicious suggestions for freehand drawing.

(1) *Evangelical Belief: a Prize Essay on the present Conflict between Evangelicalism and Sacerdotalism*. By J. B. Nichols. (2) *Until the Day Declare It: a Prize Story*. By Margaret Cunningham. (3) *The Vicar of St. Margaret's: a Prize Story*. By M. G. Murray. (Religious Tract Society.)

These three books represent the outcome of the Religious Tract Society's offer of £171 for "the best exposition of sacerdotalism," and the best long and short stories on the evils of the same theological standpoint. The *parti pris* may deprive the stories, at any rate, of much of their interest for a large number of readers, but for many more it may have a contrary effect.

*The Boyhood of a Naturalist*. By Fred Smith. (Blackie.)

This is a very simple narrative of the achievements and observations of a boy who was fond of "natural history"—in other words, fond of grubbing about in the holes and corners of Nature, always finding and delighting in common objects of the country. It is a grown man's reminiscence of his boyhood, and will be thoroughly welcome to young boys who are developing similar tastes. There are no illustrations, but the book is thoroughly interesting without them.

*Beasts*. By Wardlaw Kennedy. (Macmillan.)

These papers, for the most part reprinted from the *Public School Magazine*, are written by a lover of animals for lovers of animals, and will have great attraction for boys with a naturalist turn of mind, and perhaps awaken it in others. The anthropomorphic treatment of animal life is delightful, and so is the humour, when not strained or reduced to mere punning, as is too often the case, while the continual resort to misapplied quotation is apt to mar the book for grown-up readers. But, in spite of this, everything is bright and freshly told from start to finish, and, as the author modestly suggests in his preface, "people who like this sort of thing will find this the sort of thing they like"—and we think they will be fairly numerous.

*The Making of Europe: a simple Account of the Origin and Formation of the principal Countries and States of Modern Europe*. By "Nemo." (Nelson.)

It is not quite clear for whom this easy-going history is intended—probably as much for working men whose education was neglected as for boys beginning to learn. But we are far from depreciating the writer for his simplicity. He assumes no previous knowledge in his readers; he is patiently consistent throughout; and we would certainly give the book to an adult eager to learn. It is written from an advanced democratic point of view.

*Mothers' Songs, Games, and Stories*. Translated by Frances and Emily Lord. (W. Rice.)

This is a new "Student's" edition of the English rendering of Froebel's "Mutter- und Kose-Lieder," containing all the original illustrations, as well as the music, rearranged for children's voices, with pianoforte accompaniment. The book has an interest of its own, but we should have preferred a new book for English children on similar lines.

*Christ the Protestant, and other Sermons*. By Hely Hutchinson Almond, M.A. (Blackwood.)

Mr. Almond is a Church of England headmaster of a school in which the large majority of boys are Presbyterians. These Loretto sermons take their tone, to some extent, from this rather peculiar condition of things, but we do not think that they suffer by it.

The title of the first discourse is not particularly pleasant, but, with that exception, the text of this little volume is well calculated to arrest the attention of a thoughtful boy.

*A History of the Captivity and Return of the Jews.*

By the Rev. E. J. Nurse, M.A. (Elliot Stock.)

We have here an excellent little story of the Captivity, put together from the Bible narrative and references. It is well illustrated, and has a commendatory preface by the Bishop of Coventry.

*Sand-Modelling for School and Home.* By Miss Tarbuck and H. Major, B.A. (Newmann.)

A well conceived, freely illustrated volume, intended to assist "the teaching of drawing, object-lessons, and geography." It has a number of blackboard sketches and diagrams, maps, and photographs, with practical hints and instructions.

*Elementary Brush-Work Studies.* By E. Corbet Yeats. (Philip & Sons.)

There is a sensible and useful introduction to this oblong folio of brush-work studies, and each of the two dozen plates is faced by clear directions. The book is excellent for its purpose, and can hardly fail to cultivate the artistic taste of a beginner with the brush.

*A Summary of Ransome's Short History of England.* (Longmans.)

A compact summary of the chief events of English history, suited for reference, guidance, and, at a pinch, for cramming. It is very precise and very comprehensive. For the purposes indicated it is as good as any that we know.

"Pitt Press Shakespeare for Schools."—*As You Like It.* Edited by A. W. Verity, M.A. (Cambridge University Press.)

This is at least equal to the best of Mr. Verity's previous editions. The introduction, the glossary, the extracts from Lodge's "Rosalynde," and the hints on metre are all excellent.

*The "G. S." Object Readers, Books I.-III.* (Edward Arnold.)

Geography and elementary science again, according to the requirements of the Department, for elementary schools. There are many simple progressive lessons on common things, told in simple language.

*Combined Readers in Elementary Science and Geography. Books I.-III.* By Vincent T. Murché. (Macmillan.)

Mr. Murché's industry in the production of reading-books is indefatigable. He has given us object-lessons before; but he was bound to comply with "Schedule II., Course D, Code of 1899," and he has done it very fairly.

*The Crock of Gold: Twelve Fairy Tales, Old and New.* By S. Baring-Gould. (Methuen.)

This will be a welcome book of fairy tales for lovers of the fantastical. It is somewhat clumsily set in a framework of the troubles of one Jeremiah Toope, a very inefficient schoolmaster, who was dismissed by his trustees, and took to telling stories. But that is only Mr. Baring-Gould's way. The stories themselves are entertaining, and the pictures are attractive.

We have some admirable little reprints this month. From Mr. George Allen comes a well bound and printed volume of *Readings in John Ruskin's 'Fors Clavigera'*, 1871-1884, including over a hundred ethic and didactic pieces. The same publisher sends us a *Reader's Companion to 'Sesame and Lilies'*, by W. T. Warre, M.A.—an analysis and notes which will be welcome to many. From Messrs. Macmillan we have Tennyson's *Princess*, in the familiar binding of the "Golden Treasury Series." Messrs. Chambers reprint one of the most convincing and psychologic stories of childhood, *The Story of Paul Donbey*.

As usual, Messrs. Hachette's gift books for the new year make a goodly show—in size, gay binding, plentiful illustration, lightness of subject, readable type, simple and easy French style. As we have said before, these *Jour de l'an* stories and picture-books are likely, in many cases, to be welcome to a French-reading English boy or girl. *L'Equipage de la Rosette* is a sea-fighting story, dealing with the Anglo-French War of 1793-1802, and based on the manuscript of one Jean de la Tour, the author's grandfather. This is the largest volume of the set before us, and has ninety illustrations. *La Cousine de Suzanne*, by François Deschamps, is a shorter and more domestic story, attractive and well illustrated.—*Mon Journal*, the annual volume, is a store of amusing reading for children entering on their 'teens. It is very copiously illustrated in colours and black and white.—Still more amusing fare for the little ones will be found in three coloured picture-books: *L'Alphabet de Pierrot, Dix Petits Nègres*—a free translation of our "Ten Little Nigger Boys"—very quaintly illustrated, and *Jacques Sans Mémoire*.—From the same firm we have the useful *Almanach Hachette* for 1900, quite perplexingly full of little bits of information, little utilities and facilities for almost every phase of life.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*London University College Calendar, 1899-1900* (Taylor and Francis); *Who's Who, 1900* (A. & C. Black); *The Englishwoman's Year-Book*, edited by Emily Janes, 1900 (A. & C. Black); *Holloway College, Report of the Governors, 1898-9.*

*The School World, Vol. I., 1899* (Macmillan).

*The Boys' and Girls' Companion, 1899; The Church Worker, 1899; Stories on the Apostles' Creed; Lessons on Christian Doctrine and Christian Practice*, by the Rev. M. Stevenson, M.A.; *Outline Sermons on the Parables and Miracles*, by the Rev. H. D. S. Sweetapple, M.A. (Church of England Sunday School Institute).

## MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held at the College, Bloomsbury Square, on December 16. Present: Dr. Wormell, Vice-President, in the chair; Rev. J. O. Bevan, Mr. Bowen, Mr. Brown, Mr. Butler, Mr. Chettle, Mr. Eve, Mr. Millar-Inglis, Mr. Milne, Rev. Dr. Scott, Mr. Sergeant, and Mr. Armitage Smith.

The minutes of the last meeting were read and confirmed.

The Secretary reported that the Christmas Certificate Examinations had been held on the 5th to 9th inst., and that the number of candidates was 7,340, while the number of candidates for the Junior Forms Examination was 2,140.

He reported that the question at issue between the Council of the College and the Medical Council had not been decided at the recent meeting of that body, but had been deferred till their next meeting, in May, 1900.

The use of the College rooms was granted to the Committee of the Headmasters' Conference, for holding the meeting of the Conference on the 21st and 22nd of December.

The Report of the Examination Committee was adopted.

The Report of the Teachers' Training Committee was adopted.

The draft Report of the Council to the General Meeting was considered, and was referred to the President, Vice-Presidents, and Dean for final revision.

The Rev. J. E. Symms, M.A., Headmaster of Bancroft's School, Woodford, was elected a member of the Council to fill the vacancy caused by the death of the Rev. R. Alliott.

The following persons were elected members of the College:—

Mr. A. Anstey, B.A. Lond., L.C.P., Elmhurst School, Kingston-on-Thames.

Mr. J. Blaikie, M.A. Edin. and Camb., 6 Lancaster Road, West Norwood.

Mr. J. G. Gilchrist, M.A. Aberdeen, A.C.P., Newseat, Rothienorman, Aberdeenshire.

Mr. J. L. Holland, B.A. Lond., L.C.P., 19 Tollington Place, N.

Mr. G. F. Piggott, A.C.P., Grammar School, March, Cambs.

Mr. V. A. de Saint-Joseph, Lomas de Zamora, Argentine Republic.

The following books had been presented to the Library since the last meeting of the Council:—

By the AUTHOR—Bevan's How to Save our Private Schools.

By E. ARNOLD.—Arnold's G. S. Object Readers, Books I., II., and III.; Earl's Elements of Natural Philosophy; Lehfeldt's Text-Book of Physical Chemistry.

By G. BELL & SONS.—Marchant's Translation of Thucydides, Book VI.

By BLACKIE & SON.—Gwynn's Horace, Odes, Book IV.; Walters' Tacitus, Agricola.

By W. B. CLIVE.—Grace and Rosenberg's Coordinate Geometry, Part II.

By MACMILLAN & CO.—Gregory and Simmons' Exercises in Practical Physics, Part II.; Smith and Bryant's Euclid, Books I.-IV.

Calendars of Trinity College, London, and University College, London.

## CORRESPONDENCE.

### CONFERENCE OF SCIENCE TEACHERS.

To the Editor of the Educational Times.

DEAR SIR,—I send you particulars of a very important Conference of Science Teachers which I am arranging for the Technical Education Board for Wednesday, January 10, and Thursday, January 11. I am sure, on looking through the list, you will agree with me that we have been very fortunate in securing exactly the right men to read papers on the various subjects. I shall be very glad to send tickets of admission to any teachers who may apply for them, as far as the limits of accommodation in Conference rooms will permit.—Believe me, yours very truly,

Bermundsey Settlement Lodge,  
Farncombe Street, London, S.E.

C. W. KIMMINS.

December 8, 1899.

### CONFERENCE OF SCIENCE TEACHERS.

The great success which attended the Conference of Science Teachers held during the Christmas vacation last year has encouraged the Board to arrange another, which, it is hoped, will be attended by a very large number of teachers from elementary and secondary schools. The Conference will be held on Wednesday, January 10, and Thursday, January 11, 1900, and there will be two meetings on each day from 11 to 1 and 2 to 4. The meetings on the first day will be held at the Conference Room associated with the English Education Exhibition at the Imperial Institute, and those on the second day at the Shoreditch Technical Institute, Pitfield Street, Hoxton, where the Prout-Newcombe

natural history collection will be used in connexion with the natural history section of the Conference. First meeting, Wednesday, January 10, at 11 o'clock, at the Conference Room, Imperial Institute, Exhibition Road, S.W. Chairman, the Right Hon. Sir John Lubbock, D.C.L., F.R.S., M.P. Addresses will be delivered by Prof. L. C. Miall, F.R.S., of the Yorkshire College, Leeds, on the "Teaching of Botany in Schools," and by Miss Von Wyss, of the North London Collegiate School for Girls, on "Object-Lessons in Botany." The addresses will be followed by a discussion. Second meeting, Wednesday, January 10, at 2 o'clock, at the Conference Room, Imperial Institute, Exhibition Road, S.W. Chairman, Sir Henry Roscoe, D.C.L., F.R.S., Vice-Chancellor of the University of London. An address will be delivered by Prof. H. E. Armstrong, Ph.D., F.R.S., on "Juvenile Research," with experiments by juvenile assistants and lantern slides. The address will be followed by a discussion. Third meeting, Thursday, January 11, at 11 o'clock, at the Shoreditch Technical Institute, Pitfield Street, Hoxton. Chairman, Mrs. S. Bryant, D.Sc. Addresses will be delivered by Prof. Woods Hutchinson, M.D., on "The Early Teaching of Natural History in Schools," and by Mr. J. W. Tutt, Headmaster of the Portman Place Board School, Globe Road, Stepney, E., on "Object Lessons in Natural History." The addresses will be followed by a discussion. Fourth meeting, Thursday, January 11, at 2 o'clock, at the Shoreditch Technical Institute, Pitfield Street, Hoxton. Chairman, Major-General Sir J. F. D. Donnelly, K.C.B., late Secretary of the Science and Art Department. An address will be delivered by Prof. W. Ripper, M.I.M.E., of University College, Sheffield, on "Metal Work as a Form of Manual Instruction in Schools," to be followed by a discussion, which will be opened by Mr. C. T. Millis, Principal of the Borough Polytechnic. In connexion with the Conference, it is hoped to get together a small collection of specially designed apparatus used in schools for science teaching. The assistance of teachers who have designed such apparatus is specially desired, in order to make this section of the work of the Conference as useful as possible. Free admissions will be granted to as many teachers as the Conference rooms will accommodate. Applications for tickets of admission should be made to Dr. Kimmins, Bermondsey Settlement Lodge, S.E., or to C. A. Buckmaster, Esq., 16 Heathfield Road, Mill Hill Park, W.

T. A. ORGAN, *Chairman of the Board.*  
WM. GARNETT, *Secretary of the Board.*

### OVER-PRESSURE.

*To the Editor of the Educational Times.*

SIR,—With reference to your review of our book on "Over-Pressure" and the remedies which we propose for it, will you grant us space for a few remarks on the legitimate use of anthropometrical tables in this connexion?

We have no wish to attempt any proof of a general falling off of the English race in height and massiveness, but we do maintain that the children of our professional classes who fall below Dr. Robert's very moderate standards are subnormal, that the number of such children is far too large, and that suitable regimen will restore the normal standard while assisting their intellectual progress. Dr. Robert's tables, are, as is well known, based on the measurements of many thousand children of all kinds, from primary and secondary schools, from ill fed and well fed classes, from town and country.

Now, with any table constructed on data from a *small* number of children, it is likely that the average between those above the unknown normal development and those below it may not be identical with this norm, which is the standard for comparison, and therefore it may be contended with justice that a child below this average may be but one of those who are necessary factors of the average. But, with even a few hundred children, Mr. Francis Galton has shown in his "Natural Inheritance" that some 40 per cent. are clustered in the centre of the diagram and constitute the norm, while the considerable departures above and below it are singularly evenly balanced.

With the extended data of the tables we have used, the average and the mean at each age are identical. The only correction which needs to be applied is that growth takes place unequally, height and weight seldom increasing together, but alternately, so that the curve of growth of the individual is not like the curve of normal growth, but undulates. The average or mean established by these tables is therefore a norm, and a norm which is pitched low because of the many ill nourished and defective children who have been included.

The question for the schoolmaster becomes therefore not one of statistics, but of biology. It is not, whether in any crowd of boys of one age the departures from the mean, whether above or below, are to be taken as parts of the natural variations which make an average. It is that, given the mean representing a healthy norm—in this case low—that all failure to come up to that standard indicates a misdirection or deficiency of energy.

Among the children of well-to-do parents there is a very considerable percentage which falls below this normal standard, and we adduce evidence that, in many such cases, existing school methods turn the scale against Nature, and produce tonsillar growths, headaches, pallid com-

plexions, wrinkled foreheads, frequent colds, and other "nerve-signs," which show that nerve is going and nerves coming on. It is to show the rational remedy for this state of things that our book was written.

THE AUTHORS OF "OVER-PRESSURE."

### COMMERCIAL DEPARTMENTS IN SCHOOLS.

*To the Editor of the Educational Times.*

SIR,—In the early part of this year the Technical Education Board of the London County Council published a report on commercial education, which had been prepared by a special sub-committee, and the Board have now found themselves in a position to take action based on the recommendations of that report. A few months since the Board awarded to Mr. Kahn, then an assistant-master at the Central Foundation Schools, a scholarship of the value of £150 to enable him to visit the higher commercial institutions of the Continent. He returns to England within the next few days, and it is proposed to utilize his services in the establishment of a commercial department in University College School.

A scheme, which has received the general approval of the Technical Education Board, has been prepared by the Headmaster, Mr. Paton, and the Board have undertaken to assist the new departure by an equipment grant for the provision of teaching appliances which Mr. Kahn has purchased on the Continent; by a grant of 50 per cent. on the stipend of the master of the commercial department, and by the payment of £400 a year in consideration of the County Council having the right to nominate twenty free scholars. These scholarships will be offered for competition shortly after Christmas.

T. A. ORGAN,  
Chairman, Technical Education Board  
of the London County Council.

### SLAYING THE SLAIN.

*To the Editor of the Educational Times.*

SIR,—I should be glad if you would allow me to call attention to a widespread mistake about the new (or twentieth) century. A great many people speak of the year 1900 as the first year of this new century. It is not difficult to show that this is wrong, and that the year 1900 is the last year of, and therefore belongs to, the nineteenth century.

It will hardly be disputed that there is no such year in chronology as the year 0. The symbol 0, which is the negation of quantity, cannot denote a period of twelve months, though it may mark the starting point of an era—the point at which no portion of the era has yet elapsed. If authority be wanted for such a matter as this, I may refer to Sir John Herschel's "Outlines of Astronomy," § 916 (of ed. 8). The first year of the first century of our era is A.D. 1. As a century consists of a hundred complete years, it follows that the last year of the first century is A.D. 100. The first year of the second century, therefore, is A.D. 101, and the last is A.D. 200.

We have only to carry on our counting century by century, and it will be seen that the first year of the nineteenth century is A.D. 1801, and that the last year of it is A.D. 1900. The new, or twentieth, century will not begin till A.D. 1901.—Yours truly,

Purley, December 1.

C. WINCHMORE.

[Another illustration of the obvious is this: The nineteenth century is not complete until nineteen centuries (19 × 100 years) have come to an end—that is, until the last clock-stroke of A.D. 1900. The "widespread mistake" probably springs from the fact that for a hundred years we have written 18—, and now for a hundred years we shall write 19—; and hasty-minded persons think that that ought to be conclusive as to the division of the centuries.—EDITOR.]

### LEWIS CARROLL.

*To the Editor of the Educational Times.*

SIR,—As the writer of the authorized "Life of Lewis Carroll," I hope you will allow me space in your pages to enter a protest against the title of a book recently published by Messrs. Dent. I refer to the "Story of Lewis Carroll, told for Young People by the Real Alice in Wonderland, Miss Isa Bowman."

In the first place, "The Story of Lewis Carroll" suggests that the work is a biography, whereas nineteen-twentieths of it consists of letters, poems, literary fragments, and personal reminiscences, and these only belong to the last ten or twelve years of Mr. Dodgson's life. Again, the "Real Alice in Wonderland" is Mrs. Reginald Hargreaves (Alice Liddell), and not Miss Bowman, whose sole claim to the title is the fact that, in the second production of the "Alice" play, she acted the principal part.—Yours faithfully,

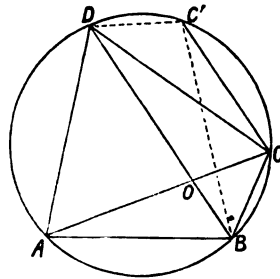
S. D. COLLINGWOOD.  
The Chestnuts, Guildford, December 14, 1899.

P.S.—I notice that the name of the authoress does not appear on the cover, and this makes the phrase "the Real Alice in Wonderland," which does appear there, still more likely to mislead people.

**MATHEMATICS.**

**PTOLEMY'S Theorem derived from different expressions for the Area of the Quadrilateral.** By GEORGE SCOTT, M.A.

Let ABCD be the quadrilateral. Through C draw a parallel to BD to meet the circle in C'. Join C' to D. The new quadrilateral ABC'D is evidently equal in area to the original quadrilateral. The area



$ABC'D = \triangle ABC' + \triangle ADC'$ . The triangle ABC' has for sides lines equal to a pair of opposite sides of ABCD. The triangle ADC' has the remaining opposite sides, while the angles ABC' and ADC' are supplemental. Again, these angles are equal to the angles between the diagonals. For  $\angle COB = \angle OBA + \angle CAB$ , but  $\angle CAB = \angle CC'B$ , which is alternate and therefore equal to  $\angle C'BD$ ; therefore, since  $\angle ABD + \angle C'BD = \angle ABC'$ , this equals the angle of diagonals. The area of the quadrilateral has therefore been replaced by two triangles, each proportional to the rectangle contained by a pair of opposite sides.

But the area of the whole quadrilateral is *similarly* proportional to the area of a triangle formed by the diagonals placed at their proper angle. Therefore the rectangle of the diagonals equals sum of rectangles of opposite sides. This follows from the fact that triangles having the same or supplemental vertical angles are to one another as the rectangles under their sides.

**14298.** (E. W. REES, B.A. Oxon.)—In a triangle ABC K is the symmedian point, and AS<sub>1</sub>, BS<sub>2</sub>, CS<sub>3</sub> the symmedian lines through A, B, and C respectively; prove that

$$\frac{AK}{AS_1} + \frac{BK}{BS_2} + \frac{CK}{CS_3} = 2.$$

*Solution by the PROPOSER and R. KNOWLES.*

From K and S<sub>1</sub> draw KD, S<sub>1</sub>E perpendicular to AB. Then  $\frac{AK}{AS_1} = \frac{KD}{S_1E}$ ,

and coordinates of K are given by

$$a/a = b/b = c/c;$$

therefore  $KD = \frac{2Ac}{a^2 + b^2 + c^2}$ ;

also  $S_1E = S_1B \sin B$  and  $\frac{S_1B}{S_1C} = \frac{c^2}{b^2}$ ;

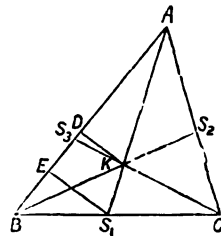
therefore  $\frac{S_1B + S_1C}{S_1B} = \frac{b^2 + c^2}{c^2}$ ;

therefore  $S_1B = \frac{c^2 a}{b^2 + c^2}$ ;

$$\therefore \frac{AK}{AS_1} = \frac{2\Delta c}{a^2 + b^2 + c^2} + \frac{c^2 a \sin B}{b^2 + c^2} = \frac{c^2 a \sin B}{a^2 + b^2 + c^2} \times \frac{b^2 + c^2}{c^2 a \sin B} = \frac{b^2 + c^2}{a^2 + b^2 + c^2}.$$

So  $\frac{BK}{BS_2} = \frac{c^2 + a^2}{a^2 + b^2 + c^2}$ , &c.;

therefore  $\frac{AK}{AS_1} + \frac{BK}{BS_2} + \frac{CK}{CS_3} = 2.$



[Mr. KELA DEVA RAU and Mr. G. D. WILSON observe that the point in question need not be the symmedian point K. It may be any point whatever in the plane of ABC.]

**5895.** (R. A. ROBERTS, M.A.)—Find the locus of the centre of gravity of an arc of the lemniscate of BERNOULLI which is of constant length.

*Solution by H. A. WEBB.*

The lemniscate being  $r^2 = a^2 \cos 2\theta$ ,  
 $ds = \sqrt{(dr^2 + r^2 d\theta^2)} = a \sqrt{(\sec 2\theta) d\theta}$ ,  
 and, if  $a\kappa$  be the constant length of the arc,

$$\int_a^\beta \sqrt{(\sec 2\theta) d\theta} = \kappa,$$

$\alpha$  and  $\beta$  being the vectorial angles of the extremity of the arc.

If  $(r, \theta)$  be the centre of gravity of the arc,

$$r \cos \theta = \frac{a}{\kappa} \int_a^\beta \cos \theta \cdot d\theta = \frac{a}{\kappa} (\sin \beta - \sin \alpha),$$

$$r \sin \theta = \frac{a}{\kappa} \int_a^\beta \sin \theta \cdot d\theta = \frac{a}{\kappa} (\cos \alpha - \cos \beta);$$

therefore  $2\theta = \alpha + \beta$ ,  $\kappa r/2a = -\sin \frac{1}{2}(\alpha - \beta)$  ..... (1).

Now the integral of  $\sqrt{(\sec 2\alpha) d\alpha} = \sqrt{(\sec 2\beta) d\beta}$  is  
 $C \cos(\alpha - \beta) + \cos(\alpha + \beta) = \pm \sqrt{(1 + C^2)}$ ,  
 where C is a constant, as may be easily verified.

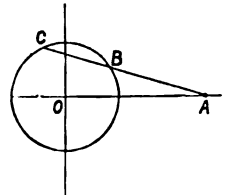
Hence from (1) we have for the locus

$$C(1 - \kappa^2 r^2 / 2a^2) + \cos 2\theta = \pm \sqrt{(1 + C^2)} \dots \dots \dots (2).$$

This curve is the first positive pedal with regard to the origin of the conic  $x^2/p + y^2/q = 1$ , where p and q are given by

$$p - q = 4a^2/C\kappa^2, \quad pq = 2a^2/\kappa^2(p + q) \dots \dots \dots (3).$$

**14230.** (Professor COCHEZ.)—On donne un cercle fixe O et un point fixe A, par lequel on mène une sécante ABC. Sur AB et AC comme diamètres on décrit des circonférences  $\Sigma$  et  $\Sigma'$ . Lieu des intersections des cordes communes à O et  $\Sigma$  et à O et  $\Sigma'$  quand la sécante tourne autour de A.

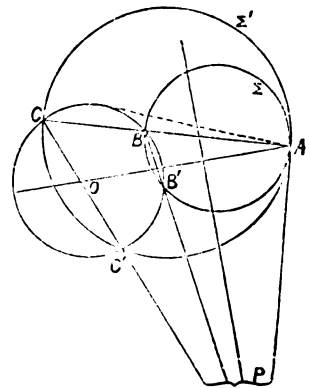


*Solution by Professor A. DROZ-FARNY.*

La circonférence  $\Sigma$  coupe O en B et B'; la circonférence  $\Sigma'$  coupe O en C et C'. On sait que les axes radicaux de trois circonférences prises deux à deux se coupent en un même point. Il en résulte que BB', CC' se croisent en un point P situé sur la tangente commune en A aux deux circonférences  $\Sigma$  et  $\Sigma'$ .

On a  $PA^2 = PB \cdot PB' = PC \cdot PC'$ .

Le lieu de P est donc l'axe radical du cercle O et du cercle point A, c'est-à-dire, la droite perpendiculaire à AO qui divise en parties égales la distance entre le point A et sa polaire par rapport au cercle O.



**14346.** (I. ARNOLD.)—A cone of marble, the axis of which is 20 feet and the base diameter 6 feet, stands on the edge of its base, the axis making an angle of 60° with the horizon. What power acting vertically at the top of the cone will sustain it? What will be the direction and intensity of the least force that will keep it in equilibrium, and what inclined position will the cone be in when the sustaining force is a minimum?

*Solution by the PROPOSER.*

Let ABC be the cone, AD its axis, G the centre of gravity, and P the power applied at its vertex A. Produce AD to meet the horizontal plane HK in E, and let w be the weight of the cone. Put  $CD = a = DB$ ,  $AD = 4b$ ,  $DG = b$ ,  $\angle BAD = \alpha$ ,  $BEA = \beta$ , and  $DAP = \theta$ .

Now, if Gw cut HK in I, we have

$$BE = a \cos \beta, \quad DE = a \cot \beta,$$

$$GE = b + a \cot \beta;$$

hence we get

$$EI = EG \cos \beta = b \cos \beta + a \cos \beta \cot \beta,$$

and therefore

$$BI = BE - EI = a \sin \beta - b \cos \beta.$$

Again,  $BA = 4b \sec \alpha$ , and  $\angle BAP = \theta - \alpha$ , and therefore the perpendicular from B upon direction of the force P is

$$4b \sec \alpha \sin(\theta - \alpha) = 4b(\sin \theta - \tan \alpha \cos \alpha),$$

and, taking moments about B, we have

$$w(a \sin \beta - b \cos \beta) = P \cdot 4b(\sin \theta - \tan \alpha \cos \theta).$$

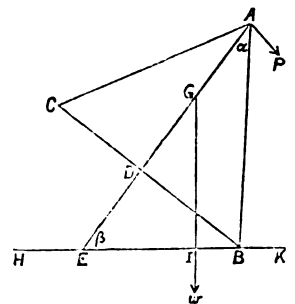
[The rest in Volume.]

**5963.** (Professor MOHEL.)—On donne une sphère S, un plan P et un point A; par le point A on mène une droite qui rencontre le plan P en un point B, puis, sur AB comme diamètre, on décrit une sphère S'; le plan radical des sphères S et S' rencontre la droite AB et un point M: (1) Trouver le lieu décrit par le point M quand la droite AB tourne autour du point A; (2) discuter le lieu précédent en supposant que le point A se déplace dans l'espace, le plan P et la sphère S restant fixes.

*Solution by MAURICE GEORGI.*

Soient  $x^2 + y^2 + z^2 - R^2 = 0$  l'équation de la sphère S et  $Z = h$  l'équation du plan P. Soit  $(x - x_0)/a = (y - y_0)/\beta = (z - z_0)/\gamma$  la droite AB. Les coordonnés de B sont donc

$$x_1 = x_0 - \{a(h - z_0)/\gamma\}, \quad y_1 = y_0 - \{\beta(h - z_0)/\gamma\}, \quad z_1 = h.$$



La sphère décrite sur cette droite comme diamètre sera (X)  
 $x^2 + y^2 + z^2 - [x_0 - \{a(h-z_0)/\gamma\}]x - [y_0 - \{b(h-z_0)/\gamma\}]y - (x+z_0)z$   
 $+ \frac{1}{2}([x_0 - \{a(h-z_0)/\gamma\}]^2 + [y_0 - \{b(h-z_0)/\gamma\}]^2 + (z_0+h)^2)$   
 $- (x_0 - \frac{1}{2}[x_0 - \{a(h-z_0)/\gamma\}])^2 - (y_0 - \frac{1}{2}[y_0 - \{b(h-z_0)/\gamma\}])^2$   
 $- \{z_0 - \frac{1}{2}(z_0+h)\}^2 = 0.$

[The rest in Volume.

**14339.** (Professor U. C. GHOSH.)—A particle of mass  $m$  is suspended by a fine inelastic string of length  $a$ , fastened to a fixed point A. It is attached to another string which passes through a small ring at O (whose perpendicular distance from the vertical through A is  $b$ ), and carries a mass  $m'$  at the other end. Prove that, if the particle  $m$  is let go when it is vertically below A, (1) its velocity, when the string to which it is attached has described an angle  $\theta$ , is

$$\left\{ \frac{2g \left[ m' \left\{ b - (b^2 + 4a^2 \sin^2 \frac{1}{2} \theta - 2ab \sin \theta)^{\frac{1}{2}} \right\} - ma(1 - \cos \theta) \right]}{m + \frac{m'(a \sin \theta - b \cos \theta)^2}{b^2 + 4a^2 \sin^2 \frac{1}{2} \theta - 2ab \sin \theta}} \right\}^{\frac{1}{2}};$$

(2) just at the instant when particle  $m$  crosses the line AO,  $m'$  has no velocity, and that of  $m$  is

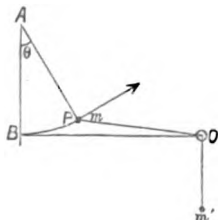
$$(2g)^{\frac{1}{2}} \left[ m'/m \left\{ b + a - (a^2 + b^2)^{\frac{1}{2}} \right\} - a \left\{ 1 - a/(a^2 + b^2)^{\frac{1}{2}} \right\} \right];$$

(3) if  $v$  and  $v'$  be the velocities of particles  $m$  and  $m'$  at any instant,

$$v' = \frac{a \sin \theta - b \cos \theta}{(b^2 + 4a^2 \sin^2 \frac{1}{2} \theta - 2ab \sin \theta)^{\frac{1}{2}}} v.$$

Solution by G. BIRTWISTLE, B.A., B.Sc.; and H. W. CURJEL, M.A.

Let B be the initial position of the particle  $m$  (P). [The result given assumes that the ring O is in the same horizontal as B; though this is omitted from the Question.]



The equation of vis viva is

$$mv^2 + m'v'^2 = -2mga(1 - \cos \theta) + 2m'g(b - OP) \dots (1),$$

$$\text{and } OP^2 = (b - a \sin \theta)^2 + a^2(1 - \cos \theta)^2 = b^2 + 4a^2 \sin^2 \frac{1}{2} \theta - 2ab \sin \theta.$$

The velocity of P resolved along OP =  $v \sin APO$ , and this must =  $v'$ , and  $OP \sin APO = b \cos \theta - a \sin \theta$ .

$$\text{Therefore } v' = \frac{v \cdot b \cos \theta - a \sin \theta}{(b^2 + 4a^2 \sin^2 \frac{1}{2} \theta - 2ab \sin \theta)^{\frac{1}{2}}} \dots (2).$$

[The rest in Volume.]

**14165.** (Professor CROFTON, F.R.S.)—If  $8n+1$  is prime, prove that  $n^n - 2^n$  is divisible by  $8n+1$  if  $n$  is even. Also  $n^n + 2^n$  is divisible by  $8n+1$  if  $n$  is odd.

Solution by H. W. CURJEL, M.A.

$$(8n)^n \equiv (-1)^n \equiv (-1)^n 2^{4n} \pmod{8n+1},$$

since 2 is a quadratic residue

$$\equiv (-16)^n; \text{ therefore } n^n \equiv (-2)^n \pmod{8n+1},$$

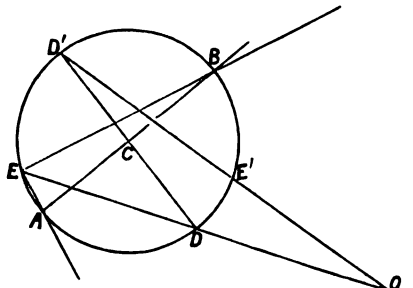
i.e.,  $n^n - 2^n$  is divisible by  $8n+1$  if  $n$  is even, and  $n^n + 2^n$  is divisible by  $8n+1$  if  $n$  is odd.

**14348.** (JAMES S. LAWSON.)—Show how to construct a square which shall have two adjacent sides passing through two given points, and the intersection of the diagonals at a third given point. Show that there are generally two solutions.

Solution by J. H. TAYLOR, M.A.; and ROBERT BRYANT, D.Sc.

[This is a particular case of the description of a square about a given quadrilateral.—*Pitt Press Euclid*, Miscellaneous Examples on Book IV., p. 243, No. 74.]

Let A, B be the given points on adjacent sides, and O the centre of the required square. Join AB, and upon this, as diameter, describe a circle ADB; draw diameter D'C'D at right angles to AB. Join OD and let it meet the circumference again in E. Then  $\angle BEA$  is a right angle, and  $\angle BED$ , standing on a quadrant, is half a right angle; therefore EDO is semi-diameter of required square. Produce AO, BO to A', B' so that AA', BB' are bisected in O. Produce EA, EB to meet parallels to EB, EA, respectively, through B', A'. This figure is a square required.



If OD' be joined, cutting circle in E',  $\angle AE'B$  is a right angle, and AE', BE' are the produced sides of another square, of which E'O is a semi-diagonal.

**14351.** (Rev. T. MITCHELSON, B.A.)—Show that the sums of the series  $\sum \sin n\beta$  and  $\sum \cos n\beta$ , when carried to  $\frac{1}{2}(n-2)$  terms, are equal,  $n$  being even and  $n\beta = \pi$ .

Solution by Rev. T. ROACH, M.A.; and the PROPOSER.

$$\sum \sin n\beta / \sum \cos n\beta \text{ to } \frac{1}{2}(n-2) \text{ terms} = \sin \frac{1}{2}(n\beta) / \cos \frac{1}{2}(n\beta) = 1 \text{ if } n\beta = \pi.$$

**14349.** (SALUTATION.)—A rectangular card lies concealed between the pages of a book, but is so placed that three of its corners are on the inner, outer, and lower edges of the book respectively. The inner corner being used as a fixed centre, the outer corner is wheeled round until it again coincides with the outer edge of the book, when the fourth corner is found on the upper edge. The pages being  $a$  by  $b$  inches, and the distance between the two positions of the outer corner of the card being  $2c$  inches, find the dimensions of the card, and state the necessary limits of the values given.

Solution by H. W. CURJEL, M.A.

Let  $b$  be the length of the edge in which a corner of the card is fixed. Let  $x$  and  $y$  be the length and breadth of the card. Cut the page along the two positions of the diagonal of the card through this point, removing an isosceles triangle of base  $2c$  and height  $a$ ; turn one of the remaining pieces over and place the two diagonal cuts together, and we get a kite-shaped figure formed by two right-angled triangles, with a common hypotenuse and sides  $x$  and  $y$  inscribed in a rectangle of sides  $b-c$ ,  $a$ . And it is clear that

$$x^2 + y^2 = a^2 + c^2 \text{ and } \frac{2xy}{\sqrt{(a^2 + c^2)}} = (b-c) \frac{\sqrt{(a^2 + c^2)}}{a} \text{ or } 2xy = \frac{b-c}{a} (a^2 + c^2).$$

Hence  $x$  and  $y$  can be found if  $a$  is not less than  $b-c$ , their values being

$$\text{given by } \frac{1}{2} \sqrt{\left( \frac{a^2 + c^2}{a} \left\{ (a+b-c)^2 \pm (a-b+c)^2 \right\} \right)}.$$

QUESTIONS FOR SOLUTION.

**14420.** (Professor G. B. MATHEWS, F.R.S.)—Let  $p$  be any odd prime:

$$X = \left(\frac{1}{2}p\right)^4 + \left(\frac{3}{2}p\right)^4 + \left(\frac{5}{2}p\right)^4 + \dots + \left\{ \frac{1}{2}(2p-5)p \right\}^4 + \frac{1}{2}(p-1),$$

$$Y = (p)^4 + (2p)^4 + (3p)^4 + \dots + \{(p-2)p\}^4,$$

where only the integral parts of the surds are to be taken; thus, if  $p=3$ ,

$$X = \left(\frac{3}{2}\right)^4 + 1 = 2, \quad Y = (3)^4 = 1,$$

and so on. Prove that, when  $p$  is of the form  $4n+1$ , the integers X, Y are equal; but, if  $p$  is of the form  $4n+3$ , X is greater than Y.

Examples:—  $p=3, 5, 7, 11, 13, 17, 19,$

$$X = 2, 8, 20, 62, 88, 160, 206,$$

$$Y = 1, 8, 19, 59, 88, 160, 203.$$

**14421.** (Professor IGNACIO BEYENS, M.A., Lt.-Col. du Génie.)—Soient O, A, B trois points sur une droite donnée; par le point O on mène une droite quelconque OX et l'on détermine sur cette dernière le point M tel que l'angle AMB soit maximum; et, si l'on fait la même construction pour tous les droites qui passent par O, déterminer le lieu géométrique des points M.

**14422.** (Professor E. LEMOINE.)—Soient deux triangles ABC, A'B'C' dont j'appelle les côtés  $a, b, c; a', b', c'$ . Je suppose ABC fixe. Ils sont tels que  $a$  et  $a'$  sont perpendiculaires ainsi, que  $b$  et  $c'$  et que  $c$  et  $b'$ . Cela posé, si ABC et A'B'C' sont homologues, le lieu du centre O d'homologie est une conique D circonscrite à ABC; si ABC et B'C'A' sont homologues, le lieu est une conique D' circonscrite à ABC; si ABC et C'A'B', le lieu est une conique D'' circonscrite à ABC. Les trois coniques D, D', D'' ont pour point commun le point de TARRY du triangle ABC. Déterminer le triangle A'B'C' qui est en même temps des centres d'homologie O, O', O'' avec ABC, c'est à dire que ABC et A'B'C' soient trihomologues. Remarquons que par leur construction ABC et A'B'C' sont toujours triorthologiques.

**14423.** (Professor SANJANA.)—In the triangle ABC the circle DEF is inscribed, and Da, Eb, Fc are the perpendiculars of the triangle DEF; A', B', C' are the mid-points of BC, CA, AB. Prove that the triangles ABC, A'B'C',  $a\beta\gamma$  have the same axis of perspective, whose equation is

$$\sum aa(s-a)(b-c) = 0.$$

This line contains the points

$$1/a : 1/b : 1/c \text{ [the centre of perspective of } ABC, A'B'C'],$$

$$r_1 : r_2 : r_3 \text{ [the centre of perspective of } ABC, a\beta\gamma],$$

$$bc(b+c)r_1 : ca(c+a)r_2 : ab(a+b)r_3$$

[the centre of perspective of A'B'C',  $a\beta\gamma$ ],

$$\text{and } 1/a(s-a) : 1/b(s-b) : 1/c(s-c) \text{ [the Gergonne point of } ABC].$$



14424. (Professor NEUBERG.)—Trouver le lieu des centres des hyperboles équilatères qui ont une corde normale commune MN.

14425. (Professor U. C. GHOSH.)—Prove that

$$\int_0^{\pi} x \phi(\sin x) dx = \frac{1}{2} \pi \int_0^{\pi} \phi(\sin x) dx,$$

and hence evaluate  $\int_0^{\pi} \frac{x \sin x (1 - \sin^n x)}{1 - \sin x} dx.$

14426. (Professor COCHEZ.)—Courbe  $\tan \omega = \rho^2/(1 - \rho^2).$

14427. (Professor H. LANGHORNE ORCHARD, M.A., B.Sc.)—On the diameter of a circle of unit radius is described the ellipse  $3x^2 + 4y^2 = 12$ , of which S, H are foci; and on SH as minor axis is described another ellipse, of which the area is the same as that of the first ellipse, and of which the foci are S' and H'; then a circle is described on S'H' as diameter. Find the area common to this circle and to the two ellipses.

14428. (Professor N. BHATTACHARYA.)—If  $r$  represent the length of a quadrant of the cardioid  $r = a(1 + \cos \theta)$ , and  $s'$  the quadrant of its first positive pedal, show that  $ss' = 6\pi a^2.$

14429. (D. BIDDLE.)—Let  $N = 2\Delta n + 1$ , where  $\Delta$  is a small prime;  $S_1$  the integral portion of  $\sqrt{Nx}$ , where  $x$  is composite;  $d$  some single digit, even or odd with  $n$ . What are the limits of  $x$  satisfying the formula  $x = (2S_1 - n + d)/(2\Delta)$ ? [In the case of  $N = 329554457$ , where  $\Delta = 11$ , the formula is satisfied by 680820, and 680289, for  $x$ ; in the former  $d = 2$ , in the latter  $d = 4$ .]

14430. (J. A. THIRD, D.Sc.)—A conic, whose centre is O, touches the sides BC, CA, AB of a triangle at X, Y, Z, and O' is the point of concurrence of AX, BY, CZ. Show that O bears to ABC the same relation that the isotomic conjugate of O' bears to the anticomplementary triangle of ABC (the triangle formed by parallels through A, B, C to the opposite sides).

[The Proposer desires the latter part of Quest. 14371 to be altered to the following:—(2) that if A'B'C' be a variable triangle in perspective with ABC with respect to P as centre of perspective, and such that C'A' passes through D, and A'B' through E, then A'B'C' and ABC are triply in perspective, DEF being an axis of perspective; (3) that one of the variable centres of perspective lies on K'; and (4) that the corresponding axis of perspective touches K. Consider the case when K' is the STEINER ellipse of ABC.]

14431. (Rev. W. ALLEN WHITWORTH, M.A.)—Show that the alteration which takes place in the year 1900, in the places of the golden numbers in the Gregorian Kalendar, reduces the frequency with which the Collect, &c., for the Sixth Sunday after the Epiphany is required in the ratio 203 : 188; the expectation of its being required having been hitherto  $\frac{1}{3}$  in February and  $\frac{1}{3}$  in November, but henceforward  $\frac{1}{3}$  in February and  $\frac{1}{3}$  in November; these expectations being calculated from theory and not by counting actual occurrences. [Following is the rubric after the Gospel for the Twenty-Fifth Sunday after Trinity, and upon which the question is based:—“If there be any more Sundays before Advent Sunday, the Service of some of those Sundays that were omitted after the Epiphany shall be taken in to supply so many as are here wanting. And if there be fewer, the overplus may be omitted: provided that this last Collect, Epistle, and Gospel shall always be used upon the Sunday next before Advent.”]

14432. (R. TUCKER, M.A.)—FSQ is a focal chord of a parabola, and PQR is the maximum triangle in the segment cut off by PQ. Prove that the equation to the circle PQR is

$$8(x^2 + y^2) - 2(7p^2 + 20)ax + p(3p^2 - 4)ay + 6p^2a^2 = 0,$$

where  $p = m - 1/n$  (P is  $am^2, 2am$ ).

The locus of the centre is a cubic, and, if O is the fourth point of section, the locus of the mid-point of OR is a parabola and the envelope of the chord OR is another parabola.

14433. (R. F. DAVIS, M.A.)—Using ordinary trilinear coordinates, prove that the straight lines

$$-\beta/\gamma = e^{iA}, \quad -\gamma/\alpha = e^{iB}, \quad -\alpha/\beta = e^{iC}; \quad \text{where } i^2 = -1,$$

countersect in a point simultaneously lying upon the straight line at infinity, and upon the circle circumscribing the triangle of reference ABC, which must consequently be one of the focioids (imaginary circular points at infinity). The trilinear coordinates of the other focoid will be found by changing the sign of  $i$ . Find the conditions that the general equation of the second degree should represent a circle in the form of six non-symmetrical relations between the coefficients.

14434. (EDWARD V. HUNTINGTON, A.M.)—An astroid, two nephroids, and four cardioids are drawn on the same fixed circle of radius  $a$ , their cusps lying at the quadrantal points of the circle. Prove: a line of length  $2a$  sliding between either pair of opposite cardioids envelopes that nephroid which has the same cusps; and a line of length  $3a$  sliding between the two nephroids envelopes the astroid. (Nephroid = two-cusped epicycloid, astroid = four-cusped hypocycloid.)

14435. (R. C. ARCHIBALD, M.A.)—Find the equation of the cardioid in trilinear coordinates, and show that its equation in Boothian coordinates, cusp origin, is  $27a^2(\xi^2 + \eta^2) = 4(1 + a\xi)^2.$

14436. (Rev. T. ROACH, M.A. Suggested by 14376.)—If  $I, I_1, I_2, I_3,$

be in- and ex-centres of a triangle ABC, and  $o_1, o_2, o_3$  circumcentres of  $I_2I_3, I_1I_3, I_1I_2$  respectively, prove that  $o_3I_1o_2I_3o_1I_2$  is an equilateral hexagon, and find the value of its angles.

14437. (R. P. PARANJPEY, B.A.)—Show that there are six conics passing through three given points and having contact of the second order with a given conic; and, further, that these six conics all touch a quartic having the three points as nodes.

14438. (G. H. HARDY, B.A.)—Evaluate

$$\int_0^{\pi} \log(\cos \alpha - \cos x)^2 dx, \quad P \int_0^{\pi} \frac{x \sin x}{\cos \alpha - \cos x} dx,$$

and  $P \int_0^{\pi} \frac{(\sin \alpha - \sin x)^n}{(\cos \alpha - \cos x)^{n+1}} dx, \quad n = 0, 1, 2, \dots;$

the symbol P denoting the principal value of the integral in question.

14439. (H. MACCOLL, B.A.)—There are five possible hypotheses,  $H_1, H_2,$  &c., of which one must be, and only one can be, true; the chance of each being one-fifth. Each of the three  $H_1, H_2, H_3$  implies that the chance that a statement A is true is  $\frac{1}{2}$ ; whereas  $H_4$  and  $H_5$  lead each to the conclusion that this chance is  $\frac{1}{6}$ . From these data prove the paradoxical (but not absurd or impossible) conclusion that it is probable but not true that A is probable; and show that the chances that A is probable and true, probable but not true, true but not probable, neither probable nor true, are respectively  $\cdot 312, \cdot 288, \cdot 024, \cdot 376.$

14440. (F. H. PEACHELL, B.A.)—It is well known that the velocity of sound rises with the temperature. In metal organ-pipes, this is counter-balanced to a certain extent by the expansion of the metal. Find the coefficient of expansion of a metal such that the pitch of an organ-pipe built of it should remain the same for ordinary ranges of temperature.

14441. (Rev. T. MITCHESON, B.A.)—A regular polygon of an even number of sides is inscribed in a circle, and lines are drawn from one of the angular points to each of the others. Show that the sum of these lines =  $(a \cot \pi/2n)/(\sin \pi/n)$  ( $a$  being a side of the polygon), and if the lines be  $h_1, h_2, h_3,$  &c., then

$$\frac{1}{2}(h_{n-1} + h_{n-2} + h_{n-3} + \dots) - \{h_{1(n-2)} + h_{1(n-4)} + h_{1(n-6)} + \dots\} = R.$$

14442. (J. J. BARNVILLE, B.A.)—Having  $u_{n-1} + u_{n+1} = 10u_n$ , prove that

$$\begin{aligned} \frac{1}{1+1} + \frac{1}{9+1} + \frac{1}{89+1} + \frac{1}{881+1} + \dots &= \frac{\sqrt{6}}{4}, \\ \frac{1}{1+1} - \frac{1}{11-1} + \frac{1}{109+1} - \frac{1}{1079-1} + \dots &= \frac{1}{\sqrt{6}}, \\ \frac{1}{1+5} - \frac{1}{5+5} + \frac{1}{49+5} - \frac{1}{485+5} + \dots &= \frac{1}{12}, \\ \frac{1}{3+5} + \frac{1}{19+5} + \frac{1}{187+5} + \frac{1}{1851+5} + \dots &= \frac{\sqrt{6}+1}{20}, \\ \frac{1}{11+5} + \frac{1}{107+5} + \frac{1}{1059+5} + \dots &= \frac{\sqrt{6}-1}{20}, \\ \frac{1}{1+\sqrt{3}} + \frac{1}{5+\sqrt{3}} + \frac{1}{49+\sqrt{3}} + \dots &= \frac{\sqrt{3}+\sqrt{2}-1}{4}. \end{aligned}$$

14443. (R. KNOWLES.)—F, S are the foci of a rectangular hyperbola; from a point T on the circle whose diameter is FS, tangents TP, TQ are drawn to meet the curve in PQ; the circle TPQ cuts the curve again in CD; prove that (1) the diagonals of the quadrilateral PQCD intersect in the axis; (2) two of its sides are parallel.

14444. (P. MILNES.)—A conic cuts the sides of triangle ABC in D, D', E, E', F, F' respectively; AD, AD' intersect the conic again in d, d'; BE, BE' in e, e'; CF, CF' in f, f'. Show that the intersections of dd', ee', ff' with the polars of A, B, C respectively are collinear.

14445. (Rev. J. CULLEN.)—Prove that

$$q^{2^q-1} - 1 \equiv 0 \pmod{q^2 + 1},$$

if  $q^2 + 1$  be a prime.

14446. (D. EDWARDS, B.A.)—The following reasoning and incorrect result are given in LAURENT'S *Traité d'Analyse*, Tome I., p. 212 (1885):—

$$\text{“On a } dz = p dx + q dy, \quad d^2z = p d^2x + q d^2y + r dx^2 + 2s dx dy + t dy^2,$$

où, si l'on fait  $d^2z = 0, \quad d^2x = 0, \quad dy = \frac{dz - p}{q} dx,$

$$0 = q d^2y + r dx^2 + 2s dx \left( \frac{dz - p}{q} dx \right) + t \left( \frac{dz - p}{q} dx \right)^2.$$

Résolvant par rapport à  $d^2y$ , on en conclut

$$\frac{d^2y}{dx dz} = -\frac{1}{q} \left( \frac{2s}{q} - 2 \frac{p}{q^2} t \right).”$$

Point out the fallacy, and correct, using the notation of differentials.

14447. (H. W. CURJEL, M.A.)—If  $f(x)$  is finite and continuous for all positive finite values of  $x$  except a finite number of values, then

$$\int_0^{\infty} \sin \{f(x)\} dx \quad \text{and} \quad \int_0^{\infty} \cos \{f(x)\} dx$$

are convergent or divergent according as limit  $\lim_{x \rightarrow \infty} \frac{f(x)}{x}$  is infinite or finite ; except in the case where limit  $\lim_{x \rightarrow \infty} f(x) = 0$  or  $n\pi$ , when  $\int_0^{\infty} \sin \{fx\} dx$  may be convergent, and the case where limit  $\lim_{x \rightarrow \infty} f(x) = \frac{1}{2}\pi$  or  $(2n+1)\frac{1}{2}\pi$ , when  $\int_0^{\infty} \cos \{fx\} dx$  may be convergent.

**14448.** (V. SRINIVASA RANGACHARI, B.A.)—OA, OB are two straight lines fixed in direction, and P any point within or without them. It is required to draw through P a straight line so that the part of it intercepted between the given straight lines may be of given length.

**14449.** (PAUL GIBSON.)—Given that in reducing  $1/N$  ( $N$  prime) in scale 17 to a pure circulator five consecutive remainders formed are 1e, 4, 9, 21, 5 (in scale 17) to find  $N$ .

#### OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6348.** (The late W. S. B. WOOLHOUSE, F.R.A.S.)—If five points be taken at random on the surface of a regular pentagon, prove that the probability that they will be the apices of a convex pentagon is  $\frac{7}{9} - 10\sqrt{5}$ .

**6349.** (ELIZABETH BLACKWOOD.)—Given that  $x, y, z$  are each between the limits 1 and  $-1$ , and that  $3x + 2y + z, 2x + y + 3z, x + 3y + 2z$  are each between the limits 3 and  $-3$ ; required all the limits of  $x, y, z$ .

**6350.** (W. J. C. MILLER, B.A.)—If P, Q be two random points inside a circle whose centre is O, find the average of (1) the perimeter, (2) the area, (3) the sum of the squares on the sides, of the triangle OPQ; also the respective probabilities that, in one such random triangle, the said (4) perimeter, (5) area, (6) sum of squares, will be less than given magnitudes.

**6351.** (The late Dr. HOPKINSON, F.R.S.)—Parallel rays are incident on a refracting sphere, and emerge after one internal reflexion; show (1) that, provided the sphere be more refractive than the surrounding medium, the caustic will have two sheets with a common asymptotic cone, and that one sheet terminates in a cusp, the other abruptly in a circle; and (2) trace the caustic when the sphere is less refractive than the surrounding medium.

**6361.** (Professor W. H. H. HUDSON, M.A.)—A paraboloid of revolution floats with the lowest point of its base in the surface of a fluid, and its axis inclined at an angle  $\theta$  to the horizon; find its height and specific gravity.

**6364.** (W. E. WRIGHT, B.A.)—If A, B, C be the angles of a plane triangle, find the minimum value of  $\cot A + \cot B + \cot C$ .

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to

D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXI. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

#### THE LONDON MATHEMATICAL SOCIETY.

Thursday, December 14, 1899.—Professor Elliott, Vice-President, in the Chair, and subsequently Dr. Macaulay and Dr. J. Larmor. Eight members present.

Professor Edalji, Ahmedabad, Professor W. M. Strong, Yale College, and Mr. R. W. H. T. Hudson, of St. John's College, Cambridge, were elected members.

Mr. Tucker announced the recent decease of Major-General F. Close, R.A., elected April 13th, 1871.

The Auditor's report was read, and on the motion of Dr. Macaulay, seconded by Mr. W. F. Sheppard, the Treasurer's report was adopted, and votes of thanks were passed to the Auditor (Mr. E. G. Gallop) and to the Treasurer.

The following papers were communicated:—

(1) "A Method of extending the Accuracy of certain Mathematical Tables," (2) "Central Difference Formulæ," Mr. W. F. Sheppard.

"Circular Cubics," Mr. A. B. Bassot.

"The Theorem of Residuation, being a General Treatment of the Intersections of Plane Curves at Multiple Points," Dr. F. S. Macaulay.

"The Genesis of the Double Gamma Functions," Mr. E. W. Barnes.

"On the Expression of Spherical Harmonics as Fractional Differential Coefficients," Mr. J. Rose Innes.

"Sums of Greatest Integers," Mr. G. B. Mathews

## WORKS

BY THE

## Rev. G. HUGH JONES.

### Higher Scripture Teaching: St. Luke.

Price 1s. 6d.

### Lesson Papers in Religious Knowledge: St. Matthew.

Price 6d.

"Very scholarly work may be brought within easy grasp of those average pupils who seem very imperatively to need a guiding hand in the preparation of their divinity lessons." *School World.*

"Will be found a useful book by those preparing for examinations." *Christian.*

"Should prove eminently serviceable to candidates for examinations in religious knowledge." *Schoolmaster.*

"Mr. Hugh Jones has done well in making his references always to the 'Cambridge Bible for Schools.'" *School Guardian.*

"To point out the exact information which University Local examiners consider candidates should possess for 'Pass' or 'Distinction.'" *School Board Chronicle.*

"The idea of the book seems to be thoroughly good and useful." *Dean Wickham, D.D.*

"Your work favourably impresses me." *Bishop of Calcutta.*

"Likely to stimulate to a thoughtful reading of the Gospel." *Rev. A. R. Vardy, M.A.*

"Have the great merit of limiting and fixing the attention of the student." *J. M. D. Meiklejohn, M.A.*

"I have found your book of real and valuable help with my class." *Headmaster of Gresham Grammar School.*

"I have found your 'St. Luke' so helpful in teaching that I should be glad to think we might hope for another Gospel on the same lines." *A Lady Principal (Dorset).*

"I was much pleased with your 'St. Luke,' which I used in College last term." *A. C. Dixon, B.A., B.Sc., Lond.*

"I have used your book of notes, and found it very helpful in teaching." *Headmistress (Liverpool).*

LONDON: SIMPKIN, MARSHALL, & CO.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises. By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c. Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin. Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID." Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition. Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

### ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS. Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

### A TREATISE ON

### ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

### PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples.

Crown 8vo, Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

### SPHERICAL TRIGONOMETRY,

AND ITS APPLICATION TO GEODESY AND ASTRONOMY.

With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.

LONDON: LONGMANS & CO.

# Blackie & Son's Publications.

## Blackie's New Illustrated Latin Series.

Edited by Prof. R. Y. TYRRELL, Litt.D., D.C.L.,  
Examiner to the Universities of London and Glasgow, &c.

Each Volume is furnished with interesting Introduction, Explanatory Notes, and full Vocabularies, and is illustrated with numerous Maps, Plans, and authentic Drawings from Coins, Gems, Statues, and other objects of ancient art. Crown 8vo, cloth. The following Volumes are now ready:—

- CICERO.—THE FIRST CATILINE ORATION.** Edited by C. HAINES KEENE, M.A. 1s. 6d.  
**CICERO.—THE CATILINE ORATIONS (Complete).** Edited by C. HAINES KEENE, M.A. 2s. 6d.  
**HORACE.—THE ODES.** Books I.-IV. Edited by STEPHEN GWYNN, B.A. With or without Vocabulary. 1s. 6d. each.  
**TACITUS.—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS, M.A. With or without Vocabulary. 1s. 6d.  
**LIVY.** Book V. Edited by W. CECIL LAMING, M.A. With or without Vocabulary. 2s. 6d.  
**EUTROPIUS.** Books I. and II. Edited by W. CECIL LAMING, M.A. This should prove the most attractive edition of this portion of Eutropius yet published. The text is printed in large type, and lavishly illustrated. The notes also are printed in a larger type than is usual, and are very clearly and simply expressed.

\* \* Other Volumes in preparation.

## French.

### NEW FRENCH BOOKS.

- MY FIRST FRENCH BOOK.** By MARGUERITE NINET. Illustrated. Cloth, 1s.  
 A little book of easy anecdotes, stories, and sketches, in large type, for very young children, with pictures to each lesson, and complete vocabularies.  
**LES DEUX BOSSUS.** Edited by EMILE B. LE FRANÇOIS. With a Frontispiece by ALICE B. WOODWARD. Small crown 8vo, cloth, 1s.  
**SONGS OF BERANGER.** Edited, with Introduction, Notes, &c. by GEORGE H. ELY, B.A. Small crown 8vo, cloth, 1s.  
**GEORGE SAND'S LES AILES DE COURAGE.** Adapted and Edited, with Notes and Vocabulary, by B. PROPER. 1s. 6d.  
**PRIMER OF HISTORICAL FRENCH GRAMMAR.** With a Chapter on Metre. By ERNEST WEEKLEY, M.A. (Lond.), Professor of French at University College, Nottingham. 2s. 6d.  
*Notes and Queries* says:—"An eminently satisfactory historical French grammar. It is a thoroughly workmanlike production, trustworthy in all respects."

## New English Classics.

- MACAULAY.—ESSAY ON HORACE WALPOLE.** Edited by JOHN DOWNIE, M.A.  
**POPE.—RAPE OF THE LOCK.** Edited by FREDERICK RYLAND, M.A. Crown 8vo, cloth, 1s. 6d.  
**POPE.—ESSAY ON CRITICISM.** Edited by FREDERICK RYLAND, M.A. Crown 8vo, cloth.  
**TENNYSON.—SELECT POEMS.** Edited, for Schools, by AGNES WILSON. In Three Books, paper, 2d. each; cloth, 3d. each.  
 1: **MORTE D'ARTHUR. THE LADY OF SHALOTT.**  
 2: **MARIANA. DORA. THE MAY QUEEN.**  
 3: **THE DAY DREAM. THE DEATH OF THE OLD YEAR. THE CHARGE OF THE LIGHT BRIGADE.**  
**BROWNING.—SELECT POEMS.** Edited, with Introduction, Notes, &c., by E. H. BLAKENEY, M.A. Paper cover, 2d.; cloth, 3d.  
**SCOTT.—MARMION.** Canto III. Edited, with Introduction, Notes, &c., by W. KEITH LEASK, M.A. Paper, 3d.; cloth, 4d. Another Canto of Mr. Keith Leask's excellent edition.

## Science.

- FIRST STEPS IN EARTH KNOWLEDGE.** Being an Introduction to *Physiography*. By J. ANSTED HARRISON. Edited by W. JEROME HARRISON, F.G.S. 2s. 6d.  
**AN INTRODUCTION TO ANALYTICAL CHEMISTRY.** By Prof. G. G. HENDERSON, D.Sc., M.A., F.I.C., and M. A. PARKER, B.Sc. 5s.

## Science and Art.

COMPLETE LIST OF BOOKS ON APPLICATION.

## FOR EXAMINATIONS, 1900, 1901.

1. **Cambridge Locals, 1900.**
2. **Cambridge Higher Locals, 1901.**
3. **Oxford and Cambridge Schools, 1900.**
4. **College of Preceptors, 1900.**

## English.

- SHAKESPEARE.—AS YOU LIKE IT.** Edited by J. C. SMITH, M.A. 1s. 6d. [*Warwick Shakespeare.*]  
**SHAKESPEARE.—AS YOU LIKE IT.** Edited by LIONEL W. LYDE, M.A. 8d. [*Junior School Shakespeare.*]  
**SHAKESPEARE.—RICHARD THE SECOND.** Edited by C. H. HERFORD, Litt.D. 1s. 6d. [*Warwick Shakespeare.*]  
**SHAKESPEARE.—MIDSUMMER NIGHT'S DREAM, A.** Edited by EDMUND K. CHAMBERS, B.A. 1s. 6d. [*Warwick Shakespeare.*]  
**SHAKESPEARE.—CORIOLANUS.** Edited by EDMUND K. CHAMBERS, B.A. 1s. 6d. [*Warwick Shakespeare.*]  
**MILTON.—PARADISE LOST.** Edited by F. GORSE, M.A. Feap. 8vo, cloth. Books I. II. and III., 1s. each.  
**SCOTT.—THE LAY OF THE LAST MINSTREL.** Edited, with Introduction, Notes, &c. Cantos I.-VI. Feap. 8vo, cloth, 1s.  
**SCOTT.—MARMION.** Cantos I. and VI. Edited, with Introduction, Notes, &c. Feap. 8vo. Each, paper, 3d.; cloth, 4d.  
**MACAULAY.—THE PROPHECY OF CAPYS.** Edited, with Introduction, Notes, &c. Feap. 8vo, paper, 2d.  
**MACAULAY.—ARMADA, IVRY, &c.** Edited, with Introduction, Notes, &c. Feap. 8vo, paper, 2d.; cloth, 3d.  
**HIGHER ENGLISH.** An Outline of English Language and Literature. By DAVID CAMPBELL. 1s. 6d.  
 "The book is as full of information as the proverbial egg. . . It is an admirable little work."—*Journal of Education.*  
**SYNOPTICAL GEOGRAPHY OF THE WORLD.** A Concise Handbook. With a complete series of Maps. 1s.  
 "It is a mine of useful and well arranged information."—*Glasgow Herald.*  
**LANDMARKS IN ENGLISH INDUSTRIAL HISTORY.** By G. TOWNSEND WARNER, M.A. Crown 8vo, cloth, 5s.  
**ENGLISH ETYMOLOGY.** A Select Glossary, serving as an Introduction to the History of the English Language. By F. KLUGE and F. LUTZ. Demy 8vo, cloth, 5s. net.  
 Prof. C. H. HERFORD, Litt.D., says:—"Kluge and Lutz . . . ought to have a good sale in England, being unquestionably the most scientific book of English philology and derivation accessible to the English reader; it at the same time covers the whole field of the alphabet."  
**A NEW SEQUEL TO EUCLID.** By Prof. W. J. DILWORTH, M.A. 2s. 6d. Part I., Exercises on the first Three Books, 1s. Part II., More Difficult Exercises on the first Four Books, and Exercises on Book Six, 2s.

## Latin and Greek.

- CAESAR.—THE GALLIC WAR.** Books IV., V., and VI. Edited, with Introduction, Notes, and Appendices, &c., by Prof. JOHN BROWN. With numerous Illustrations, Plans, and Maps. 1s. 6d. each.  
**HORACE.—THE ODES.** Books I.-IV. Edited by STEPHEN GWYNN, B.A. Illustrated. 1s. 6d. each. [*Book III. nearly ready.*]  
**PHAEDRUS.—SELECTIONS from Books I. and II.** Edited, with Introduction, Notes, &c., by S. E. WINBOLT, B.A. 1s.  
**EUTROPIUS.** Books I. and II. Edited, with Introduction, Notes, Exercises, &c., by W. CECIL LAMING, M.A. Illustrated. [*In January.*]  
**EURIPIDES.—THE MEDEA.** Edited by P. HALCOMBE, M.A., King's College, Cambridge. *The Lyric parts omitted, but an English translation supplied.* Illustrated. 1s. 6d.  
**LATIN UNSEENS.** Graduated Specimens of Prose and Verse selected mainly from Examination Papers. Junior Section, 3d.; Intermediate Section, 4d.; Senior Section, 6d.  
**GREEK UNSEENS.** Junior Section, 4d.; Senior Section, 8d.  
**LATIN GRAMMAR PAPERS.** Selected from Oxford and Cambridge Local and London Matriculation Examination Papers. By A. C. LIDDELL, M.A. 1s.

## French and German.

- A FIRST FRENCH COURSE.** By J. J. BEUZEMAKER, B.A. 1s. 6d.  
**A FIRST GERMAN COURSE.** By A. R. LECHNER. 1s. 6d.  
**A COMPREHENSIVE FRENCH MANUAL.** For Students Reading for Examinations. By OTTO C. NAF, M.A. Crown 8vo, cloth, 3s. 6d.  
**A COMPLETE COURSE OF FRENCH COMPOSITION AND IDIOMS.** By HECTOR REY, B.ES L., B.ES SC. 3s. 6d.  
**FRENCH UNSEENS.** Junior Section, 3d.; Middle Section, 1s.; Senior Section, 1s. 6d.  
**GERMAN UNSEENS.** Junior Section, Selected, 4d.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

# **PUBLIC SCHOOLS AND COLLEGES**

CAN BE SUPPLIED PROMPTLY BY THE

**EDUCATIONAL SUPPLY ASSOCIATION, LIMITED, WITH**

**SCHOOL FURNITURE** of exceptional quality, Manufactured at their Steam Factory, Stevenage.

Nearly 200 men are constantly employed, and much labour-saving machinery is used.

*Dual Desks, Single Desks, and every description of School Apparatus.*

**ESTIMATES FOR LABORATORIES AND WORKSHOPS.**

References given to Establishments fitted up by the Educational Supply Association.

**SCHOOL STATIONERY** of every description, Manufactured in London, at Holborn Viaduct and Charterhouse Square. The Paper is received direct from the Mills, and every process is carried out on the premises.

**ALL PUBLISHED BOOKS AND MAPS**

and every School Requisite, full Discounts being allowed.

*The following Illustrated Catalogues are published by the Association, and will be sent free on application:—*

**Catalogue of Stationery and Published Books.**

**Catalogue of Reward and Prize Books.**

**Catalogue of School and Church Furniture.**

**Catalogue of Holborn Series of Publications.**

**Catalogue of Chemical Apparatus, Chemicals, and Reagents.**

**Catalogue of Apparatus, &c., for Technical Schools.**

**THE EDUCATIONAL SUPPLY ASSOCIATION, LIMITED,**  
42 HOLBORN VIADUCT, LONDON.

**RUDDIMAN JOHNSTON & CO., LTD., 26 CHARTERHOUSE SQUARE, LONDON,**  
Publishers of

**WALL MAPS, ATLASES, DIAGRAMS, AND PRINTS.**

*The Publications of RUDDIMAN JOHNSTON & CO. have secured a world-wide reputation for accuracy.*

**POLITICAL AND PHYSICAL  
WALL MAPS.**

Clear, well mounted, and corrected up to date.  
With Names or without Names.  
Size, 53 inches by 46 inches. Price 12s. each.

**CLASS LESSON MAPS  
AND DIAGRAMS.**

Comprising 100 Maps and Diagrams.  
Size, 34 inches by 24 inches.  
In portfolio for 30s. net.

**HUMAN ANATOMY  
AND PHYSIOLOGY.**

Details accurate and distinct.  
Three distinct Sets.  
Four Sheets to each Set. Price 12s. each.

**CLASSICAL  
SCHOOL MAPS.**

Italia Antiqua and Graecia Antiqua.  
Modern Names in small type,  
underneath the Classical Names.  
Size, 53 inches by 46 inches. Price 12s. each.

**MAP OF THE TRANSVAAL, PREPARED EXPRESSLY FOR SCHOOL USE. Size 34 inches by 24 inches. Price 3s. 6d.**

*ILLUSTRATED CATALOGUE AND PARTICULARS POST FREE ON APPLICATION TO*

**RUDDIMAN JOHNSTON & CO., LTD., 26 CHARTERHOUSE  
SQUARE, LONDON.**

**ALL PUBLICATIONS ARE  
UP TO DATE.**

# THE EDUCATIONAL TIMES,

AND

Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 466.

FEBRUARY 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 6th of March, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—In addition to the Doreck Scholarship of £20, the following Prizes will be competed for:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

**PRELIMINARY EXAMINATION of MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 6th, 7th, and 8th of March, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS.— EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS.— (Bloomsbury Square, W.C.)

The next Monthly Evening Meeting of the Members will take place on Wednesday, the 14th of February, when Professor FOSTER WATSON, M.A., will read a Paper entitled "The Licensing of Teachers in the Past." The Chair will be taken at 7.30 p.m., and a discussion will follow the reading of the Paper. Members have the privilege of introducing their friends.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS.— (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS.

The First Course of Lectures (Twenty-eighth Annual Series), by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic in University College, London, on "Intellectual Education," will commence on Thursday, February 22nd, at 7 p.m.

For Syllabus, see p. 115.

\* \* A Doreck Scholarship, of the value of £20, will be awarded at the Diploma Examination at Christmas next, to the candidate who, having attended two courses of the Training Class Lectures during the preceding twelve months, and having passed the full examination for a College Diploma, stands first in the examination in Theory and Practice of Education.

The Fee for the Course is Half-a-guinea.

The Lectures will be delivered on Thursday Evenings at 7 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., *Secretary.*

## LONDON COLLEGE OF MUSIC.— (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FOR MUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in April next, when certificates will be granted to all successful candidates. Last day for entry, March 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

THE NEW SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), is now ready and may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, *Secretary.*

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

### MEDICAL SCHOOLS.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.  
ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.  
ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

GUY'S HOSPITAL.

LONDON HOSPITAL MEDICAL COLLEGE.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.

(For particulars of the above, see following pages.)

### TRAINING COLLEGES, &c.

UNIVERSITY COLLEGE OF WALES, ABERYST-  
WYTH—TRAINING DEPARTMENT.

CAMBRIDGE TRAINING COLLEGE.

MARIA GREY TRAINING COLLEGE.

ST. GEORGE'S TRAINING COLLEGE FOR  
WOMEN TEACHERS.

FROEBEL EDUCATIONAL INSTITUTE.

(For particulars of the above, see following pages.)

### OTHER COLLEGES, &c.

UNIVERSITY COLLEGE OF NORTH WALES.

UNIVERSITY COLLEGE, BRISTOL.

KING'S COLLEGE, LONDON.

OWENS COLLEGE, MANCHESTER.

ROYAL INDIAN ENGINEERING COLLEGE.

TRINITY COLLEGE, LONDON.

UNIVERSITY TUTORIAL COLLEGE.

EPSOM COLLEGE.

CARLYON COLLEGE.

UNIVERSITY EXAM. POSTAL INSTITUTION.

BURLINGTON CLASSES.

(For particulars of the above, see following pages.)

## LONDON UNIVERSITY EXAMS.

### Free Guides.

#### FREE MATRICULATION GUIDE.

No. XXVII., containing the Examination Papers of January, 1899, and Articles on the Special Subjects for 1900 and 1901, 80 pp. Postage 1d.

#### FREE INTERMEDIATE ARTS GUIDE.

No. XIV., 76 pp., containing the Examination Papers of July, 1899, full Solutions to the Mathematical Papers, and Articles on the Special Subjects for 1900 and 1901.

#### FREE B.A. GUIDE.

No. XIII., October, 1899, 90 pp., containing the Examination Papers of October, 1899, and Articles on the Special Subjects for 1900 and 1901.

#### FREE INTER. SCIENCE GUIDE.

No. XI., containing the Examination Papers of July, 1899, with full Solutions to the Papers in Pure Mathematics.

#### FREE INTER. LAWS GUIDE.

Containing the University Regulations, Advice on the Choice of Text-Books, &c.

Any one of the above Arts or Science Guides, Prospectus, and full particulars of Classes for all London Exams., post free on application to

THE SECRETARY,

(University Correspondence College London Office),  
32 Red Lion Square, Holborn, W.C.

## ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

### LONDON UNIVERSITY EXAMINATIONS.

Special arrangements are made for the following courses of instruction:—

#### PRELIMINARY SCIENTIFIC EXAMINATION.

Chemistry—By Wyndham R. Dunstan, M.A., F.R.S., Sec. C.S.  
Physics—By H. R. Le Sueur, B.Sc. Lond.  
Botany—By A. W. Bennett, M.A., B.Sc. Lond.  
Zoology—By F. G. Parsons, F.R.C.S.

#### INTERMEDIATE EXAMINATION IN MEDICINE.

Organic Chemistry—By Wyndham R. Dunstan, M.A., F.R.S., Sec. C.S.  
Physiology—By J. B. Leathes, M.B., B.Ch. Oxon.  
Anatomy—By F. G. Parsons, F.R.C.S., and H. B. Robinson, M.S. Lond.  
Materia Medica and Pharmaceutical Chemistry—By E. White, B.Sc. Lond.

### SCHOLARSHIPS, PRIZES, MEDALS.

Two Entrance Scholarships in Natural Science, of the value of £150 and £60.

An Entrance Scholarship of the value of £50, for University Students.

Free Scholarships are given to distinguished pupils of Merchant Taylors' School, the City of London School, and Epsom College.

The William Tite Scholarship, £27 10s.

The Musgrove Scholarship, £38 10s.

The Peacock Scholarship, £38 10s.

Thirteen College Prizes of the aggregate value of £180.

The Cheselden Medal, for Surgery and Surgical Anatomy.

The Mead Medal and the Wainwright Prize, for Medicine, Pathology, and Hygiene.

The Solly Medal and Prize, for Surgical Reports.

The Bristowe Medal and the Hadden Prize, for Pathology.

The Grainger Testimonial Prize, for Anatomy and Physiology.

The Sutton Sams Testimonial Prize, for Reports on Cases in the Department for Diseases of Women.

The Treasurer's Gold Medal, for General Proficiency.

The Beany Scholarship, for Surgery and Surgical Pathology.

The Salters' Company Research Fellowship, of the annual value of £100.

Particulars of the above and of the full curriculum are given in the Prospectus, which may be obtained from the MEDICAL SECRETARY, St. Thomas's Hospital, London, S.E.

H. P. HAWKINS, M.A., M.D. Oxon., *Dean.*

## THE LONDON HOSPITAL MEDICAL COLLEGE.

The Hospital is the largest general hospital in the kingdom and contains nearly 800 beds.

Appointments:—Sixty qualified resident appointments are made annually. Dressers, clinical and post-mortem clerks, and maternity assistants are appointed every three months. All appointments are free. Holders of resident appointments are also provided free board.

SCHOLARSHIPS AND PRIZES.—Entrance Scholarships, value £120, £60, £60, £35, £30, and £20, will be offered for competition at the end of September. Numerous Scholarships and Prizes are given annually.

FEES.—120 guineas in one payment, or 130 guineas by instalments. A reduction of 15 guineas is allowed to the sons of members of the profession.

The Students' Clubs Union, embracing all the Scientific, Social, and Athletic Clubs, is available to all Students. The Clubs Union ground is at Lower Edmonton.

### SPECIAL CLASSES.

Special Classes are held in the subjects required for the PRELIMINARY SCIENTIFIC M.B. (London) EXAMINATION.

Botany and Zoology.—By P. Chalmers Mitchell, M.A. Oxon., F.Z.S.

Chemistry and Physics.—By Hugh Candy, B.A., B.Sc. Lond.

Fee for the whole Course, 10 guineas.

These Classes are not confined to Students of the Hospital.

Students who have recently passed the Matriculation or other preliminary Examinations can enter at once.

For further information apply, personally or by letter, to

MUNRO SCOTT, *Warden.*

Mile End, E.

## GOUIN SCHOOL OF LANGUAGES, 34 HARRINGTON ROAD, SOUTH KENSINGTON, 16 FINSBURY CIRCUS, CITY.

Principal—F. THÉMOIN, B.A.

Teachers trained on the Gouin Series Method. Classes in French, German, Italian at reduced fees to Teachers.

## CHARING CROSS HOSPITAL MEDICAL SCHOOL.

The Livingstone Scholarship (100 guineas), the Huxley Scholarship (55 guineas) and six other Entrance Scholarships, including one of 30 guineas for Dental Students (total value £550) are awarded annually.

Two Scholarships of the value of 60 guineas each are reserved for Students of Oxford, Cambridge, or London Universities.

FEES.—For the five years' curriculum of study required by the various Examining Bodies and for hospital practice, 110 guineas in one sum, or 121 guineas in five instalments.

The composition fee for sons of registered medical practitioners is 100 guineas, and the fee by instalments, 110 guineas in five payments.

The composition fee for Dental Students is 54 guineas, or 60 guineas, payable in two instalments of 30 guineas each.

A proportionate reduction of the above Fees is made to Students who have completed part of the curriculum elsewhere.

CHARING CROSS HOSPITAL is within three minutes' walk of the Dental Hospital of London, and the hours of Lectures are arranged to suit the convenience of both General and Dental Students.

The Hospital and School are situated within two minutes of both Charing Cross Stations, and the Athletic Ground at Eltham can be reached within half an hour from Charing Cross.

**THE SCHOOL PROSPECTUS, containing full information concerning the classes, prizes, and all other arrangements connected with the Medical School, will be sent on application to the Dean, Chandos Street, Strand, W.C.**

H. MONTAGUE MURRAY, *Dean.*

## THE DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL,

LEICESTER SQUARE.

### LECTURES.

*Dental Anatomy and Physiology* (Human and Comparative)—Charles S. Tomes, F.R.S., M.A. Oxon., F.R.C.S., L.D.S., on Tuesdays and Thursdays, at 5 p.m. (Summer). (*Demonstrator*—A. Hopewell Smith, L.R.C.P., M.R.C.S., L.D.S.)

*Dental Surgery and Pathology*—William Hern, M.R.C.S., L.D.S., on Tuesdays and Fridays, at 8 a.m. (Summer). (*Demonstrator*—R. Hirschell, L.D.S.)

*Mechanical Dentistry*—E. Lloyd Williams, L.R.C.P., M.R.C.S., L.D.S., L.S.A., on Wednesdays, at 5.30 p.m. (Winter).

*Metallurgy and its application to Dental Purposes*—Dr. Forster Morley, M.A., F.I.C., F.C.S., on Thursdays, at 5 p.m. (Winter). (*Demonstrator*—Percy Richards, F.I.C., F.C.S.)

The Hospital is open both morning and afternoon.

During the Sessions the Surgeons of the day will give demonstrations at stated hours.

The Medical Tutor holds classes before each Examination for the L.D.S.

The House Surgeons attend daily while the Hospital is open.

The Saunders and Walker Scholarships, of £20 per annum each, and prizes are open for competition.

Fee for two years' Hospital Practice required by the curriculum, including Lectures, £50 in one payment, or 50 guineas in two yearly instalments. The curriculum requires two years to be passed at a General Hospital. The fee for this is about £55. Both Hospitals can be attended simultaneously.

The Fee for Three Years' Tuition in Mechanical Dentistry is 150 guineas.

The Calendar may be obtained on application to the DEAN, who attends at the Hospital on Wednesday mornings from 10.30 till 12 throughout the year.

MORTON SMALE, *Dean.*

## ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

The SUMMER SESSION will begin on May 1st, 1900.

FIVE ENTRANCE SCHOLARSHIPS and EXHIBITIONS are offered for competition on September 26th and following days, viz.: Two of the value of £75, one of the value of £150, one of the value of £50, and one £20; and Students who enter in May are eligible. Other Scholarships and Prizes, including the Lawrence, Brackenbury, Kirkes, and Matthews Duncan Scholarships in Medicine, Midwifery, and Surgery, are awarded annually. The total value of Scholarships and Prizes awarded is over £800 per annum.

A RESIDENTIAL COLLEGE is provided so as to afford students the advantage of living within the Hospital walls.

All the APPOINTMENTS are open to students without additional fees.

Special Laboratories and other arrangements have been provided to give the necessary additional instruction required by the new regulations, and the courses of study have been so arranged that students may with advantage begin in the Summer Session.

Special Classes are held for the Preliminary Scientific and all the other Examinations for the M.B. and M.D. (London).

For particulars apply to Dr. CALVERT, Warden of the College, St. Bartholomew's Hospital, E.C. Handbook forwarded on application.

## GUY'S HOSPITAL MEDICAL SCHOOL.

The SUMMER SESSION will begin on May 1st, 1900.

(Students who have recently passed the College of Preceptors Examination are advised to enter forthwith to prepare for the Conjoint Examinations in July next.)

The Hospital contains 644 Beds, of which 554 are in constant occupation.

ENTRANCE SCHOLARSHIPS.—Five Scholarships will be competed for in September, 1900—Two in Arts of the value of £100 and £50, and Three in Science of the value of £150, £60, and £50. Students who enter in May, if otherwise eligible, are able to compete.

APPOINTMENTS.—Hospital appointments are made strictly in accordance with the merits of the candidates, and without extra payment.

DENTAL SCHOOL.—A recognized Dental School is attached to the Hospital, which affords to Students all the instruction required for a Licence in Dental Surgery.

PRIZES AND SCHOLARSHIPS are awarded to Students in their various years, amounting in the aggregate to more than £650.

RESIDENTIAL COLLEGE.—The Residential College accommodates about 50 students in addition to the Resident Staff of the Hospital. It contains a large Dining Hall, Reading Room, Library, and Gymnasium for the use of the Students' Club.

For Prospectus, particulars of the Scholarships, and further information, apply to the Dean, Dr. LAURISTON E. SHAW, Guy's Hospital, London Bridge, S.E.

## ROYAL COLLEGES OF SURGEONS AND PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Copies of Regulations for the Triple Qualification of this Board (L.R.C.S.E., L.R.C.P.E., and L.F.P. & S.G.), containing dates of Professional Examinations for year 1899-1900, Curriculum, &c., may be had on application to JAMES ROBERTSON, Solicitor, 48 George Square, Edinburgh, Inspector and Treasurer for Edinburgh; or from ALEXANDER DUNCAN, B.A., LL.D., Faculty Hall, 242 St. Vincent Street, Glasgow, Inspector and Treasurer for Glasgow. In applying for copies, please state the date of commencement of medical study.

## KING'S COLLEGE, LONDON.—

Students received in Arts and Science, Engineering, Architecture, and Applied Sciences, Medicine, and other branches of education. Preparation for London and other Examinations. Day and Evening classes.

Students are classed on entrance according to their proficiency, and terminal reports on the progress and conduct of Matriculated Students are sent to their parents and guardians. There are Entrance Scholarships and Exhibitions.

Students who are desirous of studying any particular subject or subjects, without attending the complete courses of the various faculties, can be admitted as non-matriculated students on payment of the separate fees for such classes as they select.

Residence of Students.—There will be a few rooms vacant in the College next Term.

For prospectuses and all information apply to the SECRETARY, King's College, Strand, W.C.

### CORRESPONDENCE LESSONS.

MISS A. W. GREGORY, L.L.A., gives Lessons by Correspondence in English History and Literature, Anglo-Saxon, French, and German, to Students preparing for the Higher Local and other University Examinations. Terms moderate. Apply—3 Ickburgh Road, Upper Clapton, N.E.

MR. H. A. NESBITT (joint-author of "The Science and Art of Arithmetic," by A. SONNENSCHNIG and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.



**UNIVERSITY TUTORIAL COLLEGE,**

Red Lion Square, Holborn, W.G.

LONDON [UNIVERSITY EXAMINATIONS.



MORNING, AFTERNOON,  
AND  
EVENING CLASSES

FOR THE

Matriculation,  
Inter. Arts, Science and Law,  
Prelim. Sci. (M.B.),  
B.A., B.Sc., and L.L.B.  
Examinations of London University.

CHEMICAL, PHYSICAL, and BIOLOGICAL LABORATORIES.

During the year 1899 eighty-three Students of University Tutorial College passed the Matriculation Examination, and nearly two hundred were successful at the Science Examinations of London University, with twenty-six places in Honours.

The next Term commences Monday, January 22nd, 1900.

Full particulars on application to

**THE VICE-PRINCIPAL,**  
University Tutorial College,  
32 Red Lion Square, Holborn, W.G.

Diploma Correspondence College.

The ONLY College that coaches SOLELY for

**A.C.P., L.C.P.,  
F.C.P.**

SUCCESSSES: 108 at A.C.P.; 20 at L.C.P.  
(7 in Honours).

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**TALFOURD ELY, M.A., F.S.A.,**

Fellow of University College, London (late of the University of Berlin), Teaches and Lectures on Ancient Art and History, Classics, and English. Address—73 Parliament Hill, Hampstead, N.W.

**VOICE TRAINING for SPEAKERS,**

SINGERS, and STAMMERERS.—Apply to Mrs. EMIL BEHNKE, 18 Earl's Court Square, London. Author of "The Speaking Voice," &c.

"Pre-eminent success."—*Times*.  
"Mrs. Behnke is well known as a most excellent teacher upon thoroughly philosophical principles."—*Lancet*.

"STAMMERING." 1s., post free.

The Classes for the Clergy and Members of the Legal and Scholastic Professions will shortly be resumed. Special Classes, by request of medical men, for Respiratory Drill and Chest Expansion.

**ELOCUTION.**—Miss ROSE PATRY,

182 HOLLAND ROAD, KENSINGTON, W. (Authoress of "Practical Handbook on Elocution," published by Swan Sonnenschein & Co.), visits Schools, holds Classes, and gives Private Lessons. For terms, &c., apply to above address.

**CARLYON COLLEGE.**

KERIN & LYNAM,

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY CLASSES.**

MATRICULATION CLASSES, INTER. ARTS and SCIENCE, PREL. SCI., B.A. and B.Sc. CLASSES. Classes starting.

Classes and Tuition for **Legal and Medical Preliminaries, University and Hospital Scholarships, Civil Service Examinations, A.C.P., L.C.P., F.O.P., Higher Local, Oxf. and Camb., First M.B.; Royal Univ., Ireland, L.L.A.**

CLASSES FOR LADIES. PRACTICAL CLASSES in PHYSICS, CHEMISTRY and BIOLOGY.

Papers Corrected for Schools.  
Private tuition for all Examinations.  
Inter. Sc. Hons. and B.Sc. Botany Class, B.A. Classical Honours Class.

The Principal may be seen between 11.15 and 1 any day, and 2.30 and p.m. any day (except Saturday), or by appointment at any other time.

For Prospectus and list of lecturers apply to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Pro Plancio" and "Phædo," Author of "London Matriculation Course."

**SUCCESSSES.**

1892-1899.—London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; Science Scholarships, 5; Arts Scholarships, 4; R.U.I., 50; Indian Civil, Oxford and Cambridge, and many other Successes.

**M.A. LONDON (Classics), 1898 and 1899, 2.**

**B.A. LONDON, 1899, 12 successful**  
(11 on Official List; more than any other London Institution).

**LONDON MATRICULATION and**

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

**CORRESPONDENCE TUITION.**

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BURLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

**TO STUDENTS AND BUSY**

TEACHERS.—Help by Correspondence. Courses of Lessons prepared. Preparation for Examinations. College of Preceptors' Examinations specialized.—E. ROBINSON, A.C.P., Brinklow, near Coventry.

**L.L.A.—THE UNIVERSITY PRE-**

**L.L.A. PARATORY INSTITUTE,** 37 Chambers Street, Edinburgh, with strong Staff of Graduates, L.L.A.'s and Specialists, prepares Ladies thoroughly for this Degree by Correspondence. System includes plans of study, exercises, weekly tests, careful correction, evaluation, and criticism. Class, Open, and L.L.A. Prizes. **113 L.L.A. Successes in 1899.** Moderate Fees. Complete and thorough revision of all the prescribed work for each subject during the last term, commencing February 19th. The L.L.A. Guide for 1900, 1s. L.L.A. Prospectus free.

**OXFORD LOCAL EXAMINATIONS.**

**LONDON COMMITTEE (BOYS).**

The Regulations for the Senior, Junior, and Preliminary Examinations for 1900 can be obtained from the Secretary,

E. LAYMAN, Esq.,

1 Garden Court, Temple, E.C.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

Preparation by Correspondence

FOR

**MATRICULATION,  
B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—**Mr. J. CHARLESTON, B.A.,**  
**BURLINGTON CLASSES,**  
**27 CHANCERY LANE, LONDON.**

**ADVICE AS TO CHOICE OF SCHOOLS, TUTORS, &c.**

Parents or Guardians may obtain, without charge, Information and Advice as to Schools (for Boys or Girls) at home or abroad, Tutors for University, Civil Service, or Military Examinations, and Educational Establishments of every kind by sending a statement of their requirements to

**R. J. BEEVOR, M.A.,**

Manager, Scholastic Association, Ltd.,  
8 Lancaster Place, Strand, W.C.

Telegraphic Address:

"Triform, London."

Telephone:

No. 1854, Gerrard.

N.B.—Parents or Students applying by letter are requested to furnish the fullest possible details of their requirements, and, if a boarding school is wanted, to mention, within certain limits, what fees for board and tuition they are prepared to pay.

**UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.**  
(A Constituent College of the University of Wales.)  
*Principal—H. R. REICHEL, M.A.*

The Session began October, 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to **JOHN EDWARD LLOYD, M.A.**,  
*Secretary and Registrar.*

**UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.**  
(One of the constituent Colleges of the University of Wales.)

**TRAINING DEPARTMENT FOR SECONDARY TEACHERS, MEN AND WOMEN.**

Professor of the Theory, Practice, and History of Education—**FOSTER WATSON, M.A. Lond.**  
Assistant Lecturers—**MISS C. P. TREMAIN, B.A. Lond.**; **D. R. HARRIS, B.A. Cantab. and Lond.**

Preparation for (a) The Degrees in Arts and Science of the University of Wales, the curriculum for which includes the Theory and History of Education as an optional subject in the third year; (b) Cambridge Teachers' Certificate, Theory and Practice; (c) London University Teachers' Diploma; (d) College of Preceptors' Diplomas.

Composition Fee for the Session (including Lectures and Practice) £10.

Men Students reside in registered lodgings in the town. Some of the Men Students are able, with economy, to limit the cost of Board and Residence to £25 per annum.

Women Students reside in the Hall of Residence for Women Students. Terms from 31 to 40 guineas.

For General Prospectus of Science and Art Departments, also for Special Prospectuses of the Normal and Agricultural Departments, and all other particulars, apply to

**T. MORTIMER GREEN,**  
*Registrar.*

**YOUNG LADY, B.Sc., Author of** Scientific Papers, seeks Engagement as **TEACHER** in School, College, or in a refined Family. Mathematics and Sciences. Several years' experience from a University laboratory. Excellent references. Answer to **CHEMIST, High School, Maidenhead.**

**INVESTMENT.—Wanted, a few** Shares or Debentures in a good dividend paying Industrial Limited Liability Company. Educational preferred. Send full particulars by letter to Miss **BERTHA, 189 High Street, Lewisham.**

**THE "NOTABILIA" SERIES.**

By **WALTER BLANCHARD, L.C.P., F.R.G.S.,** Principal of the Intermediate School, Lancaster.

These Books (price 1s. each) are expressly designed to economize the time and labour of Students preparing for Examinations.

- (1) "**NOTABILIA OF ENGLISH HISTORY.**"  
New Edition (29th Thousand), with Addenda.
- (2) "**TOPOGRAPHICAL GEOGRAPHY.**"  
Revised Edition (12th Thousand), with Index.
- (3) "**COMMERCIAL GEOGRAPHY.**"

Also, Improved Edition. Price Ninepence.  
"**PATTERN LOGIC.**"

A clear, but brief, arrangement of "Euclid," Book I.

**T. MURBY,**

5 LUDGATE CIRCUS BUILDINGS, LONDON, E.C.

**GYMNASTICS, HOCKEY, &c.—**Miss **SPENCER HARRY,** Principal of West Norwood Gymnasium, is open to additional engagements, visiting in London or vicinity.—41 Binfield Road, Clapham, S.W.

**HOME AND COLONIAL SCHOOL SOCIETY.**

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

**TRAINING COLLEGE FOR SECONDARY TEACHERS.**

**HIGHBURY HILL HOUSE, LONDON, N.**

*Principal—The Rev. DAVID J. THOMAS, M.A.*  
*Vice-Principal—Miss PENSTONE.*

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

**THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.**

*Principal—Miss M. PUNNETT, B.A. (Lond.).*

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the **PRINCIPAL, Wollaston Road, Cambridge.**

**THE MARIA GREY TRAINING COLLEGE,**

**SALUSBURY ROAD, BRONDESBURY, LONDON, N.W.**

A FULL COURSE OF TRAINING in preparation for the **TEACHERS' CERTIFICATE** in the Theory and Practice of Teaching is offered to Ladies who desire to become Teachers.

Kindergarten Teachers are also prepared for the Higher Certificate of the National Froebel Union. Scholarships offered in both Divisions.

College Year begins September, 1900, and January, 1901. Address—**Principal, Miss ALICE WOODS, The Maria Grey Training College, Salusbury Road, Brondesbury, N.W.**

THE

**FROEBEL EDUCATIONAL INSTITUTE,**

**TALGARH ROAD, WEST KENSINGTON, LONDON, W.**

*Chairman of the Committee—Mr. W. MATHER.*

*Treasurer—Mr. C. G. MONTEFIORE.*

*Secretary—Mr. ARTHUR G. SYMONDS, M.A.*

**TRAINING COLLEGE FOR TEACHERS.**

*Principal—Madame MICHAELIS.*

*Mistress of Method—Miss E. E. LAWRENCE.*

**KINDERGARTEN AND SCHOOL.**

*Headmistress—Miss M. BOYS SMITH.*

Further particulars may be obtained on application to the **PRINCIPAL.**

**SESAME HOUSE FOR HOME-LIFE TRAINING.**

**43A ACACIA ROAD, N.W.**

Established on the lines of the Pestalozzi-Froebel House at Berlin, and managed by a Committee appointed by the Sesame Club. In connexion with their practical work the Students learn the Theory and History of Education, the Development of the Child, Natural Science, Simple Gardening, Hygiene, Household Management, Kindergarten Games and Occupations, &c.

Primary Course £6. 6s. per term. Higher Course £8. 8s. per term. Board and Residence £1. 1s. per week.

Ladies desirous of engaging certificated lady-nurses for their children are invited to apply before the end of each term.

For full particulars apply to the **Principal—Miss SCHEPPEL.**

**ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.**

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University, Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Four Heriot Bursaries of £30 are offered in October. Apply to the **PRINCIPAL, 5 Melville Street, Edinburgh.**

**PHYSICAL CULTURE.—Miss**

**AMER PHELPS** (niece of Miss Crehman), ably assisted by Ladies of Miss Crehman's staff, visits Schools for Scientific and Recreative Exercises. Special experience in Figure Training and Department.—39 York Place, Portman Square, W.

**UNIVERSITY COLLEGE, BRISTOL.**

DEPARTMENTS:

Chemistry.	Biology.	Modern Languages.
Mathematics.	History and	Oriental Languages.
Physics.	Literature.	International Law.
Engineering.	Classics.	Medicine.
Geology.		

Sessional Courses are organized for the Matriculation, Preliminary Scientific, Intermediate Arts, and Intermediate Science Examinations of the University of London, and for the B.A. and B.Sc. Degree work. Composition Fee for each of the above Courses now Reduced to £13. 13s. per Session.

Registration Fee, One Guinea.

Complete Three Years' Course are arranged for Mechanical and Electrical Engineering, a Two Years' Course in Civil and Mining Engineering, and Courses for Students intending to become Architects and Surveyors. The Chemical and Physical Laboratories and the Workshops will be open Two Evenings a week.

Special Day and Evening Courses in all Departments are given by the Professors and Lecturers.  
**THE WORK OF WOMEN STUDENTS IS UNDER THE SUPERVISION OF A LADY TUTOR.**

For full information see Prospectus, which will be forwarded free on application to

**JAMES RAFTER, Secretary.**

**OWENS COLLEGE, VICTORIA UNIVERSITY, MANCHESTER.**

PROSPECTUSES for the Session 1899-1900 will be forwarded on application:—

- I. DEPARTMENT OF ARTS, SCIENCE, AND LAW; and DEPARTMENT FOR WOMEN.
- II. DEPARTMENT OF MEDICINE.
- III. EVENING AND POPULAR COURSES.

Special Prospectuses can also be obtained of:—

- IV. DEPARTMENT OF ENGINEERING.
- V. DEPARTMENT OF LAW.
- VI. DEPARTMENT OF PUBLIC HEALTH.
- VII. DENTAL DEPARTMENT.
- VIII. PHARMACEUTICAL DEPARTMENT; and
- IX. A LIST OF FELLOWSHIPS, SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.

Apply to **Mr. CORNISH, 16 St. Anne's Square, Manchester,** or at the College.

**SYDNEY CHAFFERS, Registrar.**

**EPSOM COLLEGE, SURREY.**

*Headmaster:*

**Rev. T. N. HART SMITH, M.A.,** late Assistant-Master at Marlborough College.

Sixteen Assistant-Masters. Classical and Modern Sides. Public School open to all classes alike.

Special Preparation for the Universities, for London Matriculation and Science Exams., and for the Army and Navy.

New Lower School for Young Boys in experienced hands.

Seven Entrance Scholarships of £30 each, for boys under 14 on July 1st. Apply—**The BURSAR.**

**ROYAL INDIAN ENGINEERING COLLEGE, COOPERS HILL, STAINES.—**

The Course of Study is arranged to fit an Engineer for employment in Europe, India, and the Colonies. About 40 Students will be admitted in September, 1900; the Secretary of State will offer them for competition Twelve Appointments as Assistant Engineers in the Public Works Department, and Three Appointments as Assistant Superintendents in the Telegraphs Department, One in the Accounts Branch P.W.D., and One in the Traffic Department Indian State Railway. For particulars apply to **SECRETARY** at College.

**EDUCATIONAL PARTNERSHIP.**

—Lady, living near London (W.), wishes to hear from a qualified Teacher who would join her in opening a Select Day and Boarding School.—A. B., 35 Carysfort Road, Stoke Newington.

**EPPS'S COCOA.**

**GRATEFUL. COMFORTING.**

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 4-lb. and 1-lb. packets, and 1-lb. tins, labelled **JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.**

**BREAKFAST. SUPPER.**

**EPPS'S COCOA.**

**JOINT AGENCY FOR WOMEN TEACHERS.**

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

**THE JOINT AGENCY FOR MEN TEACHERS.**

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Agencies for Assistant-Masters and Tutors hitherto conducted by the College of Preceptors, the Teachers' Guild, and the Assistant-Masters' Association, have been amalgamated and placed under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c.

The rates of Commission charged to Assistant-Masters are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

**EDUCATIONAL AGENCY.**

(ESTABLISHED OVER 60 YEARS).

Proprietors:—

Messrs. GRIFFITHS, SMITH, POWELL & SMITH.

OFFICES—34 Bedford Street, Strand; and 22 Henrietta Street, Covent Garden, London, W.C.

Scholastic.

Headmasters and Principals of Public and Private Schools, desirous of engaging qualified and well-recommended English or Foreign Resident, Non-Resident, or Visiting Assistant-Masters, can have eligible Candidates introduced to them (free of charge) by stating their requirements to Messrs. GRIFFITHS, SMITH, POWELL & SMITH.

List of Easter Vacancies forwarded, on application, to graduates and other well qualified Assistant-Masters seeking appointments for next term.

Schools Transferred and Valued. Partnerships arranged. No charge unless sale effected. List of Boys' and of Girls' Schools and School Partnerships for Sale, sent gratis to intending Purchasers TO WHOM NO COMMISSION IS CHARGED.

Assistant-Mistresses.

Headmistresses and Principals of Public and Private Schools requiring English or Foreign Assistant-Mistresses or other Teachers can, on application to Messrs. GRIFFITHS, SMITH, POWELL & SMITH, have suitable Candidates placed in immediate communication with them free of charge.

List of Easter Vacancies forwarded to English and Foreign Assistant-Mistresses, and other Teachers, on application. Liberal Salaries.

**THE MANCHESTER CLERICAL, MEDICAL, AND SCHOLASTIC ASSOCIATION, Limited,**

8 KING STREET, MANCHESTER.

PRINCIPALS of Schools are invited to send particulars of Vacancies for Assistants. School Transfers negotiated. For terms, apply—SECRETARY.

**CENTRAL REGISTRY FOR TEACHERS,** 25 CRAVEN STREET, CHARING CROSS.—Miss LOUISA BROUGH supplies highly qualified Governesses for Schools and Families. Office hours 11 to 4; Saturdays 11 to 1.

**THE OXFORD SHORTHAND.**

15th Edition.

The Oxford Shorthand Co., Dover, have pleasure in announcing that the new Three-Shilling Parcel is NOW READY.

**CAMBRIDGE UNIVERSITY SCHOLASTIC AGENCY, LIMITED.**

The Register of the Agency is open to Graduates of any British or Foreign University, and to experienced Masters.

For the Regulations and Application Forms apply to Professor LEWIS, Cambridge.

**OXFORD UNIVERSITY APPOINTMENTS COMMITTEE**

Recommends MEMBERS of the UNIVERSITY OF OXFORD for Scholastic and other Appointments of all kinds.

Postal Address—The Secretary, Oxford University Appointments Committee, Oxford. Telegrams—Appointments, Oxford.

Blackwood's Edition. 2s. 6d., cloth, post free.

**A NEW AND COMPLETE PRACTICAL GUIDE TO HER MAJESTY'S CIVIL SERVICE.** Qualifications, Official Regulations, Examination Papers, Boy Clerks, Female Clerks, &c.

"TAKE MY ADVICE." A Book for every Home, giving trustworthy information on everything pertaining to daily life. Cloth, 2s. 6d.

London: JAMES BLACKWOOD & Co., Paternoster Row.

**A COMPLETE FRENCH CLASS BOOK.—HALL'S FIRST FRENCH COURSE and FRANCE AND THE FRENCH.** 1s. 6d.; Key, 1s. 8d. New and Revised Edition. Contains nearly 200 Exercises, English and French Grammar, Questionnaire, Interesting and Easy Reading Lessons, Vocabulary, Maps, &c.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., Ltd.; and of all Publishers.

READY IN MARCH. Demy 8vo, cloth, price 2s. 6d., free by post.

To Members of the College the price is 1s., or 1s. 6d. free by post.

**THE CALENDAR**

OF

**The College of Preceptors, FOR THE YEAR 1900.**

CONTAINING

All information respecting the objects and operations of the College, Lists of Officers, Examiners, and Members, the Regulations of the various Examinations, &c., with an Appendix containing the following Examination Papers:—

1. Papers set at Examination of Teachers for Diplomas, Midsummer, 1899.
2. Do. do. do. Christmas, 1899.
3. Papers set at Examination of Pupils for Certificates, Midsummer, 1899.
4. Do. do. do. Christmas, 1899.
5. Papers set at Professional Preliminary Examination, March, 1899.
6. Do. do. do. September, 1899.
7. Papers set at Junior Forms Examination ... Midsummer, 1899.
8. Do. do. ... Christmas, 1899.

\* \* Nos. 3, 4, 5, and 6 may be had separately, price, free by post, 7d. each set. Nos. 7 and 8, price, free by post, 4d. each set.

LONDON: FRANCIS HODGSON, 89 FARRINGTON STREET, E.C.

New and Revised Edition, small crown 8vo, price 2s.

**AN INTRODUCTION TO GEOMETRY.**

FOR THE USE OF BEGINNERS.

CONSISTING OF

**EUCLID'S ELEMENTS, BOOK I.**

ACCOMPANIED BY NUMEROUS EXPLANATIONS, QUESTIONS, AND EXERCISES.

By JOHN WALMSLEY, B.A.

This work is characterized by its abundant materials suitable for the training of pupils in the performance of original work. These materials are so graduated and arranged as to be specially suited for class-work. They furnish a copious store of useful examples from which the teacher may readily draw more or less, according to the special needs of his class, and so as to help his own method of instruction.

**OPINIONS OF THE PRESS.**

"We cordially recommend this book. The plan adopted is founded upon a proper appreciation of the soundest principles of teaching. We have not space to give it in detail, but Mr. Walmsley is fully justified in saying that it provides 'for a natural and continuous training to pupils taken in classes.'"—*Athenaeum*.

"The book has been carefully written, and will be cordially welcomed by all those who are interested in the best methods of teaching Geometry."—*School Guardian*.

"Mr. Walmsley has made an addition of a novel kind to the many recent works intended to simplify the teaching of the elements of Geometry. . . . The system will undoubtedly help the pupil to a thorough comprehension of his subject."—*School Board Chronicle*.

"When we consider how many teachers of Euclid teach it without intelligence, and then lay the blame on the stupidity of the pupils, we could wish that every young teacher of Euclid, however high he may have been among the Wranglers, would take the trouble to read Mr. Walmsley's book through before he begins to teach the First Book to young boys."—*Journal of Education*.

"We have used the book to the manifest pleasure and interest, as well as progress, of our own students in mathematics ever since it was published, and we have the greatest pleasure in recommending its use to other teachers. The Questions and Exercises are of incalculable value to the teacher."—*Educational Chronicle*.

KEY to the above, price 3s.

LONDON: FRANCIS HODGSON, 89 FARRINGTON STREET E.C.

FREE GUIDE TO THE  
CAMBRIDGE HIGHER LOCAL EXAMINATION,

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

Ready very shortly, 70 pp., containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.,

275 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to the June, 1899, Examination, 55 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

COLLEGE OF PRECEPTORS' TEACHERS' DIPLOMAS.

University Correspondence College

Provides Courses for the A. O. P. as follows:—Full preparation for the Examination in the Theory and Practice of Education, £7. 7s.; or, Physiology, £1. 11s. 6d.; Hygiene, £1. 1s.; Psychology, £3. 3s.; Practice of Teaching, £3. 13s. 6d.

For the L. O. P. the fees are:—for Full preparation, £8. 18s. 6d.; or, for Logic, £2. 2s.; for other subjects as for A. C. P.

Prospectus and full particulars of Classes post free on application to

THE SECRETARY,  
(Univ. Corr. Coll. London Office),  
32 Red Lion Square, Holborn, W.C.

A New Book on Elocution.  
PRACTICAL MANUAL OF ELOCUTION.  
With List of Recitations.

By R. I. PATRY.

Cloth, 1s. 6d.

"A more complete book in an inexpensive form we have not seen."—*School Board Chronicle*.

"A model of condensation and common sense."—*Literary World*.

Specimen Copy 1s., post free.

SWAN SONNENSCHN & CO., LTD., LONDON.

THE MOTHER'S THREE FRIENDS.

By Mrs. CHARLES E. GREEN, M.C.P. With 58 Illustrations by KATE E. GREEN.

"The book will be read with decided pleasure and profit."—*Journal of Education*.

"A book to help young mothers to understand the principles on which the kindergarten system of education is based."—*Birmingham Post*.

"Strongly recommended to mothers, nursery governesses, and teachers in kindergartens."—*Schoolmaster*.

"Teachers would find it profitable and pleasant reading."—*Pupil Teacher and Scholarship Student*.

"Mrs. Green is an excellent exponent of the principles of education."—*Guardian*.

"Another new work useful to parents."—*Daily News*.

Price 3s. 6d.

London: GEORGE PHILIP & SON, 32 Fleet Street, E.C.

Liverpool: PHILIP, SON, AND NEPHEW, 45-51 South Castle Street.

THE GREAT SHORTHAND REFORM

System now taught in 200 Centres in London, including leading Polytechnics and Secondary Schools.

Full particulars post free from

THE SCRIPT SHORTHAND CO., Ltd., 44 Southampton Buildings, W.C.

THE PRACTICAL STUDY OF LANGUAGES.

A GUIDE FOR TEACHERS AND LEARNERS.

By H. SWEET, M.A., Ph.D., LL.D.

Large crown 8vo, 6s. net.

"We heartily commend this singularly interesting and helpful book to all teachers and students of languages."—*Manchester Guardian*.

J. M. DENT & CO., 29 AND 30 BEDFORD STREET, W.C.

NEW BOOK.

RULES OF FRENCH GRAMMAR AT A GLANCE

For Teachers and Students.

By O. F. CAMPHUIS.

Contains a Summary of the Difficulties of the Language, in a Practical and Simplified Form, as a Text-book for use in the Class, and in preparation for Examinations.

Demy 8vo, wrapper, 1s.; cloth, 1s. 6d.

"Candidates for examinations will find this summary of rules and exceptions very useful."—*Cusack's Journal*.

"We can recommend it for its accuracy and clearness."—*Teachers' Aid*.

"Students are bound to welcome such a handy compendium."—*Teachers' Monthly*.

"Rules are well expressed."—*School World*.

POESIES DE L'ENFANCE CHOISIES.

(French Poetry for Children.)

By FRANÇOIS LOUIS.

Sixth Edition. 12mo, cloth, 1s. 6d.

This collection has been made with the greatest care, containing Nursery Rhymes and short easy pieces, such as are rarely found in similar collections, and is adapted for the youngest children.

"A charming collection of little poems."—*Educational Review*.

Marlborough's Foreign Commercial Correspondence.

With Phraseology, Alphabetical List of Merchandise, Commercial Terms, Tables of Moneys, Weights, and Measures.

In wrappers, 1s. each; cloth, 1s. 6d. each; or, in One Volume, 5s. net.

FRENCH AND ENGLISH.

By A. DUBEVANT.

"This book may be strongly recommended."—*Mark Lane Express*.

GERMAN AND ENGLISH.

By MATHIAS MEISSNER.

"Will be found highly serviceable in the school, the study, and counting-house."—*Schoolmaster*.

ITALIAN AND ENGLISH.

By G. MARCHETTI.

"Wonderfully cheap, and deserves the greatest commendation."—*Drapers' Record*.

SPANISH AND ENGLISH.

By D. SALVO.

"The book should occupy a prominent and useful position."—*British Trade Journal*.

LONDON: E. MARLBOROUGH & CO., 51 OLD BAILEY, E.C.

SHORT FRENCH EXAMINATION PAPERS (110),

Each containing Six Idiomatic Sentences to render into French.

Price 2s. 6d., cloth.

Many of the grammatical questions are taken, by permission, from the Oxford and Cambridge Local Examinations, from those of the College of Preceptors, the London Matriculation, the Oxford and Cambridge Joint Board, and from the Cambridge Higher Local Examinations.

"A very useful set of questions."—*Modern Language Quarterly*.

"The English idioms for translation into French are well chosen. It is a useful little book."—*University Correspondent*.

"The exercises in the use of idioms are specially good."—*Bookman*.

"Will be found serviceable for rapid drill in the hands of a judicious teacher."—*Educational Times*.

"Would afford useful practice for intending candidates."—*Education*.

"We noticed at the time of its appearance this very useful collection of test papers, and need only here add that the key is full and accurate save for some obvious misprints and one or two slips that we have noticed."—*Journal of Education*.

"We are great advocates of abundant exercises; hence our immediate approval of this book."—*School Guardian*.

"We have much pleasure in recommending this useful collection of papers in grammar and idiomatic sentences. It will save the teacher many an hour of labour, and would be valuable for a class entering for an examination to work through steadily."—*Educational Review*.

A KEY, issued to Teachers and Private Students only, can be obtained from the Publishers. 6s. net. (A list of errata is issued with this.)

By H. R. LADELL, M.A., F.R.G.S.

THE PUBLIC SCHOOL SPELLING CARD.

Thirtieth Thousand. Price 6d. By the same Author.

Containing nearly 1,000 words (in which actual mistakes have frequently been made, as collected from Dictations, Essays, Examination Papers, &c., during a period of more than fifteen years), with Rules.

Also, in Book Form, "HOW TO SPELL AND SPEAK ENGLISH." Third Edition. Price 1s.

This also embodies most of the errors in the sentences set for correction in the Examination Papers of the London Matriculation, the Oxford and Cambridge Locals, the College of Preceptors, &c.

French Essentials and French Conversation Sentences.

Second Edition. Price 2s. cloth; 1s. 6d. boards. By the same Author.

"This short grammar is compiled by a master who knows his business. The type is good, the arrangement good, and there is nothing superfluous."—*Journal of Education*.

"Students preparing for examination in French grammar and composition will know the worth of this little book. The colloquial sentences at the end are a useful addition."—*Bookman*.

LONDON: RELFE BROTHERS, Ltd., 6 Charterhouse Buildings, Aldersgate, E.C.

THE COLLEGE OF PRECEPTORS' EXAMINATIONS.—JULY AND DECEMBER, 1900.  
**GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS.**

**SCRIPTURE HISTORY.** *s. d.*

St. Luke. Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo, cloth 1 6  
 Containing—  
 1. *Introduction.*—Author, Life and purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazarite Vow, &c., &c.  
 2. *Text of the Gospel*, with marginal and foot notes.  
 3. *Comments on the Revised Version.*  
 4. *Glossary, and Chapters on our Lord's Teachings.*  
 5. *Appropriately coloured Sketch Maps.*

Acts of the Apostles. New Edition. Part I. Chapters I.-XVI. Edited by the Rev. F. MARSHALL, M.A. ... 1 6  
 Acts of the Apostles. (complete). New Edition. Edited by the Rev. F. MARSHALL, M.A. ... 2 6  
 Acts of the Apostles. New Edition. Part II. Chapters XVII.-end.  
*Note.*—Each of the above editions having been re-edited and enlarged, the form and arrangement differs from any previous edition of these works.

The O. and C. Genesis. With Notes ... 1 0  
 Preparation Papers on St. Luke. Per packet ... 0 8  
 Preparation Papers on Acts of the Apostles. Per packet ... 0 8  
*The great popularity of this series is evidenced by their adoption for class use in the following Schools and Colleges—*  
 Wellingborough Grammar School; Mathematical School, Rochester; Dean Close School, Cheltenham; Merchant Taylors' School, Crosby; King's High School, Warwick; Framlingham College; Dunstable Grammar School; The King Edward's Schools, Birmingham; Royal St. Anne's Schools, Redhill; Congregational School, Caterham; Tiffin's School, Kingston; Tennison's School, W.C.; The Grocers' Company School, Hackney Downs; The Grammar Schools, Ashby-de-la-Zouch; Alderman Newton's School, Leicester; Downside College, Bath; Newport Grammar School, Isle of Wight; Crediton Grammar School; Devon County School; Marlring School, Stroud; Newcastle High School; Darlington Grammar School; Maidenhead College; Elmfield College, York; St. Martin's High School, W.C.; Christ's Hospital Girls' School, Hertford; Bedford Grammar School; St. Albans Grammar School; Ipswich Middle School; Clergy Orphan School, Canterbury; Kendrick's School, Reading; The Kent Colleges at Canterbury and Folkestone; Maidstone Girls' Grammar School; Rochester Girls' Grammar School; University School, Southport; King Edward's Middle School, Norwich; Bury Grammar School; Bury High School; Bury St. Edmund's School; Rotherham Grammar School; Magdalen College School, Brackley; Queen's School, Basingstoke; Woodhouse Grove School, Apperley Bridge; Rydal Mount, Colwyn Bay; Handel College, Southampton; Trafalgar House School, Winchester; Southampton Grammar School; Farnham Grammar School; Kingswood School, Bath; Spalding Grammar School; Borden School, Sittingbourne; Simon Langton School, Canterbury; Royal Masonic School, S.W.; Tottenham Grammar School; Colfe's School, Lewisham; Hele's School, Exeter; Royal Grammar School, Guildford; Aske's Hatcham School; Wolverley Grammar School; St. John's School, Leatherhead; High School, Middlesbrough; Eugeley Grammar School; Truro College; Barbourne College, Worcester; Latymer Upper School, Hammersmith; Alleyn's School, Dulwich.

**GEOGRAPHY.** *s. d.*

The Student's Geography. By GEORGE GILL, F.R.G.S. Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition ... 4 6  
 Physical, Descriptive, Political, Industrial, Commercial, Social.  
*Also published in Sections as follows—*  
 Section I.—Europe, including British Isles, and Physical and Commercial Introduction ... 2 6  
 Section I.A.—British Isles ... 1 6  
 Section II.—Asia, Africa, America, and Australasia ... 2 6  
 Section III.—Asia ... 1 0  
 Section IV.—Africa ... 1 0  
 Section V.—America ... 1 6  
 Section VI.—Australasia ... 0 9  
 The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes ... 2 6  
 The O. and C. Geography (Revised Edition). By GEORGE GILL. With numerous Coloured Maps ... 1 0  
 A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. Written expressly for the Junior Forms Examination ... 1 0  
 The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies ... 2 6  
 The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps ... 1 0

**HISTORY.**

The Imperial History of England. By ROSCOE MORGAN, B.A. ... 2 6  
 The O. and C. History of England ... 1 0  
 Outlines and Dates of English History. By A. A. GUNNIS ... 1 0  
*This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &c.*  
 History Notes. By GEORGE GILL, F.R.G.S. With Maps ... 0 6

**ENGLISH.** *s. d.*

Shakespeare's As You Like It. Edited by the Rev. F. MARSHALL, M.A. ... 1 6  
 Containing—  
*Introduction.*—Source, Editions, Date, Scene of the Play; the Utinies, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes.  
*Text* with marginal and foot notes, and paraphrase of difficult passages.  
*Appendix.*—Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.

Scott's Lay of the Last Minstrel. Edited by the Rev. G. PRESTON, M.A., First Class Classical Tripos (Editor of Macaulay's "Lays of Ancient Rome"). Crown 8vo, cloth ... 1 0  
 Containing *Introduction, Text* with marginal and foot notes, *Appendix, and Maps.* [Nearly Ready.]

Scott's Marmion. Edited by the Rev. F. MARSHALL, M.A. [In the Press] ... 2 6

**For Junior Forms.**

Macaulay's Lays of Ancient Rome. Containing Prophecy of Cypria, Ivory, and the Armada. Edited by the Rev. G. PRESTON, M.A. Cloth, crown 8vo ... 1 6  
 Containing *Introduction, Text* with marginal and foot notes, *Appendix, and Coloured Maps.*

The O. and C. Grammar. By the Rev. CHARLES BROOKE, M.A. ... 1 0  
 Preparation Papers in English Grammar. Per packet of 60 papers ... 0 8

**BOOK-KEEPING.**

Sarll's Practical Book-keeping. 128 pp., cloth ... 1 0  
 An Elementary Text-Book, illustrating the arrangement of the Bought, Sales, Cash, Bill Books and Ledger; consisting of Graduated Exercises, followed by Examination Papers set by the College of Preceptors, accompanied by *full-worked and outline keys.*

Sarll's Double Entry Book-keeping. 256 pp., cloth ... 2 0  
 Sarll's Exercises in Double Entry Book-keeping. 128 pp., cloth ... 1 0  
 The above with *all* introductory matter, *full* explanations, *outline* keys, &c.  
*Manuscript Books published to accompany the above.*  
 For Practical:—Cash Book ... 5d. Ledger ... 0 7  
 Ledger (100 Accounts) ... 7d.  
 For Double Entry:—Journal ... 5d. Ledger ... 0 7  
 Short and Introductory Exercises ... 7d.

Key to Double Entry Book-keeping ... 3 0  
 Key to Practical Book-keeping ... 2 0

**ARITHMETIC AND MATHEMATICS.**

Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A. ... 2 6  
 Marshall's Examination Euclid. Books I.-IV. ... 1 0  
 The O. and C. Algebra ... 1 6  
 Preparation Papers in Algebra. By A. CUDWORTH, M.A. ... 0 8  
 The O. and C. "Practical Arithmetic," 176 pp., crown 8vo (New Edition), cloth, enlarged (with Answers, 1s. 6d.) ... 1 0  
 Answers, in cloth ... 0 6  
 Every Answer in Electrotypic Edition guaranteed correct.  
 The O. and C. "Tests in Arithmetic," (with Answers, 1s. 6d.). Answers only, 6d. ... 1 0  
 A Graduated Examination Arithmetic, 160 pp., cloth ... 1 6  
 With Answers ... each 0 6  
 The Metric System, Practical Guide to, containing Appendix, &c. ... 0 2  
 The Metric Chart (60 by 40), in 4 tints, mounted and varnished ... 10 6  
 The Long Tot Book, by the Rev. CHARLES BROOKE, M.A. ... 0 3  
 The Cross Tot Book, by the Rev. CHARLES BROOKE, M.A. ... 0 3  
 Cambridge Local Papers in Arithmetic, by C. CUDWORTH, M.A., per packet 0 8

**LATIN AND FRENCH.** *s. d.*

The O. and C. Latin, Part I. (Accidence) ... 1 0  
 The O. and C. Latin, Part II. (Exercises) ... 1 0  
 The O. and C. Latin, Part III. (Translations) ... 1 0  
 Commercial French Correspondence ... 1 0  
 The O. and C. French, Part I. ... 1 0  
 The O. and C. French, Part II. ... 1 0  
 Pœdrus, Books I. and II. ... 1 0  
 Eutropius, Books I. and II. ... 1 0  
 Cæsar, Book VI. ... 1 0  
 Vergil—Æneid, Book VI. ... 1 0  
 Orosio de Senecute ... 1 0  
 Preparation Papers in French ... 0 8  
 Preparation Papers in Latin ... 0 8

**NATURAL SCIENCE.**

Physical Measurements ... 2 6  
 or in Three Parts ... each 0 9  
 Elementary Physics ... 2 6  
 Applied Mechanics ... 2 6  
 Mechanics of Solids ... 2 0  
 Mechanics of Fluids ... 2 0  
 Magnetism and Electricity ... 2 6  
 Physiological Charts, Set of Three 21 0  
 Elementary Chemistry ... 2 6  
 Chemical Laws and Problems ... 2 6  
 Chemistry of Common Objects ... 2 6  
 Chemistry Notes ... 1 0

**DRAWING.**

Science and Art Geometry, Part I. ... 1 4  
 Science and Art Geometry, Part II. ... 1 4  
 The School of Art Geometry ... 1 0  
 New Government Drawing Copies per packet 1 4  
 South Kensington Demonstration Sheets the set 15 0

**MUSIC.**

Theory of Music, Part I. ... 1 0  
 Theory of Music, Part II. ... 1 0  
 Imperial Theory of Music ... 2 6

**GILL'S "CARTOGRAPHIC" WALL MAPS FOR SECONDARY SCHOOLS.**

Edited by GEORGE GILL, F.R.G.S.

**Size,** NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR. **Price 16s.**

80 x 60 in.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Now Ready.

\* ENGLAND AND WALES. \* SCOTLAND. \* IRELAND. EUROPE. INDIA. \* AFRICA. ASIA. WORLD (Mercator). \* N. AMERICA. THE SERIES, CONSISTING OF TWELVE MAPS, WILL BE COMPLETED SHORTLY.

\* Set Geography for the College of Preceptors' Examination.  
 Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases. Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# MACMILLAN & CO.'S EDUCATIONAL PUBLICATIONS.

*Text-Books suitable for the College of Preceptors and other Examinations.*

## GRADUATED SERIES OF ENGLISH GRAMMARS.

By J. C. NESFIELD, M.A. *For use in Secondary Schools.*

### The Uses of the Parts of Speech. Price 6d., cloth.

A general outline, with a large number of Exercises, showing the main purpose or purposes for which each part of speech is used in the construction of a sentence. For the use of students up to the age of ten or thereabouts.

### Outline of English Grammar. Price 1s. 6d., cloth.

A short and easy guide to Accidence, Parsing, Analysis of Sentences, Conversion of Sentences from one form to another, Sequence of Tenses, Analysis of Words, the Sounds, Symbols, and Spellings in present use, the origin and history of the chief inflections and of words in common grammatical use. With copious and carefully graded Exercises throughout.

### A Short History of English Literature. By Prof. G. SAINTSBURY. 8s. 6d.

**Shakespeare.—As You Like It.** With Introduction and Notes. By K. DEIGHTON. 1s. 9d.

**Scott.—The Lay of the Last Minstrel.** With Introduction and Notes. By G. H. STUART, M.A., and E. H. ELLIOT, B.A. Cantos I. to III., 1s. 3d.; sewed, 1s.

**Macaulay.—Lays of Ancient Rome.**—With Introduction and Notes. By W. T. WEBB, M.A. 1s. 9d. (Contains the Prophecy of Cupys, Ivry, and the Armada.)

**English Grammar.** By Rev. R. MORRIS. 1s.

**Exercises on Morris's Primer of English Grammar.** By JOHN WETHERELL, M.A. 1s.

**English Grammar Exercises.** By R. MORRIS, LL.D., and H. C. BOWEN, M.A. 1s.

**Elementary Lessons in Historical English Grammar.** By Rev. R. MORRIS, LL.D. 2s. 6d.

**A Method of English for Secondary Schools.** By JAMES GOW, Litt.D., Headmaster of the Nottingham High School. 2s.

**A First Book in Writing English.** By E. H. LEWIS, Ph.D. 3s. 6d.

**Primer of English Composition.** By Prof. NICHOL. 1s.

**Questions and Exercises on English Composition.** By Prof. NICHOL and W. S. M'CORMICK. 1s.

**Principles of English Composition through Analysis and Synthesis.** By P. GOYEN, Inspector of Schools, New Zealand. 2s. Key 4s. net.

**Primer of English Literature.** By STOPFORD BROOKE, M.A. 1s.

**A First Sketch of English History.** Part I.: 449–1307. Part II.: 1307–1689. Part III.: 1689–1895. By E. J. MATHEW, M.A. 2s. each. Complete in One Volume, 3s. 6d.

**History of England.** By EDITH THOMPSON. 2s. 6d.

**A History of England for Beginners.** By A. B. BUCKLEY. 3s.

**A Primer of English History.** By A. B. BUCKLEY. 1s.

**Short History of the English People.** By J. R. GREEN, M.A. 8s. 6d. Also, in FOUR PARTS, with Analysis. I.: 607–1265. II.: 1265–1540. III.: 1540–1689. IV.: 1660–1873. 3s. each.

**A Short Geography of the British Islands.** By J. R. GREEN, LL.D., and A. S. GREEN. With Maps. 3s. 6d.

**Geography of the British Isles.** By Sir A. GEIKIE, F.R.S. 1s.

**The Elementary School Atlas.** By J. BARTHOLOMEW, F.R.G.S. 1s.

**Class-Book of Geography.** By C. B. CLARKE, F.R.S. 2s. 6d.; sewed, 2s.

**Class-Book of General Geography.** By H. R. MILL, D.Sc. 3s. 6d.

**Geography of Europe.** By J. SIME, M.A. Illustrated. 2s.

**Geography of India, Burma, and Ceylon.** By H. F. BLANFORD. 2s.

**Geography of Africa.** By EDWARD HEAWOOD. 2s. 6d.

**Man and his Markets.** By LIONEL W. LYDE. Illustrated. 2s.

**Easy Arithmetical Exercises for Beginners.** By J. G. BRADSHAW, M.A. 2s. With Answers, 2s. 6d.

**A School Arithmetic.** By R. F. MACDONALD. 2s. 6d.

**Arithmetic in Theory and Practice.** By J. BROOKSMITH, LL.B. 4s. 6d. KEY, 10s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

### Manual of English Grammar and Composition. Price 2s. 6d., cloth.

A guide to Parsing and Analysis, Composition, the Figures of Speech, Enlargement of the Vocabulary by Affixes and Metaphors, the main divisions of Prose Composition, the peculiarities of Poetic Diction, and an outline of the History of the Language. With copious and carefully graded Exercises.

KEY TO MANUAL OF ENGLISH GRAMMAR AND COMPOSITION. [In the press.]

### English Grammar Past and Present. Price 4s. 6d., cloth.

A full account of Modern English Grammar, some peculiarities of Idiom and Construction, the Origin and Growth of English, a History of Sounds, Symbols, Spellings, and Accents, the Growth of Accidence from Anglo-Saxon and other sources, the origin and use of Prefixes and Suffixes. With Appendices on Prosody, Synonyms, the Changed Meanings of Words, and other outlying subjects. With copious and carefully graded questions selected from the London Matriculation Examinations.

### Rules and Examples in Arithmetic. By Rev. T. DALTON, M.A. With Answers, 2s. 6d.

**Arithmetic for Schools.** By S. L. LONEY, M.A. With and without Answers. 4s. 6d. Examples, 3s. Answers, 6d.

**Arithmetic for Schools.** By Rev. BARNARD SMITH, M.A. 4s. 6d. KEY, 8s. 6d.

\* \* \* The same, Revised by Prof. W. H. H. Hudson, 4s. 6d.

**Arithmetic for Schools.** By Rev. J. B. LOCK, M.A. New Edition, Revised and Enlarged. 4s. 6d. Examples, 3s. Answers, 6d.

**Arithmetic for Beginners.** By Rev. J. B. LOCK, M.A. 2s. 6d. KEY, 8s. 6d.

**Arithmetical Exercises and Examination Papers.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. 2s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Rules and Examples in Algebra.** By Rev. T. DALTON, M.A. Part I., 2s. Part II., 2s. 6d. KEY to Part I., 7s. 6d.

**Algebraical Exercises.** By Rev. C. A. JONES, M.A., and C. H. CHEVNE, M.A. 2s. 6d. SOLUTIONS, 7s. 6d.

**Algebra for Beginners.** By I. TODHUNTER. New Edition, thoroughly Revised by S. L. LONEY, M.A. 3s. 6d. With Answers, 4s. 6d. KEY, 8s. 6d.

**Algebra for Beginners.** By I. TODHUNTER, F.R.S. 2s. 6d. KEY, 6s. 6d.

**Elementary Algebra.** By C. SMITH, M.A. 4s. 6d. KEY, 10s. 6d.

**A Treatise on Algebra.** By C. SMITH, M.A. 7s. 6d. KEY, 10s. 6d.

**Algebra for Beginners.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. 2s. With Answers, 2s. 6d.

**Elementary Algebra for Schools.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. Seventh Edition, 3s. 6d. With Answers, 4s. 6d. Answers, 1s. KEY, 8s. 6d.

**Algebraical Exercises and Examination Papers.** By the Same. 2s. 6d.

**Higher Algebra.** By the Same. 7s. 6d. KEY, 10s. 6d.

**A Text-Book of Euclid's Elements.** By H. S. HALL, M.A., and F. H. STEVENS, M.A. Globe 8vo. Book I., 1s.; Books I. and II., 1s. 6d.; Books I.–III., 2s. 6d.; sewed, 2s.; Books II. and III., 2s.; Books I.–IV., 3s.; Books III.–IV., 2s.; Books III.–VI., 3s.; Books IV.–VI., 2s. 6d.; Books V.–VI., XI., and XII., Props. 1, 2, 2s. 6d.; Books I.–VI., XI., XII., and Props. 1, 2, 4s. 6d.; Book XI., 1s. KEY to Books I.–IV., 6s. 6d. KEY to VI. and XI., 3s. 6d. KEY to I.–VI. and XII., 8s. 6d.

**A First Step in Euclid,** consisting of the First Twelve Propositions. By J. G. BRADSHAW, B.A. 1s. 6d.

**Euclid's Elements of Geometry.** By CHARLES SMITH, M.A., and SOPHIE BRYANT, D.Sc. Book I., 1s.; Books I. and II., 1s. 6d.; Books III. and IV., 2s.

**Exercises in Euclid, Graduated and Systematised.** By W. WEEKS, 3s.; or separately—Book I., 1s.; Books I.–III., 1s. 9d.; Books I.–VI., 1s. 9d. Complete, 3s.

**The Elements of Euclid.** By I. TODHUNTER, F.R.S. New Edition. Revised by S. L. LONEY, M.A. 4s. 6d. Books I. and II., 1s. 6d.; Books I.–IV., 3s.

**The Elements of Euclid.** By I. TODHUNTER, F.R.S. 3s. 6d. Books I. and II., 1s. KEY, 6s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d.



# MACMILLAN & CO.'S EDUCATIONAL PUBLICATIONS—(Continued).

*Text-books suitable for the College of Preceptors and other Examinations.*

- First Lessons in Book-keeping.** By J. THORNTON. 2s. 6d. KEY, 10s. 6d.
- Exercise Books to First Lessons in Book-keeping.** No. 1, for Lessons I.-IX., 9d.; No. 2, for Test Exercises, 9d.; No. 3, for Test Exercises, 1s. 6d.; No. 4, for Lessons XIII. and XIV., 1s. 6d. Case to contain all the above, 6d.; complete set with case, 5s. No. 5, Condensed Edition for Working out a Selection on all the Lessons, 2s.; No. 6, Journal, 6d. Examination Papers in Book-keeping, 9d. KEY to Examination Papers, 2s.
- Primer of Book-keeping.** By the Same. 1s. KEY, 2s. 6d.
- Exercise Books to Primer of Book-keeping.** Part I., Ledger; Part II., Journal. The Set, 1s.
- Easy Exercises in Book-keeping.** By J. THORNTON. 1s.
- A Manual of Book-keeping.** By J. THORNTON. 7s. 6d.
- Examination Papers in Book-keeping.** By J. THORNTON. 9d. KEY, 2s.
- Advanced Examination Papers in Book-keeping.** By J. THORNTON. 1s. KEY, 2s. 6d.
- 
- Cæsar.—Gallic War. Book V.** With Notes and Vocabulary. By C. COLBECK, M.A. 1s. 6d.
- Eutropius. Books I. and II.** With Notes and Vocabulary. By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- Horace.—Odes. Book III.** With Notes and Vocabulary. By T. E. PAGE, M.A. 1s. 6d. Edited by the Same. 2s.
- Livy. Book XXII.** With Notes and Vocabulary. By Rev. W. W. CAPES, M.A., and J. E. MELHUSH, M.A. 1s. 6d.
- Phædrus.—Fables.** With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.
- **Select Fables.** With Notes and Vocabulary. By Rev. A. S. WALPOLE, M.A. 1s. 6d.
- Virgil.—Æneid. Book IX.** With Notes and Vocabulary. By Rev. H. M. STEPHENSON, M.A. 1s. 6d.
- Macmillan's Latin Course.** By A. M. COOK, M.A., and W. E. P. PANTIN, M.A. First Part, 3s. 6d. Second Part, 4s. 6d.
- Shorter Latin Course.** By the Same. Part I., 1s. 6d. KEY, 4s. 6d. net. Part II., 2s. KEY, 4s. 6d. net.
- Macmillan's Latin Reader.** By H. J. HARDY, M.A. 2s. 6d.
- A First Latin Grammar.** By M. C. MACMILLAN, M.A. 1s. 6d.
- Macmillan's Elementary Latin-English Dictionary.** To the Prose Writings of Cæsar, Sallust, Nepos, Livy, Eutropius, and Portions of Cicero; and the Poems of Catullus, Vergil, Horace, Ovid, and Phædrus. For use in Preparatory Schools and Junior Forms. By Rev. G. H. NALL, M.A. 3s. 6d.
- First Steps to Latin Prose Composition.** By Rev. G. RUST, M.A. 1s. 6d. KEY, 3s. 6d. net.
- Short Exercises in Latin Prose Composition.** By Rev. H. BELCHER, LL.D. Part I., 1s. 6d. KEY, 3s. 6d. net. Part II., 2s. KEY, 3s. net.
- Latin Accidence and Exercises.** Arranged for Beginners. By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- Latin Prose Exercises based upon Cæsar's Gallic War.** By C. BRYANS. 2s. 6d. KEY, 4s. 6d. net.
- Latin Prose after the Best Authors.** By F. B. SIMPSON, B.A. Part I., CÆSARIAN PROSE. 2s. 6d. KEY, 5s. net.
- A First Latin Verse Book.** By W. E. P. PANTIN, M.A. 1s. 6d. KEY, 4s. net.
- Sermo Latinus.** A Short Guide to Latin Prose Composition. By Prof. J. P. POSTGATE, Litt.D. 2s. 6d. KEY, 4s. 6d. net.
- Exercises in Unseen Translation in Latin.** By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- 
- Euripides.—Medea.** With Notes and Vocabulary. By Rev. M. A. BAYFIELD, M.A. 1s. 6d.
- Xenophon.—Anabasis. Book III.** With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.
- Macmillan's Greek Course—**
- First Greek Grammar.** By Rev. W. G. RUTHERFORD, LL.D. Accidence, 2s. Syntax, 2s. Complete, 3s. 6d.
- Easy Exercises in Accidence.** By H. G. UNDERHILL, M.A. 2s.
- A Second Exercise Book.** By Rev. W. A. HEARD, M.A. 2s. 6d.
- Easy Exercises in Syntax.** By Rev. G. H. NALL, M.A. 2s. 6d.
- 
- Greek Reader.—Stories and Legends.** With Notes, Vocabulary, and Exercises. By F. H. COLSON, M.A. 3s.
- Passages for Greek Translation for Lower Forms.** By G. H. PEACOCK, M.A., and E. W. W. BELL, M.A. 1s. 6d.
- An Introduction to Greek Prose Composition.** By H. PITMAN, M.A. 2s. 6d.
- St. Matthew's Gospel.** Greek Text, with Introduction and Notes. By Rev. A. SLOMAN, M.A. 2s. 6d.
- The Acts of the Apostles.** Authorized Version, with Notes. By T. E. PAGE, M.A., and Rev. A. S. WALPOLE, M.A. 2s. 6d.
- The Greek Text.** With Notes. By T. E. PAGE, M.A. 3s. 6d.
- 
- Lessons in French.** By H. COUTHOPE BOWEN, M.A. 1s.
- The Study of French according to the Best and Newest Systems.** By A. F. EUGÈNE and H. E. DURIAUX. 3s. 6d. Exercise Books, in Eight Books, 6d. each.
- Macmillan's Progressive French Course.** By G. E. FASNACHT. FIRST YEAR, 1s. Supplementary Exercises to First Year, 1s. SECOND YEAR, 2s. THIRD YEAR, 2s. 6d. KEYS, 4s. 6d. net each.
- Macmillan's Progressive French Readers.** By the Same. FIRST YEAR, 2s. 6d. SECOND YEAR, 2s. 6d.
- Macmillan's French Composition.** By the Same. Part I., 2s. 6d. KEY, 4s. 6d. net. Part II., 5s. KEY, 5s. net.
- Kroeh's French Course.** A Three-Year Preparatory Course. By C. M. KROEH, A.M. FIRST YEAR, 3s. 6d. SECOND YEAR, 3s. 6d. THIRD YEAR, 5s.
- A Historical French Grammar.** By A. DARMESTETER. Edited by E. MURET and L. SUDRE. Authorized Translation by Prof. A. HARTOG. 12s. 6d.
- Selections of French Idioms for English Readers.** By Madame PH. PLAN. With a Preface by F. F. ROGET. 3s. 6d.
- An Abridged French Grammar for Schools.** By G. E. FASNACHT. 2s. 6d.
- A Compendious Dictionary of the French Language.** By Prof. ALFRED ELWALL and GUSTAVE MASSON. 3s. 6d.
- 
- A German Primer.** By OTTO SIEPMANN. 3s. 6d.
- Macmillan's Progressive German Course.** By G. E. FASNACHT. FIRST YEAR, 1s. 6d. SECOND YEAR, 3s. 6d. KEYS, 4s. 6d. net each.
- Macmillan's Progressive German Readers.** By the Same. FIRST YEAR, 2s. 6d.
- Macmillan's German Composition.** By the Same. Part I., 2s. 6d. KEY, 4s. 6d. net.
- A Compendious German and English Dictionary.** By Prof. WHITNEY and A. H. EDGREN. 5s. German-English, 3s. 6d.
- 
- Elementary Physics and Chemistry.** By R. A. GREGORY and A. T. SIMMONS. 1s. 6d.
- Exercises in Practical Physics.** By R. A. GREGORY and A. T. SIMMONS. Part I., 2s.
- Elementary General Science.** By A. T. SIMMONS and L. M. JONES. 3s. 6d.
- Elementary Practical Physics.** By R. A. GREGORY. 2s. 6d.
- An Introduction to Practical Physics.** By D. RINTOUL, M.A. 2s. 6d.
- Heat, Light, and Sound.** By D. E. JONES. 2s. 6d.
- Heat for Advanced Students.** By E. EDSEER. 4s. 6d.
- Magnetism and Electricity for Beginners.** By H. E. HADLEY. 2s. 6d.
- Chemistry for Organized Schools of Science.** By S. PARRISH. 2s. 6d.
- Inorganic Chemistry for Beginners.** By Sir H. E. ROSCOE and J. LUNT. 2s. 6d.
- Inorganic Chemistry for Advanced Students.** By Sir H. E. ROSCOE and A. HARDEN. 4s. 6d.
- Study of Chemistry.** By W. H. PERKIN and B. LEAN. 2s. 6d.
- Physiology for Beginners.** By Sir M. FOSTER and L. E. SHORE. 2s. 6d.
- Botany for Beginners.** By E. EVANS. 2s. 6d.

# MESSRS. LONGMANS & CO.'S LIST.

By **CYRIL RANSOME, M.A.**

**Short History of England.** From the Earliest Times to the Present Day (1895). With Tables, Plans, Maps, Index, &c. Crown 8vo, 3s. 6d.

Or, in Two Parts, 2s. each: Part I. To the Death of Elizabeth, A.D. 1603. Part II. A.D. 1603 to 1895.

JUST PUBLISHED. PRICE ONE SHILLING.

**A Summary of Ransome's Short History of England.** With 22 Maps and Plans and 36 Genealogical Tables.

By **SAMUEL RAWSON GARDINER, M.A., LL.D.**

**A Student's History of England.** From the Earliest Times to 1885. Vol. I.: B.C. 55-A.D. 1509. With 173 Illustrations. Crown 8vo, 4s. Vol. II.: 1509-1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.: 1689-1885. With 109 Illustrations. Crown 8vo, 4s. Complete in one Volume, with 378 Illustrations, crown 8vo, 12s.

Preparatory Questions on the above. By R. SOMERVELL, M.A., Assistant-Master at Harrow School. Crown 8vo, 1s.

**A School Atlas of English History.** With 66 Maps and 22 Plans of Battles, &c. Fcap. 4to, 5s.

**Outline of English History, B.C. 55 to A.D. 1895.** With 96 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By **C. W. C. OMAN, M.A., F.S.A.**

**A History of Greece.** From the Earliest Times to the Macedonian Conquest. With Maps and Plans. Crown 8vo, 4s. 6d.

By **ALEXANDER BAIN, LL.D.**

**A First or Introductory English Grammar.** 18mo, 1s. 4d.

KEY with additional Exercises. 18mo, 1s. 9d.

**A Higher English Grammar.** Fcap. 8vo, 2s. 6d.

**A Companion to the Higher English Grammar.** Being intended as a help to the thorough mastery of English. Crown 8vo, 3s. 6d.

**English Composition and Rhetoric.** Original Edition. Crown 8vo, 4s.

**English Composition and Rhetoric.** Enlarged Edition. (Two Parts.) Part I.: The Intellectual Elements of Style. Crown 8vo, 3s. 6d. Part II.: The Emotional Qualities of Style. Crown 8vo, 3s. 6d.

**On Teaching English,** with Detailed Examples and the Definition of Poetry. Crown 8vo, 2s. 6d.

By **A. A. SOMERVILLE, B.A.**

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

By **LÉON CONTANSEAU, M.A.**

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

By **Dr. B. H. KENNEDY.**

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. and J. E. KENNEDY, and H. WILKINSON M.A. Cr. 8vo, 1s. 6d. A KEY, for the use of Masters only. 2s. 9d. net, post free.

By **ARTHUR SIDGWICK, M.A.**

**A First Greek Writer.** Crown 8vo, 3s. 6d. A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.** With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus. Euripides.—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alcestis. Bacchae. Hecuba. Medea.

**An Introduction to Greek Verse Composition.** With Exercises. By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By **T. K. ARNOLD, M.A.**

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

By **H. G. LIDDELL, D.D., and ROBERT SCOTT, D.D.**

**Greek-English Lexicon.** 4to, 36s.

**Greek-English Lexicon.** Abridged from the above. Square 12mo, 7s. 6d.

By **JAMES SULLY, M.A.**

**Outlines of Psychology.** Crown 8vo, 9s.

**The Teacher's Handbook of Psychology.** Crown 8vo, 6s. 6d.

**Studies of Childhood.** 8vo, 10s. 6d.

**Children's Ways:** being Selections from the Author's "Studies of Childhood," with some additional matter. With 25 Figures in the Text. Crown 8vo, 4s. 6d.

By **Professor GANOT.**

Translated and Edited by E. ATKINSON, Ph.D., F.C.S.

**Elementary Treatise on Physics, Experimental and Applied.** With 9 Coloured Plates and 1,057 Woodcuts. Crown 8vo, 15s.

**Natural Philosophy for General Readers and Young Persons:** a Course of Physics divested of Mathematical Formulæ, expressed in the language of daily life. With 7 Plates, 624 Woodcuts, and an Appendix of Questions. Crown 8vo, 7s. 6d.

# MESSRS. METHUEN'S LIST

## WORKS BY A. M. M. STEDMAN, M.A.

- Initia Latina:** Elementary Lessons in Latin Accidence. Third Edition. Fcap. 8vo, 1s.
- First Latin Lessons.** Fifth Edition. Enlarged. Crown 8vo, 2s.
- First Latin Reader.** With Notes adapted to the Shorter Latin Primer and Vocabulary. Fourth Edition. Revised. 18mo, 1s. 6d.
- Caesar.—The Helvetian War.** With Notes and Vocabulary. Second Edition. 18mo, 1s.
- Livy.—The Kings of Rome.** With Notes and Vocabulary. Illustrated. 18mo, 1s. 6d.
- Easy Latin Passages for Unseen Translation.** Sixth Edition. Fcap. 8vo, 1s. 6d.
- Exempla Latina: First Exercises on Latin Accidence.** With Vocabulary. Crown 8vo, 1s.
- Easy Latin Exercises on the Syntax of the Shorter and Revised Latin Primer.** With Vocabulary. Seventh and Cheaper Edition. Revised. Crown 8vo, 1s. 6d. Issued with the consent of Dr. KENNEDY.
- The Latin Compound Sentence:** Rules and Exercises. Crown 8vo, 1s. 6d. With Vocabulary, 2s.
- A Vocabulary of Latin Idioms and Phrases.** Second Edition. 18mo, 1s.

- Notanda Quaedam: Miscellaneous Latin Exercises on Common Rules and Idioms.** Third Edition. Fcap. 8vo, 1s. 6d. With Vocabulary, 2s.
- Latin Vocabulary for Repetition:** Arranged according to Subjects. Eighth Edition. Fcap. 8vo, 1s. 6d.
- Steps to Greek.** 18mo, 1s.
- A Shorter Greek Primer.** Crown 8vo, 1s. 6d.
- Easy Greek Passages for Unseen Translation.** Third Edition. Fcap. 8vo, 1s. 6d.
- Greek Vocabulary for Repetition.** Second Edition. Fcap. 8vo, 1s. 6d.
- Greek Testament Selections.** With Introduction, Notes, and Vocabulary. Third Edition. Fcap. 8vo, 2s. 6d.
- Steps to French.** Fourth Edition. 18mo, 8d.
- First French Lessons.** Fourth Edition. Crown 8vo, 1s.
- Easy French Passages for Unseen Translation.** Third Edition. Fcap. 8vo, 1s. 6d.
- Easy French Exercises on Elementary Syntax.** With Vocabulary. Second Edition. Crown 8vo, 2s. 6d. Key, 3s. net.
- French Vocabulary for Repetition.** Eighth Edition. Fcap. 8vo, 1s.

## SCHOOL EXAMINATION SERIES

EDITED BY A. M. M. STEDMAN, M.A. Crown 8vo, 2s. 6d.

- French Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Tenth Edition.
- A Key,** issued to Tutors and Private Students only, to be had on application to the Publishers. Fourth Edition. Crown 8vo, 6s. net.
- Latin Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Ninth Edition.
- Key,** Third Edition (issued as above), 6s. net.
- Greek Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Sixth Edition.
- Key,** Second Edition (issued as above), 6s. net.
- Examination Papers in English History.** By J. TAIT WARDLAW, B.A., King's College, Cambridge. Crown 8vo, 2s. 6d.
- German Examination Papers in Miscellaneous Grammar and Idioms.** By R. J. MORICH, Manchester Grammar School. Fifth Edition.
- Key,** Second Edition (issued as above), 6s. net.
- History and Geography Examination Papers.** By C. H. SPENCE, M.A., Clifton College. Second Edition.
- Science Examination Papers.** By R. E. STEEL, M.A., F.C.S., Chief Natural Science Master, Bradford Grammar School. In Three Vols. Part I., Chemistry. Part II., Physics.
- General Knowledge Examination Papers.** By A. M. M. STEDMAN, M.A. Third Edition.
- Key,** Second Edition (issued as above), 7s. net.

## CLASSICAL TRANSLATIONS

EDITED BY H. F. FOX, M.A., Fellow and Tutor of Brasenose College, Oxford.

- Cicero.—De Natura Deorum.** F. BROOKS, M.A., late Scholar of Balliol College. Crown 8vo, 3s. 6d.
- Cicero.—De Oratore, I.** E. N. P. MOOR, M.A., late Assistant-Master at Clifton. Crown 8vo, 3s. 6d.
- Cicero.—Pro Milone, Pro Murena, Philippic II. in Catilinam.** H. D. BLAKISTON, Fellow and Tutor of Trinity College, Oxford. Crown 8vo, 5s.
- Horace.—Odes and Epodes.** A. D. GODLEY, M.A. Crown 8vo, 2s.
- Sophocles.—Electra and Ajax.** E. D. A. MORSHEAD, M.A., Assistant-Master at Winchester. Crown 8vo, 2s. 6d.
- Aeschylus.—Agamemnon, Choephoroe, Eumenides.** LEWIS CAMPBELL, M.A., LL.D., late Professor of Greek at St. Andrews. Crown 8vo, 5s.
- Lucian.—Six Dialogues (Nigrinus, Icaro-Menippus, Cock, Ship, Parasite, Lover of Falsehood).** S. T. IRWIN, M.A., Assistant-Master at Clifton. Crown 8vo, 3s. 6d.
- Tacitus.—Agricola and Germania.** R. B. TOWNSEND, M.A., late Scholar of Trinity College, Oxford. Crown 8vo, 2s. 6d.

## METHUEN'S COMMERCIAL SERIES

EDITED BY H. DE B. GIBBINS, Litt.D., M.A. Crown 8vo.

- British Commerce and Colonies from Elizabeth to Victoria.** By H. DE B. GIBBINS, Litt.D., M.A., Author of "The Industrial History of England," &c. Third Edition. 2s.
- Commercial Examination Papers.** By H. DE B. GIBBINS, Litt.D., M.A. 1s. 6d.
- The Economics of Commerce.** By H. DE B. GIBBINS, Litt.D., M.A. 1s. 6d.
- A Primer of Business.** By S. JACKSON, M.A. Second Edition. 1s. 6d.
- German Commercial Correspondence.** By S. E. BALLY. Crown 8vo, 2s. 6d.
- French Commercial Correspondence.** By S. E. BALLY. Second Edition. 2s.
- A French Commercial Reader.** By S. E. BALLY. 2s.
- Commercial Geography,** with special reference to the British Empire. By L. W. LYDE, M.A. Second Edition. 2s.
- Commercial Arithmetic.** By F. G. TAYLOR, M.A. Second Edition. 1s. 6d.
- Facile Writing and Office Correspondence.** By E. E. WHITEFIELD, M.A. 2s.
- Guide to Professions and Business.** By HENRY JONES. 1s. 6d.
- The Principles of Bookkeeping by Double Entry.** By J. E. B. M'ALLEN, M.A. 2s.

## TEXT-BOOKS OF TECHNOLOGY

- Carpentry and Joinery.** By F. C. WEBBER. With numerous Illustrations. Crown 8vo, 3s. 6d.
- "It has the marks of practical knowledge set forth by a practical teacher."—*Guardian*.
- Practical Mechanics.** By SIDNEY H. WELLS. Illustrated. Crown 8vo, 3s. 6d.
- Practical Physics.** By H. STROUD, D.Sc., M.A., Professor of Physics in the Durham College of Science, Newcastle-on-Tyne. Fully Illustrated. Crown 8vo, 3s. 6d.
- Practical Chemistry.** By W. FRENCH, M.A. Part I. With numerous Diagrams. Crown 8vo, 1s. 6d. [Shortly.]
- Practical Millinery.** By Miss HILL. With numerous Diagrams. Crown 8vo, 2s. 6d. [Shortly.]
- Educational Reform. The Task of the Board of Education.** By FABIAN WARE. Crown 8vo, 2s. 6d.
- The Story of English Literature.** By EMMA S. MELLOWS. Crown 8vo, 3s. 6d.
- The history of English literature told in a simple style for young students. It is particularly rich in biographical detail and contains a considerable number of illustrative extracts.
- General Elementary Science.** By J. T. DUNN, D.Sc., and V. A. MUNDELLA. With many Illustrations. Crown 8vo, 3s. 6d. [Methuen's Science Primers.]
- A Constitutional and Political History of Rome.** By T. M. TAYLOR, M.A., Fellow of Gonville and Caius College, Cambridge. Senior Chancellor's Medalist for Classics, Porson University Scholar, &c., &c. Crown 8vo, 7s. 6d.
- An account of the origin and growth of the Roman institutions, and a discussion of the various political movements in Rome from the earliest times to the death of Augustus.
- Lacemaking in the Midlands.** By C. C. CHANNER and M. E. ROBERTS. With 16 Full-page Illustrations. Crown 8vo, 2s. 6d. [Shortly.]
- The Scientific Study of Scenery.** By J. E. MARR, Fellow of St. John's College, Cambridge. Illustrated. Crown 8vo, 6s.
- An elementary treatise on geomorphology—the study of the earth's outward forms. It is for the use of students of physical geography and geology, and will also be highly interesting to the general reader.
- A Class Book of Dictation Passages for the Use of Middle and Higher Forms.** By the Rev. W. WILLIAMSON. Second Edition. Crown 8vo, 1s. 6d.
- The passages are selected from recognized authors, and a few newspaper passages are included. The lists of appended words are drawn up mainly on the principle of comparison and contrast, and will form a *répertoire* of over 2,000 words, embracing practically all the difficulties felt by the pupil.
- The Construction of Large Induction Coils.** By A. T. HARE. With numerous Diagrams. Demy 8vo, 5s. [Shortly.]
- The Metric System.** By LÉON DELBOS. Crown 8vo, 2s.
- A theoretical and practical guide for use in elementary schools and by the general reader. [Shortly.]
- A History of Egypt, from the Earliest Times to the Present Day.** Edited by W. M. FLINDERS PETRIE, D.C.L., LL.D., Professor of Egyptology at University College. Fully Illustrated. In Six Volumes. Crown 8vo, 6s. each.
- Vol. VI. **Egypt under the Saracens.** By STANLEY LANE POOLE. [Shortly.]
- A Short History of Rome.** By J. WELLS, M.A., Fellow and Tutor of Wadham College, Oxford. With 3 Maps. Second Edition. Crown 8vo, 3s. 6d.
- "An original work, written on an original plan and with uncommon freshness and vigour."—*Speaker*.
- Passages for Unseen Translation.** By E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and A. M. COOK, M.A., late Scholar of Wadham College, Oxford; Assistant-Masters at St. Paul's School. Crown 8vo, 3s. 6d.
- "A capital selection, and of more variety and value than such books usually are."—*Athenæum*.
- Exercises in Latin Accidence.** By S. E. WINBOLT, Assistant-Master in Christ's Hospital. Crown 8vo, 1s. 6d.
- "Accurate and well arranged."—*Athenæum*.
- Notes on Greek and Latin Syntax.** By C. BUCKLAND GREEN, M.A., Assistant-Master at the Edinburgh Academy, late Fellow of St. John's College, Oxon. Crown 8vo, 3s. 6d.
- "Well arranged, clear, and extremely useful."—*School Guardian*.
- New Testament Greek. A Course for Beginners.** By G. RODWELL, B.A. With a Preface by WALTER LOCK, D.D., Warden of Keble College. Crown 8vo, 3s. 6d.
- A Greek Anthology.** Selected by E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and Assistant-Master at St. Paul's School. Crown 8vo, 3s. 6d.

# DENT'S MODERN LANGUAGE SERIES.

Edited by WALTER RIPPMMANN, M.A.

Just published, extra fcap. 8vo, 3s. 6d. net.

\* **OUTLINES OF HISTORICAL FRENCH GRAMMAR.** By A. T. BAKER, M.A., Ph.D.

The object of this short work is to give, in as brief a space as possible, all that is necessary for those who wish to gain only an elementary knowledge of the philological side of the language, and to form at the same time a trustworthy guide for those who intend studying the subject much more deeply.

Extra fcap. 8vo, 1s. 6d. net.

\*\* **DENT'S FIRST FRENCH BOOK.** Based on the Hülzel Pictures of the Four Seasons. By S. ALGE and WALTER RIPPMMANN.

Extra fcap. 8vo, 1s. 6d. net.

**HINTS ON TEACHING FRENCH.** With a Running Commentary to Dent's First and Second French Books. By WALTER RIPPMMANN.

Prof. FREDERIC SPENCER writes:—"Dent's First French Book appears most opportunely, supplying as it does, on the lines of the 'reform' method, a course which is both rational and eminently practical."

Extra fcap. 8vo, 1s. 6d. net.

\*\* **DENT'S SECOND FRENCH BOOK.** By S. ALGE and WALTER RIPPMMANN. Consists mainly of a charming story by JEANNE MAIBET, "La Tâche du Petit Pierre."

The Second French Book can be taken with a class, even without previously working through the First Book. It will be found an excellent reading book.

"We can heartily commend this reader as an exposition of the new method."  
—*Journal of Education*, Dec., 1898.

Extra fcap. 8vo, 2s. 6d. net.

\* **FRENCH DAILY LIFE.** Adapted by WALTER RIPPMMANN from Dr. KRON'S "Le Petit Parisien."

"For class use it is far better than anything we have previously seen. It is not, of course, intended for beginners. The Englishman travelling in France will find here all the phrases essential to his comfort—not in formal lists, but strung together in a chatty and interesting narrative, which also contains information as to how and where the phrases are to be used."—*Education*.

\*\* SPECIMEN COPIES OF THESE MAY BE HAD BY TEACHERS ON APPLICATION.  
\* SPECIMEN COPIES OF THESE MAY ALSO BE HAD AT HALF-PRICE BY TEACHERS.

J. M. DENT & CO., 29 AND 30 BEDFORD STREET, W.C.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID,

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI.

Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.

By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.

Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."

By JOSEPH B. CASEY, Tutor, University College, Dublin.  
Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."

Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

### ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.

Containing an account of its most recent Extensions, with numerous Examples.  
New Edition. Crown 8vo.

### A TREATISE ON

### ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

### PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples.  
Crown 8vo. Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

### SPHERICAL TRIGONOMETRY,

AND ITS APPLICATION TO GEODESY AND ASTRONOMY.

With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.  
LONDON: LONGMANS & CO.

## WHITTAKER'S LIST.

CATALOGUE POST FREE ON APPLICATION.

**A NEW GRAMMATICAL FRENCH COURSE.** By ALBERT BARRÈRE, Professor R.M.Acad., Woolwich.

PARTS I. and II., in One Volume, ELEMENTARY. 1s.

PART III., INTERMEDIATE. 2s.

The above volumes form Preliminary parts to Professor BARRÈRE'S "Précis of Comparative French Grammar," which is used in many of our large Public Schools.

**PRÉCIS OF COMPARATIVE FRENCH GRAMMAR AND IDIOMS, AND GUIDE TO EXAMINATIONS.** By A. BARRÈRE, Professor R.M.A., Woolwich. Sixth Edition, Revised. 3s. 6d.

In use at Cheltenham College, Haileybury College, King Edward's School (Birmingham), &c., &c.

**FRENCH COMPOSITION, SHORT PASSAGES FOR.**

With a Vocabulary. By ALBERT BARRÈRE, Professor R.M.A., Woolwich, and Examiner to the Intermediate Examination Board, Ireland, and LEON SORNET, French Master, King Edward's High School, Birmingham. Second Edition, Revised. Crown 8vo, 2s. 6d. (In use at Elton College, Cheltenham College, &c.)

**AN ELEMENTARY FRENCH READER.** With full Vocabulary.

By J. F. DAVIS, D.Litt., M.A. (Lond.), Assistant-Examiner in the University of London, and F. THOMAS, B.A., B.Sc., Assistant-Examiner in the University of London. Second Edition, Revised. Crown 8vo, 2s.

**GERMAN FOR BEGINNERS.** A Grammar and Reader on the

New Method. By L. HARCOURT. Second Edition, Revised. 2s. 6d. net.

"This is the best at tempt we have yet seen to introduce the 'New Method' into English schools."—*Journal of Education*.

**ELEMENTARY GERMAN READER:** a Graduated Collection of Readings in Prose and Poetry. With English Notes and a Vocabulary, by F. LANGE, Ph.D. Fifth Edition. 1s. 6d.

**A SCHOOL GEOGRAPHY.** By CHARLES BIRD, B.A., F.G.S., Headmaster of the Mathematical School, Rochester. With Sketch-Maps and Diagrams. Crown 8vo, cloth, 2s. 6d.

"This volume is distinctly in advance of the usual school books of geography."—*Nature*.

"Mr. Bird possesses the first requisite for success—a plain and straightforward style."—*Journal of Education*.

**ELEMENTARY MATHEMATICS.** Arithmetic, Geometry, Algebra, suitable for the Science and Art Examinations. By J. L. S. HATTON, M.A., Director of Studies, East London Technical College, and G. BOOL, B.A., Lecturer in Elementary Mathematics, East London Technical College. Crown 8vo, 2s. 6d.; with Answers, 3s.

WHITTAKER & CO., White Hart Street, Paternoster Square, London.

# APPROVED SCHOOL BOOKS BY DR. CORNWELL, F.R.G.S.

"We are qualified by ample trial of the books in our own classes to speak to their great efficiency and value. We have never known so much interest evinced or so much progress made as since we have employed these as our school-books."—EDUCATIONAL TIMES.

**A School Geography.** 88th Edition; 3s. 6d., or, with 30 Maps, 5s. 6d.

"Very superior to the common run of such books. It contains a good deal of useful matter of a more practical kind than usual, which the exercises are likely to impress on the mind more deeply than by the parrot system."—*Athenæum*.

**A School Atlas.** Consisting of Thirty Small Maps. A Companion Atlas to the Author's "School Geography." 2s. 6d., or 4s. coloured.

**Geography for Beginners.** 68th Edition; 1s., or, with 48 pp. of Questions, 1s. 4d. Questions, 6d.

"A very useful series of Educational Works, of which Dr. Cornwell is either author or editor. It ('The Geography for Beginners') is an admirable introduction. There is a vast difficulty in writing a good elementary book, and Dr. Cornwell has shown himself possessed of that rare combination of faculties which is required for the task."—*John Bull*.

**Spelling for Beginners.** A Method of Teaching Reading and Spelling at the same time. 4th Edition, 1s.

**Allen and Cornwell's School Grammar.** 64th Edition; 2s. red leather, or 1s. 9d. cloth.

"The excellence of the Grammar published by the late Dr. Allen and Dr. Cornwell makes us almost despair of witnessing any decided improvement in this department."—*Athenæum*.

**Arithmetic for Beginners.** Combines simplicity and fullness in teaching the First Four Rules and Elementary Fractions. 9th Edition. 1s.

**Grammar for Beginners.** An Introduction to Allen and Cornwell's "School Grammar." 87th Edition; 1s. cloth, 9d. sewed.

"This simple introduction is as good a book as can be used."—*Spectator*.

The Book is enlarged by a Section on Word-Building, with Exercises for Young Children.

**The Young Composer: Progressive Exercises in English Composition.** 48th Edition, 1s. 6d. Key, 3s.

"The plan of the work is very superior. We are persuaded this little book will be found valuable to the intelligent instructor."—*Westminster Review*.

**Poetry for Beginners: A Selection of Short and Easy Poems for Reading and Recitation.** 13th Edition, 1s.

**The Science of Arithmetic.** A Systematic Course of Numerical Reasoning and Computations; with very numerous Exercises. By JAMES CORNWELL, Ph.D., and Sir JOSHUA G. FITCH, LL.D. 26th Edition. 4s. 6d.

"The best work on arithmetic which has yet appeared. It is both scientific and practical in the best and fullest sense."—*London Quarterly*.

**Key to Science of Arithmetic.** With the Method of Solution to every Question. KEY, 4s. 6d.

"Eminently practical, well stored with examples of wider range and more varied character than are usually given in such books, and, its method of treatment being thoroughly inductive, it is pre-eminently the book for general use."—*English Journal of Education*.

London: Simpkin, Marshall, Hamilton, Kent, & Co., Limited.—Edinburgh: Oliver & Boyd.

## Cambridge Local and Colloge of Preceptors Examinations, 1900.

The following Books, published by RELFE BROTHERS, Ltd., will be found specially adapted for the above Examinations.

### FRENCH.

**Mérimée's Colomba.** With Notes and Vocabulary by the Rev. J. HEWETSON, M.A. Cloth, 2s.

**Ransome's Modern French Grammar.** Crown 8vo, cloth, 1s.

**Illustrated French Grammar.** By LOLY and GOUJON. Second Edition. Cloth, 1s. 6d.

### RELIGIOUS KNOWLEDGE.

**Acts of the Apostles.** With Introduction and Notes by G. CARTER, M.A. 1s. 6d.

**St. Luke.** With Introduction, Notes, and Comments on the Authorized and Revised Versions, by G. CARTER, M.A. 1s. 6d.

"The method adopted by Mr. Carter is at once clear and useful... The text of the Gospel is divided into paragraphs, with headings in bold type; the notes explanatory of passages requiring comment complete a most useful manual."—*School Guardian*.

### PUBLIC EXAMINATION SCRIPTURE MANUALS.

By A. RICHES, F.R.A.S., F.R.G.S.

**The Gospel of St. Luke.** 1s. 6d.

**The Acts of the Apostles.** 1s. 6d.

**The Church Catechism.** 9d.

"Will be found of great service to any teacher... concise and satisfactory."—*British Mail*.

"Will prove exceedingly serviceable."—*Bookseller*.

"A valuable aid to teachers."—*Christian World*.

### ENGLISH HISTORY.

**Wood's Summary of English History B.C. 55—A.D. 1886.** 1s.

**Carter's Outlines of English History (Ninth Edition) B.C. 55—A.D. 1897.** Cloth, 1s. 6d.

**Carter's History of England 1689—1897.** 2s.

**Gutteridge's Chart of English History No. 2, 1066—1837.** 6d.

### ARITHMETIC AND ALGEBRA.

**A First Algebra.** Containing copious and varied original Exercises and Miscellaneous Examples. By Dr. KNIGHT. Cloth, 6d.

**Bowick's Exercises in Arithmetic.** Parts I. and II., 9d. each. ANSWERS, 6d. net.

**Elementary Algebra.** By R. P. SCOTT, M.A., LL.D., and J. MONTGOMERY. Cloth, 1s.; or with ANSWERS, 1s. 3d.

**Relfe Brothers' Easy Intermediate Tests in Arithmetic.** Suitable for Third Class College of Preceptors and the Oxford and Cambridge Preliminary. Price 4d.; ANSWERS, 6d.

**Stewart's Algebra to Simple Equations.** 2s.; with ANSWERS, 2s. 6d.

**Stewart's Home and Class Book of Arithmetical Questions.** Twelfth Edition. 2s. 6d.; ANSWERS, 2s.

### GEOGRAPHY.

**Irvine's Geographical Text-Book.** Illustrated by Twelve Maps. 4to, 1s.

**Irvine's British Possessions and Colonies.** Illustrated by Twelve Maps. 4to, 1s. [Just published.]

**Geographical Questions (chiefly Commercial).** By J. WULFSON. 6d.

**Physical Outline Maps.** 1. Shaded to show the land elevations, bringing out clearly the special character of the country. 2. Comparative areas are shown by inset Maps of the British Isles on the same scale. It is intended that pupils should use these Maps for the purpose of filling in the names and position of towns the names of rivers, mountain districts, &c. Ready: AFRICA, SOUTH AMERICA, SCOTLAND, THE RHINE BASIN, AUSTRALIA, THE WORLD, INDIA, IRELAND, ENGLAND, EUROPE, PALESTINE, CHINESE EMPIRE. 1d. each.

**Relfe Brothers' Charterhouse Atlas.** Thirty-eight Maps (coloured)—containing Railway Map of the British Isles; coloured Map of the Environs of London, Liverpool, Manchester, &c.; large Scale of Map of Palestine, and a good clear Map of the World, as known to the Ancients. Folio size, cloth, 1s.

**Relfe Brothers' Aldersgate Atlas.** 72 4to coloured Maps, with Index, containing Political, Physical, and Classical Maps, Commercial Chart showing the Steamer Routes, Naval and Coaling Stations, Environs of Chief Towns, Manufacturing Districts of Lancashire and Yorkshire, Astronomical Charts, and Diagram of the comparative sizes of Mountains, Rivers, &c. Second Edition Revised. 4to, cloth, 3s.

RELFE BROTHERS, Ltd., Educational Publishers,  
6 CHARTERHOUSE BUILDINGS,

Booksellers, and School and College Stationers,  
ALDERSGATE LONDON, E.C.

NOW READY.

# FOUR VOLUMES OF THE OXFORD CLASSICAL TEXTS.

(SCRIPTORUM CLASSICORUM BIBLIOTHECA OXONIENSIS.)

**THUCYDIDIS HISTORIAE.** Tom. I. (Libri I.-IV.). H. STUART JONES. Paper covers, 3s.; limp cloth, 3s. 6d.**PLATONIS OPERA.** Tom. I. (Tetralogiae I.-II.). J. BURNET. Paper covers, 5s.; limp cloth, 6s.; on India paper, 7s.**LVCRETI CARI DE REEVM NATVRA.** C. BAILEY. Paper covers, 2s. 6d.; limp cloth, 3s.; on India paper, 4s.**CORNELII TACITI OPERA MINORA.** H. FURNEAUX. Paper covers, 1s. 6d.; limp cloth, 2s.*To follow immediately:***AESCHYLII TRAGOEDIAE.** Cum Fragmentis. A. SIDGWICK. Paper covers, 3s.; limp cloth, 3s. 6d.; on India paper, 4s. 6d.*India paper copies are bound in cloth, gilt edges, but may also be purchased bound in smooth Persian calf.*

Just published, Second Edition, Revised, in Two Volumes, demy 8vo, cloth, 15s.

**THUCYDIDES**, translated into English, to which is prefixed an Essay on Inscriptions and a Note on the Geography of Thucydides. By BENJAMIN JOWETT, M.A., late Master of Balliol College. Vol. I., Essay on Inscriptions and Books I.-III. Vol. II., Books IV.-VIII. and Historical Index.

## GREEK LEXICONS.

By H. G. LIDDELL, D.D., and ROBERT SCOTT, D.D.

**A GREEK-ENGLISH LEXICON.** Eighth Edition, Revised. 4to, £1. 16s.**AN INTERMEDIATE GREEK-ENGLISH LEXICON**, founded upon the Quarto Edition of LIDDELL and SCOTT'S Greek Lexicon. Small 4to, 12s. 6d.**AGREEK-ENGLISH LEXICON**, abridged from the Quarto Edition. Square 12mo, 7s. 6d.

## LATIN DICTIONARIES.

By CHARLTON T. LEWIS, Ph.D., and CHARLES SHORT, LL.D.

**A LATIN DICTIONARY**, founded on ANDREWS' Edition of FREUND'S Latin Dictionary, Revised, Enlarged, and in great part Re-written. 4to, £1. 5s.**A SCHOOL LATIN DICTIONARY.** 4to, 18s.**AN ELEMENTARY LATIN DICTIONARY.** Square 8vo, 7s. 6d.

Just published, crown 8vo, pp. xxiv. + 204, cloth, 5s.

**SELECT FRAGMENTS OF THE GREEK COMIC POETS.** Edited, with Table of Subjects, Table of References, and Brief Commentary, by A. W. PICKARD-CAMBRIDGE, M.A.

1. On Rag-made Paper, cloth, 6s. net.

2. On Oxford India Paper, cloth, 7s. 6d. net.

**NOVA ANTHOLOGIA OXONIENSIS.** Translations into Greek and Latin Verse. Edited by ROBINSON ELLIS, M.A., and A. D. GODLEY, M.A.

New Issue. Crown 8vo, cloth, 7s. 6d.

ROMAN POETS OF THE AUGUSTAN AGE.

**HORACE AND THE ELEGIAC POETS.** By W. Y. SELLAR. With a Memoir of the Author by ANDREW LANG, M.A.

A limited number of the 8vo Edition remains on sale. With Portrait, 14s.

Edited by the late H. FURNEAUX, M.A.

**TACITUS.—The Annals.** Books I.-VI. With Introduction and Notes. Second Edition. 8vo, 18s.— **The Annals.** Books XI.-XVI. 8vo, 20s.— **The Annals.** Books I.-IV. With Introduction and Notes (for the use of Schools and Junior Students). Extra fcap. 8vo, 5s.— **The Annals.** Book I. With Introduction and Notes. Extra fcap. 8vo, limp, 2s.— **De Germania.** With Introduction, Notes, and Map. 8vo, 6s. 6d.— **Vita Agricolaë.** With Introduction, Notes, and Map. 8vo, 6s. 6d.

ALSO PUBLISHED BY HENRY FROWDE.

Bourgeois, 32mo, cloth, pp. 508, price 1s. 6d. net. And in various Leather Bindings, from 3s. 6d.

# THE LEARNERS' PRAYER BOOK.

*Being the Book of Common Prayer. With Simple Notes.*

These notes on the Prayer Book have been written for the use of those who have not been well instructed in the meaning of the Book of Common Prayer. The Clergy, it is hoped, will find "The Learners' Prayer Book" useful for their Confirmation Candidates, for the young men and women of their various Classes, for all the children of the Church who have been brought up in Board schools, and for boys and girls starting out in life. On one margin the meaning of all obscure words is given, on the other are Scripture references, and at the foot of each page are simple notes explaining the subject and arrangement of the different Services. With this book in his hand, the least instructed person should be able to join intelligently in the worship of the Church.

*Educational Times.*—"This handy little volume combines in an admirable manner the purposes of a Prayer Book and a book of Instruction. It does not include a history of the Book of Common Prayer, but is explanatory and exegetical in a simple sense. There are marginal references and definitions of terms, and the notes constitute a helpful commentary throughout."

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.



## CONTENTS.

	Page		Page
Technical Universities .....	55	Half-yearly General Meeting of the College of Preceptors .....	67
The Late C. P. Mason .....	56	Conference of Teachers at the Imperial Institute .....	70
Notes .....	56	Reviews .....	76
Summary: The Month.....	58	Mr. Cust's Eton; Bismarck; Logical Education; Aristotle's "Poetics";	
Universities .....	60	A Greek History of Rome.	
The English Education Exhibition.....	61	General Notices.....	78
Correspondence:—London Society for the Extension of Uni-		Adjourned Meeting of the Council of the College of Preceptors	79
versity Teaching .....	62	Teachers' Diploma Examination, Pass List .....	80
Forecasts and Comments:—Fixtures .....	65	Mathematics .....	81
Education Gossip .....	65	List of Candidates who have passed the Christmas Certificate	
Literary Gossip .....	66	and Junior Forms Examinations of the College of Pre-	
Thoughts on Retiring .....	67	ceptors.....	93

## The Educational Times.

### Technical Universities.

THOUGH the conferences of January, at the Imperial Institute and elsewhere, have had a certain measure of attraction for people engaged in the work of education, they can scarcely be said to have shown the same actuality and urgency which distinguished our conferences of two or three years ago. The manifest reason is that what we were propounding and asking for in 1897 and 1898 is now our own, to do what we can with, and for the moment we are not in a phase of actual contention and demand. Rather, let us say, we are the busy bees of the Oxford, Cambridge, and London Conferences who have settled on their honey and are dumb. Our garden of education is full of the honey of organization, which needs to be absorbed, and secreted in the cells.

Sir George Kekewich and Sir William Abney, who were entertained a short time ago by the Association of Technical Institutions at Mercers' Hall, gave evidence that they also are engaged in transferring the honey to the cell. Prof. Wertheimer had proposed the toast of the new Board of Education, and Sir George rose with diffidence to respond for something which had no existence, and with which he had no connexion.

He was no longer Secretary of the Education Department or of the Science and Art Department, and he did not know what was to become of him. All he could say was that, if he should happen to occupy a position on the new Board of Education, he should continue to take the same interest—he hoped officially—in technical institutions that he had taken up to the present more or less as a private individual.

With regard to the policy of the future, Sir George added:—

It might be that in technical instruction we were still behind Continental nations, and especially in the establishment of great technical colleges, which he was desirous of seeing established. But he had great confidence in the English character—in its tenacity and energy; and he was convinced that before long they would be supplied with a system of technical instruction which would be second to none in the world.

Sir William Abney said that, for his part, "if he were entrusted with any duties under the new Board," he should endeavour to do his duty, and to gain the approbation of his colleagues and the public. This is all as it should be. Of course the new Board, in the domain above the elementary, will be very largely concerned with technical instruction, and those who are to be amongst its leading officials do well to assure the Technicals that their interests will not be neglected.

As for the literary schools, they will have their battle to fight. No one will want to neglect them, but some may

neglect them out of sheer ignorance, or distraction, or shortness of vision. Without forgetting that, we are unfeignedly glad to note the zeal of the Technicals for their own secondary and higher education. There is, indeed, no limit to their zeal. Mr. Chamberlain told us at Birmingham of the direction in which their zeal is leading them. Birmingham seems likely to be the Technical University *par excellence*. She has her Faculties of Arts and Science already, by virtue of the absorption of Mason College. She is to have her school of beer, because people interested in beer found the money for it. Apparently there is no good reason against any faculty whatsoever, if the money is forthcoming. For what does Mr. Chamberlain say?—

We ought to have a school of railway engineering, of electrical lighting, of railway management; every large trade in the town ought to be represented in the new University by specialized instruction—especially towards the termination of the University course—by such specialized instruction as will enable the students to leave college fully equipped to take a proper part in the work for which they are destined. . . . We are, I think, on the eve of discoveries which may be more important for the human race than any that have been made in centuries past; and I hope that we are going to take our full share in the research and the study which may lead up to these discoveries.

This, again, is excellent in its way. After all, a University is a place for universal knowledge and faculty, for endowed research and untiring invention. The country will have no reason to complain if Birmingham pushes the technical idea to its utmost development. London, too, is likely to make a great advance in the same direction, though she has other and more Imperial functions to discharge. The endowment of the London University is beginning in good earnest, for, what with State grants, County Council promises, and Lord Iveagh's munificent offer, she is already in a fair way towards equipment. Mr. Busk, on retiring from his position as Chairman of Convocation, mentioned a fact of very considerable interest. London University, he said, bids fair to become a universally recognized sphere for post-graduate learning and research. From information which has come before the Statutory Commission, it is anticipated that as many as a thousand students may be expected to attend the University from our Colonies and the United States of America, for purposes of research. At the present time, as Mr. Busk said, many go to one or another of the German Universities, and, without in any way reflecting on the German system, we should all prefer to see the students in question imbued with British rather than with German ideas. This, amongst other things, is what is understood by the Imperial function of London University.

*The late  
C. P. Mason.*

CHARLES PETER MASON, B.A., F.C.P., Fellow of University College, London, has passed away full of years and of honour. His death will awaken many kindly recollections in the minds of nearly all who read these words. Not only was he prominent in his day amongst the pioneers of secondary education, forty or fifty years ago, and an active member of the College of Preceptors in various capacities, but he was also an educational writer of high repute.

Born at Highgate, in 1820, Mason was educated at Finchley, at University College School, and at University College. There was exhibited at the Imperial Institute, last month, the earliest register of London University, in which Mason's name appeared in the Matriculation list of 1838, when he was bracketed first in Classics. Two years later, on taking his degree, he stood second to his friend and schoolfellow the late Prof. Greenwood. He then studied at Bonn for two years, and, on his return to England, was for some time Professor of Classics at the Lancashire Independent College. In 1850 he entered into partnership with Mr. Fletcher, at Denmark Hill, and became sole principal of the school in 1852. For twenty years he conducted this school with great ability and success. Many of his pupils, who have distinguished themselves in after life, will be ready to bear witness to the excellence of his teaching; and we may mention that the late Lord Herschell was amongst the number.

In 1870 Mason withdrew from active work as a schoolmaster, and devoted his leisure to literary pursuits and the revision of his "English Grammar" and other works. The "Grammar" had been a wonderful success. It was the soundest and clearest text-book of English which had been produced up to his time, Morell's being the only one which could stand comparison with it. It has seen thirty-five editions, numbering 150,000 copies; and, as Mason had retained the copyright, and dealt with an honourable firm of publishers, he derived from it a very satisfactory income. It had a large sale in the Colonies, especially in Canada, and it is not yet by any means superseded.

Mason was Vice-President of the Council of the College of Preceptors from 1872 to 1878, and he held his position on the Council from 1860 down to the year 1895. For many years he acted as one of the Examiners in English Language and Literature. His interest in educational matters was always keen, and his prominence as a private schoolmaster was recognized by the Schools Inquiry Commission, before which he gave valuable and interesting evidence in 1865. At an earlier period he had acted, with Mr. E. E. Pinches and others, on the original London Committee for acclimatizing the Oxford Local Examinations. He was an occasional contributor to the *Educational Times*, and we may mention that in 1881 he wrote a kindly and appreciative memoir of his old friend Dr. Pinches, who, like himself, had been distinguished in the first rank of English private schoolmasters.

In 1843 he married Miss Eleanor Edwards, daughter of the Rev. J. Edwards, of Stratford-on-Avon, who survives him. Mrs. Mason was his invaluable helpmeet at Denmark Hill, and she was at the same time a lady of many accomplishments. She excelled as a pianist and as a painter, and it may fairly be said of her that she was at all times the congenial companion of her husband's most laborious and most leisurely moments.

## NOTES.

MANY worshippers of varied ideals feel that they have lost a leader by the death of Ruskin. Educational reformers will not be the slowest to feel it. Although his direct suggestions in this field were comparatively few, general, and, needless to say, scattered here and there through his works, they are always lucid and striking. Education, more than any other profession, benefits from the criticism of an outsider, who can judge of the finished product better than the man at work. The fact that Ruskin never did any teaching of children in no way detracts from the value of his words. The supreme importance of obedience was the keynote of his preaching, with a fierce onslaught against the craze for liberty. Thoroughness in a few things he demanded, rather than a flashy show in many subjects. Yet he strongly inveighed against teaching children merely to read and write, without giving them the taste to read and write good things. All we get, said he, as a result of our boasted Board school education is indecent scribbling on the pavement. There is that germ of biting truth in all his extravagances which impresses them so vividly. Instance, again, his ideal for free education: Let them be taught habits of industry, cleanliness, and honesty. So little? you say. Have you, at least, attained these? His views on the essential difference between a boy's education and a girl's are well worth studying: the main idea being that a boy's should be intensive and progressive, a girl's extensive and conservative.

THE vacancy in the Parliamentary representation of London University has led to the usual academic discussion as to the ideal representation of a University constituency. In addition to the claims of social and political doctrinaires, we now find those of educationists and educational organizers put forward. The view expressed in some papers—the *Times*, for example—that the separate representation of Universities can only be justified on the assumption that men of the highest literary or scientific distinction are chosen, is too narrow. There are periods when the presence in the House of Commons of an independent educational reformer, fully conversant with the composition of our educational problems, would be invaluable. He would, especially if of such University and intellectual distinction as would command the confidence of the public-school authorities, render more service to the country than a man whose brilliant scholarship was his chief recommendation. There is no good reason why the present University electorate should not be extended. Why the qualification of a voter at Oxford and Cambridge should be in effect a mere money payment it is hard to say, and our next Reform Bill will doubtless herald a change in one way or another. Perhaps our younger Universities will then advance their claims.

ONE might almost think that the training colleges must have a difficulty in finding enough for their students to do, if such illustrations for lessons as were exhibited at South Kensington are indeed encouraged by the authorities. Such marvellous ingenuity in wasting time it has seldom been our lot to come across. Some dozen dolls were shown, dressed by a painstaking student, to represent the costumes of the different

centuries; the same inane doll's expression simpered in the pre-Saxon skin attire, the Puritan's cloak, and the Cavalier's lace and feathers. Rough drawings would be far more suitable; unless, indeed, it is intended to show the sameness of human nature under varying conditions. For a lesson on measuring heights and distances in trigonometry a very elegant model of a church in cardboard was erected: if the girls (there is no disguising the sex in such cases) cannot grasp the idea without this aid, they certainly are not fit to attack the problem at all. A tantalizing item in the catalogue was "device for teaching the Latin declensions." This turned out to be a box full of different-coloured tickets with a Latin noun written on each. There was no key to the mystery; but we suppose the colours had some connexion with the declensions. It is difficult to believe that an institution professing to teach the laws of memory should permit the use (not to say the unblushing exhibition) of such an unintelligent mnemonic.

---

TEACHERS of geography have always a delightful field of labour in preparing maps and pictures, but the teachers of history have evidently been put to it to excogitate original illustrations. The old-fashioned style of studying the subject by careful reading and attention to narration is played out, as being too dull; our modern pupils must taste, handle, see. The well known historical charts, divided into squares, each representing a year of a century, have been improved upon (?) by a model—a large shallow box, suggestive of geological specimens, is found to contain tin soldiers, an inch-long doll in a bassinette, a ribbon bow, a cardboard obelisk, and so on, dotted about in various squares: this is mercifully provided with a key, informing the pupil that this year was celebrated for somebody's birth, that for a war; no event seeming too trivial or too important to have a square devoted to it. A still more ambitious teacher of history (or is it only some one who is about to teach?) has devised a plan of an ideal class-room for the subject—one wall is covered by blackboards, each standing for a century, decorated with portraits, pictures, and names. The teacher, so says the explanatory note, may thus literally take his pupils through time. Does this mean by marching them round the room? On the other wall they will find corresponding blackboards, but each one represents in this case a million years, a geological period. So now geology and history can be picked up *ambulando*, so to speak. Very little harm, however, is done by these students in training; the first week of the storm and stress of real school life causes them to shed these ornaments. The only pity is that they come to their work with such false and disproportionate views as to the real purpose of illustrations, and are apt, by reaction, to consider the other parts of their training course as equally unpractical. In short, they backslide after conversion, and their last state is worse than their first.

---

A SADDER spectacle is afforded by some of the Board school exhibits. There is an enormous quantity of brushwork on view. This chiefly consists of highly coloured geometrical patterns, painted on paper laid out in squares. One onlooker was protesting in a loud voice that he would never believe young children could perform such feats. As it happens, nothing

could be easier or more mechanical and unintellectual. Another onlooker was puzzled to know what it was intended to teach, and paused for a reply. If art is supposed to be furthered by this terrible square-filling process, it is high time that artists should protest against our children's time being spent in work directly inimical to any feeling for art. If merely intended to make the children neat and accurate, it is an expensive method of attaining such an end. Much of the sewing exhibited was beautifully done—exquisitely fine hemming, feather-stitching, button-holes, and so on. For a technical school of needlework this would be most appropriate; but, for the average needs of the poorer classes in the matter of sewing, the girls might almost as well be studying Greek, for all the use it will be to them. This protest was made some years ago by a lady in an educational paper, but apparently had little effect; and, as we looked at these exhibits, we could not help reflecting on the case of a young servant who "finished" her Board school career last autumn without the faintest idea how to mend a hole in her stocking. Long ago Matthew Arnold said we lacked lucidity; to-day, perhaps, he would say we lack common sense.

---

WHY has botany been such an unpopular subject in schools? Prof. Miall, in his speech before the conference of science teachers at the Imperial Institute, suggested that the method of teaching was at fault. Instead of its being taught as a practical and experimental science, without the use of technical terms, the learner was at once engulfed in a quagmire of book-learning, reeking with a formidable terminology. Which is undoubtedly true. Possibly the explanation lies not so much in a faulty method as in the absence of teachers who really know the subject. Hence the reliance on books and the unpopularity of the subject. Ignorant teachers will endure as long as the subject is thrown into a group, or allowed to count as a "special" for a "poll" degree. Botany has too long been treated as a Cinderella subject, both by headmasters and by University Boards of Studies. It is no wonder that the Cambridge man forgot the name of the special subject he took up for his "poll" degree, and could only describe it as being "the thing you get up by walking about the gardens with a book in your hand." It is the duty of headmasters to employ competent teachers, and, if they cannot get them, to find out the reason why they cannot be produced by the Universities.

---

"A. B." writes:—"There is a passage in your leading article in January which is, perhaps, open to misconstruction. You say that girls from the Board schools ought to be, and will be, able to climb from scholarship to scholarship until they end on a level with men at the Universities. Doubtless you implied that Oxford and Cambridge still refuse them a degree on the ground of their sex; but I would point out that girls are now enabled to climb from the elementary schools to the Universities, and that some have already done so." That is quite true, and all credit is due for that fact to the ladies whose zeal and energy have made such promotion possible. But it is necessary, in the interests of the girls themselves, to insist on the point which was in our mind when we wrote. Oxford and Cambridge refuse to our girls not only degrees, but also matriculation.

Women are allowed to attend lectures (not all lectures) and to pass examinations, but they cannot yet end on a level with the men.

A MOVEMENT has been started by certain governors of intermediate schools in Carmarthenshire to establish cadet corps in connexion with the secondary schools of the county, and it is sought to obtain the approval of the Education Department for the scheme. The Battle of Waterloo may have been won on Eton playing fields, but it is painfully manifest that the mental and physical training and discipline derived from our staple games are not prophetic of any recurrence of such a result. Our national games are indeed admirable as a training for the hand-to-hand *mêlée* of the bayonet age. Now, the poacher's attributes—cunning and keen practised eyesight—are as essential as the fiery courage which our soldiers have never lacked. Take an average London boy on a country common and point out to him a rabbit crouching in a tuft of grass, only forty yards away, and he will not see it. He has never learnt to mark the movements of living objects in relation to their natural surroundings. Similarly, a first-class marksman may be equally incapable of detecting a creeping man four hundred yards away. Cadet corps can, perhaps, do no harm, even if approved and regulated by the Board of Education; but, if they are to be of any practical use in the development of serviceable military instincts, something is required in addition to the stereotyped military drill of existing cadet corps.

It seems probable that at length the buried treasure of our local records may be utilized. It is certainly time that something should be done in this matter, and we welcome Mr. Balfour's Committee on Local Records, which has just printed some "Schedules of Questions" to clear the ground for effective action. What are these local records, and where may they be found? Parish registers, parchments of leases, manorial rolls, churchwardens' accounts—these are some of the documents which the historian of the future will find invaluable for his work whether in local or general history. As to the whereabouts of these old manuscripts, that is just one of the points of difficulty in getting to work. In the past they have been kept anywhere or nowhere. It has been nobody's business to preserve them in safety, or, indeed, at all, and the result is that many have been lost, whilst many will be useless, thanks to years of dust and damp. In the church vestry, in the squire's chest, in the parish clerk's domain, and in other out-of-the-way places the search will have to be made. When they are found proper shelters will have to be created for these really valuable records where the student can consult them, and where he may expect to find them in good preservation. It is suggested that, in some cases, the free library would be a suitable place for the keeping of such documents. The two points of chief importance are that the student should be able to get at the records easily, whatever the local centre chosen, and that he should have no difficulty in learning where to go for what he wants. As yet these things are not decided; but a good start has been made by the Committee, and its "Schedules of Questions" and practical suggestions augur well for the carrying out of a scheme for which we have waited long enough.

## SUMMARY.

### THE MONTH.

On January 5 the Prince of Wales opened the English Education Exhibition in the east wing of the Imperial Institute. The Prince was received by the Duke of Devonshire, the Bishop of London, Dr. Adler, and various representatives of educational bodies throughout the country. The Duke of Devonshire read an address which gave an account of the origin of the Exhibition out of the intended exhibition of educational objects at Paris. The Prince, in declaring the Exhibition open, said it would be difficult to bring together any collection more worthy of study by those who had the interests of this kingdom at heart. He believed this was the first time that any one had been bold enough to organize an exhibition in London on a large scale of educational work alone; but he hoped it would be found that education by itself could produce a most interesting exhibition. It had also a significance as a preparation for the Paris Exhibition of this year, and they hoped to be able to show foreign critics and observers that there was a unity as well as a wholesome variety in English education, and that we could worthily compete in friendly rivalry with foreign nations. He was happy to think that in declaring the Exhibition open he was assisting a cause which had always been supported by his family, and especially by his father.

A LARGE number of educational meetings and conferences were held during the month. In association with the Education Exhibition, several of the conferences took place at the Imperial Institute, in the large hall which will probably be used as a Senate House for London University. The first of the series, held on January 6, was organized by the College of Preceptors. We give elsewhere a full report of the proceedings of this conference.

On January 8, a conference of elementary and secondary teachers was held at the Institute under the direction of the Teachers' Guild, to consider the possibility of bringing about closer organization and better conjoint action between teachers generally. Canon Lyttelton, Headmaster of Haileybury, who presided, said that already a large number of organizations exist among teachers of various grades. What seemed now to be needed was unity between these separate organizations. Mr. J. H. Yoxall, M.P., would like to see the Teachers' Guild take the initiative, and gather into its folds teachers of all sorts of schools. Mr. J. Thornton said that in Scandinavia there was a quinquennial educational conference, supported by the Government, which tended to bridge over the social gulf between teachers of different grades, and to solve many problems still acute in England. Mr. Charles Bowden pointed to the Educational Institute of Scotland, which embraced all the teachers of the country, from the University to the kindergarten school.

On the second day of this conference the Rev. T. W. Sharpe, C.B., gave an address on "The Future Supply of Teachers and the Methods of Training them." He said that the training colleges should admit no teachers who had not been properly prepared to enter the institutions. They wanted to lift the training colleges up to the University standard, and to University recognition. They, as an influential body, should protest against the use of set books for the purposes of examinations. Where set books existed, no freedom of knowledge was to be found. With regard to examinations, he would be satisfied if there were none, but in that case he would require certificates of study in their place. As to the supply of students from the rural schools, he recommended that leaflets or pamphlets should be printed and circulated amongst the public stating some of the advantages that were to be derived by teachers. For the best pupil-teachers they would have in the future to look mainly to the London County Council and to the School Boards and central classes where there had been University Extension lectures. Some might even be taken from secondary schools, and in that case they should secure the co-operation of the heads of those schools to encourage their pupils to take up teaching. He hoped that the training colleges would not be captured for the purpose of agricultural teaching, which was now so much advocated. Country boys and girls wanted as good an education as those who lived in the towns.

THE eighth annual conference of the Association of Principals and Lecturers in Training Colleges under Government Inspection was held on January 11 at the Imperial Institute. The chair was taken by the President, the Rev. H. Wesley Dennis, Principal of St. John's College, Battersea. From the report it appeared that the Association has 225 members. In the morning Miss Annie Yelland lectured on "A Visit to Athens in the Age of Pericles," and Prof. Rippmann read a paper on "The Reform Method of Modern Language Teaching." The Bishop of London also addressed the conference. After comparing the function of the teacher to that of a mustard plaster, the Bishop said:

From his own knowledge of the English boy, he knew of no means of inducing him to learn except at the point of the bayonet, and he was, therefore, no great believer in educational methods. The English boy had a deeply rooted objection to knowledge, disliking it for its own sake, and the problem of the teacher was to cure that dislike. There was a great difference between boys and girls; though that view was not a popular one nowadays. The girl wanted to learn; the boy did not, and enveloped subject and teacher in the same contempt, whereas the girl's enthusiasm spread to her teacher. He sometimes thought men should teach girls and women the boys. But not only was knowledge unpopular with boys; education was unpopular with the parents. There was no general interest in teaching; the public considered itself absolved from any care in the matter so long as the educationalists, the experts, existed. The questions of what the child should be taught, and how it should be taught, did not interest the public, and that was deplorable, as we should not get on in educational matters until they did. Our public schools were institutions half-way between the barracks and the workhouse, to which parents sent boys for years, divesting themselves of all responsibility in the matter. The great question was how to get a fuller and wider recognition of the dignity of the teaching profession and the importance of its work.

THE annual general meeting of the Headmasters' Association was held at the Guildhall on January 10 and 11, under the presidency of Dr. Gow, of Nottingham. The Bishop of Coventry, by invitation, explained the scheme of local administrative areas put forward by the Birmingham Archidiaconal Association, which has already been described in these columns. Mr. R. D. Swallow moved the following resolutions, which were adopted after discussion:—

(1) That, for the purposes of secondary education, the area to be administered by the Local Authority should be not less than that of a county or county borough; and (2) that adjoining counties and county boroughs should have power to unite for such purposes; (3) that the Local Education Authority, hereafter to be established, should have the control of the local administration of primary, secondary, and technical education, but should not itself directly administer any school or institution providing the same; and (4) that such Local Education Authority should be invested by statute with definite powers over schools of all kinds, however administered, within its own area, such statutory powers to vary with the nature of the administration of the schools or institutions concerned.

The following resolution was subsequently carried, on the motion of the Rev. T. N. Hart-Smith:—"That, in the opinion of this Association, it is desirable that, without interfering with the existing powers of Local Authorities, the main inspection of secondary schools should be conducted by, or on behalf of, the Board of Education."

A RESOLUTION to the following effect was carried after considerable discussion, on the motion of Mr. J. J. Findlay:—"That this Association heartily sympathizes with the establishment of professorships, lectureships, and other University or collegiate agencies for the post-graduate training of secondary school teachers; and presses upon all those who are preparing for the profession the importance of systematic training in the theory and practice of education, with special reference to secondary schools. It is further of opinion that after five years from the commencement of the Board of Education Act no new member of the profession should be qualified for a place on the register of secondary teachers who had not undergone some such systematic course of training." Mr. Findlay said:

There were certain dangers which would be incurred if teachers merely emphasized what was really the theoretical side of the study of education, and neglected all the other factors in the problem of training. There were two dangers to be guarded against. The first danger was that of professors and lecturers neglecting the practical side of training, and failing adequately to realize the teachers' needs. Nothing had done more harm to the theory of education, or had brought it into more contempt, than the fact that philosophers and men who had no experience of the work teachers were doing, or of

their ideals, had written books which were regarded as standard works on the theory of education. Another danger was due to the circumstance of the training movement in England falling hitherto almost completely into the hands of primary teachers or women teachers. The study of education should rest on a more thorough basis of scholarship and culture.

A CONFERENCE of science teachers, under the direction of the Technical Education Board of the London County Council, was opened at the Imperial Institute on January 11. Sir John Lubbock presided in the morning, when a discussion took place on the study of botany. At the afternoon meeting the chairman was Sir Henry Roscoe, Vice-Chancellor of the University of London. The address was delivered by Prof. H. E. Armstrong, Ph.D., F.R.S., on "Juvenile Research," accompanied by demonstrations and experiments, the latter undertaken by three of his own children. He argued that the teaching of science should strictly proceed through observation and experiment. Simple illustrations in physics and hydrostatics were employed to show the possibility of interesting even the youngest children in the pursuit of science. Dr. Gladstone, F.R.S., also addressed the conference.

THE conference was resumed on January 12 at the Shoreditch Technical Institute, when Dr. Kimmins presided, in the unavoidable absence of Mrs. Bryant. Prof. Woods Hutchinson was also absent through indisposition. Mr. J. W. Tutt, Headmaster of the Portman Place Board School, Globe Road, Stepney, read a paper on the place of object-lessons in natural history in the curriculum of elementary schools. He dwelt on the value of living object-lessons, every form of life having its peculiar attraction for the young. Miss von Wyss, of the North London Collegiate School for Girls, emphasized the importance of systematic teaching and constant observation of even the commonest objects; Mr. Winch, a Board teacher, and Mr. Pilley, on the other hand, lamenting the inutility of purposeless observation. Mr. Swayne, one of the inspectors of the Science and Art Department, thought that headmistresses, who were usually "literary," had been hitherto unsympathetic towards science teaching. The general feeling of the conference was in favour of more time and more abundant opportunities being given for elementary instruction in natural history.

At the afternoon conference, the chair was taken by Major-General Sir J. F. Donnelly, K.C.B., late Secretary of the Science and Art Department, who referred to the advantages which an early acquaintance with wood work and metal work had offered to himself. The discussion, opened by Mr. C. T. Millis, of the Borough Polytechnic, was continued by Mr. A. W. Bevis, director of manual instruction under the Birmingham School Board, and by representative teachers from Liverpool, Portsmouth, and elsewhere. Prof. Ripper, of Sheffield, in reply to certain criticisms, said that manual instruction was alike an educational training and a training for trade purposes. It was, and must be, both. He deplored the waste of effort which was inevitable in the instruction of young people not destined to carry it further; but, as Mr. Mundella had long ago pointed out, unless we had technical schools we should lose as a country our pre-eminence in the manufacture of metal work, notably machine tools. Mr. C. A. Buckmaster brought the discussion to a conclusion.

THE annual meeting of the Private Schools' Association (Incorporated) was held on January 12, at the College of Preceptors. The Rev. J. B. Blomfield (Lewisham Collegiate School), President for the ensuing year, said that, with regard to the Secondary Education Act and the new Education Board, everything depended upon administration. If it was coercive, arbitrary, and centralizing, governed by ideals set up in other lands, it was bound to produce the minimum of good with the maximum of evil. If, on the other hand, the Act was administered in a generous and sympathetic spirit, if local needs were considered, if the right men were put on the Consultative Committee and Local Boards, if the idea of the necessity of beginning with a clean slate was abandoned, and if it was not taken that what was English was, therefore, wrong, much good might reasonably be hoped from it. Resolutions were passed to the effect that in the opinion of the meeting the Consultative Committee should be so constituted as to do justice to all interests involved in the organization of secondary education; that, while sympathizing with the

establishment of universal and collegiate agencies for the training of teachers for secondary schools, the meeting urged upon all preparing to enter the profession the importance of systematic training in the theory and practice of education; and that the teachers were in favour of opening private schools to inspection, as suggested by the Education Act, if they were assured that the inspectors appointed had experience both in the teaching and in the management of schools of a similar type.

The annual meeting of the Assistant-Masters' Association was held on January 13, at the City of London School. Mr. Fabian Ware explained the provisions of the Bill which the Association propose to promote in Parliament; and remarked that, when it came to be discussed in the House, the public would learn what an assistant-master in secondary schools was, and what were some of his worst grievances. He moved that the resolution passed at the Birmingham meeting, held on September 16, should be reaffirmed, namely:—

That Clause 22 of the Endowed Schools Act, 1869, and Clause 4 of the Board of Education Act, 1899, should be amended, so as to allow all headmasters and assistant-masters a right of appeal to the Board of Education, acting through the Consultative Committee, in case of dismissal; and that the Association should approach the Headmasters' Conference and the Incorporated Association of Headmasters, with a view to drawing up a concordat affecting the professional custom of giving assistant-masters three months' notice of dismissal, expiring at the end of the term.

Mr. A. G. Munro (City of London School) seconded the resolution, which was carried. On behalf of Mr. Kahn—who has been studying the question of commercial education on the Continent, but was prevented by illness from being present—Mr. de Sainte Croix (St. Edmund's School, Canterbury) proposed a resolution to the effect that commercial instruction in secondary schools must have as base and lateral support a course of liberal education, in which due prominence is given to modern linguistic and literary studies. Mr. Atkinson (Rossall), in seconding, dwelt on the importance of general mental development, instead of merely training the hand. After some discussion, the resolution was carried.

At a general meeting of Convocation of London University on January 15, after a resolution of regret at the death of Sir James Paget, Mr. Blake Odgers, Q.C., presented the report of the committee which dealt with the election by Convocation of members of the Senate under the new statutes. It stated that the representatives allotted to Convocation would have to be chosen in May. The representatives would consist of the Chancellor (elected for life), the Chairman of Convocation, and sixteen members, of whom eight would retire every two years. These eighteen would form a majority of the members of the Council for External Students, who would have to advise the Senate regarding the whole of the present work of the University. The Academic Council, elected mostly by teachers of the University, would perform a like function for internal students. There was no restriction on the choice of candidates. The report also dealt in detail with the accommodation to be provided at the Imperial Institute, and stated that the new constitution would probably be in the hands of the University before the next meeting of Convocation in May, and before that time it would probably have taken up its abode in its new home. The report was carried, as was also a resolution dealing with the accommodation in the Imperial Institute. The proceedings terminated with the election as Chairman of Sir Philip Magnus, and a vote of thanks to the late Chairman, Mr. Busk, now candidate for the representation of the University in Parliament, for his services during the past eight years.

The ninth annual general meeting of the Association of Directors and Organizing Secretaries for Technical and Secondary Education was held on January 17, at the Imperial Institute. Mr. Macan (Surrey), the retiring President, occupied the chair at the morning sitting, when Mr. W. Hewitt (Liverpool) was elected President for the year 1900. The following resolutions were agreed to:—

That the Sanitary Inspectors' Examination Board, having no representatives upon it of either Local Authorities or educational institutions, is unworthy of public confidence. That this Association is unable to understand the action of the Local Government Board in declining to place on the above mentioned Board representatives of the City and Guilds Institute, the Association of Technical Institutes, and this Association. That the interests alike of municipal government and of

educational efficiency and harmony demand that in the constitution of Local Authorities for Secondary Education these should be (a) identical with the Local Authorities for Technical Education, and (b) should consist of members of the Councils of counties and of county boroughs . . . freely co-opted as regards the administrative counties either by the Councils or by the municipal majority of the committee. That, in the interests of the effective local administration of education, it is essential that the statutory areas for the Local Authority responsible for secondary and technical education shall be none other than the ordinary municipal areas of the County Councils and County Borough Councils, but that free power should be given to Authorities in charge of these areas to combine for specific purposes.

On January 18 Mr. Chamberlain presided at the last meeting of the Governors of Mason College, which is to be merged in the new University of Birmingham. He said that the Charter of the University had been drafted, and he hoped that it would be granted within six weeks of the meeting of Parliament. Speaking of the future work of the University in technical instruction and scientific research, he said:

I hope, before long, that we shall do for every trade in the town what we are now doing for one or two. We have a school of brewing, we have a school of engineering; we ought to have a school of railway engineering, of electric lighting, of railway management; every large trade in the town ought to be represented in the new University by specialized instruction—especially towards the termination of the educational or University course—by such specialized instruction as will enable the students to leave the college fully equipped to take a proper part in the work for which they are destined. . . . We are, I think, on the eve of discoveries which may be more important for the human race than any that have been made in centuries past, and I hope that we are going to take our full share in the research and the study which may lead up to these discoveries.

Mr. Chamberlain added a strong plea for a further increase of endowment. The contributed fund now exceeds £325,000.

## UNIVERSITIES.

(From our Correspondents.)

THE term opens with a sad record of deaths among Oxford. Fellows of Colleges. The University has lost members as well known outside as Mr. Ruskin and Mr. G. W. Stevens, and as well known inside as Mr. R. L. Abbott and the Rev. H. Furneaux. Mr. Furneaux was a remarkable specialist. To Tacitus, his one subject, he steadily devoted himself all his life; and he had his reward. To have produced the edition of a classical author of the first rank is a distinction rare in Oxford; indeed, in England. Mr. Furneaux achieved it. Mr. Abbott is a very great loss as a teacher. He was Senior Tutor of the Non-collegiate Students, of whose situation and needs he had a deep and sympathetic knowledge, and whose welfare—at times a tender plant—he did much to foster.

The appointment most worthy of chronicling is that of the new Sanskrit Professor, Mr. Macdonell. He had done the Professor's work for some years, and is at once learned and inspiring; every one concerned is thoroughly pleased.

A great deal of building is being done in Oxford at the moment, and its progress during the vacation is quite the most noticeable time-index. Much of it is destined to serve the ends of natural science, which is steadily demanding and getting more and more space and material facilities. Round the original Museum the agglomeration of attached buildings goes on growing, like the seedlings round a tree. Architecturally the effect is ruinous. As to the Museum itself, critics disagree; it was, however, Ruskin's offspring, and is almost the only material monument to him in Oxford. Waiving its artistic claims, it undoubtedly possesses great historic interest, and in our "storehouse of styles" occupies a pigeon-hole by itself. The new accretions are in a style not merely different, but discordant; they are, too, so crowded on to it as to spoil at once its effect and their own.

Architecture's loss is, however, education's gain. When all is finished, we shall have all our science centralized (save for a few chemical laboratories) in one very commodious establishment. Of the additions, the new Radcliffe Library approaches completion; it has been built at a cost of £15,000, granted by the Drapers' Company. It will be as capacious as could be desired, and its closeness to the laboratories will be most advantageous. In a less forward stage of building are the new Pathology and Morphology Departments, built by an anonymous gift of £5,000, supplemented by a University grant. When these are up, our



scientific accommodation will contrast favourably with that at Cambridge.

More of it is, nevertheless, needed. Our geological arrangements, for instance, are quite inadequate; though the geological collection is assuming, under Prof. Sollas's care, a more presentable shape. For geology, we must build in the near future; Cambridge is doing so extensively now. Chemistry is another case. The department is far from flourishing at either University; but, while Cambridge has, at least, good public laboratories, we have not, and the need is crying. At least as needful, however, in both cases is some enterprise, some enthusiasm, some fostering care, *from the top*. The divorce of work and pay in the teaching staffs is felt among chemical students as a gross scandal with the very worst effects. At Oxford there is really no chemical research. At Cambridge the private laboratories of Caius and Sidney do a good deal; but they are in a state of tacit antagonism to the inefficiency of the public laboratory.

An interesting point which will come up this term is the mooted D.Sc. degree. Our Natural Science system at present is as follows:—Within a year of Responsions comes a general preliminary examination. After this one works at *one* subject for the B.A. with Honours, and may then (for the last four years) take up research and get a B.Sc. The D.Sc. would put the coping-stone to this system, which, with its frank specialization, deserves all praise. Cambridge, so superior to us in *personnel*, is here rather behind us. After a man has passed the First Part of his Tripos (on *three* subjects) he takes for Second Part not one subject, but two; and, though he is supposed to emphasize one of these, he has to know the other well enough to divide and so cripple his energies—a half-and-half course, which is specialization, and yet is not. There is at this moment on foot at Cambridge a very strong private agitation for the complete revision of this Second Part, which is interesting as illustrating the way in which the two Universities tend more and more to adopt common methods in pursuit of their common ends.

The Mathematical Scholarships for the year have just been announced. The Senior goes to W. M. Roberts, B.A. of Corpus; the Junior to W. J. Walker, scholar of Balliol; and the Junior Exhibition to H. C. Beaven, scholar of Balliol.

So far the term is young, but we have had plenty of excitement in giving our send-off to the contingent of the University Volunteers who have offered their services for the front. The scene was a most impressive one, and will live long in the memory of those who were present. The War Office authorities are recognizing fully what a vast reserve it possesses to draw upon in the Universities. Already five commissions in the Royal Artillery have been offered to the Vice-Chancellor, to confer upon candidates selected according to his absolute discretion.

The prevalence of influenza, which was so marked among the residents before the undergraduates returned, threatened a grave danger to University work, but, fortunately, so far the epidemic has not taken any hold of the colleges; and it is hoped the danger is now practically over.

The vacancy in the office of Esquire Bedell, caused by the lamented death of Mr. W. A. Gill, of Magdalene, has been filled by the appointment of Mr. A. H. Evans, of Clare, who defeated his chief opponent, Mr. Courter, of Pembroke, by a majority of four to one. Another election is now on the *tapis*. It is to a living the presentation to which has fallen in to the University owing to the patron being a Roman Catholic. "The election is *more burgensium*, as before," so runs the stereotyped notice of election; and it is hoped that in a very short time we shall have the new enactment which will enable these appointments to be made in a manner more in accordance with modern ideas and usages.

Mr. Dale having left Cambridge to take up his new post at Liverpool, the tutorship at Trinity Hall has been given to Mr. G. B. Shirres; and it is believed the appointment will be in all respects satisfactory for the college. At King's Dr. Montague James succeeds to the tutorship lately held by the Rev. A. H. Cooke, who has accepted the Headmastership of Aldenham School.

Before long, the controversy as to the proposed changes in the Mathematical Tripos will be in full swing. In spite of the great array of distinguished mathematicians whose names appear in favour of the changes, there are many moderate men who, having full knowledge of the action of examinations, though no special knowledge of the tripos in question, will not vote for alterations in any existing system until a clear case is made out. A good many years ago a somewhat similar measure was intro-

duced, with reference to the Classical Tripos; and during the debate in the Arts School only one voice was lifted up against the scheme. Being the result of a compromise, it was weakly supported by its own authors, and the result was that the Senate threw out the Grace by a decisive majority. It does not require much of a prophet to foretell a similar fate for the present proposals.

Important work continues to be done by the Tuberculosis Committee; and a definite proposal is now made that, if the colleges will contribute to the funds of the Association a sum of 1s. a head of the members in residence, the Committee will take charge of the inspection of herds and dairies, so as to prevent any chance of milk from tuberculous herds being supplied to the colleges. The experiment, if successful, will be of some value, as tending to show how the problem can be attacked without the assistance of a Government Department. In Denmark the State is enterprising enough to protect its staple industry, but in England the authorities are hard to move.

The new wing of the Engineering Laboratory, erected in memory of the late Dr. John Hopkinson by his widow and family, will be formally opened on February 2 by Lord Kelvin; and at the same time a portrait of Dr. Hopkinson will be unveiled. Prof. Ewing is to be congratulated on the continued success of his department, which is rising by leaps and bounds.

Our prospects on the river look fairly bright for the contest with Oxford. A crew is at present in practice; but the four or five Old Blues who are available to row are at present not called upon to take their places in the boat.

Twenty-four beds in Addenbrooke's Hospital have been placed at the disposal of the War Office for the use of our wounded soldiers; and our Medical School will doubtless profit by the experience which thus will be attainable.

### THE ENGLISH EDUCATION EXHIBITION.

THE Exhibition in the Imperial Institute might not inaptly be compared with London, viewed from the æsthetic point. At the first glance it disappointed; but, by search and research, the visitor discovered much that was worth knowing, studying, and even admiring. Its five sections embraced Elementary Education, Secondary Education of both sexes, Higher and University Education, Technical Education, Education of the Blind and Deaf. The sections which appealed most to the eye were certainly the first and the last two. They had objects to display—kindergarten cardboard, wood work in all its branches, clay modelling, sewing and fancy work, laundry work and cookery, beaten metal and iron work, all in great variety, and some of it excellent in style. One could hardly avoid the reflection that the annual Exhibition of the London School Board in the Hugh Myddelton Schools has been a very excellent training for the display of their exhibits. They certainly made a capital show.

The letterless method of teaching music to children appealed to the eye with its metal clefs, rings, disks, and black and white buttons for notes, its *brèves*, *orotchetts*, and *quavers*.

The half-dozen schools under the Girls' Public Day School Company which were represented exhibited kindergarten work, maps, brush work, badges, school mottoes, examination papers, freehand and model drawings, charts, photographs. One girls' school had a fair display of scientific apparatus with written work explaining the expansion of solids, density of water, radiation, and other experiments. Some specially interesting charts were sent by the North London Collegiate School for Girls, illustrating lessons in geography, the trade of the British Isles, British exports, Church events from A.D. 1000 to 1300, armour, the Peasants' Revolt, locomotion in the middle ages, dress, the flora of Australia, the cathedrals of England. The subjects lend themselves to a great variety of excellent work, and proved the talent and ingenuity that can be evoked for purposes of illustration.

Eton, Winchester, Shrewsbury, Rugby, Charterhouse, the Grey Coat Hospital had many ancient and interesting mementoes to show. There was a birch in a glass case, but, if truth must be told, it had a miserably unused and not perfectly genuine appearance; there was also a *bibling-rod*, whose purpose, even at a third glance, was not revealed to us. The Grey Coat Hospital sent its first account and minute books, both dated 1698. Eton reminded the world of its pre-eminence by its written volumes, its challenge shield won at Bisleby by the cadet corps, and a series of beautiful photographs of the college. There was a copy of the Charter of foundation of "Seinte Marie College of Wynchestre," dated 1382, at which all gazed reverentially. More attractive than piles of examination papers was a boy's letter describing the rebellion at Winchester in 1818, when the boys barricaded themselves in the tower, laughed at the masters, insulted Gabell, and shouted: "Williams for ever!"—whose rule, it appears, they wished to substitute for Gabell's. There were also copies of the "long school rolls," going back even to 1668.

These are the ancients; modernity steps in with Abbotsholme and Bedales, not to mention organized science schools, Anglo-French schools, and other developments. Many of the photographs were worth studying; but, when a teacher and class are under the eye of the operator, we would suggest to the former the advisability of assuming an attitude not quite so graceless and uncouth as that of a master whose school we shall not name. Even when the photographer is not there, attitude should count for something with the wise pedagogue.

It has often been remarked, and that before Teufelsdröckh's days, how important are clothes. In the educational world, and especially in the Universities, their value is as that of pearls and rubies. Recognizing this, Oxford has fully illustrated the subject. There is displayed a beautiful hierarchy of individuals in appropriate clothing, beginning with the Chancellor of the University, the nobleman in learning's garb, the D.D. in scarlet hood, the Bachelor of Law, Doctor of Music, that fine flower of University life the gentleman commoner, the yeoman bedel, the verger, the bellman, and the marshal—the last a mere man with a top hat.

Further on was an examination paper worked by Mr. Gladstone in 1831 in Moral Philosophy. In those days the written examination was only supplementary to the *viva voce*. The paper was preserved by the Rev. R. D. Hampden, afterwards Bishop of Hereford, and is doubly interesting in that a few months later Mr. Gladstone gained the distinction of a Double First. The writing is good and clear, but modern examination regulations are contravened in that the candidate has left a very small margin, has written the questions themselves, and has also written on both sides of the paper. It seems strange to reflect that he survived the paper sixty-seven years. As one wandered through interminable galleries one caught glimpses of portraits of T. H. Green, of Dr. Jowett, Darwin, Kelvin, and may other saints of the educational and scientific calendar. Ladies, too, were there, as Miss Clough, Miss Emily Davies, Miss Buss, Lady Stanley of Alderley.

The scientific exhibit of Cambridge University was considered very fine. Prof. Sims-Woodhead exhibited different media for the cultivation of bacteria; the rocking microtome for section cutting, which appeared in 1899, could at least, if not self-explanatory, cast abasement into minds ignorant of scientific apparatus. There was also on view a highly ingenious instrument called "the auxanometer," an instrument which actually measures the growth of plants "while you wait." But the exhibitor only exhibited an artificial plant, actuated by the same fear which induces wise parents to talk of the training of children in general, rather than attempt a drawing-room display of their own results.

Oxford showed a *correctoris flagellum e Collegio Lincolnensi*, a sacred relic of bygone days. She showed, too, a chart well worth attention. It marked the numbers of men receiving degrees from 1810 to 1898. In the former year 300 matriculated, of whom 140 took a degree, 92 going out in Honours. In 1898 the numbers are 800 matriculations, 650 degrees, 435 in Honours. Cambridge had a similar table. In 1800 110 men received degrees; in 1898 the number had risen to 756, of whom 412 passed in Honours, 333 ordinary passes, 11 advanced students.

The progress of the University Extension movement was also chronicled. The number of students is given as 3,500 at the various centres in 1873; in the session 1898-9 it had risen to 11,500. Many will be glad to know that the set-back of 1896-7 has been recovered, and the present is the largest number of students yet entered. Many of the time-tables displayed by schools and colleges could have been studied with advantage by inquiring teachers.

## CORRESPONDENCE.

### LONDON SOCIETY FOR THE EXTENSION OF UNIVERSITY TEACHING.

To the Editor of the Educational Times.

DEAR SIR,—In the next issue of the *Educational Times* will you please give your readers as full information as possible about the following courses of lectures by Prof. Earl Barnes on "The History of Education" and "Child Study," which have been arranged for the Lent Term, 1900:—(1) Toynbee Hall, Commercial Street, E., course of ten lectures on "The History of Education," on Mondays at 5.30, commencing January 22. (2) Bermondsey Settlement, Farncombe Street, S.E., course of ten lectures on "Child Study," on Tuesdays at 5.15, commencing January 23. (3) High School, Norland Square, W., course of ten lectures on "The History of Education," on Wednesdays at 5.30, commencing January 24. (4) Northern Polytechnic Institute, Holloway Road, N., course of ten lectures on "Child Study," on Thursdays at 5.30, commencing January 25.

Prof. Earl Barnes is so well known as a distinguished authority on these subjects, and as an exceptionally able lecturer, that I need not impress upon you the necessity of bringing the matter before teachers and others as fully as possible.

I enclose syllabuses, which will give you some idea of the attractive nature of the courses of lectures.—Yours very truly,  
January 2, 1900. C. W. KIMMINS.

## RECENT PUBLICATIONS.

Bound in Navy Blue Cloth, 1s. 6d.

Published under the auspices of the Navy League.

### BRITAIN ON AND BEYOND THE SEA.

By CECIL H. CROFTS, M.A.,  
Assistant-Master at Tonbridge School.

This work is an Explanatory Handbook to the Navy League Map of the World. It contains as frontispiece a reduced reproduction—size 21 by 15½ ins.—of the Wall Map, with all its special features.

The Letterpress contains a sketch of British Naval History, 1588-1882, based on the list of 112 naval events as printed on the Map. The position of each engagement is shown on the Map by a number, and in text the description of the event will be found under the same number, so that any naval engagement can be quickly localized, and its description easily found.

In the second chapter will be found an account of the British Empire, in which the position and the importance of our various Colonies are described. A brief Sketch of their history and of the method of administration is also given.

### THE NAVY LEAGUE MAP OF THE WORLD.

Illustrating British Naval History and Dedicated to the Children of the British Empire.

Size of Map, 79 by 63 ins.

Prices:—On Cloth, Stained Rollers, and Varnished, £1. 1s. On Cloth, Mahogany Rollers, and bound with Silk up the sides, £1. 11s. 6d. On Cloth, folded up in four divisions, and in titled box case, £1. 11s. 6d.

ENTIRELY NEW EDITION.

### THE HOWARD VINCENT MAP OF BRITISH EMPIRE. FOR SCHOOLS.

Size, 72 by 63 ins. With Handbook gratis. Adopted by the London School Board. 21s. on Cloth, Rollers, and Varnished.

The Twenty-Second Edition, thoroughly Revised to the present time.

### THE UNRIVALLED ATLAS.

Containing Forty Full-coloured Maps, Indexes, &c. Full-bound Cloth, 3s. 6d.

The Index to the Political Maps has been entirely re-set for this Edition.

### ARTISTIC COLOUR AND BRUSH WORK.

For Higher Standards. By W. SCHOFIELD.

Demonstration Sheets for Class Teaching.

Set A.—Fifteen Sheets. Designs for Panels, with numerous suggestive Examples in Free Brush Work. (A Year's Course.)

Set B.—Thirteen Sheets. Advanced Artistic Designs illustrating the Practical application of Brush Work. (A Year's Course.)

Accompanied by a Handbook. The Two Sets in Envelope, price 5s.

A SERIES OF

### SEWING AND KNITTING DIAGRAMS.

By E. HUGHES, West Bromwich.

One Sheet to each Standard. Standards I. to VII. Size of each Sheet, 34 by 28 ins.

Prices:—The Complete Series of Seven Sheets, on Cloth, Rollers, and Varnished, £1. 1s. Separate Sheets, on Cloth, Rollers, and Varnished, 3s. 6d. each.

An Explanatory Handbook is given gratis with each Set, also with one or more Sheets.

W. & A. K. JOHNSTON'S

### SERIES OF COOKING DIAGRAMS.

By HESTER DAVIES,

Superintendent, Training School of Cookery, Cardiff.

Six Sheets, in Colours. Size, 34 by 28 ins. Price 3s. 6d. each; or 18s. for the Complete Set on Cloth, Rollers, and Varnished.

Complete Catalogue of Wall Illustrations, Diagrams, Maps, Atlases, Terrestrial and Celestial Globes, post free to any address.

W. & A. K. JOHNSTON,

EDINA WORKS, EASTER ROAD, & 20 SOUTH ST. ANDREW STREET, EDINBURGH;  
5 WHITE HART STREET, WARWICK LANE, LONDON, E.C.

# Cassell's Unrivalled Dictionaries.

**CASSELL'S FRENCH DICTIONARY.** 555th Thousand. 1,150 pp. 3s. 6d.

"Has become a standard work in this country."—*Daily Chronicle*.

**CASSELL'S GERMAN DICTIONARY.** 222nd Thousand. 1,201 pp. 3s. 6d.

"Is the best of the smaller German Dictionaries in the field."—*Journal of Education*.

**CASSELL'S LATIN DICTIONARY.** 102nd Thousand. 927 pp. 3s. 6d.

"Is the handiest, the most useful, and certainly the very cheapest to be met with."—*Rock*.

**CASSELL'S ENGLISH DICTIONARY.** 1,100 pp. 3s. 6d.

"It is an excellent dictionary."—*Pall Mall Gazette*.

NEW AND REVISED EDITION. JUST PUBLISHED.

**CASSELL'S LESSONS IN FRENCH.** Parts I. and II. 2s. each. Complete in One Vol. 3s. 6d.

This work (which reached a sale of 141,000 copies in its original edition) has been revised by Mr. JAMES BOULELLE, B.A., Examiner in French Language and Literature in the University of London.

**SONGS FOR SCHOOLS.** Edited by John Farmer.

**"SCARLET AND BLUE."** Being Songs for Soldiers and Sailors. Extra crown 4to, cloth, 5s. Words only, paper, 6d.; cloth, 9d.

**GAUDEAMUS.** One Hundred Songs for Colleges, Schools, and the Home. Crown 4to (Old Notation and Words), 5s. Words only, paper, 6d.; cloth, 9d.

**DULCE DOMUM.** 134 Rhymes and Songs for Children. Crown 4to (Old Notation and Words), 5s. Also issued in crown 8vo size, in Two Parts (Tonic Sol-fa and Old Notation and Words), 6d. each. For Infants' Schools and Kindergarten.

CASSELL & COMPANY, LIMITED, LUDGATE HILL, LONDON.

FEBRUARY NUMBER NOW READY.

## The School World.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### CONTENTS.

**THE PARENT AND THE SECONDARY SCHOOL.** A Practical Contribution to the Problem. By J. J. FINDLAY. Relation of School to Home.—**SET BOOKS IN FRENCH FOR THE OXFORD LOCAL EXAMINATION IN JULY, 1900.** Set Books versus Unseen Translation. By Prof. WALTER RIPPIMANN, M.A. The Place of Grammar. **PIONEERS IN EDUCATION. II.** Some Practical Views on the Education of John Dury (in the Age of Cromwell). By Prof. FOSTER WATSON, M.A.—**LEISURE-HOUR PURSUITS IN BOARDING SCHOOLS.** By FREDERICK ANDREWS, B.A.—**FOUGHTS AND CROSSES.** (Illustrated.) By Prof. G. B. MATHEWS, M.A.—**EXPERIMENTAL CHEMISTRY.** (Illustrated.) I.: Chemical and Physical Change. Mixtures, Compounds, and Elements. Indestructibility of Matter. By Prof. J. B. COLEMAN, A.R.C.S., F.I.C.—**THE TEACHING OF ENGLISH IN PUBLIC SCHOOLS.** By Rev. G. C. BELL, M.A.—**THE TEACHING OF BOTANY IN SCHOOLS.** By Prof. L. C. MIALI, F.R.S.—**THE SYLLABUS AND EXAMINATIONS IN THE THEORY OF TEACHING, WITH SUGGESTIONS FOR THEIR AMENDMENT.** By Prof. JAMES WELTON, M.A.—**Examination Paper in the Theory of Teaching.—Teachers' Notes on English History, 1603-1715.** IV.: The Commonwealth, 1649-1660. By C. S. FEARENSIDE, M.A., and L. J. MCNAIR, B.A.—**Current Geographical Topics.** The Boundary Changes of 1899 affecting Britain. By Dr. A. J. HERBERTSON, F.R.G.S.—**THE RESOLUTIONS OF RECENT CONFERENCES.**—Items of Interest: General; Scotch; Welsh; Irish; Foreign; Current History.—Florent Etona—esto Perpetua. (Illustrated.)—On the Geography of Europe. (Illustrated.)—**Reviews of Recent School Books.** (Illustrated.) London Matriculation, June, 1900. Monthly Test Papers, No. 2.—Junior Oxford Local Examination, July, 1900. Monthly Test Papers, No. 2.—Preliminary Oxford Local Examination, July, 1900. Monthly Test Papers, No. 2.—Correspondence: The Saltese Method of Teaching History. By Miss DOROTHEA BEALE and ETHEL M. REILLY. Apparatus for Determining "g." By W. R. S.—**The Quantitative Shibboleth.** By Dr. BEVAN LEAN, B.A. A Teacher's Library of Geography. By C. S. FEARENSIDE, M.A., and Dr. HUGH ROBERT MILL.—"Origin of Brushwork" at the English Education Exhibition. By EBENEZER COOKE.—Prize Competition. Result of No. 9. Competition No. 10.—Our Chess Column.—Calendar.

\* \* Also ready, Volume I., containing Nos. 1-12, January-December, 1899. 480 pp., Index. Price 7s. 6d. net. Cases for binding Volume I., 1s. net.

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.

## A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd.

### ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

### THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

#### REVIEWS:—

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."  
*Daily Telegraph*.—(Julius Cæsar) "... is invaluable as an aid to the study of the play."

*South Africa*.—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."

*Athenæum*.—"Essentially books for students."  
*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

'AS YOU LIKE IT	...	s. d.
COBOLANUS	...	2 0
HAMLET	...	2 6
HENRY V.	...	2 6
JULIUS CÆSAR	...	2 0
KING JOHN	...	2 0
KING LEAR	...	2 0
MACBETH	...	1 6
MERCHANT OF VENICE	...	1 6
MIDSUMMER NIGHT'S DREAM	...	2 0
RICHARD THE SECOND	...	1 6
TEMPEST	...	2 0
TWELFTH NIGHT	...	1 6

\* For Current Examinations.

### BACON.

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

### MILTON.

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation."

'PARADISE LOST. Books 1 and 2. (Just published.) s. d.

SAMSON AGONISTES ... 2 0

'COMUS ... 1 6

'LYCIDAS, L'ALLEGRO, and IL PENSEROSO 1 4

\* For Current Examinations.

### SCRIPTURE.

Edited by R. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

'MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

'MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

### FRENCH.

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... 2 6

### GERMAN.

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

## MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director. Works: Johnson's Court, Fleet Street.

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

## SUITABLE BOOKS IN THE University Tutorial and Preceptors' Series.



### Latin and Greek Classics.

- Caesar.—Gallic War, Book V.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Caesar.—Gallic War, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Cicero.—De Senectute.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Homer.—Odyssey, Books XI., XII.** By J. H. HAYDON, M.A. Lond. and Camb., and F. G. PLAISTOWE, M.A. Text and Notes. 2s. 6d.
- Horace.—Odes, Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid, Book IX.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. Vocabulary, Books IX., X. 1s.

### English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond., Professor of English in the University of New Zealand. [In the press.]
- The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. *Fifth Edition.* 3s. 6d.
- History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, &c. By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.
- Shakespeare.—As You Like It.** Edited, with Introduction and Notes, by Prof. W. J. ROLFE, D.Litt. 2s.

### Latin and Greek.

- Greek Reader, The Tutorial.** By A. WAUGH YOUNG, M.A. Lond., Gold Medallist in Classics. *Second Edition.* 2s. 6d.
- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [In the press.]
- Latin Dictionary, The Tutorial.** By F. G. PLAISTOWE, M.A. Lond. and Camb., Gold Medallist in Classics. 6s. 6d.
- Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Third Edition.* 3s. 6d. Exercises and Test Questions on. 1s. 6d.
- Latin Composition and Syntax.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fourth Edition.* 2s. 6d.
- Latin Reader, The Tutorial.** With Vocabulary. 2s. 6d.
- LATIN READER, THE PRECEPTORS'.** [In preparation.]

### Mathematics and Science.

- Chemical Analysis, Qualitative and Quantitative.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and R. W. STEWART, D.Sc. Lond. 3s. 6d.
- Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WILLIAM BRIGGS, M.A., F.C.S.  
Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.
- Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By Wm. BRIGGS, M.A., F.C.S. Interleaved. 1s. 6d.
- Euclid.—Books I.—IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.
- Hydrostatics, An Elementary Text-Book of.** By Wm. BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. *Second Edition.* 2s.
- Magnetism and Electricity, Text-Book of.** By R. W. STEWART D.Sc. *Fourth Edition.* 3s. 6d.
- MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.
- Mensuration of the Simpler Figures.** By Wm. BRIGGS, LL.B., B.A., F.C.S., and T. W. EDMONDSON, B.A. *Second Edition.* 2s. 6d.
- Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. Lond. 2s.
- Trigonometry, The Tutorial.** By WILLIAM BRIGGS, M.A., LL.B., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.
- TRIGONOMETRY, THE PRECEPTORS'.** Edited by WILLIAM BRIGGS, M.A., LL.B., F.C.S., F.R.A.S. 2s. 6d.

### Book-keeping.

- Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d.
- BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [In preparation.]

### French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.
- FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. ès Sc., Univ. Gall., Examiner in French to the College of Preceptors. 1s. 6d.
- French Prose Composition.** By E. WEEKLEY, M.A. Lond. 3s. 6d.
- FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. *Second Edition.* 1s. 6d.
- French Prose Reader.** Edited by S. BARLET, B. ès Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. *Third Edition.* 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for College of Preceptors' Examinations, free on application.

LONDON: W. B. CLIVE, THE UNIVERSITY TUTORIAL PRESS

(University Correspondence College Press),

13 BOOKSELLERS Row, STRAND, W.C.

Digitized by Google

# LONDON UNIVERSITY MATRICULATION, 1900 AND 1901.

SUITABLE BOOKS IN

## The University Tutorial Series.

June, 1900.

**CAESAR.—THE INVASION OF BRITAIN.** Book IV., Ch. 20—Book V., Ch. 23. By A. H. ALLCROFT, M.A. Oxon., and T. R. MILLS, M.A. Oxon. 2s. 6d. VOCABULARY, 1s. 6d. TRANSLATION, 1s. 6d. IN ONE VOLUME, 4s. 6d.

**EURIPIDES.—HECUBA.** By T. T. JEFFERY, M.A. Camb. 3s. 6d. TRANSLATION, 1s. 6d. IN ONE VOLUME, 4s. 6d.

January, 1901.

**VERGIL.—AENEID, Book II.** By A. H. ALLCROFT, M.A. Oxon., and T. R. MILLS, M.A. Oxon. 1s. 6d. VOCABULARY, 1s. TRANSLATION, 1s. IN ONE VOLUME, 3s.

**ÆSCHYLUS.—PROMETHEUS VINCTUS.** By F. G. PLAINSTOWE, M.A. Lond. and Camb., and T. R. MILLS, M.A. Oxon. 2s. 6d. TRANSLATION, 1s. 6d. IN ONE VOLUME, 3s. 6d.

June, 1901.

**SALLUST.—CATILINE.** By T. M. NEATBY, M.A., and B. J. HAYES, M.A. Lond. and Camb. *Second Edition.* 2s. 6d. VOCABULARY, 1s. 6d. TRANSLATION, 1s. 6d. IN ONE VOLUME, 4s. 6d.

**LUCIAN.—CHARON AND TIMON.** By T. R. MILLS, M.A. Oxon. 3s. 6d. TRANSLATION, 1s. 6d. IN ONE VOLUME, 4s. 6d.

[In preparation.]

## SCIENCE AND ART DEPARTMENT EXAMINATIONS.

SUITABLE BOOKS IN

## The Organized Science Series.

FOR THE ELEMENTARY STAGE.

2s. each Volume.

**FIRST STAGE MECHANICS (SOLIDS).** By F. ROSENBERG, M.A., B.Sc. *Second Edition.*

**FIRST STAGE MECHANICS OF FLUIDS.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*

**FIRST STAGE SOUND, HEAT, AND LIGHT.** By JOHN DON, M.A., B.Sc.

**FIRST STAGE MAGNETISM AND ELECTRICITY.** By R. H. JUDE, M.A. Cantab., D.Sc. Lond. *Second Edition.*

**FIRST STAGE INORGANIC CHEMISTRY (THEORETICAL).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WILLIAM BRIGGS, M.A., F.C.S.

**FIRST STAGE PHYSIOGRAPHY.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.

FOR THE ADVANCED STAGE.

3s. 6d. each Volume.

**SECOND STAGE MATHEMATICS.** Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*

**ADVANCED MECHANICS.** By WM. BRIGGS, M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A. Vol. I., Dynamics. Vol. II., Statics. *Second Edition.*

**ADVANCED HEAT.** By R. WALLACE STEWART, D.Sc. Lond. *Second Edition.*

**ADVANCED MAGNETISM AND ELECTRICITY.** By R. W. WALLACE STEWART, D.Sc. Lond.

**ADVANCED INORGANIC CHEMISTRY.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, M.A., F.C.S., F.R.A.S.

Price 1s.

**FIRST STAGE INORGANIC CHEMISTRY (PRACTICAL).** By F. BEDDOW, Ph.D., D.Sc. *Second Edition.*

Price 1s. 6d.

**PRACTICAL ORGANIC CHEMISTRY.** By GEORGE GEORGE, F.C.S.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for London University (including the Special Subjects for Inter. Arts and B.A. 1900 and 1901), COLLEGE OF PRECEPTORS, Cambridge and Oxford Local, Teachers' Certificate, Central Welsh Board, Science and Art Department, and other Examinations, free on application.

LONDON: W. B. CLIVE,  
THE UNIVERSITY TUTORIAL PRESS  
(University Correspondence College Press),  
13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	2 10 0	.....	"	8 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....		"	0 7 0
Narrow Column (one-third page)	.....		"	2 0 0
Half Column (one-sixth page)	.....		"	1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.

Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 6d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

February 1, 1900.

THE first course of Lectures to Teachers, in the Fixtures. twenty-sixth annual series, will be given at the College of Preceptors by Prof. Sully, on Thursday evenings at 7 p.m., beginning this day fortnight. Prof. Sully's subject will be "Intellectual Education."

\* \* \*

PROF. ERNEST A. GARDNER has begun at University College a course of eight Monday afternoon lectures on "Greek Sites," supplemented by a special class in preparation for the lectures to be given in Greece. The lectures during February will be on Athens, Eleusis, Epidaurus, and Megalopolis.

\* \* \*

It has been found necessary to postpone until next term the course of lectures which Mr. Stopford Brooke had undertaken to give at University College, London, on the poetry of Browning.

\* \* \*

PROF. BUTLER's course of lectures on Macchiavelli began yesterday at University College; and Dr. Moore's course on Dante, at the same college, will begin on Wednesday next.

\* \* \*

PROF. PRIEBSCH has undertaken to deliver three free public lectures in German at University College, London. The first of the three, "Shakespeare in Deutschland," was given last Monday. The second, "Leben und Dichten der Spielleute im Mittelalter," will be delivered on February 19; and the third, "Emanuel Geibel, der Sänger der Liebe und Herold des Reiches," on March 5.

\* \* \*

A COURSE of four popular lectures to young people, under the auspices of the Parents' Educational Union, will be given in the Horbury Rooms on Thursdays, February 1, 8, 15, and 22, by Mr. C. Carus-Wilson. The subject will be "The Wonders of Creation."

\* \* \*

MR. EARL BARNES has begun a course of ten lectures on the "History of Education," which are given at the Notting Hill High School on Wednesday evenings, at 5.30 p.m. The subdivision of the subject is as follows:—The Oriental Monarchies, Greece, Rome, the Early Church, the Middle Ages, the Renaissance and the Reformation, the Seventeenth and Eighteenth Centuries, the French Revolution, the Nineteenth Century, Problems of To-day. Tickets for each lecture are 1s. 6d., or for the whole course 10s. 6d. (teachers and students being admitted for 5s.), and may be obtained from Miss Lauder, 36 Campden Hill Gardens, W., and Mr. Perfit, 90 Holland Park Avenue, W.

Education Gossip. THERE were audiences of between a hundred and a hundred and fifty at the two sittings of the College of Preceptors' Conference on January 6.

Proximity to the Education Exhibition may have accounted for a few, but not for many, of those who were present, and no doubt the attendance would have been larger—both at the Conference and at the Exhibition—if they had been held in a more central locality.

\* \* \*

SOUTH KENSINGTON will become more and more the academic quarter of London, but for the present the new home of London

University strikes a casual visitor with a certain sense of chill. That will soon be remedied. Between now and May—when the Senate will be reconstituted—no doubt a great deal will be done to make the spacious rooms of the Institute fit to house the Imperial University.

\* \* \*

THE Scottish Education Exhibition has been held in the National Gallery, Edinburgh, where it was opened on December 30 with a brilliant ceremonial. The selections for Paris are now being made for the whole of the United Kingdom, and the exhibits will soon be ready for transmission across the Channel.

\* \* \*

THE successful candidates for diplomas at the January examination of the College of Preceptors numbered 67, out of a total entry of 263.

\* \* \*

THE President of the Association of Headmasters put in a reasonable plea for the occasional conferment of titular honours on eminent headmasters. The audience at the Guildhall laughed, not in derision, but because the idea tickled them. The *Daily News* quite commends the suggestion.

Perhaps the most respected and successful of our present headmasters is the layman who presides over St. Paul's School, and was previously Headmaster at Manchester. Few men since Dr. Arnold's day have exerted a wider and more beneficent influence over so large a succession of school generations. Why should such unquestionable public service not have its appropriate public reward? Mr. Walker might have been a bishop long ago if he had been in Orders. Lord Rosebery made Mr. Henry Irving a knight, and surely a great schoolmaster is as worthy of such an honour as a great actor.

Seriously, why not Sir Frederick Walker?

\* \* \*

THE Military College at Sandhurst has "gone to the front." In other words, the work of the college was so much interfered with by the departure of professors and commissioned students on active service that it has been closed until further notice.

\* \* \*

THE German Emperor has conferred on Dr. Buchheim, Professor of German at King's College, and a member of the Council of the College of Preceptors, the Order of the Red Eagle of the Third Class for his long service in promoting the study of German literature in this country.

\* \* \*

SIR JOHN GORST, Vice-President of the Committee of Council on Education, has appointed as his private secretary Mr. R. L. Morant, of the Special Inquiries Office.

\* \* \*

WHAT is wrong with the London Diocesan Board of Education? It complains that Churchmen do not adequately support it; that it is living on its reserve fund and owes money to its bankers. Not only so, but some large Church schools are in danger of passing under the London School Board. Who is to blame? Or is anybody to blame?

\* \* \*

EDUCATIONAL matters are still very little understood by the general public. One of our most respectable evening papers thinks that the fact of two conferences of headmasters sitting separately within a month "shows that we are only as yet in a preliminary state of educational unanimity." Perhaps, after all, our contemporary, judging *ab extra*, is approximately right. The "Conference" and the "Association" headmasters are quite distinct to us inside our ring; but outsiders may well wonder why they do not meet together.

\* \* \*

THE Birmingham Diocesan Association appears to have scored a little off both bodies of the endowed school headmasters; for both seem to have treated combinations of counties for secondary administration as a very reasonable thing. The Headmaster of Shrewsbury, the President of the Conference this year, wrote to the *Times* to say that the amendment in favour of grouping was only carried by 18 to 10; whereas the Conference includes over a hundred members.

WE are all at the mercy of the Post Office, and, as a rule, the Post Office treats us all remarkably well. We have not a word to say against it; but the fact remains that a packet of manuscript, intended for this number of the *Educational Times*, has gone astray at the last moment between the sender and the printer. "Things without remedy should be without excuse"; but we must take this means of accounting for the absence of the month's record of "Appointments and Vacancies," of our Welsh intelligence, and of sundry other items.

\* \* \*

Literary Gossip. PROF. E. E. MORRIS contributes to the January number of the *English Historical Review* a note on the story which tells how Wolfe, on the way down the St. Lawrence to Quebec, recited Gray's "Elegy," and said he would rather have written that poem than take the town from the French. We feared at first that Prof. Morris was going to destroy the whole story; but he only clears away a few inaccuracies, and leaves the substance intact.

\* \* \*

IN the same number Prof. Foster Watson has a paper on his favourite section of educational history: "The State and Education during the Commonwealth." The *Review* has many other articles of considerable interest, and is as indispensable as ever to the student of history.

\* \* \*

OF course the Welsh schools ought to make a point of Welsh history. This is far more evident than the wisdom of laying artificial stress on the Welsh language. The Cardiff Cymmrodorion Society has urged the University, Intermediate, and School Board authorities to make Welsh history a specified subject in the schools.

\* \* \*

IN the New York *Educational Review* there is a sensible article, "Is Spelling a Lost Art?" which states difficulties fairly enough, but does not air any new method of surmounting them. There is another paper in the same magazine on "The Prize System," suggested by Dr. Hill's memorable speech at University College School. This, too, we considered a sensible article, until we suddenly lighted on uncontested proof that the author had lost the art of spelling. He declares that something or other has happened "thru the abuse of a privilege." What if the art of spelling should be lost in the same way?

\* \* \*

THE deaths of the veterans, John Ruskin and James Martineau—though the latter was of age when Ruskin was at his preparatory school—has revived many an old memory half buried in the dust. The great seer of the Unitarians was at one time a disciple of Bentham and James Mill, and a fast friend of John Stuart Mill. He cast off their influence, so far as theory was concerned, and adopted a more humane and even emotional attitude. But Mill was his good friend to the last.

\* \* \*

MR. LESLIE STEPHEN may have something to say on this point in his forthcoming work on "The English Utilitarians," which will soon be ready for publication. It is an elaborate work in three volumes, and is being looked for with much interest.

\* \* \*

THE new editor of the *Guardian* is Mr. Walter Hobhouse, who was recently for a few years Headmaster of the Durham Cathedral School. The migration from school-teaching to editing is not unusual, and not very surprising. The two functions are similar in various ways. The journalist revels, as a rule, in unlimited freedom, variety, and elasticity; and, if he misses his supple cane and his lavish vacations, he has usually a better *solatium* on quarter-days.

\* \* \*

MESSRS. HENRY GRAVES & Co., the old established printsellers and picture dealers, make a new departure by publishing the first part of a series of "The Great Masters' Drawing Studies," selected by Principal Horobin, M.A. The subject is Landseer's Dogs. For copy-drawing from the flat these clear line engrav-



ings, with alternate leaves of good drawing paper, seem to be very well adapted.

\* \* \*

A LARGE-TYPE edition of Dr. Moore's Oxford text of the "Divina Commedia" will be published at once at the Clarendon Press. It will contain a few emendations and corrections and a revised index of proper names by Mr. Paget Toynbee. A volume of notes by the Rev. H. F. Tozer is in preparation, and should be in the hands of Dante students in little more than a year and a half from the present time.

\* \* \*

AMONGST other early products of the Clarendon Press will be the following works in English (and British) literature:—"Celtic Folklore: Welsh and Manx," by John Rhys, M.A.; "A Translation into Modern English of King Alfred's O.E. Version of Boethius," by W. J. Sedgefield, M.A.; "King Horn," edited by Joseph Hall, M.A.; "The Canon of Chaucer," by W. W. Skeat, Litt.D.; "Dryden's Critical Essays," edited by W. P. Ker, M.A.; "Plays and Poems of Robert Greene," edited by J. Churton Collins, M.A.; "The Works of Thomas Kyd," edited by F. S. Boas, M.A.; and "Milton's Poetical Works," edited by H. C. Beeching, M.A.

### THOUGHTS ON RETIRING.

BY A PEDAGOGUE RETIRED.

It is Black Monday—a day how variously regarded by those whom it most concerns!—by the harried parent, hailed with a sigh of relief; by the younger hopefuls, banned, amid cries of execration and horror that will all be hushed to-morrow, when once again the zest and pulsating stir of school life will have set hope and ambition a-throbbing in their hearts. Wholly joyful, perhaps, is this Feast of St. Orbilius to nobody, save to Miss Pinkerton alone, who, having spent five purgatorial weeks as a queen unthroned—*privata regina*—to-day is wafted majestic back to the academy at Chiswick. True, it is popularly supposed that her brethren of the craft, the august headmasters of Great Britain, likewise rejoice this day, and keep festival with pious orgies, decent mirth. But, as to the truth of that opinion, we confess to have entertained some doubts, as we have frequently had occasion to notice that on the morrow of Black Monday the temper of these Great Beings is seldom suggestive of that peace of mind and serenity of thought that would naturally be prompted by the days of "whitest mark" in the working year's calendar. So we prefer to mark down the headmaster as doubtful. And those inferior beings, the poor creatures that do his will—not, mark you, the keepers of hotels in our great schools, that are almost independent of Greatness, because they are men of means—but those humble servants or assistants who depend wholly for their advancement, perhaps for their subsistence, on the favour of the Great Beings—how are we to suppose that they regard Black Monday?

Just see how this pen of mine, so long unused to liberty, frisks and curvets over this ample champagne, indulging itself with a "free-hand" such as, I warrant you, it has not enjoyed these many years. Behold, good reader, it is the pen of a pedagogue retired—of one to whom Black Monday will henceforward be as other Mondays—nay, will be more delightful, more inspiring, more prolific of inward peace and content than all other days of the year, just because to-morrow there are no ruffled tempers to be coped with, no Virgil to be construed, no Horace to be murdered. Fling the fellows behind the fire: burn them whole for all the torture that they have daily, hourly inflicted on man and boy! But stay! Is it possible that, after the mean, bethumbed things have been neglected and hidden away for some months in the remotest shelf, in a Purgatory along with dethroned authors and the "books that are no books," their dry bones may yet live again? Is it possible that, from these arid, dreary plains, in which so long only the grammarian has strayed, whereon none but the scholar has browsed, and only absinth, "stretching far and wide like the sea," has flourished in them—even from these fair blossoms may spring again which shall at last waft us *some*, if not all, of the charm of the Muses?

It is a glad hour; yet would you greatly err should you suppose that even on this day, on which the Pedagogue Retired has been wont to re-enter his prison-house, he feels no regrets. We have heard that, when a clerk or an attorney goes up into the Temple to render thanks to the divine Author of his being, he thanks

God that he is not a schoolmaster. And his gratitude has reason in it, to be sure, but not that kind of reason which the grateful drudge assumes. To him the awful thing, the immunity from which is enough to raise in him the liveliest satisfaction, the dread ogre to be coped with by the less fortunate pedagogue, is the human boy. But far otherwise thinks the Pedagogue Retired. To him, unless, indeed, he mistook his vocation, and threw off a livery that he never ought to have assumed, the chief source of regret on Black Monday, strange and unfathomable as the assertion would appear to grateful clerk and contented attorney, is that he wrestles no more with the ogres, strives no more to civilize and humanize them and bring them into harmony with the nature of their Author, feeble though his own conception of Him may be. The loss of the ogres is water that tempers the wine of his enjoyment.

Then, again, the loss of the games, in the contemplation of which the Pedagogue Retired felt a keen delight long after his own joints were stiff and his back was crooked—that is no light thing; for, in the playing-fields, he was wont shyly to renew his youth like the eagle, as he cheered and shouted with his juniors, or merely stood at gaze. There are storm and stress enough and to spare in assistant-mastery. But, be it admitted, there is fair weather, too; and, thankful as one is to have escaped from the Alpine winters, one cannot forget the long spaces of summer that divided them.

Retired! and thus the high hopes with which we set out years ago are melted away into nothing. To climb the ladder of the profession, to become first one of the Great Beings; and then, when in due course all about us grew a little weary of our Greatness, to be promoted into a quiet professorship, a pleasant benefice, or even a mighty bishopric, and so to live on and die in harness at ninety-five—that was the vista down which in years gone by we peered with wistful eyes. And now that stone palace which we saw in a vision, and the broad paradise that encompassed it, are contracted into a little brick house and a modest rose-garden, as they shall shrink, in turn, to paltry six-foot-by-two. We would shed a tear over visions vanished and blighted prospects were it not that to-day is Black Monday, and to-morrow, in place of construing poor old Horace, we shall be drawing a little earth—*pulveris exigui munus*—over our rose-crowns, and not as a sprinkling to cover the dead, but as a life-giving covering for that which Pæstum itself cannot undo. *Deus nobis hæc otia fecit.*

### COLLEGE OF PRECEPTORS.—HALF-YEARLY GENERAL MEETING.

THE Ordinary Half-Yearly General Meeting of the members of the Corporation was held at the College, Bloomsbury Square, on Saturday, January 20.

The Secretary having read the notice convening the meeting, Dr. WORMELL was appointed Chairman.

The Report of the Council was laid before the meeting, and was taken as read, a copy having previously been sent to every member of the College. It was as follows:—

#### REPORT OF THE COUNCIL.

The Council beg to lay the following Report of their proceedings for the past half-year before the members of the College:—

1. They have to report that the number of entries for the Christmas Examination for Certificates is 7,340, while the number of entries for the Junior Forms Examination is 2,142. At the Midsummer Examination, the total number of entries was 6,130; so that the total for the present year is 15,612. The Public Distribution of Prizes and Certificates to the successful candidates at the last Midsummer Examination took place at the College on October 26, when the Chair was occupied by the Bishop of London. Due notice will be given of the time and place of the forthcoming Distribution.

2. The Professional Preliminary Examination for intending medical students and others was held, as usual, in the first week of September, and was attended by 208 candidates. In their last Report the Council called attention to a protest which they had felt themselves constrained to address to the President of the General Medical Council against statements made in a Report of the Education Committee of that body with regard to the standard of the College Second Class Examination as compared with that of the Oxford and Cambridge Junior Local Examinations. In the reply of the President, attention was called to the appointment of educational experts by the Education Committee of the Medical Council for the purpose of advising them as to the relative standard of the various Junior Examinations recognized by the Council, and the report made by these experts is referred to in the Report of the Education Committee, which was submitted to the Council at their

meeting last month. The Medical Council, however, did not adopt the Report of the Education Committee at this meeting, and have deferred their final decision on the matter till their next meeting, to take place in May, 1900.

3. For the Christmas Examination of Teachers for the College Diplomas 263 candidates have entered, being an increase of 53 on the number of entries for the preceding Christmas Examination. At the Midsummer Examination the number was 176, making the total number of Diploma candidates for the year 433. The Examination will be held in London and at the following local centres:—Birmingham, Bristol, Leeds, Manchester, Worcester, Jersey, Croydon, Kingston (Jamaica), Buenos Aires, Graaf Reinet, and Hong Kong.

4. In addition to their own examinations of pupils and teachers, and the examination of a number of schools by visiting examiners, the Council have conducted, during the past half-year, the Preliminary Examinations of the Pharmaceutical Society of Great Britain and Ireland.

5. The Twenty-seventh Annual Series of Lectures to Teachers on "The Science and Art of Education," which began in February last with a course of twelve lectures on "Moral Education," by Prof. James Sully, M.A., LL.D., was completed by a course of twelve lectures on "The Teacher and the Class," by Mr. P. A. Barnett, M.A. The Council, having accepted the invitation of the authorities of the English Education Exhibition to co-operate with other educational bodies in holding conferences of teachers in connexion with the Exhibition at the Imperial Institute, South Kensington, have deemed it advisable to defer the holding of the next Winter Meeting of Teachers, which would have taken place in the same week, till January, 1901. The day assigned to the College of Preceptors is January 6, and it is proposed on that day to discuss the question of the conditions of formation of a register of secondary schools. Other questions will be discussed on subsequent days, under the auspices of other bodies. All the discussions will be open to the public.

6. The usual Monthly Meetings of the members have been held during the past half-year, at which the following papers have been read:—On October 13, by R. Wormell, Esq., D.Sc., M.A., "On Inspection and Science Teaching"; on November 16, by the Rev. J. O. Bevan, M.A., "On the Board of Education Act in its bearing on Private Schools"; and on December 6, by Sir Joshua Fitch, M.A., LL.D., "On Some Lessons from Thring's Life." The substance of the papers and the discussions on them have been reported, as usual, in the *Educational Times*.

7. The Board of Education Act received the Royal Assent on August 9, and will come into operation on April 1 next. In the absence of precise definitions, it is hardly possible to forecast the effects of a measure which is avowedly only intended to pave the way for further measures for the better organization of the secondary as well as the primary education of the United Kingdom. It is not anticipated that anything in the nature of revolutionary changes in the present system of secondary education will ensue, and ample time will probably be afforded for the many schools and teachers, whose interests may be affected by the working of the Act, to strengthen their position and to prove themselves worthy of retaining their place in the educational machinery of the country. The present desire of the Government to avail themselves of existing agencies for the improvement of secondary education is shown by the reinstatement in the House of Commons of words in Clause 3 which had been struck out during the passage of the measure through the House of Lords, and which provide that the Board of Education may inspect any school, not only by their own officers, but also "by any University or other organization."

8. The Council have been enabled, out of the surplus funds accruing from the regular operations of the College to provide for the outlay on account of scholarships for intending teachers, and to place the sum of £100 to the credit of the Benevolent Fund. They have not, however, been able to make any further addition to the Teachers' Training Fund, the residue of which amounts to about £2,650.

9. During the past half-year, the Diploma of Licentiate has been conferred on seven candidates, and that of Associate on thirty-nine, who had passed the required examinations. Eighteen new members have been elected, and notice has been received of the withdrawal of five. The Council regret to have to report the death of a member of their body, the Rev. R. Alliot, and also of the following members of the College:—Mr. W. T. Biggadyke, A.C.P., the Rev. Canon Boger, Mr. J. Featherstone, Mr. J. Morgan, L.C.P., and Prof. C. H. Schaible.

Mr. BECKTON said he should be glad to have some information with regard to the General Medical Council, who had recently decided that candidates for registration as medical students should be examined on First Class papers. The College required that candidates for a First Class Certificate should pass in seven subjects at least, and also obtain a certain aggregate of marks, which would, in most cases, make it necessary to offer more than seven subjects. It was well known that the College First Class was far more difficult to get than the Oxford or Cambridge Junior Local Certificate, or the Certificate of the Educational Institute of Scotland, which was still recognized by

the Medical Council. He suggested that the Council of the College should agree to examine intending medical students in the six subjects required by the Medical Council, and that no definite aggregate of marks should be required.

The DEAN explained that the result of the vigorous protest that the College had made against the imperfectly informed action that had been taken by the Medical Council was that a committee of educational experts had been appointed, to assist the Medical Council in coming to a definite decision on the respective standards of the various junior examinations which were recognized as qualifying for registration. The experts had accordingly reported; but, instead of at once accepting and acting on their report, the Medical Council had deferred coming to a decision until the experts had been requested to supply the reasons for the opinion they had come to; so that, practically, the report was hung up until their next meeting. With regard to the question of satisfying the examination test in six subjects, the Council were perfectly willing to examine in any number of subjects, and to certify that the candidates had passed in those subjects; but whether the Medical Council would accept such a certificate without requiring a fixed total of marks to be obtained he could not at present say.

Mr. THORNTON said he noticed that, for the present year, the number of candidates presented at the pupils' examinations was 15,612. It was not many years back that the total number of pupils examined annually by the College exceeded the total number who presented themselves at both the Oxford and Cambridge Local Examinations; but, in a paragraph which recently appeared in the *Times*, it was stated that during the past year over sixteen thousand candidates had attended the last Cambridge examination. He would be glad to know whether there was any immediate prospect of the College recovering some of the lost ground.

Mr. G. BROWN said the question raised by Mr. Thornton was a very important one. For some time past the College had been making the Second Class Examination more difficult in proportion than the First Class or the Third. This being so, there was a temptation on the part of masters to save the reputation of their schools by sending in their pupils to the Oxford and Cambridge Local Examinations.

Mr. VINCENT said he was of opinion that the standard of the papers set for the College examinations should be more uniform and regular. If greater care were not taken to secure uniformity, complaints would continually arise, and the number who attended the examinations would decrease.

Mr. STEWART said his own experience of the Cambridge examination and that of the College (which in past time had been a fairly extensive one) was that the Second Class Examination was slightly more difficult to pass than the Cambridge Junior. As to uniformity of examination papers, he thought the Dean would be the first person to admit that they were not always equal in standard; but neither would the desired uniformity be found in the Oxford or Cambridge papers. It was hardly possible to secure that the papers should be of exactly the same standard unless the questions were the same from year to year, or only so far altered as to give an appearance of novelty.

The DEAN said that, since the institution of the Oxford and Cambridge Preliminary Examinations, which covered ground which had hitherto been occupied by the College Third Class, there had naturally been a falling off in the numbers attending the College examinations; but it was important to note that the number of candidates at the recent Christmas examination was practically the same as at the previous Christmas.

With reference to paragraph 4, Mr. ORCHARD congratulated the Council on the high character of the lectures to teachers delivered by Mr. Barnett, which had been most highly appreciated by those who had attended his course.

Mr. THORNTON remarked that some time ago the Council announced their willingness to arrange for similar courses of lectures to be delivered at provincial centres on receiving applications from local committees, and to defray some part of the expense that might be incurred thereby. He had not heard, however, of any provincial centre having taken advantage of the opportunity. He thought that this was owing to the fact that the offer of the Council had not been widely enough advertised.

Mr. PINCHES said the Council had promised that, if application were made for a course of lectures in connexion with the training of teachers, they would be prepared to provide a lecturer for the purpose, but he had no recollection of any undertaking having been given to defray part of the cost of such lectures. It was

agreed that they would send down a lecturer, on condition that all expenses incurred were guaranteed by the local committee applying for such assistance.

In reference to paragraph 7, Mr. G. BROWN asked whether the Joint Committee for promoting legislation for secondary education was still in existence.

The DEAN replied that it had not been formally dissolved.

Mr. G. BROWN said when that Committee was constituted it was distinctly understood that it was to be a Joint Committee of representatives of teaching bodies; but, later on, representatives of administrative bodies were admitted to it, thus completely altering its character. If there were any likelihood of the Joint Committee being called together again, with the administrative bodies still represented on it, he was not sure that the College would be justified in continuing to take part in its proceedings.

The DEAN said he did not think the object of the formation of the Committee was in danger of being defeated. In reply to a further question, he said it was not yet known how the Consultative Committee was to be appointed. In the first instance, the members would be appointed by the Crown, and, afterwards, it was understood that it would consist of elected representatives.

Mr. THORNTON asked whether any information could be given as to the number of persons who had joined the College in consequence of the step taken by the Council some few years back, for admitting holders of the College diplomas to the privileges of membership without payment of the annual subscription.

Mr. PINCHES replied that there had been a falling off in the members' subscriptions, but hardly to the amount that was anticipated. He believed that the number of those who had availed themselves of the privilege was about forty each year.

The Report of the Council and the accompanying statement of accounts were then adopted.

The meeting then proceeded to the election of twelve members of the Council to fill the places of those retiring by rotation, and three Auditors.

The CHAIRMAN having appointed Mr. Beckton and Mr. Brewer to act as Scrutators, the voting papers were distributed and the election was proceeded with. On the Scrutators subsequently presenting their report, the Chairman announced that the following had been duly elected:—

#### MEMBERS OF THE COUNCIL.

Miss M. E. Bailey, 63 Kensington Gardens Square, W.  
 Rev. G. C. Bell, M.A., Marlborough College, Marlborough.  
 Rev. A. W. Boulden, M.A., L.C.P., Christchurch Vicarage, Erith.  
 Mrs. Bryant, D.Sc., F.C.P., 12 Gayton Crescent, Hampstead, N.W.  
 R. F. Charles, M.A., 65 Dartmouth Park Hill, N.W.  
 Miss E. Day, Greycoat Hospital, Westminster, S.W.  
 Rev. S. F. Hiron, LL.D., D.C.L., 34 Cliveden Place, Eaton Square, S.W.  
 Miss S. Jebb, Lyndhurst, Hextable, Swanley, Kent.  
 J. V. Milne, B.A., Streete Court, Westgate-on-Sea.  
 Barrow Rule, F.C.P., Lightney House, Aberdeen Road, Croydon.  
 R. P. Scott, M.A., LL.D., Parmiter's School, Victoria Park, N.E.  
 J. Walsley, B.A., The Grammar School, Eccles, Manchester.

#### AUDITORS.

J. Bell, M.A., LL.D., 31 Caversham Road, N.W.  
 Rev. T. Mitcheson, B.A., L.C.P., Clairville, Pelham Road, Wimbledon.  
 James Swift, 229 New Cross Road, S.E.

In connexion with the statement of accounts Dr. BELL said he should be glad to have some information as to the sum advanced to the Joint Scholastic Agency.

Mr. PINCHES said that the Joint Scholastic Agency was started to take the place of two or three other agencies that had previously existed, one of them being the agency which had for many years been carried on by the College. It was started under the auspices of the College, the Teachers' Guild, and the Assistant-Masters' Association, with the distinct understanding that the three bodies were equally responsible for all expenses in connexion with its working. A Registrar was appointed, and the Agency had been doing a fair amount of business; but it would be readily understood that in starting such an undertaking it was necessary to have a certain amount of money in hand; and as Treasurer he took upon himself to suggest that the College should advance what was required within certain limits, on the explicit understanding that the three bodies were equally liable for any loss that might accrue. The sum authorized to be advanced was not to exceed £200, and he was happy to say that already a certain portion was being returned, which would appear in the next balance sheet.

Mr. CHARLES pointed out that the money was only lent, and he had no doubt the Agency would soon become self-supporting. All that was wanted to make it a great success was the support of the headmasters.

The DEAN then presented his Report, which had been printed and distributed among the members present, and which was as follows:—

#### THE DEAN'S REPORT.

In addition to the general statement of the examination work of the College during the past half-year, which has been embodied in the Report of the Council, I have now to submit to you, in detail, the statistics and results of the various examinations.

The Christmas Examination of candidates for Certificates took place on the 5th to the 9th December at 260 Local Centres and Schools. In the United Kingdom the Examination was held at the following places:—Aldershot, Anerley, Ashbourne, Aylesbury, Balham, Bamford, Banbury, Barnsley, Bath, Bedford, Bexhill, Biggleswade, Birkenhead, Birmingham, Blackpool, Bodmin, Bognor, Bolton, Bournemouth, Bovey Tracey, Bradford (Yorks), Brentwood, Bridgwater, Bridlington, Brighton, Bristol, Bromsgrove, Buckingham, Bungay, Burnham (Som.), Burnley, Bury St. Edmunds, Buxton, Calne, Cambridge, Cardiff, Carnarvon, Cheltenham, Chepstow, Chertsey, Chester, Clacton-on-Sea, Clevedon, Cotes, Crowe, Croydon, Derby, Devizes, Devonport, Doncaster, Dover, Durham, Ealing, Earl's Colne, Eastbourne, Edinburgh, Epsom, Evesham, Exeter, Faversham, Gillingham (Dorset), Goole, Gravesend, Grimsby, Guildford, Halesowen, Halifax, Harleston, Harrogate, Hartlepool, Hastings, Hatfield, Haverfordwest, Hawkhurst, Hereford, Herne Bay, Hornsea, Huddersfield, Hull, Hulme, Hythe, Ilfracombe, Ilkley, Iron Bridge, Jersey, Kingsland R.S.O., King's Lynn, Kirkby Lonsdale, Leamington, Leeds, Leek, Lincoln, Liskeard, Littlehampton, Liverpool, Llandudno, London, Longton (Staffs), Loughton, Lowestoft, Ludlow, Luton, Lydney, Maidenhead, Maidstone, Malmesbury, Malvern, Manchester, Margate, Marlborough, Middlesbrough, Midhurst, Morecambe, Newbury, Newcastle-on-Tyne, Newport, Newport (Mon.), Newton Abbot, Northampton, Norwich, Norwood, Nottingham, Ongar, Penge, Penketh, Penzance, Plymouth, Pontefract, Portsea, Portsmouth, Putney, Ramsgate, Reading, Reigate, Rhyl, Richmond-on-Thames, Romford, Royston (Herts), Ryde, Safron Walden, St. Anne's, St. Austell, St. Ives, St. Leonards-on-Sea, St. Neots, Sale, Sandwich, Scarborough, Selby, Sheffield, Shepton Mallet, Shirley, Shoreham, Shrewsbury, Sittingbourne, Southampton, Southbourne, Southend, Southport, Spalding, Stanford-le-Hope, Sudbury (Suffolk), Sunderland, Swindon, Tamworth, Taunton, Teignmouth, Thorne, Tiverton, Torquay, Totnes, Towcester, Trowbridge, Tunbridge Wells, Ullesthorpe, Waltham Cross, Walton (Liverpool), Wanstead, Wateringbury, Watford, Wellington (Salop), Weston-super-Mare, Whitechurch (Salop), Wigton, Wincanton, Winchester, Windsor, Wincambe, Wisbech, Witney, Wolverhampton, Woodford, Worcester, Worksop, Worthing, Yalding, Yeovil, and York. The Examination was also held at Batticaloa (Ceylon); Chefoo (N. China); Nassau (Bahamas); Georgetown (British Guiana); St. George's (Grenada); Kingston and Stewart Town (Jamaica); Lagos; Freetown (Sierra Leone); and Port of Spain (Trinidad).

The total number of candidates examined (not including 188 examined at Colonial Centres) was 7,042, of whom 4,171 were boys and 2,871 girls.

Taking the Christmas and Midsummer Examinations together, the total number of candidates examined for Certificates during the year (not including those who attended the supplementary examinations in March and September) was 11,863.

The following table shows the proportion of the candidates at the recent Examination who passed in the class for which they were entered:—

	Entered.	Passed.	Percentage.
First Class	570	281	49
Second Class	2,788	1,294	46
Third Class	3,684	2,643	72

The above table does not take account of those candidates who obtained Certificates of a lower class than that for which they were entered.

The number of candidates entered for the Junior Forms Examination (not including 58 examined at Colonial Centres) was 2,046—1,050 boys and 996 girls. Of these, 1,407 passed, or 69 per cent.

At the supplementary Examination for First and Second Class Certificates, which was held on the 5th to 7th of September, in London and at four Provincial Centres, viz., Birmingham, Bristol, Leeds, and Liverpool, 204 candidates presented themselves. The number of candidates examined at these supplementary examinations during the year was 427.

The Christmas Examination of Teachers for the College Diplomas took place on the 1st of January and five following days in London and at the following Local Centres:—Birmingham, Bristol, Croydon, Jersey, Leeds, Manchester, South Shields, Worcester, Buenos Ayres, Graaf Reinet (Cape Colony), Hong Kong, Jamaica, and Belleville (Ontario). It was attended by 241 candidates, of whom 174 were men and 67 women. The subjects of examination included the Theory and Practice of Education, Scripture History, English Language, English History, Geography, Arithmetic, Algebra, Euclid, Trigonometry,

Analytical Geometry, Differential and Integral Calculus, Latin, Greek, French, German, Spanish, Natural Philosophy, Astronomy, Physics, Animal Physiology, Botany, Geology, Chemistry, Drawing, and Music. On the results of this Examination, one candidate obtained the diploma of Fellow, six that of Licentiate, and 57 that of Associate.

The number of schools examined during the year under the Visiting Examination Schemes (A) and (B) was 29.

The Preliminary Literary Examinations of the Pharmaceutical Society have been held, as usual, at the times appointed. The number of candidates examined during the year was 1,530. The College has also conducted Scholarship Examinations for St. George's Hospital Medical School.

The DEAN, in reply to criticisms on the examination questions, said that he thought the examiner in Third Class Geography was justified in putting a question on rainfall and climate, because, after all, it was not a very difficult thing for children to understand that the West of England had more rain than the East, or that more corn was grown in Essex than on the Yorkshire moors. As to the First Class Arithmetic paper, it seemed to be forgotten that there were at the end three questions for the benefit of those who could not do the more difficult problems. The paper, as a whole, should be sufficiently difficult to test good candidates who aimed at distinction in the subject; but, at the same time, it had to serve as a pass paper; and, on the whole, the plan of putting alternative questions at the end had been found to work well. The results did not show that the paper in question had been found too difficult for average candidates. As to the Third Class French paper, to which reference had been made, he might say that it had been carefully arranged so that the sentences to be translated into French were based on those to be turned into English. In the Third Class History paper every question had an alternative; and he must say he had been particularly pleased with the simple character of this paper. With regard to the Junior Forms French paper, he was inclined to think that this paper was a shade too difficult, and, in marking the answers, allowance had been made accordingly.

The Report of the Dean was then adopted.

A vote of thanks to the Chairman concluded the proceedings.

### CONFERENCE OF TEACHERS AT THE IMPERIAL INSTITUTE

THE Council of the College of Preceptors, having accepted the invitation of the authorities of the English Education Exhibition to take part in a series of Conferences in the Conference Hall of the Imperial Institute, after the opening of the Exhibition by the Prince of Wales on January 5, arranged to hold a Conference of heads of schools connected with the College on Saturday, January 6, on "The Conditions of the Formation of a Register of Secondary Schools."

The Chair was taken by Sir JOSHUA FITCH, who said that, in view of the reorganization of secondary and primary instruction, registration was of great importance, both on professional and public grounds. The particular question to which this morning's speakers would address themselves was the register of schools. But this was part of a larger question, and it presupposed a registration of teachers. It was necessary for the proper organization of a profession that it should be known who belonged to it and what were the qualifications which they severally possessed. A fitting analogy would be found in the medical profession, and in its General Medical Council, which kept a register of all qualified medical men. But more important than the professional interests were the interests of the public which were involved. The public generally wanted to know something, for its own guidance and information, of the persons who entered on the profession of teaching, and what sort of schools they severally conducted. For the interest of the public, as well as for the ennobling and raising of the profession in the eyes of the public, one of the first duties in connexion with the reorganization of secondary education in England should be the preparation of a full register of schools and of teachers. One question which would arise would be as to the nature of the qualifications necessary for registration. For elementary teachers there would, of course, be the certificate granted by the Education Department, while for teachers in higher schools and colleges there were University degrees and the various diplomas given by the Universities and other public bodies for the profession of teaching alone. Another question that would arise was as to any possible classification of the persons thus registered—whether persons who were connected with technical and other special branches should form part of the

general register, or whether they should be registered in their several classes. Then, again, there was the important question, what was to be the legal and conventional value of registration in relation to the parents and public generally—whether there should be any disability attaching to persons or schools not entitled to a place on the register. All these were questions of very great importance which would come before the public in a very pronounced and conspicuous form before long, and he did not know of any subject which could more properly engage the attention of those assembled there that morning.

The Chairman then called on Dr. WORMELL to read his paper on

### THE CONDITIONS ON WHICH A REGISTER OF SCHOOLS MIGHT BE FORMED.

Dr. Wormell said: Before proceeding to the subject which I have the honour to introduce for discussion, I desire to make a few introductory remarks. First, I cannot overlook the circumstances which have led to this Conference. It is an outcome of the fact that our brilliant neighbours across the Channel are about to hold a great Exhibition. They have wisely concluded that, in such an Exhibition, education should be made prominent, and they have, therefore, invited the co-operation of educators in all countries. Let us wish the whole undertaking—the Exhibition in all its features—complete success, and, in particular, let us hope that the improvement of schools and the promotion of general culture may be among the beneficial results. Probably we may be able to give a few hints to others by means of our exhibits; but I am sure that, if our eyes are kept open, we may receive far more hints from the contributions of other nations. Kipling has well asked: "What do they know of England who only England know?"

My second remark has reference to the Board of Education Act. No conference on education could be profitably directed at the present moment if it did not keep before it the potentialities of that Act. Let me say I do not share the misgivings which some express with regard to the intentions of the Government in developing the Act. It is not to be a dead letter. Its authors intended it to initiate great movements, and honestly meant it to be as a fruitful tree well planted. Let us continue to receive it without suspicion; let us tend it with care, and water it with assiduity. Great social problems are always solved in England after much political mending and patching. As a great statesman once said: "Thorough remedies are never immediate; immediate remedies are never thorough."

The Government will not begrudge the necessary aid for the complete organization we need. They will not spend all they have on guns, machines, and inanimate agents. "The strength and wealth of nations," said Mr. Smiles, in one of his pithy sentences, "depend upon coal and iron—not forgetting men—more than on gold." Enlightened and educated men are the best part of the national resources in all the leading nations of the world. No Government in England in these days will be so blind as not to see this prominent and palpable fact.

Now I come to my proper subject—the conditions of the formation of a register of secondary schools. The second reason why we want a register of schools is derived from the conditions which must regulate the granting of financial aid from the public purse, the safeguarding of endowments, and the awarding of scholarships. Reasonable evidences of efficiency should be required wherever public money finds its way. As all classes of schools—public, proprietary, and private—should be open to the choice of the gainers of scholarships, all classes should submit to reasonable tests, and be placed on the register when the test conditions are fulfilled. It is well understood now that it is for the public good to foster a healthy spirit of rivalry, and to allow freedom to make educational experiments, even to ride hobbies. It is both a matter of economy and also a matter of common justice and regard for the rights of property to utilize the resources of every kind at present available and worthy of recognition.

The subject may well be considered early, for it touches most others. There is the question of the registration of teachers, for instance. Our subject involves that question, for it is clear that, in gauging the efficiency of a school, we must ask whether the man or woman in charge of it can be trusted to make, and not to mar, the minds and characters of the citizens of the future. In other words, it must be asked whether the head teacher is qualified for registration. But this branch of the subject comes later in the Conference.

The necessity for the registration of schools is evident when we consider the absence of comprehensive, reliable, and well ordered

information. What are the resources possessed by the land for secondary education? Who knows? Some affirm that there is a general dearth in this respect. How do they know? There are no evidences. This is but an assumption. Others say there is deficiency in particular localities unnamed. Still an assumption. There are hundreds of good men and good teachers who would like to know where it would be profitable to establish good schools, and this well known fact contradicts the assumption of a general deficiency. A register of efficient schools is much needed to check these gratuitous and mischievous assumptions. The register must evidently be more than a list of names—it must convey information. It cannot, of course, classify schools in order of merit or grades of merit, nor is it at all desirable that it should. It can state the special aim of the school, or special form of curriculum—classical, mathematical, scientific, general, commercial, technical, &c.—and the efficiency must be judged in reference to the special aim. In a word, the British parent looks for such a register to enable him to make a better instructed choice of the school which will supply his own and his children's need. Good private schools should be encouraged to increase their efficiency and extend their operations, and such encouragement will be afforded by registration. I have said that registration implies the application of reasonable tests of efficiency. What are they? At a former Conference they were laid out with much reasonableness and great knowledge of the circumstances by Mr. E. Pinches, and, because I entirely agree with all he said, and also because I think we should preserve consistency and continuity of argument in our successive Conferences, I venture to quote him. Mr. Pinches showed that the criteria of efficient education may be said to consist of three factors:—(1) Material, in the shape of suitable buildings, fittings, and appliances for teaching; (2) personal, relating to the qualifications of the headmaster or principal and his assistants; (3) the quality of the education given, as evidenced by the results of an independent examination by impartial and competent experts.

The sanitary requirements, the personal qualifications of teachers and their registration, and the examination tests, will all be dealt with in separate papers by those who follow me, and I need not detain you now to consider them. I agree with Mr. Pinches that, if the school-room and class-rooms are capacious enough, the means of ventilation, warming, and lighting satisfactory, and the sanitary appliances sufficient, the building as a whole should be held to be adequate, although it may be but a private house adapted to the requirements of a school.

Two questions remain—first, what are we to do with the inefficient schools? I reply: Refuse to register them—ignore them. If, from a sanitary point of view, they are dangerous to the community, then the sanitary authority can deal with them. Otherwise I would apply a maxim I have lately read in a work of fiction. I may confess, in passing, that lately I have taken violently to novel reading, and I find in novels much useful philosophy. The moral of my latest is stated in these words: "Strengthen the wheat and it will choke the tares; refine the gold and the dross will be consumed." This maxim will apply well to our schools as soon as we get a complete register of those that are efficient.

The last point I wish to urge has reference to the authorities. We have made up our minds, I think, that there are functions which can only be worked by a Central Authority, and there are others which require a Local Authority. There is a Scylla and a Charybdis to be avoided: the Central Authority provided by the new Act may keep us from the one, the Local will protect us from the other. These two dangers are well described by Edward Thring as "Bumbledom and King Log." As Thring said, "a good phrase is worth ten thousand arguments." Now, without Local Authorities, we may be under King Log. Without the Central Authority we may suffer from the corruption and partiality of Bumbledom. Unrestrained Bumbledom is often corrupt, rarely enlightened and impartial. Uneducated itself, it cares less for education than it does for its own party prospects. Yet it is generally keen and alert in the collection of local knowledge; and directed Bumbledom may place at our service its useful qualities without exercising its prejudices. It is clear that the registration of teachers must be conducted by the Central Authority, for the qualifications of teachers are independent of locality. It is equally clear that the registers of schools should be in the first place prepared locally. The rules and regulations, and also the *criteria* of efficiency to be applied, should emanate from the Central Authority, and to this Authority there should be allowed an appeal from schools unfairly neglected by the Local Body charged with the duty of preparing the register.

Dr. A. NEWSHOLME then read a paper on  
THE ESSENTIALS OF SANITARY SCHOOL PREMISES,  
of which the following is a summary:—

Although Section 3 of the Board of Education Act, 1899, leaves it optional on the part of the Board of Education whether they will inspect or not, on the part of proprietors and directors of secondary schools whether they will submit to inspection or not, and on the part of the Councils of counties or county boroughs whether they will contribute towards the expense of inspecting under this section, there is little doubt that in the near future a large proportion of secondary schools, whether under private management or under the control of committees or limited companies, will be submitted to inspection in accordance with its terms. The inspection is defined as being "for the purpose of ascertaining the character of the teaching in the school, and the nature of the provisions made for the teaching and health of the scholars." Under these circumstances it is desirable that the scope of the inspection, so far as the health of scholars is concerned, should be freely canvassed, and that school proprietors and teachers should know what may reasonably be expected of them.

In ascertaining what is now considered by the Education Department to be necessary to place school premises in an efficient hygienic condition, they have a convenient and exact guide in Schedule VII. of the Code of Regulations for Elementary Day Schools, which specifies the structural requirements in the planning and fitting up of public elementary schools. Article 85 (a) of the Education Code states that "all new school premises and enlargements must conform generally to the rules contained in Schedule VII." It is evident that a distinction, which is perfectly reasonable, is here drawn between *new* school premises and those already existing, and it is implied that the same standard cannot be enforced in old as in new buildings. This is an important point, as, under the circumstances in which secondary schools usually exist, they generally consist of large private houses adapted for the purposes of school life, and added to as the growth of the school demands. I shall take this view of the case, and state as succinctly as possible what I consider to be necessary sanitary requirements of buildings used as schools, assuming each school to consist of a private house, of sufficient size and well built.

Not the least important matter, if any choice exists, is that the school must be well situate so far as its surroundings are concerned. It is not likely that any existent school would be condemned on this account; but, if any choice is possible, the following conditions must be fulfilled:—The vicinity of a main street, having heavy and noisy traffic, or of any noisy factory, railway-station, &c., is most undesirable. Trees overshadowing the house are undesirable, as they impede the free entrance of light and air. The close vicinity of higher buildings, overshadowing the school, is also most objectionable. An uninterrupted sky-view from each window is the ideal, to be approached as nearly as is practicable. There should be ample space for a playground, or, in the alternative, ready access to a field for cricket and football. The Education Department requires that an open space of at least 30 square feet per scholar shall be maintained. The aspect should preferably be such that both morning and afternoon sun will enter the class-rooms. The rooms of a private house adapted for a school can never be made so perfect as when the building is properly planned as a school from the beginning. For reasons already given, I shall assume, however, that the present rooms will be allowed to remain. The proper width of a school-room according to the Education Department's requirements, is from 18 to 22 feet, while class-rooms must never measure less than 18 by 15 feet. The use of movable partitions is deprecated, and each class-room ought to be capable of being cleared without disturbing any other room. Entrances should be separate for each department of a large school, and the principal entrance should never be through a cloak-room.

In conclusion, Dr. Newsholme said: It would be quite easy to extend this lecture by entering into various miscellaneous requirements of school life. A fresh branch of the subject of school hygiene would be opened out were we to discuss the mental hygiene of school work, or the extremely important question of the prevention of infectious diseases in relation to school life. I have, however, confined my remarks to the more prosaic and less interesting problems involved in the construction and management of schools. The problem of ventilation of the school towers above all other problems in importance. It is the main question of school hygiene, and, if it be solved, healthy and efficient school-life is ensured. In solving it, the warming of the school must necessarily be considered, and the best solution is found by a combined system of ventilation and warming. It is hardly necessary to remind you, in conclusion, that the function of school education is to prepare a child for his after-life, and the true test of the value of an educational course lies in whether it fulfils this end. In educating the mental and moral we must not neglect the physical parts of a child's nature, if an ill balanced and defective manhood is not to be produced. These different parts of our nature are inextricably associated, and defects in one react injuriously on the others. From this standpoint the commonplace subject which I have had the honour to bring before you to-day is of prime importance to the success of your great work.



The Chairman having invited discussion on the above papers,

Mr. G. BROWN said that, while Dr. Newsholme had given some very good advice as to the construction and fitting up of school premises, it was apparent that he had in view more or less ideal conditions with which very few schools at present carried on in private houses could comply. With regard to private schools, the new Board of Education might reasonably be expected to use a wise discretion in the exercise of its powers for ascertaining the suitability of the buildings and the adequacy of the means of instruction provided. He could not help thinking that, if the criteria suggested in the paper were strictly applied, not only school premises, but a large proportion of the churches and chapels in the country would require to be reconstructed. Not a few of the ideas that were put forward respecting the healthy conditions of a school must be characterized as utopian. How, for instance, could it be guaranteed that the pupil's seat should always be placed at a certain angle to the sun's moving light? Then, as to the posture of the children at their desks: no doubt, there were certain positions which, if too long persisted in, would be detrimental to health; but it was difficult to see how time could be found for the constant observation of these minute details.

Mr. BLOMFIELD hoped that the inspectors chosen would be men who were not prejudiced in favour of any particular class of school, and that the fullest sympathy would be shown with those who had hitherto borne the heat and burden of the day.

Mr. GUTTERIDGE would like to know how far down in the school the rule as to registration of the teaching staff should extend. In the case of schools deemed by the inspector to be inadequately equipped, he presumed that time would be allowed for making the changes required in order to secure efficiency.

Miss RAMSAY said the difficulty with regard to the angle of sight could be met by having movable chairs and desks. She had seen cases of spinal complaint which were clearly traceable to the adoption of a bad position while writing; whereas, if the teacher had paid proper attention to the attitude of the children, much suffering might have been avoided.

Mr. LIGHTWOOD remarked that as the Chairman of a District Council he had never met with any case of resistance to a thorough examination of school premises by a sanitary inspector.

Mr. MILLAR INGLIS did not think private-school teachers sufficiently recognized the advance of public opinion with regard to educational requirements. Too much trouble could not be taken to improve their school-rooms, the furniture, and the teaching staff, in order to meet the requirements of the present day.

Mr. WILSON said that as a private-school teacher he should welcome inspection. Of course, they all desired to be dealt with sympathetically, and the inspectors should not be too exacting at the outset.

Mr. SOUTHER endorsed Mr. Wilson's remarks. They had no reason to expect the public to support them unless their school buildings were healthy and properly adapted for the purposes they had to serve.

Mr. WILLIAMS suggested that the sanitary condition of the building should come first in order; after that, evidence of good teaching should be looked for; and, thirdly, the technical qualifications of the teacher should be inquired into.

Mr. PRITCHARD would like to know whether Dr. Newsholme's calculations were based on the assumption that the children were in the schoolrooms the whole of the day.

Dr. WORMELL, in reply, said the answer to Mr. Gutteridge's question would probably be given at one of the later conferences, when he (Dr. Wormell) had undertaken to open the discussion on the subject "What should be the terms of admission to the Register for Teachers for those about to enter the profession?" There were two aspects of the question of the order of the criteria for efficiency. In one, he quite agreed with the suggestion that the quality of the work should be put before the qualification of the teacher; but when they got the whole scheme of the registration of teachers in proper working order, it would surely be required of those entering the profession, besides the possession of an academical qualification, that they should know something about the principles and practice of education.

Dr. NEWSHOLME, in reply, said Mr. Brown had not discussed the points raised in his paper. He quite agreed with what had been said as to the necessity for a sympathetic attitude on the part of the inspector, and a much lower standard would have to be adopted with regard to old schools than for those newly erected. It would be gathered from the "Code of Regulations" with regard to elementary schools, that the inspection of schools would be within certain well defined limits, and no secondary school that failed to fulfil the requirements there set forth ought to be registered. His calculation with regard to the amount of air space in a schoolroom was not based on the assumption of its being occupied for the whole day; and, if it were occupied for only a single hour, ten square feet of floor space for every scholar should be allowed in new schools, and about seven square feet of floor space in old schools, as required in elementary day schools by the Education Department.

Sir JOSHUA FITCH hoped that teachers generally would carefully study Dr. Newsholme's paper, so that they might see the goal they ought to aim at. As to Government inspectors insisting on impossible

and ideal conditions in buildings which had been constructed for other than school purposes, he thought, from his experience as an old Government official, it might safely be assumed that even Government inspectors were amenable to ordinary considerations of common sense, and that no unreasonable conditions would be imposed. The public interests ought to come first, and, unless efforts were made in all the existing public or private schools to attain a higher standard of hygienic and sanitary efficiency, those schools must suffer in the long run.

#### Afternoon Sitting.

Sir JOSHUA FITCH having again taken the Chair, Mr. H. L. WITHERS, M.A., Professor of Education in Owens College, Manchester, read the following paper on

#### EXAMINATION TESTS, ORAL AND WRITTEN.

In opening this brief paper on an important and difficult subject, may I be allowed to say a few words of thanks to the College of Preceptors for its action in summoning this Conference, and for the enterprising policy of which that action is only one example among many? There are many indications—the Exhibition close by is one of them—of the gradual growth of interest in matters of education, both among the public at large and among the sundry kinds of people—administrators, politicians, officials, managers, teachers, and the rest—who are more directly concerned with the questions thus raised. But it is still true that, when we consider the immeasurable importance to the vitality and happiness of the whole nation of a well directed and effectual system of colleges and schools, the most noticeable point about such popular opinion, and even such professional opinion, as exists is its apathy and its helplessness. It was a saying of Thring's that "the waste in a teacher's workshop is the lives of men." No saying could be more manifestly true. Yet can any one say that there are even now an alertness and an energy about the prevention of that waste such as at all correspond with the critical character of the issues at stake? But, if the world in general is not yet wide awake, if the amount of intelligent energy at work upon problems of education is still slight compared with that devoted to other sides of human life, such, for instance, as commerce, or the practice and theory of medicine, yet the College of Preceptors must be acquitted of all blame for any part of this lethargy. For years it has striven to systematize the study of education, and to establish a department of training for teachers. In spite of the wretchedly poor support its efforts have received, it still perseveres, and has quite lately laid us all under a great obligation by securing Mr. Barnett to give that course of lectures which have been published under the title of "Common Sense in Education and Teaching."

The College of Preceptors has thus given practical proof of its belief that there are right ways and wrong ways of doing things in school; that inquiry can show broadly why one way is right and another wrong, and that the general truths thus attained are communicable, and may be of great service to any one whose duty it is to make education as good as it can be made.

The subject which I have the honour to introduce for discussion this afternoon is peculiarly one in which an inquiry into sound and unsound methods is urgently required, and extremely likely to be fruitful in important practical results. I suppose there is no point upon which every one is more generally agreed than that a great deal of the inspection and of the examination which now goes on in this country has a bad effect upon methods of teaching and on methods of study, that it leads to a vast amount of sterile or even mischievous work, and that it produces among those who come strongly under its influence an entirely faulty habit of mind.

The criticism has been expressed with characteristic energy by Thring:—"If education and training are the true aims of mankind, and power in a man's self the prize of life, then no superstition ever ate into a healthy national organism more fatal than the cult of the examiner. A system of examination and inspection, in proportion to its power, is death to all original teaching, to all progress arising from new methods, and even to all improvement which is at all out of the routine track. There is no dead hand so dead as living power thrust in on work from the outside. It is the doctor putting his fingers on the heart when he ought to feel the pulse. Where examinations reign, every novelty in training, every new method of dealing with mind, becomes impossible. It is outside the prescribed area, and does not pay." ["Life," Vol. II., page 130.]

#### EXAMINATIONS ARE NECESSARY.

At the same time, there is no question, as Thring himself would have admitted, that examination and inspection of some sort are absolutely necessary. They are necessary, first, because, from the point of view of sound financial administration, he who pays the piper must be allowed to call the tune, and, when public money is spent, there must be some public guarantee that it is spent to good purpose. They are necessary, secondly, because in almost every calling some minimum standard of qualification must be required from all who enter it; and the possession of this standard must be publicly tested. They are necessary, thirdly, because, at a great many points in life, choice must be made between a number of persons who claim the same position; and this choice cannot be made on public and equitable grounds



except by means of some form or other of examination. Lastly, they are necessary for a quite different kind of reason. The first three reasons—the financial, the professional, the competitive—are not, in the strict sense of the term, educational reasons at all, but arise from certain relations in which, owing to the general nature of human life, education stands to certain other human activities.

#### TEACHERS' EXAMINATIONS.

But the fourth reason is inherent in the nature of the process of education itself, and would continue to exist just as strongly if the educator had nothing more to think of in his work than the pursuit of his own art. Whoever teaches anything must maintain contact with the minds of his pupils, and must know what shapes their thoughts are taking. The contact maintained must be as sensitive and as delicate as possible, but it must also be constant and searching. The procedure of the skilful teacher varies flexibly with the result of his observation upon the mental processes which he has helped to set up. He will constantly be coming to points at which he will feel that, if the mental growth for which he has been striving has, in fact, taken place, then it will show itself in certain verifiable ways. He will verify accordingly, and continue or alter his methods as he finds occasion to do. If no one else examines his pupils, he, at least will be for ever examining them; his whole art and mystery lie in this. Before each lesson begins he will need to know what is the mental stage at which they stand; at the end of each clearly defined step he must make sure, by a recapitulation drawn from the class, that the step has been actually made; at the close he will ascertain that the new knowledge is in hand, and available, by requiring same application of it—that is, by calling for some exercise or some deduction, which can only be worked by those who have, in truth, mastered the new matter, and can wield it to their own purposes. Examination, therefore, is not, in this sense, a thing alien to the process of education, and imposed upon it from without, for the sake of parents, or professions, or Government Departments, but a vital portion of that process itself—one side, indeed, of that *interchange of minds* which is the inmost essence of education. It cannot be psychologically wrong to test instruction. "What comes to nothing is nothing"; and good teaching may be known by its fruits.

#### OUTSIDE EXAMINERS.

But the danger begins when the examiner is no longer the teacher. This also is necessary, and must be indispensably reckoned with. To begin with, the good teacher himself wishes to have his work tested and tried by some one other than himself, on whose judgment he can rely. He will get new notions, fresh points of view, from such an overhauling, and will be saved from routine and one-sidedness. For the less efficient teacher, such a revision, whether by his headmaster or by an outsider, is obviously needed to correct and fortify his procedure. There may also often be cases where the thing of its kind is good, and has been well done, and yet is not the thing which, under all the circumstances, is wanted. Value is not simply constituted by cost of production, but also by demand. Infinity of labour may be put into producing something which, after all, nobody wants. A teacher works in his own corner of the field, and sees all too little of the rest of it. An examiner, if he examines a good deal, must needs take a wider view over a larger breadth of human experience. And then there come in those considerations, mentioned before, of an extra-educational kind. Governors of schools and administrative bodies require some public criterion of efficiency. Pupils must, for certain purposes, be put in an order of comparative merit by an external and impartial judge. Or, again, to take the instance which, in our discussion, we are specially to bear in mind, we may have a public register of certified schools. It is clear that schools cannot certify to their own virtues. *The outside examiner is essential.*

In practice, however, his intervention is often found to work *disastrously*. Why? Because, first, an outside examiner generally means an outside syllabus, which is propounded without reference to individual schools, still less to individual classes, and least of all to individual pupils. The syllabus so propounded will almost certainly begin in the wrong place and end in the wrong place. It will probably require more to be done in the time than can be done healthily and on sound methods. Because, secondly, an outside examiner often does not sufficiently consider the influence which his questions will have upon the work of those who prepare for them, nor the state of mind which a right answer to them will imply. He does not see that the whole of the syllabus ought to be represented in his paper, and that the relative importance of the different parts of the subject ought to be reproduced to scale in the problems which he sets. Thirdly, as questions which test mere information are easily and rapidly made up, while those which require the exertion of mental power on the part of the candidates also require the same exertion on the part of the examiner, the tendency is to ask for information, and not for thinking. Hence the use of "set books" and "commentaries," which need so little thought to study and so little thought to examine. Hence the whole machinery of cram and sterile memorizing, which have led a French philosopher to define an examination as a "permission to forget," because candidates acquire a mass of information which they take care not to digest, but keep crude in their mental

gizzards, so that they may, once and for all, disgorge it on examination day.

I have ventured to recall these trite and only too obvious facts to your recollection because I believe a number of useful conclusions may be arrived at from a consideration of them. We have seen that every good teacher will at every moment keep in contact with his pupils' minds, and inform himself of what is passing in them, and that a system of tests or applications of new knowledge will be an essential part of his method of education, and, consequently, that there cannot be anything vicious in examination as such, but only in the form which such examination takes. We have seen also that the danger begins at the entry of an outside examiner with his ready-made syllabus. Does it not follow from this that the first requisite should be that—subject to the necessary conditions of impartiality and an adequately high standard—the examiner should be in as close touch as possible with the teacher? This leads to a corollary on the nature and qualifications of the examiner. It must mean that the examiner should *have taught*, or, better still, *be teaching*, himself; and that, too, under conditions not entirely unlike those of the school which he examines. A great deal of harm was done in primary schools by creating a body of examiners and inspectors—as such—men, fresh from the Universities, who had done little or no teaching themselves. But, if our analysis has been right, examination is only educationally sound when it is itself a portion of the process of teaching—a finishing touch, which requires from the pupil reasonable evidence that his knowledge is practicably available. A great deal too much use is still made of examiners who have not taught, or who have taught under conditions too different to afford useful analogies. I think myself that it will be a great mistake if, under the new Board of Education, any large number of Government officials are appointed to undertake examinations. Such officials are, in the nature of the case, somewhat too remote and out of touch with school work. They are appointed too young, and they sometimes fail to see that their work is well or ill done according as it helps or hinders really fruitful educational work in the schools.

#### THE PROFESSIONAL ELEMENT NECESSARY.

Neither the Central nor the Local Authority should undertake the work of inspection directly, unless for exceptional reasons and upon appeal, but they should limit their functions to seeing that every registered school is, at intervals, examined and inspected by some competent professional body, such as the Universities or the College of Preceptors. The professional examining boards ought invariably to have a proportion of acting schoolmasters among their members.

Then again, contact between examiners and teachers should be further maintained by the method on which the syllabus is drawn up. In every case where this is at all possible, the syllabus should be propounded in the first instance by the school, then revised, and, if necessary, altered by the examining board. This would restore initiative and self-direction to the teacher, give elasticity to the curriculum, and bring untold relief to thousands of pupils. It would redeem the system of examination from the well deserved reproach of woodenness and of Chinese uniformity. It would enable schools to develop a mind and a will of their own—to form a *character*, in fact.

I am well aware that there is a very grave difficulty in doing this where any sort of certificate depends on the examination. Such a certificate is required to mean the same thing at all times and in all places; otherwise its value would be variable and uncertain. But this difficulty is not insuperable. To begin with, it points to the necessity of keeping such certificates as few in number as possible. A leaving certificate at the close of the school course will serve the purpose of matriculation at a University, or of a preliminary examination at the commencement of study for a profession. Such a certificate should be all that most pupils require; and even for this a liberal system of equal options in different subjects, or sections of subjects, should secure a sufficient degree of variety. And, in any case, let there be no set books, or as few as possible. Let the examinations test power and method rather than information.

#### ORAL EXAMINATIONS.

For this purpose written examinations should be, wherever possible, supplemented by oral—supplemented, I say, not supplanted, for the two things serve different purposes. The powers of continuous thinking and of literary composition are tested by writing in a way that is impossible by word of mouth. Moreover, in advanced work, it is not practicable to deal orally with difficult problems. Again, in a *viva voce* examination any one question can only be put to one boy, and the examiner can only guess very vaguely how many others could have dealt successfully with it. Oral examinations are apt to deal too exclusively with the *small change* of knowledge, items of information that can be handed over in the silver of speech rather than those "long investments" of the mind, the real property which cannot in a moment be brought to market, but which make, for all that, far the most valuable of our assets.

Yet oral examinations, conducted by experienced and skilful persons, have certain manifest advantages. A written paper of questions, once printed, is a mechanical, clumsy instrument to serve the delicate

purposes of an intellectual probe. It may proceed on wholly different lines from those on which the candidates have worked; so that it establishes no mental contact at all with them, and fails to unlock their intellectual stores. Yet there it lies upon the desk and cannot readjust itself. The boys come out and call it a "rotten" paper; the examiner looks over their work and pronounces it "feeble" and "disappointing"; and the total result is discouragement and misunderstanding. Compared with this, *viva voce* questioning is a sensitive and searching instrument of great flexibility. It feels for what it wants, and, if it fails by one line, tries another and again another. While the printed paper advances in an immobile mass, the oral examination reconnoitres and skirmishes, and adapts itself to the position which it finds.

In one point more particularly, on which stress has already been laid, oral questioning has a conspicuous advantage. It lends itself very readily to co-operation between the teacher and the examiner. A skilled inspector will almost always begin by asking the teacher himself to examine the class upon one or two topics that have already been studied, or else to continue teaching from the point last reached. This will—in a very few minutes—give him an insight into the general lines and methods which have been followed such as no amount of written papers will ever convey. It will save him bowling wickets, as he might otherwise do, for over after over.

Where the object of an inspection is to judge of the efficiency of a school for purposes of a public register, I venture to think that oral examination becomes indispensable. In this case it is the general tone of the school and the spirit and skill of its instruction that are upon trial. There will be no need to assess the comparative merits of candidates or to produce a numerical estimate in the shape of a mark-sheet. The inspector's object is to ascertain how the pupils' minds are trained, and whether their intelligence is alive and growing. He will wish to see the place as much as possible in a normal condition, not at the close of the academic year, but during the course of it. He will pay heed not so much to the answers given him as to the style and method with which his questions are attacked.

There are a great many important aspects of education which a written paper never even touches. It is a commonplace that natural science is, as a study, worse than useless, unless pupils learn to conduct experiments and to manipulate instruments themselves. We are beginning to see an analogous truth in regard to modern languages. The University of London has lately instituted *viva voce* reading and talking for the French and German examinations in its Arts course. The Education Department now requires the recitation of a certain number of lines of French from every student who presents the language as a subject for his certificate. These innovations, I have good cause to know, have worked wonders for the improvement of linguistic teaching among the persons affected. The College of Preceptors offers an oral examination in modern languages, as a first step; later on, perhaps, it will see its way to making such an examination an obligatory condition of every modern language certificate. Every test in science should be partly experimental; every test in modern language should be partly oral, or else the inevitable consequence is faulty and mischievous methods of study.

Again, in *viva voce* examining, whether of a class or of a single candidate, other mental qualities than memory and fluency are tested. I remember hearing the late Master of Balliol, when some one objected to him that a *viva voce* examination was unfair to very nervous candidates, reply that extreme nervousness ought to tell against a man; and, contrariwise, that a good address and ready self-possession are qualities so valuable in the discharge of public duties that it is to the public interest they should be known to carry weight and to influence success in examinations. It is certainly true that we ourselves all act upon some such theory. Who would dream of appointing a clerk or a servant upon written testimonials only? It is the personal interview which decides us.

It is admitted that the lack of clear articulation and the lack of full and continuous expression in speech are among the most obvious deficiencies of Englishmen, young and old. Searching and stringent oral examinations will force us to pay more attention to this fault.

#### GENERAL CONCLUSIONS.

I venture to suggest, as a general conclusion, that, in the highest classes of a school with pupils nearly adult, with whom it is both necessary and right to look for "results," written examinations are indispensable. These might take the form of an examination for a "leaving certificate." That, in the lower classes, where processes are infinitely more important than results, and where the chief danger is the forcing upon teachers of an inappropriate syllabus, and upon pupils of premature formulation of certain ill-digested notions, *inspection*, during the course of the school year, with careful observation of teaching methods, and particularly of practical work, and with brief oral examinations, should be the instrument employed.

Written examinations should be sparingly used in lower forms, and should be conducted by the teachers themselves or by the headmaster. The Central Educational Authority should not, unless upon appeal, and by exception, examine or inspect, but should name professional boards

of proper academic competence to do the work. The syllabus of work should, so far as possible, be propounded, in the first instance, by the schools, not by the examining boards; and upon all examining boards there should be an adequate representation of acting teachers. "Set books" should be discouraged, and examination should, as far as possible, take the form not of the exaction of formulated or dogmatic knowledge, but of the setting of deductions or problems, the solution of which will at once imply correct knowledge, and demand the power to apply it. In this way examination will serve as a natural corollary to teaching, and will cease to be a disturbing and perverting influence upon it.

Miss E. WILLIAMS, President of the Franco-English Guild, was then called upon by the Chairman to read her paper on

#### ORAL EXAMINATIONS IN FRANCE.

In France all examinations in arts and sciences, from the *certificat d'études*, which children pass on leaving the primary school, between the ages of eleven and thirteen, to the *doctorat*, qualifying for a professorship in one of the faculties, consist of two parts—the first written, and the second *viva voce*. Candidates whose written work has satisfied the examiners are declared *admissibles*, which means that they are allowed to take the second part of the examination; but, if they fail at the *viva voce*, their success in the first part counts for nothing. They must begin over again from the beginning should they wish to go up for the examination a second time.

In studying the subject of oral examinations in France, we shall find it convenient to divide them into three groups.

#### FIRST GROUP.

The first includes those at which the candidates are simply required to show that they have comprehended and assimilated the information imparted to them in the course of their school career. This group comprises the primary examinations known as the *certificat d'études*, the *brevet simple* and *brevet supérieur*, and the different sections of the *baccalauréat*, which is, as you know, a secondary examination. At all these examinations the *viva voce* consists chiefly in questions put by the examiners on the different subjects in the curriculum. The test in ancient or modern languages consists in reading a text aloud and translating it into French; and in the case of modern languages answering a few questions in the language in which the candidate is being examined.

The percentage of failures at these oral examinations varies. At the *certificat d'études*—passed, as I have said, by children from eleven to thirteen years of age—the failures are very rare; not more, I am told, than one in a hundred. At the *baccalauréat* about five out of fifteen fail—that is to say, one-third.

#### SECOND GROUP.

In our second group we place the higher examinations, open to men and women, including the teachers' certificate for training colleges, the *licence*, and *agrégation*, and also the two examinations known as the *certificat* and *agrégation des jeunes filles*, open only to women. It will be noticed that, whereas all the men's examinations are open to women, the women have certain examinations of their own to which men are not admitted.

Theoretically, all examinations in France are professional—that is to say, the diploma granted to successful candidates confers upon them the right to teach. But, in reality, a large proportion of the young men who pass the *baccalauréat*, and even the *licence*, and of the girls who take the *brevet supérieur*, never enter the teaching profession. On the other hand, few, if any, candidates work for the training college certificate, for the men's *agrégation*, or for the special examinations for women, without intending to become teachers. This being the case, it will easily be understood that the *viva voce* examinations in this higher group are conducted on different lines from those of which I have already spoken. At these examinations candidates are required to show that they are able to impart to others the knowledge they have acquired and also that they have some originality of thought.

It will be impossible for me to enter into a detailed study of all the oral examinations in the group we are now considering; for, at the men's *agrégation* alone, what is known as the section of letters is divided into six parts, each with its own separate examination in classics and French literature, or grammar, or history, or philosophy, or one modern language. The women's *agrégation* has two sections—letters and sciences, each with two subdivisions; on the one side mathematics or natural science, on the other history or literature. Each of the oral examinations is not the exact counterpart of the others, as we shall presently see. I have, therefore, chosen two of these higher examinations which it seemed to me might specially interest my hearers, in order to give a detailed account of the way in which the oral part is conducted.

#### AGRÉGATION DES JEUNES FILLES.

We will take first the *agrégation des jeunes filles*, which qualifies women to teach in the higher classes of a *lycée* or secondary school for girls belonging to the State, for it should be clearly understood that these higher examinations are conducted by the State, and that their object is to provide teachers for State schools exclusively. This

explains why women have special examinations of their own, the curriculum of a girls' *lycée* differing from that of the boys.

The section of letters has, as we have seen, two subdivisions—history and French literature; but two other subjects—ethics and a modern language, English or German—must be studied, both by history students and by students of French literature, although they will not be called on to teach a foreign language. At the *viva voce* examination the history students give what is known as a *lesson*—but it might perhaps be more correctly defined as a short *lecture*—on history, and another on geography. They have also to explain and comment on an English or a German text. The students of French literature have a lesson on French grammar and another on ethics; a third test consists in a commentary, grammatical and literary, on a French text; and, lastly, they have the same examination in English or German as the others. A certain time, varying from one to four hours, according to the subject, is allowed for the preparation of each lesson. The history students are permitted to consult historical dictionaries and maps. No books of reference are given for any of the other subjects. The lessons are prepared in the presence of an inspector, whose business it is to see that the candidates receive no extraneous help. The average length of each lesson that the candidates give before the examiners is about half an hour. They are allowed one or two slips of paper, on which are written dates, names, and quotations, but are strictly forbidden to read what they have to say; in fact, were a candidate to attempt what I am doing at the present moment, she might be sure of getting a very low mark. The subjects which candidates have to treat all bear on the syllabus they have been studying during the past year. . . .

#### AGRÉGATION D'ANGLAIS.

The second series of oral examinations of which I propose speaking is that of the *English agrégation*, this being the highest examination for teachers of English in the State schools, and open to men and women alike. Women have, as we have seen, their own examinations in letters and sciences; but there is no special examination for women in languages. Those who have to teach a foreign language in a State school are therefore forced to take the same examination as the men. In addition to the translation of a piece of English into French and a piece of French into English, and also a piece of German into English, all these translations being taken from set authors, candidates have to give two lectures, one in French on English literature and one in English on the English language and prosody. But here the regulations differ somewhat from those of the women's *agrégation* in history and French literature. . . .

The failures at the men's *agrégations* and at the special examinations for women are necessarily numerous, as these examinations are all competitive. The number of candidates finally passed depends upon the number of vacancies in the State schools. Not more than two women are admitted at the *English agrégation* each year, because they cannot find posts for more than two. The examiners usually pass on to the *viva voce* examination about twice as many candidates as they will finally admit. Candidates who have done excellent work at the written examination are not always equally successful at the *viva voce*, and, on the other hand, those who have only just scraped through the first part will sometimes show unexpected qualities in their oral examination. There is consequently a general feeling that it is well not to cut down too closely the list of candidates who are to pass on to the second series of tests.

#### MARKS.

It will, perhaps, be asked how in competitive examinations such as I have just been describing it is possible to observe strict equity in the distribution of marks. If each examiner had the sole responsibility of the mark he gives, it might be difficult, as the impression produced by any given test which is neither superlatively good nor superlatively bad undoubtedly depends, to some slight extent, upon the examiner's own frame of mind at the time. But, in these higher examinations, no lesson may be given in the presence of fewer than three examiners, and very often at the women's examinations there are as many as six or seven present. The value of the lesson is frequently the subject of a lengthy discussion. Considerable weight is naturally attached to the opinion of the specialists, and, if even then the examiners cannot agree, they strike a mean. If one examiner insists upon 10 marks and another 12, the marks finally awarded would be 11. I have frequently been present at discussions of this kind, and have been struck by the perfect impartiality of the judges and by the scrupulous care with which they award the marks.

#### THIRD GROUP.

We now come to our third group of examinations comprising the two Doctorates, the first of which is a preparation for what would be called in England a University professorship, while the second, called the *doctorat de l'Université*, lately instituted for the convenience of foreigners, does not confer the right to lecture in a French University. At these examinations the candidate is expected to show that he is capable of doing original work. (A certain amount of research work is required in some sections of the *licence* and *agrégation*; but, as it is not the most important part in these examinations,

I have not insisted on it.) An interesting feature in both examinations for the Doctor's degree is the *soutenance de thèse*, or public debate on the opinions expressed in the thesis. This debate takes place at the Sorbonne, and lasts several hours. Failures after a public debate are rare, but examples have been known of men who had written a satisfactory thesis, yet failed to obtain their degree because they had shown themselves incapable of expounding and defending their opinions in a public debate, or because, in the course of the debate, they had betrayed gross ignorance on subjects with which it was considered that a University professor ought to be acquainted. At the new *doctorat* the debate turns not only upon the written thesis, but also upon two other subjects previously chosen by the candidate and submitted to his judges.

We have seen that in the lowest group of examinations the *viva voce* is conducted almost entirely by means of questions and answers; that in the second and higher group the work of the examiners consists chiefly in listening to what the candidates have to say and determining what it is worth; while in the highest group of all the oral examination takes the shape of a debate between the examiners and the candidate.

#### UTILITY OF ORAL EXAMINATIONS.

The question that still remains to be answered is: Of what use are all these oral examinations, and how do they work?

A few days ago I asked one of my friends who examines for the Doctor's degree of what use the public debate can be at the Doctorate. My question seemed to bewilder him, for Frenchmen look upon oral examinations as a part of the natural order of things. But at length he replied: "Why, it is of every possible use. In the first place [I give you a literal translation of my friend's expressions] a man may write a very good book and yet be a fool. You will never find this out if you only read his thesis; but discuss with him for an hour, and you cannot fail to discover what he is worth. Then again, a future professor must not only be able to write: he must know how to expound his opinions orally, and to defend them if necessary. Lastly," my friend added, "the art of literary criticism is a lost art in France, or would be so were it not for these public debates at the Doctorate, where men who would not take the trouble to write an article on the subject freely pass judgment during the debate on all the faults of composition and style they have found in the thesis, and so help to maintain a certain standard of good writing." . . .

Then there is the question of nervousness. I have come across one or two cases—generally women, who had begun to work for examinations rather late in life—in which the candidate, who had already proved herself an excellent teacher, was so paralyzed in the presence of the examiners as to be struck almost dumb. But these are exceptional cases; in fact, examiners in Paris have frequently been heard to say that women, as a rule, succeed far better in oral examinations than men. It appears they have more self-control, express themselves more easily and—what I am going to add is not, I fear, altogether to our credit—are quicker to find out what the examiners expect them to say, and when they have once found it out they never fail to say it. On the whole, a story told of the late M. Arsène Darmesteter illustrates, I think, pretty well what is generally to be understood by nervousness. When anxious mothers used to come to him, begging him not to be too hard upon their boy at the *baccalauréat*, as the poor fellow was very nervous, he would reply: "In what subject is he nervous, madam?" . . .

#### CONCLUSION.

In conclusion, it seems to me that the utility of the debate at the *doctorat* and of the oral examinations at the *agrégation* is incontestable. The only query that might be raised is whether the lessons and lectures of which I have spoken do not rather tend to form brilliant lecturers than teachers. As for the lower examinations, such as the *brevet supérieur* and *baccalauréat*, if you will excuse my once more referring to personal reminiscences, I will confess that, whatever the examiner may think, it is possible to get high marks at the *viva voce* for subjects of which one knows almost nothing, especially if one has been in the hands of a clever coach.

Yet it would be a pity to suppress the *viva voce*, however little it may mean, because this would inevitably entail a neglect of *viva voce* work in schools; and one of the most interesting sides of educational work in France in the present day is the effort made by teachers—an effort often crowned with success—to teach their boys or girls to express their thoughts verbally in clear, forcible, and even elegant language.

The CHAIRMAN having invited discussion on the subjects raised by Professor Withers and Miss Williams,

Mr. EVE said the *viva voce* part of the French examinations was evidently most successful in the examination of teachers. The real problem was how to conduct such examinations so as to be in touch with the examinees. *Viva voce* tests required special skill on the part of the examiners, and it was often difficult to look over the candidates' written papers prior to the *viva voce* examinations. Mr. Withers had expressed his dislike to set books for examinations. He (Mr. Eve) was at one time opposed to them, but had now come to the conclusion that they formed a valuable part of the examination. He did not

agree that there was no trouble in composing a paper on a set book. He was glad to hear it stated that, in examining on a book or a syllabus, there ought to be a due sense of proportion. When a boy's education was supposed to be complete, they did not want to find out so much what he had been learning, but how he could apply his knowledge; in the intermediate stages, they had not only to ascertain what power he had acquired of applying his knowledge, but also the immediate result of recent teaching.

Mr. BARLET considered that, in the case of modern foreign languages, oral examination was a necessity. A dead language might be learned very well from books; but a modern language had to be spoken in such a way that it could be understood. It was necessary, therefore, that the pronunciation should be studied as well as the grammar. This was not always the case in schools, where too frequently the study was conducted almost entirely by means of translation from and into the foreign language.

Professor SPIERS said oral examinations need not be very long. With regard to nervousness in children, his experience coincided with that of Miss Williams. They mostly seemed cool and collected, especially the girl candidates. It could be seen in a very short space of time how a candidate stood with regard to speaking or pronouncing a foreign language, and the more elementary the examination the quicker it could be got through; so that he hoped the College of Preceptors would not make a difficulty of the number of candidates, but proceed at once to make *viva voce* a necessary part of its examination in modern foreign languages. Set books might be made of great practical use; the great objection to them was that many candidates merely learnt a translation which had been given to them. The important thing was for the student to know some French by heart, and be able to construct sentences on the same material. It was hard to find a common subject which would have words that were fairly easy and known to all; whereas, if a certain passage from a set book were given and adopted, the vocabulary could be taken from that passage, and then the intelligence and the accuracy of the candidate could be easily tested by the examiner making up a piece of translation into the foreign language out of the vocabulary of the set book.

Mr. ORCHARD remarked that an examination, to be effective, should be both written and oral. An examination in French, where there was no test of the pronunciation, could not be regarded as a satisfactory examination. He also was of opinion that the use of set books was to be recommended.

Mr. STORR said the calling of an inspector was one to which a man should devote the best part of his life. He should have served his apprenticeship as a schoolmaster, should have commended himself as an efficient schoolmaster, and should give the rest of his life to the work of inspection. When they saw the sort of men that the system of primary education had produced, and how much they had advanced the general education of the country, he thought that something analogous might be hoped for in secondary education. The sort of men they wanted would not be got from the Universities, where their main work was University teaching, and he hoped that the Board of Education itself would undertake examination and inspection.

Mr. SOUTHEE said it would be very helpful if they could have examiners who had been accustomed to teach. *Viva voce* was a most important part of the work, but its efficiency depended entirely on whether the examiner was in sympathy with the work the pupils had been doing.

Mr. WITHERS, in reply, said he thought there should be a number of inspectors who should do nothing else. But, if the inspectors and examiners could be kept in organic connexion with the teachers, it would be of very great advantage from many points of view. He thought Professor Spiers' suggestion that passages for translation should be founded on set books a very valuable one, and that the test should not be of a kind such as lent itself to memorizing of an unintelligent character.

The CHAIRMAN proposed that a hearty vote of thanks should be passed to Miss Williams and Mr. Withers for their able and suggestive contributions. Miss Williams had presented them with a most lucid and careful statement of the actual working of *viva voce* examinations in France. Mr. Withers had referred to an authority whom they all respected and revered, viz., Edward Thring, whose objection to what he called the dead hand of outside authority coming in and interfering with the life and growth of the real teacher was constantly expressed in all he wrote and said. He could hardly help thinking that Thring took a somewhat exaggerated view in this respect. The truth was that, if all schools in England were conducted like Thring's, inspectors and examiners would not be wanted at all; but for the average man or woman there was no doubt that an outside test was valuable, provided that it was applied under proper conditions. Those conditions were not only that the examiner should possess knowledge of what he was appointed to examine upon, but that he should have tact, and, above all, sympathy. He could not agree with Mr. Withers in thinking that an outside examiner implied an outside syllabus. It did not seem

to him that that was at all necessary. The ideal examination of a secondary school was that the examiner should put himself in communication with the teacher, ascertain the scheme of study adopted, the books used, and the amount of progress that he expected this or that form to have made. He should then get the teacher to conduct a little oral examination, so that he might judge of what was expected of the scholars, and how the examination could best be adapted to the work done in the school. It was not the business of the Government to impose this or that theory of teaching. All originality, all independence, and all enthusiasm would be very seriously interfered with if it were supposed to be the business of the Government to impose its own syllabus and its own codes upon every school; but there were certain general lines which, by universal consent, must be followed in all good schools. The object should be to find out what the schools professed to teach, and then to discover whether that profession was properly carried out, but not to impose upon them a scheme of instruction which they themselves might disapprove. Then with reference to the differences between examination and inspection, it must be remembered that either by itself was inadequate. If they had individual examination only, and then registered the results, and made their estimate of the school entirely dependent upon the number of scholars who passed a number of mechanical tests, their estimate of the school would be an unsatisfactory one. But, if they went to the other extreme and said that because examination had its defects therefore they must rely on inspection only, there was the possibility of very hasty and inaccurate impressions on the part of examiners, who mistook those impressions for a complete estimate of the work of the school. He was quite sure there was far greater danger of a teacher being misunderstood and undervalued if they relied on pure inspection than if they combined inspection with examination. Every system of testing a school had its limitations and defects, but each had also its merits, and the two together seemed to be mutually corrective and helpful. He did not look forward to any successful method of examining schools which did not include some test of the intelligence of the teaching, the brightness of the pupils in responding to questions, and the amount of interest they gave to their work. This could only be tested by inspection, and then the examination would show how far the knowledge had been accurately and thoroughly necessary. Thus it would be seen that both examination and inspection were necessary. In the Indian Civil Service Examination, with which he had been connected for many years, the Commissioners attempted to adapt the examination to the needs of the best schools, and to prevent it from becoming a too narrow or mechanical test. For example, in English literature it was arranged that the examination should be divided into three parts: first there was a general paper dealing with the whole subject, care being taken that it covered a considerable range. The second paper bore on prescribed books for the year, a list of books and an indication of the particular period which would be discussed having been printed beforehand. In the third part of the examination the students were invited to send in a list of the books they had read with most interest to themselves for the *viva voce* examination. By this arrangement a very fair result could be arrived at as to the order of merit in which a student should be classed. In conclusion, he congratulated the meeting on having had a very useful discussion.

A vote of thanks to Sir Joshua Fitch for presiding concluded the proceedings.

## REVIEWS.

MR. CUST'S ETON.

"English Public Schools."—*A History of Eton College.* By Lionel Cust. (Duckworth.)

It is natural enough that the story of Eton should be fuller, and in many respects more picturesque and interesting, than the story of other old English public schools. It was munificently founded, and has been royally nourished; the patronage of the aristocracy, if nothing else, would have filled it with clever and fortunate youths, destined to prominent careers. The sun has shone continuously for Eton; the gods have been good to it, even when they seemed to frown. The Public Schools Commission of 1861 was a blessing in disguise, for the abuses of the old order of things had attracted public attention, and would never have been allowed to go unchecked. Mr. Cust is still in some sort of sentimental sympathy with the past. He passes in review the seven Commissioners on whom the fate of Eton



dedicated—Lord Lyttelton, “with his high sense of moral and religious rectitude”; Sir Stafford Northcote, whom Lord Salisbury described as “eminently cautious,” and Mr. Gladstone as “a man in whom it was the fixed habit of thought to put himself wholly out of view when he had before him the attainment of great public objects”—and then he proceeds to say: “It could hardly be expected that Lord Lyttelton and Sir Stafford Northcote would be strenuous champions of Eton in her hour of need.” The other Commissioners were the Earls of Clarendon and Devon, Dr. W. H. Thompson, Mr. Twisleton, and Mr. Halford Vaughan. “It was before such a tribunal that the Provost, Fellows, and Headmaster of Eton College were bound over to stand up and answer for their sins. Provost Hawtrey felt the situation deeply.” This is almost comical. Considering the general awakening of sleepy minds in the fifties and sixties, and the ominous controversy which had been brought to a head by Sir J. T. Coleridge and Matthew Higgins, the college fared remarkably well at the hands of a sufficiently partial Commission.

The history of the school is the history of its endowments and buildings, of its masters, and of its roll of distinguished boys. The record has been traced often enough already, and the copious works of Maxwell, Lyte, and Benson are so well within the reach of all who need them that a new volume on Eton cannot be looked upon as a manifest need. But, in a series of school histories such as Messrs. Duckworth have undertaken, it was necessary that one volume should be devoted to the ancient foundation of Henry of Windsor, a quaint manuscript portrait of whom embellishes this book. Mr. Cust has recognized the precise nature of his task, and has performed it very well. He goes over the ground in a sufficiently interesting manner, and refers to most of the Old Etonians who have won a place in the history of their country.

#### BISMARCK.

“Heroes of the Nations.” Edited by Evelyn Abbott, M.A.—*Bismarck, and the Foundation of the German Empire.* By James Wycliffe Headlam. (Putnam’s Sons.)

Mr. Headlam’s biography of Bismarck is on many grounds one of the best volumes in the useful series to which it belongs. The writer has not hurried his work, or been content with authorities and information already familiar to English readers. He is considerably indebted to Kohl, whose “Bismarck-Regesten” is indispensable to students of the political and diplomatic career of the first Imperial Chancellor of Germany. Kohl is still, or was until recently, engaged in collecting reminiscences of Bismarck, which he prints in an annual volume—and, of course, the longer he continues to do so the more he will be in danger of picking up what is apocryphal. Mr. Headlam is also indebted to the rather sensational memoirs of the King of Roumania, which Bismarck discredited in general terms, as he and his son after him discredited a great mass of very interesting Bismarckiana. The mercurial Busch falls within this category. Bismarck’s own “Memoirs” have been consulted throughout as the best attainable guide to his character and personal attitude; and Sybel, of course, is indispensable for the facts of Prussian diplomacy during the decade preceding the final unification of Germany.

The evolution of Bismarck from the capable *Junker* into the King’s right-hand man and the creator of an empire is interesting as a study of shrewdness and success. There is no romance about it. Mr. Headlam has told it thoroughly well; but he does not bring the personality of the man any nearer to our hearts and sympathies, for the simple reason that this clever, positive, cynical, and unscrupulous German was not sympathetic, and was never willing to pay the price that it costs to own and maintain a heart. We would not willingly do him an injustice. Here is a pathetic passage from a letter to his wife—undated, but apparently written from Frankfort at about the age of thirty-five:—

Yesterday I was at Wiesbaden, and, with a feeling of melancholy, revisited the scenes of former folly. May it please God to fill with His clear and strong wine this vessel in which the champagne of twenty-one years foamed so uselessly! . . . I do not understand how a man who reflects on himself, and still knows, and will know, nothing of Good, can endure his life for contempt and weariness. I do not know how I endured this in old days; if, as then, I were to live without God, thee, and the children, I do not know why I should not put life aside like a dirty shirt. And yet most of my acquaintances live thus.

Bismarck achieved a brilliant success, partly because he was a skilful intriguer precisely suited to the situation in which he found himself, partly because there was a highly trained army with excellent generals ready to his hand, and partly because educa-

tion and commerce had set Germany on the up-grade of human development at least a generation before he went to school.

Messrs. Putnam have made themselves a name by the admirable illustration of their biographical and historical volumes. We have here five excellent portraits of Bismarck, with many of the chief historical scenes of his life—in all, twenty-seven full-page pictures directly illustrating the text.

#### LOGICAL EDUCATION.

*The Logical Bases of Education.* By J. Welton, M.A. (Macmillan.)

Mr. Ruskin was consciously enough extravagant when he said that “modern ‘education,’ for the most part, signifies giving people the faculty of thinking wrong on every conceivable subject of importance to them.” One must, indeed, speak loud if one is to hope for a hearing. In any case, the evil indicated by Mr. Ruskin may readily be remedied by a careful use of this new volume of Prof. Welton’s.

Mr. Welton has written distinctively well on logic, but we are inclined to think that he has never produced anything better than this succinct and lucid exposition of the application of logical method to educational purposes. After sketching the general nature of knowledge, and setting forth the postulates of knowledge by language. “Doubt has been expressed,” he asserts, “whether the majority of Englishmen ever either say what they mean or mean what they say”—another extravagance which may be permitted for the effect. The judicious teacher will lay to heart Mr. Welton’s remarks and illustrations; though there is hardly any fresh element in them except the setting and the form of presentation. Then we get on to logic, which is “the science which investigates the origin, development, and structure of knowledge.” The treatment, of course, is conditioned by the specific purpose of the work. The old formal logic is very shortly handled; the fruitful principles are found in the modern developments of the science since Mill “grasped the truth that the function of logic is not to dictate method to science, but to accept the methods which science finds successful in the ascertainment of truth, and by analysis to make clear their essential general features.”

Mr. Welton’s illustrations of principle, and of violation of principle, are abundant, fresh, and interesting. There is a certain charm of hopefulness in seeing that even Mill could go wrong in the practice of what he preached; that Mr. Herbert Spencer is capable of perpetrating the logical fallacy of “begging the question” (*petitio principii*, as the learned have it); and that even the astute Mr. Sherlock Holmes can fail to draw the line correctly between observation and inference. By the way, however, that inference of Mr. Holmes is not, after all, so “very unsafe”—for practical purposes. Further, the illustrations are extremely valuable in impressing the importance of logical method in the most various classes of literary work. The last chapter, which expounds the general bearing of logic on education, will be found most suggestive and helpful. The “Exercises in Inference” contribute a valuable (and amusing) appendix. The volume appears in a series of “Manuals for Teachers,” under the general editorship of Mr. Oscar Browning and Dr. S. S. F. Fletcher, of the Cambridge University Day Training College. It will be an admirable series if the rest of the volumes come anywhere near the excellence of this one.

#### ARISTOTLE’S “POETICS.”

*Aristotelis Poetica.* Textum recognovit, emendavit, in ordinem digessit, secundum sententiarum seriem typis distinxit T. G. Tucker. (Nutt.)

This, in plain English, is a new edition of the text of Aristotle’s “Poetics.” Prof. Tucker has so arranged and printed the text as to assist as far as possible the mind of the student by appealing to his eye. It is generally conceded that the treatise, as it has come down to us, is in much disorder; but previous editors have been content in this, as in other cases, to indicate in notes the passages that are out of order, and to enclose in brackets whatever appears to be spurious. Prof. Tucker, however, resorts to distinctive types in the one case, and boldly prints the sections in the order in which they should apparently be read. In many other ways he employs the devices of the printer’s art to make the meaning clear—by spacing, indenting, renumbering the sections in accordance with the sense, and so forth. It appears to us that the ingenious system here adopted might advantageously be applied to other difficult authors; and we feel sure that Prof. Tucker’s arrangement of the text will lighten the labours of the reader.

The editor has introduced a number of emendations which are often ingenious; a few are very good, but several of them seem to us to err on the side of boldness. But an editor who prints his own conjectures in the text throws down the gauntlet to all other scholars, *urbi et orbi*, and, truth to tell, they are generally all eagerness to pick it up. In this respect Prof. Tucker is a provocative editor; but we shall sternly repress the temptation to enter into the lists against him. All we would say is that any one who reads the "Poetics" with this text and Prof. Butcher's edition will be thoroughly equipped for the task of discerning and mastering the treatise. It is almost needless to add that Prof. Tucker has largely availed himself of Prof. Bywater's admirable text.

#### A GREEK HISTORY OF ROME.

*The Roman History of Appian of Alexandria.* Translated from the Greek by Horace White, M.A., LL.D. In 2 vols. (Bell & Son.)

Appian has not been translated since 1679, and that translation was not often reprinted; so that Dr. White has broken almost virgin soil in this easy English version of a Greek text so well known to historians and scholars. Appian was, in many senses, a thoroughly competent historian. A Greek colonist in Egypt, an advocate in Alexandria, and probably procurator before he came to practise in the Imperial Courts at Rome, he soon earned distinction in the capital. He was befriended by Fronto, the tutor of Marcus Aurelius, and one of Fronto's letters was addressed to Antoninus Pius, asking for the appointment of Appian as procurator as a mark of distinction in his old age. The appointment was made, and it was after this that Appian wrote, or, at any rate, completed, his voluminous history.

Appian is concise in style, often rhetorical, occasionally grand. He is a narrator, not a philosopher, and in his narration, very naturally, he makes occasional little slips, on which modern criticism is severe. His history of Rome, and especially of fighting Rome, is a very good compilation, and he could not possibly be expected to be minutely accurate in all his details. He writes a fluent account, which gives one a very good idea of the consecutive events of the Roman people, without much attempt to pick out causes and effects, or to show how the State or the *imperia* were built up. In this account there is a great deal which is interesting. Where there is no time or appetite for more comprehensive and elaborate histories, and where a concise and partly contemporary story is desired, carrying us from the origin of Rome to the second century after Christ, we cannot do better than recommend Dr. White's sufficiently faithful and facile translation of Appian. These volumes are illustrated by maps, busts, reproductions of Vatican manuscripts, and other aids to the text.

## GENERAL NOTICES.

### CLASSICS.

*Hannibal's First Campaign in Italy (Livy XXI. 39-59)*, edited by F. E. A. Trayer (Bell), is a volume of the excellent series of "Illustrated Classics" which help so much to give reality to classical work. The introduction is short and interesting. Perhaps the section on the characteristics of Livy would meet the wants of schoolboys better if it were a little extended and arranged in numbered paragraphs. There are chapters on Taine's "Tite Live," which, though not actually numbered, suggest such treatment. We are glad to see a reference to Philemon Holland's delightful translation. Its racy style will often supply a teacher with capital renderings; while its differences suggest points easily overlooked. Mr. Trayer's notes are scholarly and meet all real difficulties, both of construction and of subject-matter. In the preface it is stated that attention has been drawn to points of both style and idiom with a view to composition. This might, in places, have been done more explicitly. For example, in the excellent note on *dolor injuria indignitas* (XLIV. 4), it might have been worth while to add, in so many words, that the use of words like *injuria* to mean "a sense of injustice" is a very useful "tip" in writing Latin prose. Again, apropos of *ut quaeque iis impeditiora erant* (LVII. 5), a hint that this would be the idiomatic rendering of the English "on difficult ground" would not be out of place.

*Caesars's Gallic War, Book III.*, edited by F. H. Colson and G. M. Gwyther (Bell), is another volume of the same series. The notes are of a somewhat more elementary description. They are clear and to the point. The introduction is well put together, and contains no superfluous matter. For example, there is no attempt to write a life

of Caesar; but some of his chief characteristics are given under distinct heads with definite illustrations, avoiding the vagueness and verbiage which are so apt to disfigure such descriptions. It is supplemented by Mr. Liddell's account of the Roman Army, which has appeared in other volumes of the series.

### SCIENCE.

(1) *Introduction to Physical Chemistry.* By J. Walker, D.Sc., Ph.D. (Macmillan.) (2) *A Text-Book of Physical Chemistry.* By Prof. R. A. Lehfeldt. (Arnold.)

During the last twelve years or so physical chemistry, from a mere appendage of ordinary chemistry, has grown into a great volume of knowledge, claiming a right to be considered a science in itself. The pioneers of this new science, Ostwald and Van't Hoff, have published extensive treatises which have been translated to a large extent into English. But, for the student who does not intend to devote himself to the science, some smaller and more introductory work was needed. This want is now supplied by the two works before us. Both authors have previously qualified for their task by acting as translators of certain of the works above referred to, as well as being themselves investigators and teachers in the subject. The arrangement of the two books is somewhat different, and Prof. Walker's is more extensive in its subject-matter, taking the Periodic Law, for instance, not included in Prof. Lehfeldt's book. The laws of solution, osmotic pressure, &c., are equally treated in both.

*Inorganic Chemistry for Advanced Students.* By Sir Henry Roscoe, F.R.S., &c., and Arthur Harden, Ph.D., &c. (Macmillan.)

This book strikes one at once as essentially a new edition of the senior author's "Elementary Lessons" of our school-days, and starts a train of reflections on the changing use of the terms "advanced" and "elementary." One of the characteristic features it retains is the interweaving of the general with the descriptive portions of the subject. Thus a chapter on Equivalents follows the description of the halogens; atomic heat and crystallization are discussed between the nitrogen group and the alkali-metals; and so forth. In fact, the book is designed to present a definite course of study rather than as a systematic treatise chiefly to be used for reference. This is borne out by a new feature—the giving of directions for laboratory experiments, each in its appropriate place; though the instructions are less detailed than they would be in an elementary book.

*Elements of Natural Philosophy.* By Alfred Earl, M.A. (Arnold.)

Under this somewhat old-fashioned title we find a quite modern work on the elements of mechanics, physics, and chemistry. The measurement of quantities of matter, space, and time and their relations; the chief kinds of physical and chemical change; common chemical elements and compounds; the meaning of energy; equilibrium, inertia, vibration, sound and light—these form the subject-matter, illustrated by experiments and mathematical exercises.

*Elementary Practical Physics.* By Henry Stroud, M.A., D.Sc. (Methuen.)

This will be a useful manual for a physical laboratory, as it contains instructions for the use of the usual instruments and methods for measuring length, area, volume, mass, density, time, &c.; experimental illustrations of the balancing of forces, the barometer, and Boyle's law; and elementary experiments on heat, light, sound, magnetism, and electricity, all requiring only very simple and readily constructed apparatus.

*Heat for Advanced Students.* By E. Edser. (Macmillan.)

This work bears on every page the stamp of the practical teacher. It leads the student from the elementary, though not altogether simple, subjects of thermometry and expansion to the laws of thermodynamics and their far-reaching results, both practical and theoretical. Due consideration is given to the historical development of the science, and descriptions of some of the very latest experimental results are to be found here. There are detailed instructions for laboratory experiments, each in its proper place, as well as descriptions, and, in some cases, photographs of the apparatus by which classical experiments have been carried out. There are plenty of good illustrations.

*Magnetism and Electricity for Beginners.* By H. E. Hadley. (Macmillan.)

This work well maintains the high standard of the series to which it belongs. The usual order of treatment is followed—magnetism, statical electricity, voltaic electricity. Instructions for a hundred and seventy-six experiments are given, and the book is abundantly illustrated.

*Magnetism and Electricity.* By J. Paley Yorke. (Arnold.)

The subsidiary title of this book is: "An Elementary Treatise for Junior Students; Descriptive and Experimental." To the last word we must take objection, since no precise instructions are given for the carrying out of experiments. Apart from this deficiency, the importance of which will depend entirely on the circumstances under which the book is used, the book is a good one. Some originality is shown in the order of treatment, electrostatics being taken last.



- (1) *Practical Chemistry* (First Year and Second Year). By H. Hills, B.Sc., B.A. (Philip.) (2) *Practical Physics* (First Year and Second Year.) By H. Hills, B.Sc., B.A. (Philip.)

These contain lists of laboratory experiments and corresponding lecture-headings, intended to be cut out and pasted as headings in the student's note-book. The arrangement of the course is good.

*Animal Biology.* By C. Lloyd Morgan, F.R.S. Third Edition. (Longmans.)

This excellent introduction to zoology reappears with considerable alterations, partly such as are required by recent alterations in the syllabus for the Intermediate Science Examination of London University, partly new diagrams and the usual other improvements of a new edition. In its new form it can be safely recommended to candidates at the examination in question as an eminently readable and trustworthy guide. There is a useful glossary of biological terms at the end.

#### MODERN LANGUAGES.

*Petite Esquisse de la Littérature Française.* By J. E. Mansion. (McDougal's Educational Co.)

The object of the author is to furnish, for higher classes, a French reading book on French literature. Considering the difficulty of condensing such a vast subject within the limits of a hundred and fifty pages, he has succeeded fairly, and a teacher well acquainted with his subject might utilize the book with advantage. But it errs in attempting too much; unnecessary biographical details are often given, and the notices of many authors are too concise to convey an adequate idea of them. The description of the quarrel about "Le Cid" may be cited as distinctly interesting, and so may the notices of Boileau and Montesquieu. On the other hand, Victor Hugo is inadequately treated, and the account of the romantic movement wants a good deal of expansion. A series of essays in which less knowledge was taken for granted would, it seems to us, have carried out the author's idea better. The real object of a school book on literature is rather to show in some detail how a judgment on a few authors may be formed than to summarize cut-and-dried verdicts on a great many.

*My First French Book.* By M. Ninet. (Blackie.)

This is a collection of little talks about cats, canaries, rabbits, naughty boys, and the like, written in simple language with plenty of pictures. By covering up the letterpress they might be also utilized for simple conversations. For that purpose it would have been better to arrange the pictures and the reading on opposite pages.

*Les Ailes de Courage,* by G. Sand, adapted and edited by B. Proper (Blackie), is a pretty little story, not too long for a couple of terms' reading. It has a vocabulary and notes. Some of the notes, which are not numerous, are suggestive, but most of them are mere translations.

#### MISCELLANEOUS.

"Handbooks of English Literature." Edited by Prof. Hales.—*The Age of Johnson.* By Thomas Seccombe. (Bell & Sons.)

Mr. Seccombe has had assigned to him the fifty years from 1748 to 1798, and reviews, with Johnson as his central figure, the late half of our eighteenth-century literature. Within this period, mainly of classical or buckram prose, he has to deal with many artists who have left their quality well impressed on our minds; but we doubt if it can be fairly said to include "more great names in our literature than any other 'Age' included in this series." Amongst its essayists and critics we have Johnson himself, Goldsmith, and the Warton; amongst writers of letters and memoirs, Chesterfield, Walpole, and Boswell; amongst political writers and economists, Burke, Adam Smith, and Arthur Young; amongst theologians, Paley, Priestley, and the Wesleys; amongst historians, Hume, Robertson, and Gibbon; amongst novelists, Richardson, Fielding, Smollett, and Sterne; amongst dramatists, Colman, Goldsmith, and Sheridan; amongst poets, one or two already mentioned, but no great names until we come upon Burns. The scope is wide, but the output is hardly more brilliant than that of the times of Elizabeth, the later Georges, and Victoria. Apart from that Mr. Seccombe has given us a very readable estimate of the time.

*Missionary Travels and Researches in South Africa.* By David Livingstone. (Ward, Lock, & Co.)

There will always be plenty of interest in Livingstone's story of his sixteen years' residence in the interior of Africa. This handy reprint should make a large number of young folk acquainted with a book, in some sense a classic, which delighted their parents on its first publication. It is full of characteristic sketches from the banks of the Congo, Zambesi, Limpopo, and the Equatorial lakes. Incidentally, Livingstone draws a very poor character of the Boers, of their "oppression," "suspicion," "cruelty," and "cowardice." But he bears witness to their ingenuity:—"No winter passes without one or two tribes in the East country being plundered of both cattle and children by the Boers. The plan pursued is the following: One or two friendly tribes are forced to accompany a party of mounted Boers, and these expeditions can only be got up in the winter, when horses may be used without danger of being lost by disease. When they reach the tribe to be attacked, the friendly natives are ranged in front, to form, as they

say, a 'shield'; the Boers then coolly fire over their heads, till the devoted people flee, and leave cattle, wives, and children to the captors. This was done in nine cases during my residence in the interior, and on no occasion was a drop of Boer's blood shed."

"British Anthologies." Edited by Prof. Edward Arber.—*The Spenser Anthology* (1548-1591). Edited by Prof. Arber. (Frowde.)

Some fifty poets are illustrated in this acceptable volume of Elizabethan poetry. The selection is liberal in spirit and quantity, the pica type is excellent for reading, and altogether the volume is very handy and attractive.

*Specimens of English Prose, from Malory to Carlyle.* Selected by Bertha M. Skeat, Ph.D. (Blackie.)

This book is intended, and very well adapted, for school use. It is a selection of passages for the illustration of literary history, and for study rather than simple delectation. The pieces are introduced by descriptions of the works laid under tribute; there are occasional footnotes, and each passage is followed by "points to note in style." The specimens are interesting, and the book will be found very useful.

*A First Sketch of English History.* By E. J. Mathew, M.A. (Macmillan.)

We noticed some time ago a small historical text-book by Prof. Mathew, of New Zealand. The present volume is a combination of three parts, printed at different times, and now bound together with their original paginations. Mr. Mathew is guided mainly by the evolution of constitutional history, but he has wisely lightened his text by introducing a brief narrative of public events.

*Jesus, the Carpenter of Nazareth.* By Robert Bird. (Nelson.)

Mr. Bird has written a graphic life of Jesus, in short and simple sentences, for the youngest children. "Two points are dwelt on which are common to all the Churches—the beauty of the life of Jesus and the personal contact of the Spirit; beyond that lie the dividing walls of creeds and dogmas." The book is imposing in size and full of pictures. It seems to be conceived in an excellent spirit, and has been produced with much taste and judgment.

*Mark Hamilton's Daughters.* By A. Fraser Robertson. (Nelson.)

A pretty, pathetic, melancholy story of a daughter's devotion—good for grown-up readers, especially for young women with a hard lot in life. A novel as safe as the true lessons of life can make it.

*The Children's Hour.* By Mrs. Molesworth. (Nelson.)

This is a very charming story of children for children; full of childish incidents, natural vignettes, pet animals and toys, transient laughs and tears. There are dozens of pictures, some coloured, others in black and white.

### ADJOURNED MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

An adjourned meeting of the Council was held at the College on January 20. Present: Rev. J. Stewart in the Chair; Mr. Barlet, Mr. Baumann, Rev. J. O. Bevan, Mr. Bidlake, Mr. Brown, Mr. Butler, Mr. Charles, Miss Day, Mr. Eve, Mr. Harris, Mr. Leatham, Mr. Millar-Inglis, Mr. Pinches, Mr. Sergeant, and Dr. Wormell.

Diplomas were awarded to the successful candidates at the Christmas Examination of Teachers, as follows:—

#### Fellowship:

Miss R. Crump. E. Garnett.

#### Licentiatehip:

W. M. Daniels. Miss E. M. Harrison. W. H. Payne.  
B. Dumville. R. P. Jones.  
J. H. Fudge. W. Mattison.

#### Associateship:

P. H. Arch.	G. W. Doibel.	T. P. Oakley.
C. E. Arnold.	Miss A. Douglas.	G. C. Oldfield.
T. R. Baldwin.	J. Downes.	Miss E. J. Overton.
F. Barnard.	H. J. Drewitt.	E. J. Owen.
Miss N. M. Barnard.	E. Entwistle.	G. H. O. Piggott.
A. W. Bartlett.	Miss A. Foy.	Miss B. M. Pringuer.
P. L. Beck.	J. C. Gordon.	E. E. Raby.
Miss M. K. Bell.	Miss M. E. Gutteridge.	A. E. Roberts.
W. H. Booth.	T. Hay.	E. F. Sewter.
H. Bosomworth.	Miss E. Hinton.	S. G. Shrive.
T. R. Bradley.	H. St. V. Holden.	W. J. Sidery.
F. A. B. Brett.	J. E. Hoyle.	Miss E. A. Snyth.
C. E. Brittain.	Miss H. Hulls.	J. Stavert.
H. W. Burchmull.	J. H. Irving.	Miss C. Stephens.
R. E. Cawley.	W. A. Johnson.	Miss E. Story.
S. W. Clarridge.	A. Lane.	Miss F. K. Taylor.
Miss E. A. Craig.	W. H. Lawson.	J. W. Tucker.
J. Cussons.	Miss M. P. Lovett-Turner.	H. Turner.
Miss F. E. Dannatt.	G. H. Matthews.	R. H. Venn.
Miss B. M. Davis.	A. Mills.	Miss V. E. Vincent.
A. W. Dawson.	A. Moore.	J. Waller.
G. H. J. Dawson.	S. F. Motts.	Miss E. F. Wood.
Miss M. A. Divane.	R. T. Norton.	

The prize of £10 for Theory and Practice of Education was awarded to Mr. B. Dumville, and the prize of £5 for Classics to Mr. W. M. Daniels.

## TEACHERS' DIPLOMA EXAMINATION—PASS LIST, JANUARY, 1900.

*Theory and Practice.*

## FELLOWSHIP.

Morris, W. R.

## LICENTIATESHIP.

Daniels, W. M.  
Dunville, B.  
Fudge, J. H.  
Harrison, Miss E. M.  
Jones, R. P.  
Mattison, W.  
Payne, W. H.  
Skelly, T. W. K.

## ASSOCIATESHIP.

Arch, P. H.  
Arnold, C. E.  
Baldwin, T. R.  
Barnard, F.  
Barnard, Miss N. M.  
Bartlett, A. W.  
Butterbury, Miss M. M.  
Bell, Miss M. K.  
Booth, W. H.  
Bradley, T. R.  
Brett, F. A. B.  
Brinnicombe, J. R. M.  
Brittain, C. E.  
Britten, H.  
Burchnall, H. W.  
Cawley, R. E.  
Chapman, S. B.  
Clarridge, S. W.  
Corbett, A. J.  
Craig, Miss E. A.  
Cussions, J.  
Dannatt, Miss F. E.  
Davis, Miss B. M.  
Dawson, G. H. J.  
Divane, Miss M. A.  
Dixon, Miss M. M.  
Dolbel, G. W.  
Douglas, Miss A.  
Downes, J.  
Ellison, T. W.  
Entwistle, E.  
Foy, Miss A.  
Gedge, C.  
Gordon, J. C.  
Gutteridge, Miss M. E.  
Gwinn, F.  
Hay, T.  
Hinton, Miss E.  
Holden, H. St. V.  
Hoyle, J. E.  
Hulls, Miss H.  
Irving, J. H.  
Johnson, W. A.  
King, F. A.  
Kirkpatrick, J.  
Lacey, H. C.  
Lambert, W.  
Lane, A.  
Lawson, W. H.  
Lovett Turner, Miss M. P.  
Matthews, G. H.  
Mills, A.  
Moore, A.  
Motts, S. P.  
Norton, R. T.  
Oldfield, G. C.  
Overton, Miss E. J.  
Owen, E. J.  
Piggott, G. H. O.  
Pringuier, Miss B. M.  
Raby, E. E.  
Roberts, A. E.  
Sewter, E. F.  
Sidery, W. J.  
Simmonds, W. J.  
Simon, W. H.  
Smyth, Miss E. A.  
Stavert, J.  
Story, Miss E.  
Taylor, Miss F. K.  
Tucker, J. W.  
Turner, H.  
Venn, R. H.  
Vincent, Miss V. E.  
Waller, J.  
Wood, Miss E. F.*English Language.*Beck, P. L.  
Biss, E. E.  
Booth, W. H.  
Bosomworth, H.  
Britten, H.  
Claxton, W. J.  
Corbett, A. J.  
Dawson, A. W.  
Dering, Miss V. A. J.  
Downes, J.  
Ellison, T. W.  
Fincher, Miss G. V.  
Foy, Miss A.  
Gedge, C.  
Gerrans, W. J.  
Gosling, R. H.*English Language—continued.*Harrison, W. E.  
Hawxwell, J.  
Horsey, E. P.  
Horspool, R.  
Kemp, A.  
Kennedy, W.  
Kirkpatrick, J.  
Lacey, H. C.  
Lambert, W.  
Lane, A.  
Lindow, D.  
Malden, Miss E. L.  
Mather, Miss E. M.  
Mathers, Miss M. J.  
Metcalfe, A. M.  
Minchington, C. H.  
Moore, A.  
Munro, J. (hon.).  
O'Connor, J. R.  
Prior, O. H.  
Savage, Miss H.  
Shrive, S. G.  
Sillet, W. E.  
Simmonds, W. J.  
Simon, W. H.  
Spillett, P. J.  
Stapley, Miss J.  
Stavert, J.  
Stroud, T.  
Venn, R. H. (hon.).  
Walker, A.  
Walters, D.  
Wilford, Miss E.*English History.*Beck, P. L.  
Biss, E. E.  
Booth, W. H.  
Brinnicombe, J. R. M.  
Dawson, A. W.  
Dering, Miss V. A. J.  
Downes, J.  
Foy, Miss A.  
Gerrans, W. J.  
Gosling, R. H.  
Harrison, W. E.  
Horsey, E. P. (hon.).  
King, F. A.  
Lindow, D.  
Mather, Miss E. M.  
Minchington, C. H.  
Moore, A.  
Munro, J.  
Munro, J. R.  
Roberts, R. R.  
Savage, Miss H.  
Spillett, P. J.  
Stapley, Miss J.  
Venn, R. H.  
Wilson, T. W.*Geography.*Aston, Miss F.  
Beck, P. L. (hon.).  
Biss, E. E.  
Bone, T. W.  
Booth, W. H.  
Bothers, W. G.  
Brinnicombe, J. R. M. (hon.).  
Britten, H.  
Chapman, S. B.  
Claxton, W. J.  
Collier, H.  
Corbett, A. J.  
Dawson, A. W.  
Dering, Miss V. A. J.  
Downes, J.  
Ellison, T. W.  
Felix, H. D.  
Finch, Miss F. B.  
Fincher, Miss G. V.  
Foy, Miss A.  
Gedge, C. (hon.).  
Gerrans, W. J.  
Gosling, R. H.  
Gutteridge, C. B.  
Gwinn, F.  
Hannay, Miss E. I.  
Harrison, W. E.  
Hawxwell, J.  
Hills, R. E.  
Horsey, E. P.  
Kennedy, W. (hon.).  
King, F. A.  
Lacey, H. C.  
Lambert, W.  
Levinstein, S. O. J.  
Lindow, D. (hon.).  
Malden, Miss E. L.  
March, Miss A. L.  
Mather, Miss E. M.  
Minchington, C. H.  
Moore, A.  
Munro, J.  
O'Connor, J. R.  
Pearce, E.*Geography—continued.*Prior, O. H.  
Savage, Miss H.  
Sawyer, K.  
Simmonds, W. J.  
Simon, W. H.  
Smith, Miss F. R.  
Spillett, P. J.  
Stroud, T.  
Venn, R. H.  
Waite, A.  
Walker, A.  
Walker, M. F.  
Walters, D.  
West, Miss M. E.  
Wilson, T. W. (hon.).  
Winter, W. H.*Arithmetic.*Acocks, Miss A. V.  
Batterbury, Miss M. M.  
Bone, T. W.  
Booth, W. H.  
Brinnicombe, J. R. M.  
Britten, H.  
Chapman, S. B.  
Claxton, W. J.  
Corbett, A. J.  
Dawson, A. W.  
Downes, J.  
Fincher, Miss G. V.  
Gedge, C.  
Gerrans, W. J.  
Glenny, Miss E. F.  
Gosling, R. H.  
Hansford, H.  
Harrison, W. E. (hon.).  
Hart, G. L.  
Hawxwell, J.  
Herlihy, W. J.  
Hills, R. E.  
Hinton, Miss E.  
Horsey, E. P.  
Horspool, R.  
Kennedy, W.  
King, F. A.  
Lacey, H. C.  
Lambert, W.  
Lindow, D.  
Malden, Miss E. L.  
Mather, Miss E. M.  
Moore, A.  
Munro, J.  
O'Connor, J. R.  
Pearce, E.  
Piggott, G. H. O.  
Roe, Miss M. B.  
Salter, Miss E. A.  
Sawyer, Miss K.  
Shrive, S. G.  
Simmonds, W. J.  
Simon, W. H.  
Skinner, G. E. A.  
Spillett, P. J.  
Stavert, J.  
Stevens, Miss A. M.  
Stroud, T.  
Venn, R. H.  
Wagz, H. J.  
Walker, A.  
Wright, S. H.*Algebra.*FELLOWSHIP.  
Richardson, C. W. H.  
LICENTIATESHIP.  
Herlihy, W. J.  
ASSOCIATESHIP.  
Bone, T. W.  
Dawson, A. W.  
Ellison, T. W.  
Harrison, W. E. (hon.).  
Kennedy, W.  
Lambert, W.  
Lindow, D.  
Minchington, C. H.  
Munro, J.  
O'Connor, J. R.  
Osborne, S. H.  
Roe, Miss M. B.  
Simon, W. H.  
Spillett, P. J.  
Stavert, J.*Geometry.*FELLOWSHIP.  
Lloyd, C. C.  
Richardson, C. W. H.  
LICENTIATESHIP.  
Moore, A.  
Munro, J.  
O'Connor, J. R.  
Roberts, R. R.  
Sterrey, C. E.*Geometry—continued.*

## ASSOCIATESHIP.

Beck, P. L.  
Chapman, S. B.  
Dawson, A. W.  
Drewitt, H. J.  
Ellison, T. W.  
Forrester, T. C.  
Harrison, W. E.  
Huck, J.  
Kennedy, W.  
Lambert, W.  
Lindow, D.  
Minchington, C. H.  
Munro, J.  
Oakley, T. P.  
O'Connor, J. R.  
Powell, Miss M. B.  
Roe, Miss M. B.  
Simon, W. H.  
Spillett, P. J.  
Stavert, J.*Trigonometry.*

## FELLOWSHIP.

Richardson, C. W. H.  
LICENTIATESHIP.  
Sterrey, C. E.  
Skelly, T. W. K.*Mechanics.*

## LICENTIATESHIP.

Sterrey, C. E.

## ASSOCIATESHIP.

Britten, H.  
Harrison, W. E. (hon.).  
Munro, J.  
Oakley, T. P.  
Stevens, Miss A. M.*Conics.*

## FELLOWSHIP.

Richardson, C. W. H.

*Calculus.*

## FELLOWSHIP.

Richardson, C. W. H.

*French.*

## FELLOWSHIP.

Jordan, F. W.  
Winn, Miss I.

## LICENTIATESHIP.

Biss, E. E.  
Gerrans, W. J.  
Gutteridge, C. B.  
Harris, E. W.  
Horsey, E. P. (hon.).  
Lock, Miss A. J. (hon.).

## ASSOCIATESHIP.

Aston, Miss F.  
Booth, W. H.  
Budgett, Miss B. S. (hon.).  
Dering, Miss V. A. J. (hon.).  
Dolbel, G. W. (hon.).  
Fincher, Miss G. V.  
Gosling, R. H.  
Levinstein, S. O. J. (hon.).  
Malden, Miss E. L.  
Mather, Miss E. M.  
Salter, Miss E. A. (hon.).  
Symmons, R. H.  
Walker, M. F.*German.*

## FELLOWSHIP.

Crump, Miss R.  
Jordan, F. W.

## ASSOCIATESHIP.

Dering, Miss V. A. J.

*Latin.*

## FELLOWSHIP.

Lloyd, C. C.

## LICENTIATESHIP.

Biss, E. E.  
Daniels, W. M. (hon.).  
Gerrans, W. J.

## ASSOCIATESHIP.

Britten, H.  
Munro, J.  
Venn, R. H.*Greek.*

## FELLOWSHIP.

Garnett, E.  
Lloyd, C. C.

## LICENTIATESHIP.

Daniels, W. M.  
Payne, W. H.*Sound, Light, and Heat.*

## LICENTIATESHIP.

Sterrey, C. E.

## ASSOCIATESHIP.

Britten, H.  
Claxton, W. J.  
Downes, J.  
Foy, Miss A.  
Harrison, W. E.  
Lacey, H. C.  
Norton, R. T.  
Smith, Miss F. R.  
Waite, A.*Chemistry.*

## FELLOWSHIP.

Morris, W. R.

## LICENTIATESHIP.

Sterrey, C. E.

## ASSOCIATESHIP.

Brinnicombe, J. R. M.  
Harrison, W. E. (hon.).  
Moore, A.  
Norton, R. T.  
Stephens, Miss C.*Physiology.*

## LICENTIATESHIP.

Biss, E. E.  
Bosomworth, H.  
Feltham, L. R. M.  
Harris, E. W.  
Lock, Miss A. J.  
Roberts, R. R.  
Skelly, T. W. K. (hon.).  
Swann, H. T.  
Wilson, T. W.

## ASSOCIATESHIP.

Blacklee, A. P. (hon.).  
Brinnicombe, J. R. M. (hon.).  
Britten, H.  
Claxton, W. J.  
Downes, J.  
Gedge, C. (hon.).  
Hansford, H.  
Hawxwell, J.  
Horspool, R.  
Lacey, H. C. (hon.).  
Moore, A.  
Savage, Miss H.  
Simpson, J. J.  
Skinner, G. E. A.  
Smith, Miss F. E.  
Stavert, J.  
Stevens, Miss A. M.  
Stroud, T.  
Waite, A.  
Walker, M. F.*Botany.*

## LICENTIATESHIP.

Feltham, L. R. M.  
James, T. E.  
Lock, Miss A. J.  
Skelly, T. W. K.

## ASSOCIATESHIP.

Finch, Miss F. B.  
March, Miss A. L.  
Savage, H.  
Wilford, Miss E.*Geology.*

## FELLOWSHIP.

May, E. W. S.

## ASSOCIATESHIP.

Drewitt, H. J.

*Drawing.*Kennedy, W. (hon.).  
Minchington, C. H. (hon.).  
Shinwell, Miss J. E. (hon.).*Scripture History.*Biss, E. E. (hon.).  
Collier, H.

**MATHEMATICS.**

**4086.** (A. RENSRAW.)—If AC be the chord of a heptagon inscribed in a circle, diameter AB (= 2r), and AB be taken as the axis of x, and a line at right angles to it through A as that of y, then, if (x', y') be the coordinates of C, prove that

$$\frac{2y'(2x'-r)\{x'(x'-r)-y'^2\}}{\{x'(x'-r)-y'^2\}^2-y'^2(2x'-r)^2} = \frac{x'}{y'}$$

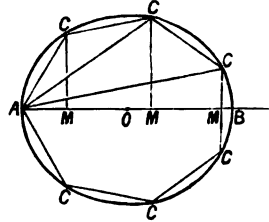
*Solution by Professor SANJANA, M.A.*

Let A be joined to any one of the remaining vertices, C, of the heptagon; let  $\angle BAC = \theta$ . Then

$$\theta = \frac{1}{7}\pi \text{ or } \frac{3}{7}\pi \text{ or } \frac{5}{7}\pi;$$

also  $AC = 2r \cos \theta$ ,

$$x' = 2r \cos^2 \theta, \quad y' = 2r \cos \theta \sin \theta.$$



Hence, the given left side

$$\begin{aligned} & \frac{2r \sin 2\theta (r + 2r \cos 2\theta) \{r(1 + \cos 2\theta) r \cos 2\theta - r^2 \sin^2 2\theta\}}{\{r(1 + \cos 2\theta) r \cos 2\theta - r^2 \sin^2 2\theta\}^2 - r^2 \sin^2 2\theta (r + 2r \cos 2\theta)^2} \\ &= \frac{2 \sin 2\theta (1 + 2 \cos 2\theta)(\cos 2\theta + \cos 4\theta)}{(\cos 2\theta + \cos 4\theta)^2 - \sin^2 2\theta (1 + 2 \cos 2\theta)^2} \\ &= \frac{2 (\sin 2\theta + \sin 4\theta)(\cos 2\theta + \cos 4\theta)}{(\cos 2\theta + \cos 4\theta)^2 - (\sin 2\theta + \sin 4\theta)^2} \\ &= \frac{8 \sin 3\theta \cos \theta \cos 3\theta \cos \theta}{4 \cos^2 3\theta \cos^2 \theta - 4 \sin^2 3\theta \cos^2 \theta} = \frac{2 \sin 3\theta \cos 3\theta}{\cos^2 3\theta - \sin^2 3\theta} = \tan 6\theta \\ &= \tan (\frac{3}{2}\pi - \theta), \text{ in all three cases,} \\ &= \cot \theta = x'/y'. \end{aligned}$$

This example is quoted in Vol. LXIX., at p. 125, where, I believe, two mistakes occur in the left-side expression. For all regular polygons this expression is  $\tan 6\theta$ ; and for the heptagon  $\tan 6\theta$  is  $\cot \theta$ .

[Mr. DAVIS agrees with Professor SANJANA's emendation of the question. Since

$$\sin \theta = y'/AC, \quad \cos \theta = x'/AC, \quad \sin 2\theta = y'/OC, \quad \cos 2\theta = (x'-r)/AC;$$

therefore  $\tan 3\theta = y'(2x'-r)/\{x'(x'-r)-y'^2\}$  and  $\tan 6\theta$  as above.]

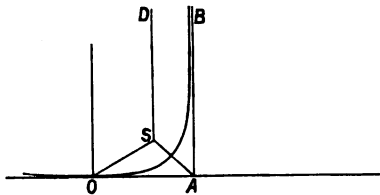
**14365.** (Professor COCHEZ.)—Lieu des foyers des hyperboles tangentes à l'origine à l'axe des x et ayant une asymptote perpendiculaire à l'axe des x.

*Solution by R. P. PARANJPYE, B.A.*

Let OA = a, when AB is the asymptote perpendicular axis of x. If S be the focus in this position, the coordinates being  $\xi, \eta$ , we express the condition that

$$\angle OSA = \angle ASD,$$

or its supplement, since AO and AB are the two tangents from A.



On making some easy reductions, we see

$$\eta^2 a = \pm (a - \xi) \{ (a - \xi)^2 - \eta^2 \}.$$

There is no other condition to be satisfied. Hence there is no locus as required, for we can take any point as focus and describe an hyperbola (there are, in fact, two for each point) satisfying the given conditions.

*A New Proof that the Medians of a Triangle are Concurrent.*

*By J. W. SHARPE, M.A.*

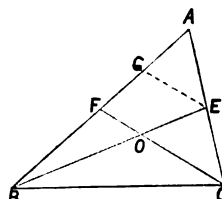
Let ABC be a triangle. Bisect AB, AC in F, E; and AF in G. Join BE, CF, EG, and let BE meet CF in O. Then EG is parallel to CF, and GF is one-third of GB; therefore EO is one-third of EB; and the theorem follows at once.

*Notes.*—If EF and OG be joined, the proof can be arranged as follows:—

Since EG is parallel to OF,

$$\triangle OFE = \triangle OFG,$$

and therefore is one-half of  $\triangle OFB$ : therefore EO is half OB.

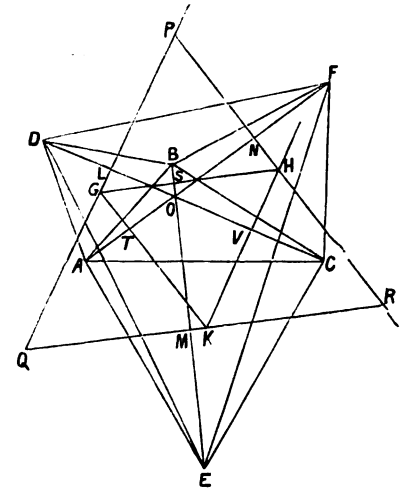


**14382.** (I. ARNOLD.)—Given the three right lines joining the vertices of equilateral triangles described externally on the sides of any plane triangle, to construct the triangle.

*Solutions (1) by the PROPOSER; (2) by C. JOSS, M.A.*

(1) Construct the triangle DEF having the sides equal to the given lines. On DE, DF describe segments each containing an angle equal to  $120^\circ$ .

Let the arcs intersect in O; join DO, EO, FO. Bisect these in L, M, N; and through these points draw perpendiculars to DO, FO, EO, thus forming the triangle PQR. Bisect PQ, PR, QR in G, H, K; draw GH, GK, HK, and produce EO, FO, DO to meet them in S, T, V. From ES, FT, DV produced cut off  $TA = TO$ ,  $SB = SO$ ,  $VC = VO$ ; draw AB, BC, CA: then is ABC the triangle required.



It is evident from the construction that the six angles AOD, DOB, BOF, FOC, COE, EOA are equal; and therefore each of them is one-sixth of four right angles, or two-thirds of a right angle. Also since PQ and PR are bisected in G and H, then GH is parallel to Q, R, and therefore perpendicular to BE; similarly GK is perpendicular to AF, and HK to CD.

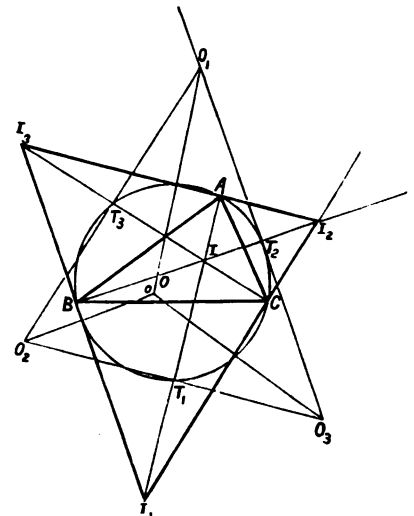
[The rest in Vol.]

**14376.** (A. F. VAN DER HEYDEN, B.A.)—If I be the incentre,  $I_1, I_2, I_3$  the excentres, and O the circumcentre of a triangle ABC, and if  $o_1, o_2, o_3$  are the circumcentres of the triangles  $I_1I_2I_3, I_1I_2I_1, I_1I_2I_3$  respectively, then o, I, O are respectively the orthocentre, circumcentre, and nine-point-centre of the triangle  $o_1o_2o_3$ , and the circle ABC touches the inscribed and escribed circles of this triangle.

*Solution by LIONEL E. REAY, B.A.; R. P. PARANJPYE, B.A.; and many others.*

ABC being the nine-point-circle of each of the triangles  $I_1I_2I_3$ , &c., the circumradius of each

$= R = o_3I = o_1I = o_1I_2 = o_3I_2$ ; therefore  $o_1o_2$  is bisected at right angles by  $I_1I_2$  at point  $T_2$ . So for  $o_2o_3, o_3o_1$ ; therefore I is circumcentre of  $o_1o_2o_3$ . Also the circle ABC passes through  $T_1, T_2, T_3$ , the mid-points of the sides of  $o_1o_2o_3$ : therefore it is the nine-point circle of  $o_1o_2o_3$ ; and therefore O is the nine-point centre, and ABC touches the inscribed and escribed circles of  $o_1o_2o_3$  (FEUERBACH'S theorem). Again,  $I_1I_2$  and  $o_1o_2$  are parallel, since they are both perpendicular to  $I_1I_3$ ; therefore  $oo_3$  is perpendicular to  $o_1o_2$ ; therefore o is orthocentre of  $o_1o_2o_3$ .



**14281.** (J. A. THIRD, M.A.)—If a conic touch the sides BC, CA, AB of a triangle at X, Y, Z, and another conic touch the sides YZ, ZX, XY of XYZ at P, Q, R respectively, then AP, BQ, CR are concurrent.

*Solution by Professor SANJANA, M.A.*

Take XYZ as the triangle of reference. Let the equation of the circumconic be  $S_1 \equiv l/a + m/b + n/\gamma = 0$ ; that of the inconic

$$S_2 \equiv L^2a^2 + M^2b^2 + N^2\gamma^2 - 2MNB\gamma - 2NL\gamma a - 2LMa\beta = 0.$$

The tangent YA is  $\gamma/n + a/l = 0$ , and ZA is  $a/l + \beta/m = 0$ ; hence for A  $a/l = -\beta/m = -\gamma/n$ . The conic  $S_2$  is touched by YZ at the point P, for which  $a = 0, \beta/N = \gamma/M$ . Thus the equation of AP is

$$a(Mm - Nn) + l(M\beta - N\gamma) = 0.$$

Similarly, BQ, CR are given by

$$\beta(Nn - Ll) + m(N\gamma - La) = 0, \quad \gamma(Ll - Mm) + n(La - M\beta) = 0.$$

With ordinary working it will be found that these lines concur in the point

$$a/l \{ l(Mm + Nn - Ll) \} = \beta/\{ m(Nn + Ll - Mm) \} = \gamma/\{ n(Ll + Mm - Nn) \}.$$

**14327.** (ROBERT W. D. CHRISTIE).—Investigate the easiest method of securing (1) the first primitive root of a prime, and (2) all the rest.

*E.g.*, prime = 29; first root 2; ∴ 2<sup>3</sup> = 8; ∴ 8<sup>3</sup> = 19, 19<sup>3</sup> = 15, &c.,  
or  
2. 3. 8. 27. 21. 26 × 5  
10. 15. 11. 19. 18. 14 × 6.

*Solution by Lt.-Col. ALLAN CUNNINGHAM, R.E.*

GAUSS's method of finding a primitive root is given in MATHEWS's *Theory of Numbers*, Pt. I., 1892, Art. 20. It is direct, but certainly very laborious, as it involves computing every term of the complete period of each of the trial roots *a*, *b*, *c*, &c., until a primitive root *g* is obtained. It may be much curtailed by testing each trial root *a*, *b*, *c*, &c., as to its being a primitive root or not, before undertaking the labour of computing every term of its complete period. This may be done in a series of tests; if, at any step, a trial root is found to be non-primitive. The steps are described as used for the first trial root *a*.

(1) Apply the known simple rules as to whether *a* is a 2-ic residue or not.

(2) When *p* = 6*w* + 1, apply the known simple rules as to whether *a* is a 3-ic residue or not.

(3) If *a* proves to be a 2-ic non-residue, and also a 3-ic non-residue (when *p* = 3*w* + 1), next compute the least residues of *a*<sup>*f*</sup> (mod *p*) for every exponent *f* which is a sub-multiple of (*p* - 1), beginning with the lowest value of *f*. If any such value of *f* < (*p* - 1) gives *a*<sup>*f*</sup> ≡ 1, then *a* is a non-primitive root; but, if no such value of *f* < (*p* - 1) gives *a*<sup>*f*</sup> ≡ 1, then *a* is a primitive root.

[The rest in Volume.]

**14229.** (PROFESSOR UMES CHANDRA GHOSH).—If the LEMOINE's circle of a triangle ABC cuts its sides AB, BC, and CA in F, F'; D, D'; and E, E' respectively, and if the points of intersection of the symmedians AK, BK, and CK of the triangle ABC with FE', F'D, and ED' be A<sub>1</sub>, B<sub>1</sub>, C<sub>1</sub>, show that the centre of the LEMOINE's circle of the triangle A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> is the middle point of the line joining the symmedian point of the triangle ABC and the centre of its LEMOINE's circle. If triangles A<sub>2</sub>B<sub>2</sub>C<sub>2</sub>, A<sub>3</sub>B<sub>3</sub>C<sub>3</sub>, A<sub>4</sub>B<sub>4</sub>C<sub>4</sub>, ..., A<sub>*n*</sub>B<sub>*n*</sub>C<sub>*n*</sub> be formed in the same way as A<sub>1</sub>B<sub>1</sub>C<sub>1</sub>, and if O<sub>1</sub>, O<sub>2</sub>, O<sub>3</sub>, ..., O<sub>*n*</sub> be the centres of the LEMOINE's circles of these triangles, prove that O<sub>*n*</sub>K = 1/(2<sup>*n*</sup>) · OK.

*Solution by Rev. J. CULLEN.*

Since FE', F'D, and ED' are anti-parallel, A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> are their mid-points, so that B<sub>1</sub>C<sub>1</sub> is parallel to BC; hence the triangle A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> is homothetic with ABC (K being the homothetic centre). Also DF' = *abc*/*k*, DD' = *a*<sup>2</sup>/*k*, where *k* = *a*<sup>2</sup> + *b*<sup>2</sup> + *c*<sup>2</sup>. Therefore

$$B_1C_1 = (a^2 + abc \cos A) / k = \frac{1}{2}a;$$

whence the modulus of similarity of A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> = 1/2, so that the circumcentre of A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> is the centre of the LEMOINE circle of ABC; therefore O<sub>1</sub>K = (1/2<sup>2</sup>) OK. Similarly, for A<sub>2</sub>B<sub>2</sub>C<sub>2</sub>, &c.

[Mr. G. N. BATES solves the Question as follows:—Here A<sub>1</sub>, &c., are the mid-points of KA, KB, KC, and the circumcentre of A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> coincides with centre of triplicate ratio circle of ABC, and is therefore at mid-point of OK (see Quest. 14110); therefore, if O<sub>1</sub> be centre of triplicate ratio circle of A<sub>1</sub>B<sub>1</sub>C<sub>1</sub>, O<sub>1</sub>K = 1/2 OK, and therefore O<sub>*n*</sub>K = (1/2<sup>*n*</sup>) OK.]

**6222.** (PROFESSOR CROFTON, F.R.S.).—A heavy particle rests on the summit of a smooth circle; if it be allowed to slide down the circle, show that the parabola which it describes on leaving the circle has double contact with the circle.

*Solution by F. H. PEACHELL, B.A.*

Let P be the point where the particle leaves the circle.

It is easy to prove that P is at a vertical distance = 1/3 radius below A. Call the radius *a*. The velocity of the particle at P = √{1/3(2*ag*)}.

Let ∠TPX = *α*;

then cos *α* = 2/3,

$$\sin \alpha = \frac{1}{3}\sqrt{5},$$

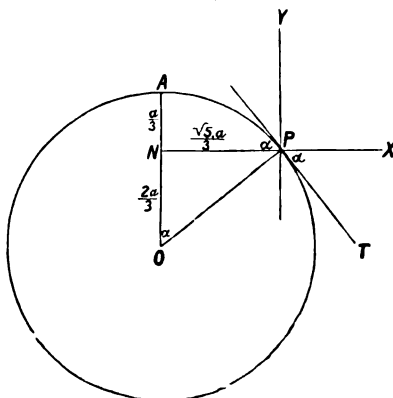
$$\tan \alpha = \frac{1}{2}\sqrt{5}.$$

Take PX, PY as axes of coordinates. Then position of the particle, after a time *t*, is given by

$$y = -(u \sin \alpha \cdot t + \frac{1}{2}gt^2), \quad x = u \cos \alpha \cdot t;$$

therefore, eliminating *t*, we get  $y = -\left\{ x \tan \alpha + \frac{1}{2} \frac{gx^2}{u^2 \cos^2 \alpha} \right\}$ .

This reduces to  $27x^2 + 8\sqrt{5}ax + 16ay = 0$ .



Tangent at origin is  $\sqrt{5}x + 2y = 0$ .

Equation of a conic having contact of second order with the parabola is

$$27x^2 + 8\sqrt{5}ax + 16ay - \lambda(\sqrt{5}x + 2y)(y - mx) = 0.$$

If this is a circle, we get  $\lambda = -6$ ,  $m = \frac{1}{2}\sqrt{5}$ .

The equation then becomes  $x^2 + y^2 + \frac{1}{2}(2\sqrt{5})ax + \frac{1}{2}ay = 0$ , which is the equation of the given circle. Thus the circle osculates the parabola at the origin.

[Mr. J. H. TAYLOR, M.A., refers to SALMON's *Conic Sections* (1862), pp. 210-212, and says, "It is evident that Dr. SALMON would have called the Question 'a contact of the second order,' not a 'double contact.'"]

**5916.** (EDWYN ANTHONY, M.A.).—Show that, for all positive integral values of *n* except unity, 2*n*! is less than {*n*(*n* + 1)}<sup>*n*</sup>.

*Solution by H. W. CURJEL, M.A.; ROBERT BRYANT, D.Sc.; and many others.*

Since the geometric mean is greater than the arithmetic mean, if *n* > 1, then {1.3.5... (2*n* - 1)}<sup>1/*n*</sup> < *n* and (2.4.6... 2*n*)<sup>1/*n*</sup> < *n* + 1; therefore

$$2n! < \{n(n+1)\}^n.$$

**6330.** (H. MACCOLL, B.A.).—The chances of two causes X and Y are respectively .1 and .2. The chance that, if the cause X present itself, an event Z will accompany it, whether as a consequence of the cause or not, is .6; and the chance that, if the cause Y present itself, the event Z will accompany it, whether as a consequence or not, is .7. Moreover, the event Z cannot appear in the absence of both the causes X and Y. On the assumption that X and Y are independent, and that Z is more probable when X and Y both occur than when only one of them occurs, show that the chance of the event Z lies between .18 and .186. [This result does not agree with BOOLE's (see *Laws of Thought*, p. 321, especially the foot-note), whose formula would give .190697... for the exact chance.]

*Solution by the PROPOSER.*

Denoting the data by the symbol  $\epsilon$ , and employing generally the probability notation already explained in the *Educational Times*, and elsewhere, we have

$$\epsilon : \left(\frac{x}{\epsilon} - \frac{1}{10}\right) \left(\frac{y}{\epsilon} - \frac{2}{10}\right) \left(\frac{z}{\epsilon} - \frac{6}{10}\right) \left(\frac{z}{y} - \frac{7}{10}\right) (z : x + y) \times \left(\frac{x}{xy} > \frac{x}{x}\right) \left(\frac{z}{xy} > \frac{z}{y}\right) \left(\delta \frac{x}{y} = 0\right)$$

in which *x*, *y*, *z* are statements respectively asserting the occurrence of the causes X and Y and the event Z. From the fifth factor of the above data, we get  $z = z(x + y) = zx + zy$ ;

therefore

$$\frac{z}{\epsilon} = \frac{zx}{\epsilon} + \frac{zy}{\epsilon} - \frac{zx \cdot zy}{\epsilon} = \frac{zx}{\epsilon} + \frac{zy}{\epsilon} - \frac{z \cdot xy}{\epsilon} \\ = \frac{x}{\epsilon} \cdot \frac{z}{x} + \frac{y}{\epsilon} \cdot \frac{z}{y} - \frac{z}{xy} \cdot \frac{xy}{\epsilon} = \frac{1}{10} \cdot \frac{6}{10} + \frac{2}{10} \cdot \frac{7}{10} - \frac{1}{10} \cdot \frac{2}{10} \cdot \frac{z}{xy} \\ = \frac{20}{100} - \frac{2}{100} \cdot \frac{z}{xy};$$

for  $\frac{zx}{\epsilon} = \frac{1}{10} \cdot \frac{2}{10}$ , since  $\delta \frac{x}{y} = 0$ .

But, from our fourth and seventh data,  $\frac{z}{xy}$  lies between 1 and 7/10. Hence  $\frac{z}{\epsilon}$  lies between .18 and .186.

[The rest in Volume.]

**13483.** (P. W. FLOOD).—Given the base and vertical angle, to construct the triangle geometrically so that the rectangle of the sides shall have a given ratio to the square of a line drawn from the vertex to a point in the base.

*Solution by the late MORGAN BRIERLEY.*

The base AB and the vertical angle ACB being given, the diameter DH of the circumcircle is given. Divide DH in I, so that DH : DI = the given ratio of AC · BC : CK<sup>2</sup>, CK being the required line drawn from the vertex to the base.

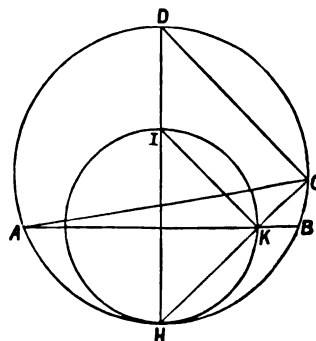
On HI describe a circle, cutting the base in K, through which point draw the line HKC to meet the circumcircle in C. ACB will be the required triangle.

By similar triangles,

$$HD : DI :: HC : KC,$$

$$\text{and } HC \cdot KC = \{HK \cdot KC + KC^2\} \\ = AC \cdot BC;$$

∴ AC · BC : CK<sup>2</sup> = HC · KC = DH : DI = the given ratio.



QUESTIONS FOR SOLUTION.

**14450.** (Professor G. B. MATHEWS, F.R.S.)—When  $n$  is an indefinitely large positive integer, every point of the curve  $r = a \{1 + (1/n) \sin n\theta\}$  is indefinitely near the circle  $r = a$ . Prove, by elementary considerations, that, notwithstanding this, the limit of the perimeter of the curve certainly exceeds  $2a\sqrt{\pi^2 + 4}$  [its exact value is  $4a\sqrt{2E_1(1/\sqrt{2})}$ ]. Show also that, under the same circumstances, the limit of the perimeter of  $r = a \{1 + (1/n) \sin n^2\theta\}$  is infinite.

**14451.** (Professor NEUBERG.)—Trouver l'aire de la courbe  $x^2 - y^2 = x^y$ .

**14452.** (Professor UMES CHANDRA GHOSH.)—If  $\Omega$  and  $\Omega'$  are the BROCARD points of a triangle ABC,  $\Delta_1, \Delta_2, \Delta_3$  and  $\Delta'_1, \Delta'_2, \Delta'_3$  are the areas of the triangles  $\Omega BC, \Omega AC, \Omega AB$  and  $\Omega' BC, \Omega' AC, \Omega' AB$ , show that

$$(i.) \frac{\sin^2 \omega}{4\Delta} = \frac{\Delta_1}{a^2 c^2} = \frac{\Delta_2}{a^2 b^2} = \frac{\Delta_3}{b^2 c^2} = \frac{\Delta'_1}{a^2 b^2} = \frac{\Delta'_2}{b^2 c^2} = \frac{\Delta'_3}{a^2 c^2};$$

$$(ii.) \frac{\sin \omega}{2\Delta} = \frac{\Omega A}{b^2 c} = \frac{\Omega B}{a^2 c} = \frac{\Omega C}{a^2 b} = \frac{\Omega' A}{bc^2} = \frac{\Omega' B}{a^2 c} = \frac{\Omega' C}{ab^2};$$

$$(iii.) \Omega \Omega' = \frac{abc}{a^2 b^2 + a^2 c^2 + b^2 c^2} \sqrt{\{a^2(a^2 - b^2) + b^2(b^2 - c^2) + c^2(c^2 - a^2)\}};$$

where  $\omega$  is the BROCARD angle and  $\Delta$  the area of the triangle ABC.

**14453.** (Professor A. DROZ-FARNY.)—Construire un triangle, dont on connait la base, la hauteur correspondante et sachant que sa droite d'EULER est parallèle au côté donné.

**14454.** (Professor SANJANA, M.A.)—Solve, in rational numbers, the equation  $M^2 - 2xN^2 = x^2 - 1$ , where  $x$  stands for any one of the natural numbers 2, 3, 4, 5, 6, ... [The solution gives  $N^4 + 1$  as the difference of two squares. I have reason to believe that 5 is the only small value of  $x$  admissible. For the method see CHRYSTAL, xxxiii., §§ 16-19.]

**14455.** (Professor COCHEZ.)—Courbe  $\rho^3 - 3\rho \tan \omega + 2 = 0$ .

**14456.** (Professor N. BHATTACHARYYA.)—There are  $n$  smooth rings fixed to a horizontal plane, and a string, the ends of which are fastened to two of the rings, passes in order through them. In the loops formed by the successive portions of the string are placed a number of pulleys whose masses are  $m, \frac{1}{2}m, \frac{1}{3}m, \frac{1}{4}m, \frac{1}{5}m$ , &c. If, in the subsequent motion, all the portions of the string not in contact with the pulleys are vertical, show that the acceleration of the  $r$ th pulley is  $\{(n-2r)/n\}g$ . Discuss the case when  $n$  is even.

**14457.** (D. BIDDLE.)— $N = \Delta a_1 + b_1 \equiv r \pmod{\Delta p + q}$ , where the quantities are all integral but not necessarily all positive. Prove (1) that  $a_q - b_1 p \equiv -mr \pmod{\Delta p + q}$ , and, if  $a_1 q - b_1 p = \Delta a_2 + b_2$ , then

$$a_{2q} - b_2 p \equiv m^2 r \pmod{\Delta p + q},$$

or, continuing the process,  $a_n q - b_n p \equiv \pm m^n r \pmod{\Delta p + q}$ ,

according as  $n$  is even or odd; (2) that when  $r = 0$ , eventually  $a_n q = b_n p$ . Further, bearing in mind that in (1)  $m = p$ , but that  $b_1$  is not necessarily  $< \Delta$ , show (3) that by a process inverse to the above a series of residues of  $N$ , in respect of successive primes, can be found without division of  $N$  as a whole.

**14458.** (J. A. THIRD, D.Sc.)—XYZ is a triangle inscribed in ABC and having its sides proportional to the medians of ABC. Show that the envelope of the circumcircle of XYZ is the LEMOINE ellipse of ABC.

**14459.** (R. TUCKER, M.A.)—PQAR is a conormal circle of a parabola (A being the vertex), and AP, QR cut in  $p$ ; AQ, RP in  $q$ ; and AR, PQ in  $r$ . Show that the circle  $pqr$  is given by the equation

$$x^2 + y^2 + 2ax + \frac{2S_1 + \mu^2}{4\mu} ay + \frac{1}{2} S_2 a^2 = 0.$$

Also the orthocentre of  $pqr$  is  $(S_2 + 8) \frac{1}{2} a, \frac{1}{2} \mu a$ ; and  $\Delta AQR = 4\Delta pqr$ . [For notation, &c., cf. Quest. 13730, Reprint, LXIX., p. 57.]

**14460.** (R. F. DAVIS, M.A.)—Given the base of a triangle in magnitude ( $= 2a$ ) and position, and also the length ( $= l$ ) of the line bisecting the vertical angle (vertex to base), prove that the locus of the vertex referred to the base as axis of  $x$  and a perpendicular to the base through its middle point as axis of  $y$  is

$$(x^2 + y^2 + a^2)^2 = 4x^2 a^2 + l^2 x^2 / (l^2 - y^2).$$

**14461.** (Rev. W. ALLEN WHITWORTH, M.A.)—If a straight line be divided at random into three parts  $x, y, z$ , show that the expectation of the volume  $(y+z)(x+x)(x+y)$  is 14 times the expectation of the volume  $xyz$ .

**14462.** (G. D. WILSON, M.A.)—Prove algebraically that

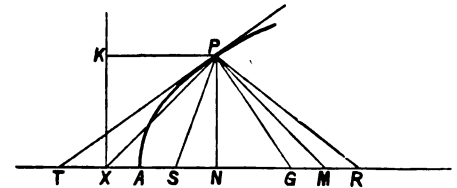
$$\sum_{b=0}^{b=\lambda} \frac{(-1)^b (n-m)! m!}{2^{2b} (n-m-2b)! b! (m+b)!} x^{n-m-2b} (y^2 - x^2)^b = \left(\frac{y}{2}\right)^{n-m} \sum_{p=0}^{p=\lambda} \frac{(-1)^p (n-m)! m! (2n-2p)!}{(n-m-2p)! p! (m+p)! (n-p)!} \left(\frac{x}{y}\right)^{n-m-2p}$$

where  $\lambda = \frac{1}{2}(n-m)$  if  $(n-m)$  be even, or  $\frac{1}{2}(n-m-1)$  if  $(n-m)$  be odd.

**14463.** (R. C. ARCHIBALD, M.A.)—Express the coordinates of any point on the cardioid as rational functions of a variable parameter, and show that the locus of a point which moves such that the triangle formed by joining the points of contact of the tangents drawn therefrom to the cardioid is, in general, a curve of the eighth degree. [This theorem is due to Professor ZAHRADNIK. Evidently Quest. 11427 (i.), Reprint, Vol. LVIII., p. 42, is a special case.]

**14464.** (EDWARD V. HUNTINGTON, A.M.)—The angle between the principal axes of two given concentric ellipses is  $90^\circ$ , and  $a + b = a' + b'$ . Show that a line of length  $a - b'$  (or  $a' - b$ ) sliding between these curves envelops an astroid; and that any line rigidly connected with this sliding line envelops an involute of an astroid. (Astroid = hypocycloid of four cusps.)

**14465.** (Rev. T. ROACH, M.A.)—In a parabola, PG, PM, PR are perpendicular to PT, PX, PA. Find the condition that M bisects GR.



**14466.** (Rev. A. M. WILCOX, M.A.)—Four pennies are placed flat on a table so that each touches two of the others. Find when the space enclosed between them is a maximum or minimum.

**14467.** (G. H. HARDY, B.A.)—Prove that

$$\int_{-\infty}^{\infty} \{\phi(x-a) - \phi(x-b)\} dx = (b-a) \{\phi(\infty) - \phi(-\infty)\},$$

provided each side of the equation represents a determinate quantity. Deduce the values of

$$\int_{-\infty}^{\infty} \frac{dx}{\cosh(x-a) \cosh(x-b)}, \quad \rho \int_{-\infty}^{\infty} \frac{dx}{\sinh(x-a) \sinh(x-b)}$$

**14468.** (R. P. PARANJPE, B.A.)—Show that, if  $xyz$  be the rectangular Cartesian, and  $r, \theta, \phi$  the polar coordinates of a point, and  $x, y, z, r$  be integers, then the product  $xyzr$  is a multiple of 7,200, provided  $\theta$  and  $\phi$  have commensurable trigonometrical ratios. [N.B.—The last condition is necessary; otherwise the question is not true, e.g.,  $2^2 + 2^2 + 1^2 = 3^2$ , but  $2.2.1.3 = 12$ .] (This is a generalization of Quest. 14367.)

**14469.** (H. MACCOLL, B.A.)—Professor SAVAGE'S Quest. 14394 has suggested the following:—Given that  $a$  is real and positive, and that  $x$  and  $y$  are each taken at random between  $a$  and  $-a$ , what is the chance that  $(x+y)^n$  is less, and  $(x+y)^{n+1}$  greater, than  $a^n$ ? Show that there are four different answers (including zero) depending on the oddness or evenness of  $n$ , and on the numerical limits assigned to  $a$ .

**14470.** (J. J. BARNVILLE, B.A.)—Having  $u_n - 1 + u_{n+1} = 5u_n$ , prove that

$$\begin{aligned} \frac{1}{1+1} + \frac{1}{4+1} + \frac{1}{19+1} + \frac{1}{91+1} + \dots &= \frac{\sqrt{21}}{6}, \\ \frac{1}{1+4} + \frac{1}{4+4} + \frac{1}{19+4} + \frac{1}{91+4} + \dots &= \frac{\sqrt{21}}{12}, \\ \frac{1}{4+5} + \frac{1}{7+5} + \frac{1}{31+5} + \frac{1}{148+5} + \dots &= \frac{7+3\sqrt{21}}{90}, \\ \frac{1}{7+5} + \frac{1}{4+5} + \frac{1}{13+5} + \frac{1}{61+5} + \dots &= \frac{7+2\sqrt{21}}{60}, \\ \frac{1}{2+5} - \frac{1}{6+5} + \frac{1}{23+5} - \frac{1}{110+5} + \dots &= \frac{1}{14}, \\ \frac{1}{1+1} - \frac{1}{6-1} + \frac{1}{29+1} - \frac{1}{139-1} + \dots &= \frac{\sqrt{21}}{14}. \end{aligned}$$

**14471.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—(Suggested by Quest. 14445.) (1) Show that

$$q^n \equiv 1 \pmod{p}, \text{ where } x = 2^{2^Q-3}, Q = q^2, p = Q.4^Q + 1 = \text{prime.}$$

(2) Show that

$$q^n \equiv 1 \pmod{p}, \text{ where } x = 2^{4^Q-4}, Q = q^4, p = Q.16^Q + 1 = \text{prime.}$$

**14472.** (ROBERT W. D. CHRISTIE.)—It is known that we can form a test for a divisor  $2^n$  or  $5^n$  by cutting off  $n$  figures. It is required to generalize the process for divisors  $3(2^n), 3(5^n), 9(2^n), 9(5^n), 11(2^n), 11(5^n), 37(2^n), 37(5^n)$ , and generally  $p(2^n)$  or  $p(5^n)$ .

**14473.** (W. S. COONEY.)—Construct the triangle, being given any three of the following six points:—the centres of the squares described externally and internally on the sides.

**14474.** (R. KNOWLES.)—Tangents from a point T meet a parabola in P, Q; the circle TPQ cuts the parabola again in C, D; the sides PC, QD of the quadrilateral PQCD meet in E; the diagonals in G; M is the mid-point of EG; MN<sub>1</sub>, EN<sub>2</sub>, GN<sub>3</sub> are drawn at right angles to the axis; MN<sub>1</sub> meets the parabola in K. Prove that KN<sub>1</sub><sup>2</sup> = EN<sub>2</sub>. GN<sub>3</sub>.

**14475.** (A. GEORGE.)—Find the maximum value of an isosceles

triangle DEF inscribed in an isosceles triangle ABC, D being on BC, EF inclined at an angle  $\alpha$  to BC, where  $\alpha$  is less than both  $\frac{1}{2}A$  and  $\frac{1}{2}(\pi - A)$ .

14476. (Professor E. J. NANSON.)—If

$$\frac{a^2 - bc}{a} + \frac{b^2 - ca}{b} + \frac{c^2 - ab}{c} = 0,$$

then

$$\frac{a}{a^2 - bc} + \frac{b}{b^2 - ca} + \frac{c}{c^2 - ab} = 0.$$

14477. (C. E. BICKMORE, M.A.)—Express as the product of two factors, each factor being the sum of two squares,  $(a^2 - 4b^2 + c^2)^2 + (4abc)^2$ .

14478. (Rev. T. MITCHESON, B.A.)—P, Q are the ends of conjugate semi-diameters of an ellipse, and a straight line drawn from the intersection of the normals at P and Q, through the centre C, meet PQ in S, whilst the tangents meet at the point (h, k); show that

$$CS = \frac{a^2 h^2}{(a^4 h^2 + b^4 k^2)^{\frac{1}{2}}}$$

14479. (SALUTATION.)—I is the incentre of the triangle ABC, of which A is the greatest angle. P is a point on the incircle, and through P lines are drawn parallel to the three sides of the triangle, and meeting the incircle again in Q, R, S respectively. QR, RS being joined, prove that the quadrilateral PQRS is a maximum when AIP is a right angle, and find its mean area.

#### OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

6366. (G. J. GRIFFITHS, M.A.)—Prove that the sum of the squares of the reciprocals of all numbers which are not divisible by the square of any prime is  $15\pi^{-2}$ .

6372. (Rev. J. L. KITCHIN, M.A.)—Find the sum of the following series,  $n$  and  $k$  being integers:—

$$1 + k(n-1) + \frac{k(k-1)(n-1)}{1 \cdot 2} + \frac{k(k-1)(k-2)(n-1)(n)}{1 \cdot 2 \cdot 3} + \dots$$

6381. (W. J. C. MILLER, B.A.)—A GUNTER'S surveyor's chain is broken at random, at two of the junctures of its links, into three pieces. Show that the probability that a triangle can be formed of these pieces is  $\frac{2}{3}$ ; and hence, by a general solution, prove that the chance of being able to form a triangle with three random segments of a divided straight line is  $\frac{2}{3}$  or  $\frac{1}{2}$ .

6385. (R. PENDLEBURY, M.A.)—Two triangles circumscribe a parabola, and the two circles which circumscribe the triangles intersect in O (not the focus of the parabola). Prove that the conic which passes through the six vertices of the triangles also passes through O.

6387. (R. A. ROBERTS, M.A.)—Prove that the inflexional tangents of a plane cubic may be arranged in twelve sets of six, each of which touches a conic.

6400. (J. HAMMOND, M.A.)—Prove that the surface

$$x^2 + y^2 + z^2 - 3xyz = a^3$$

is one of revolution, and find its axis and the equation of the generating curve (referred to its asymptotes as axes).

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to

D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

NOTICE.—Vol. LXXI. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.O. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

#### THE LONDON MATHEMATICAL SOCIETY.

Thursday, January 11th, 1900.—Lt.-Col. Allan Cunningham, R.E., V.P., in the Chair. Ten members present.

The following members were elected:—Miss Beatrice M. Cave Browne Cave, Miss Frances E. Cave Browne Cave, and Mr. H. W. Richmond, M.A., Fellow of King's College, Cambridge.

Professor Love gave a sketch of a paper by Mr. J. H. Michell, entitled "Elementary Distributions of Plane Stress."

Lt.-Col. Cunningham (Mr. Kempe in the Chair) communicated a preliminary sketch of a "General Method of Factorization of Biquadratics," with special application to quartans,  $N = x^4 + y^4$ .

The following papers were communicated in abstract, viz. :—

"A Problem in Resonance, illustrative of the Mechanical Theory of Selective Absorption of Light," Professor H. Lamb.

"An Abstract Simple Group of Order 25920," Dr. L. E. Dickson.

FROM

## WILLIAMS & NORGATE'S LIST OF SCHOOL BOOKS.

**EUGÈNE'S THE STUDENT'S COMPARATIVE GRAMMAR OF THE FRENCH LANGUAGE.** With an Historical Sketch of the Formation of French. For the Use of Public Schools. With Exercises. By EUGÈNE FASSACHT, late French Master, Westminster School. Twentieth Edition, thoroughly Revised. Square crown 8vo, cloth, 5s. Or, separately, Grammar, 3s.; Exercises, 2s. 6d.

"In itself this is in many ways the most satisfactory grammar for beginners that we have as yet seen."—*Athenæum*.

**EUGÈNE'S FRENCH METHOD.** Elementary French Lessons. Easy Rules and Exercises preparatory to the "Student's Comparative French Grammar." By the same Author. Sixteenth Edition. Crown 8vo, cloth, 1s. 6d.

"Certainly deserves to rank among the best of our elementary French exercise books."—*Educational Times*.

**EUGÈNE'S COMPARATIVE FRENCH-ENGLISH STUDIES.** Grammatical and Idiomatic. Being an entirely re-written Edition of the "French Exercises for Middle and Upper Forms." Fourteenth Edition. Cloth, 2s. 6d.

**BOËLLE (JAMES).—FRENCH COMPOSITION THROUGH LORD MACAULAY'S ENGLISH.** Edited, with Notes, Hints, and Introduction, by JAMES BOËLLE, B.A. Univ. Gall., Senior French Master, Dulwich College, &c. Crown 8vo, cloth.

Vol. I. Frederick the Great. 3s.

Vol. II. Warren Hastings. 3s. 6d.

Vol. III. Lord Clive. 3s.

"This, we may say at once, is an exceedingly useful idea, well carried out, and one of the best things of its class that we have seen. . . . We can pronounce the equivalence of the idioms recommended to be quite unusually just."—*Saturday Review*.

**DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. I.—First Year: Anecdotes, Tales, Historical Pieces. Edited, with Notes and a complete Vocabulary, by LÉON DELBOS, M.A., late of King's College, London. Twelfth Edition. 166 pages. Crown 8vo, cloth, 2s.

**DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. II.—Second Year: Historical Pieces and Tales. Edited, with Notes, by LÉON DELBOS, M.A., late of King's College, London. Sixth Edition. 180 pages. Crown 8vo, cloth, 2s.

"It would be no easy matter to find a French reader more completely satisfactory in every respect than that of M. Delbos."—*Athenæum*.

"This is a very satisfactory collection from the best authors, selected with great care, and supplied with adequate notes. . . . A thoroughly good book of this kind should, in fact, be calculated to inspire a taste for literature in the student's mind. The volumes edited by M. Delbos fairly meet this requirement."—*Journal of Education*.

"The notes are critical and explanatory. The book is well printed and excellently got up."—*Educational Times*.

**DELBOS.—LITTLE EUGÈNE'S FRENCH READER.** For Beginners. Anecdotes and Tales. Edited, with Notes and a complete Vocabulary. Second Edition. Crown 8vo, cloth, 1s. 6d.

**VICTOR HUGO.—LES MISÉRABLES.** Les Principaux Épisodes. Edited, with Life and Notes, by J. BOËLLE, Senior French Master, Dulwich College. 2 Vols. Crown 8vo, cloth, each 3s. 6d.

"A worthy addition to our stock of French reading books, which will be welcomed by numberless masters. . . . M. Boëlle's notes are full and to the point, his philology is sound, and his translations idiomatic."—*Journal of Education*.

**VICTOR HUGO.—NOTRE-DAME DE PARIS.** Adapted for the use of Schools and Colleges. By J. BOËLLE, B.A., Senior French Master, Dulwich College. 2 Vols. Crown 8vo, cloth, each 3s.

"Equipped in the same excellent manner as the same author's 'Misérables.' . . . Makes an admirable school book."—*Scotsman*.

**FOA (MADAME EUGEN).—CONTES HISTORIQUES.** (Chârin de Louis XV—Bertrand Duguesclin—Dupuytren—Grety—Greuze.) With Idiomatic Notes by G. A. NEUVET. Third Edition. Cloth, 2s.

**FLEURY'S HISTOIRE DE FRANCE,** racontée à la Jeunesse. Edited for the use of English Pupils, with Grammatical Notes, by AUGUSTE BELJAME. Second Edition. 12mo, cloth, 3s. 6d.

**WEISSE'S COMPLETE PRACTICAL GRAMMAR OF THE GERMAN LANGUAGE.** With Exercises on Conversation, Letters, Poems, and Treatises, &c. Fourth Edition, almost entirely re-written. Crown 8vo, cloth, 6s.

"We have no hesitation in pronouncing this the fullest and most satisfactory German grammar yet published in England."—*Journal of Education*.

**WEISSE'S SHORT GUIDE TO GERMAN IDIOMS.** Being a Collection of the Idioms most in use. With Examination Papers. 8vo, cloth, 2s.

**MÖLLER (A.).—A GERMAN READING BOOK.** A Companion to Schlatter's "German Class Book." New Edition. Corrected to the Official German Spelling. With a complete Vocabulary. 12mo, cloth, 2s.

**HEIN'S GERMAN EXAMINATION PAPERS.** Comprising a complete set of German Papers set at the Local Examinations in the four Universities of Scotland. By G. HEIN, Aberdeen Grammar School. Crown 8vo, cloth, 2s. 6d.

**A SHORT SKETCH OF GERMAN LITERATURE.** Prepared for the Scottish Leaving Certificate Examinations. By VIVIAN PHILLIPS, B.A., Fettes College. Thoroughly Revised. Second Edition. Fott 8vo, 1s.

**FOUQUE'S UNDINE, SINTRAM, ASLAUGA'S RITTER, DIE BEIDEN HAUPTLEUTE.** Four Parts in One Vol. 8vo, cloth, 5s.

Undine, 1s.; cloth, 1s. 6d. Sintram, 1s. 6d.; cloth, 2s. Aslauga's Ritter, 1s.; cloth, 1s. 6d. Die beiden Hauptleute, 1s.; cloth, 1s. 6d.

\*\* In ordering through Booksellers, "Williams & Norgate's Edition" should be specified: it is the only uniform edition, clearly printed, in crown 8vo.

**HEBREW TEXTS,** in large type, for Classes: **Genesis.** Second Edition. 16mo, cloth, 1s. 6d. **Psalms.** 16mo, cloth, 1s. **Isaiah.** 16mo, cloth, 1s. **Job.** 16mo, cloth, 1s.

WILLIAMS & NORGATE,

14 HENRIETTA STREET, COVENT GARDEN, LONDON;

20 SOUTH FREDERICK STREET, EDINBURGH;

AND 7 BROAD STREET, OXFORD.



# BLACKWOODS' NEW EDUCATIONAL WORKS.

## BLACKWOODS' ILLUSTRATED CLASSICAL TEXTS.

General Editor—H. W. AUDEN, M.A., Assistant-Master at Fettes College.

### LEADING FEATURES OF THE SERIES:—

Interesting Biographical and Critical Introductions.  
A Sound Text.  
Practical Notes.  
Careful Typography.  
Useful Summaries and Appendices.  
Numerous Plain and Coloured Illustrations, Maps, and Plans.

NOW READY.

**Cæsar.—Gallic War. Books IV., V.** By ST. J. B. WYNNE WILLSON, M.A., Assistant-Master at Rugby. *With or without Vocabulary.* 1s. 6d.

(Prescribed for the Oxford Local, London Matriculation, and College of Preceptors Examinations, 1900.)

**Virgil.—Georgics. Book IV.** By J. SARGEANT, M.A., Assistant-Master at Westminster. 1s. 6d.

(Prescribed for the Cambridge Higher Local Examinations, 1900, 1901.)

*In active preparation.*

**Ovid.—Metamorphoses (Selections).** By J. H. VINCE, M.A., Assistant-Master at Bradfield. [Immediately.]

**Cicero.—In Catilinam. Books I.—IV.** By H. W. AUDEN, M.A., Assistant-Master at Fettes College. [Shortly.]

**Cæsar.—Gallic War. Books I.—III.** By J. M. HARDWICH, M.A., Assistant-Master at Rugby.

**Homer.—Odyssey. Book VI.** By E. E. SIKES, M.A., Fellow and Lecturer of St. John's College, Cambridge.

**Ovid.—Elegiac Extracts.** By A. R. F. HYSLOP, M.A., Assistant-Master at Harrow.

**Sallust.—Jugurtha.** By J. F. SMEDLEY, M.A., Assistant-Master at Westminster.

**Homer.—Odyssey. Book VII.** By E. E. SIKES, M.A., Fellow and Lecturer of St. John's College, Cambridge.

**Demosthenes.—Olynthiacs I.—III.** By H. SHARPLEY, M.A., formerly Assistant-Master at Marlborough.

**Cicero.—Pro Lege Manilia and Pro Archia.** By K. P. WILSON, M.A., Assistant-Master at Fettes College.

**Cicero.—Pro Cæcina.** By Rev. J. M. LUPTON, M.A., Assistant-Master at Marlborough.

**Tacitus.—Agricola.** By H. F. MORLAND SIMPSON, M.A., Rector of Aberdeen Grammar School.

**Livy.—Book XXVIII.** By G. MIDDLETON, M.A., Lecturer in Sanscrit and Comparative Philology in the University of St. Andrews.

**Euripides.—Hecuba.** By F. GRIFFIN, M.A., Headmaster of Birkenhead School.

**Nepos.—Select Lives.** By Rev. E. J. W. HOUGHTON, M.A., Headmaster of King Edward's Grammar School, Stratford-on-Avon.

**Xenophon.—Anabasis. Books I., II.** By A. JAGGER, B.A., Hymer's College, Hull.

**Virgil.—Æneid. Books V., VI.** By ST. J. B. WYNNE WILLSON, M.A., Assistant-Master at Rugby.

*Other Volumes to follow.*

## GREEK AND LATIN.

**Greek Prose Phrase-Book.** By H. W. AUDEN, M.A., Editor of "Meissner's Latin Phrase-Book." Interleaved. 3s. 6d.

**Greek Test Papers.** By JAMES MOIR, Litt.D., LL.D., Co-Rector, Aberdeen Grammar School. 2s. 6d.

**Higher Greek Unseens.** By H. W. AUDEN, M.A., Assistant-Master at Fettes College. 2s. 6d.

**Higher Greek Prose.** By H. W. AUDEN, M.A. 2s. 6d.

**Lower Greek Prose.** By K. P. WILSON, M.A., Assistant-Master at Fettes College. 2s. 6d.

**Higher Latin Unseens.** By H. W. AUDEN, M.A. 2s. 6d.

**Higher Latin Prose.** By H. W. AUDEN, M.A. 2s. 6d.

\*.\* KEY (for Teachers only), 5s. net.

**Lower Latin Unseens.** By W. LOBBAN, M.A. 2s. 6d.

**Lower Latin Prose.** By K. P. WILSON, M.A. 2s. 6d.

\*.\* KEY (for Teachers only), 5s. net.

**Tales of Ancient Thessaly.** An Elementary Latin Reading Book, with Vocabulary and Notes. By J. W. E. PEARCE, M.A., late Assistant-Master, University College School, London. 1s.

## ENGLISH.

### BLACKWOODS' SCHOOL SHAKESPEARE.

Edited by R. BRIMLEY JOHNSON. Each Play complete, with Introduction, Notes, and Glossary. In Crown 8vo Volumes, price 1s. 6d. each, cloth; paper, with cloth back, 1s.

#### As You Like It.

(Prescribed for Cambridge and Oxford Locals and College of Preceptors Examinations, 1900.)

#### Richard II.

(Prescribed for the Oxford and Cambridge Schools Examinations, 1900.)

**The Merchant of Venice.** | **Julius Cæsar.** | **The Tempest.**

### BLACKWOODS' LITERATURE READERS.

Edited by JOHN ADAMS, M.A., B.Sc., F.C.P., Rector of the Free Church Training College, Glasgow.

<b>Book I.</b> ... ..	Price 1s.	<b>Book III.</b> ... ..	Price 1s. 6d.
<b>Book II.</b> ... ..	Price 1s. 4d.	<b>Book IV.</b> ... ..	Price 1s. 6d.

**A History of English Literature.** For Secondary Schools. By J. LOGIE ROBERTSON, M.A., First English Master, Edinburgh Ladies' College. 3s.

**Outlines of English Literature.** By J. LOGIE ROBERTSON, M.A. 1s. 6d.

**English Verse for Junior Classes.** By J. LOGIE ROBERTSON, M.A. Part I.—CHAUCER TO COLERIDGE. Part II.—NINETEENTH CENTURY. Each 1s. 6d. net.

**English Prose for Junior and Senior Classes.** Part I.—MALORY TO BOSWELL. Part II.—NINETEENTH CENTURY. By J. LOGIE ROBERTSON, M.A. Each 2s. 6d.

**Paraphrasing, Analysis, and Correction of Sentences.** By D. M. J. JAMES, M.A. 1s.

**One Hundred Stories for Composition.** Told in Alternative Versions. 1s. 3d.

**Stormonth's Handy School Dictionary.** New Edition, thoroughly Revised. By WILLIAM BAYNE. 1s.

## FRENCH AND GERMAN.

**The Tutorial Handbook of French Composition.** By ALFRED MERCIER, L.ès-L., Lecturer on French Language and Literature in the University of St. Andrews. 3s. 6d.

**The Children's Guide to the French Language.** By ANNIE G. FERRIER, Teacher of French in the Edinburgh Ladies' College. 1s.

**Select Passages from Modern French Authors (Prose and Verse).** With short Literary and Biographical Notices. Part I.—ADVANCED COURSE. Part II.—JUNIOR COURSE. By L. E. KASTNER, B.A., Lecturer in Modern Languages at Caius College, Cambridge. 2s. 6d. each.

**French Historical Unseens.** For Army Classes. By N. E. TOKE, B.A. 2s. 6d.

**A Compendious German Reader.** Consisting of Historical Extracts, Specimens of German Literature, Lives of German Authors, an Outline of German History (1640–1890), Biographical and Historical Notes, Especially adapted for the use of Army Classes. By G. B. BEAK, M.A. Oxon., Modern Language Master at The King's School, Bruton. 2s. 6d.

**Progressive German Composition (with Copious Notes and Idioms) and First Introduction to German Philology.** By LOUIS LUBOVIC, German Lecturer in the Free Church Training College, Glasgow. 3s. 6d.

Also in Two Parts—**Composition**, 2s. 6d.; **Philology**, 1s. 6d.

\*.\* KEY to Composition (for Teachers only), 5s. net.

**Lower-Grade German:** Reading, Supplementary Grammar with Exercises, and Material for Composition, with Notes and Vocabulary, and Ten Popular Songs in Sol-fa Notation. By LOUIS LUBOVIC. 2s. 6d.

## MATHEMATICS.

**Modern Geometry of the Point, Straight Line, and Circle.** An Elementary Treatise. By J. A. THIRD, M.A., Headmaster of Spier's School, Beith. 3s.

**Arithmetic.** With numerous Examples, Revision Tests, and Examination Papers. By A. VEITCH LOTHIAN, M.A., B.Sc., F.R.S.E., Mathematical and Science Lecturer, E.C. Training College, Glasgow. *With Answers*, 3s. 6d.

COMPLETE EDUCATIONAL CATALOGUE FORWARDED POST FREE ON APPLICATION.

WILLIAM BLACKWOOD & SONS, EDINBURGH AND LONDON.

## NEW TEXT-BOOKS ON THE SCIENCE AND ART OF EDUCATION.

By **JOSEPH H. COWHAM**

(Lecturer on Education, Westminster Training College, S.W.).

### COWHAM'S NEW SCHOOL METHOD. (Complete.) Price 4s. 6d.

Also in Parts, viz.:-

Part I. How to Teach Reading, Spelling, Writing, and Drawing. 1s. 6d.

Part II. How to Teach Arithmetic. 1s. 6d.

Part III. How to Teach Geography, Grammar, History, and Elementary Science. 1s. 6d.

"I know of no manual so thorough and practical."—*Sub-Inspector of Schools.*

"We certainly like the book."—*Journal of Education.*

### GRAPHIC LESSONS IN PHYSICAL AND ASTRONOMICAL GEOGRAPHY. Price 4s. 6d.

"A Teacher's model lesson book." With 200 Outline Blackboard Sketches. Invaluable for teaching purposes.

"Exceedingly well done."—*Journal of Education.*

### PRINCIPLES OF ORAL TEACHING AND MENTAL TRAINING.

Being an Introduction to Psychology and Ethics for Teachers. Price 3s. 6d.

"The best for students."—*Journal of Education.*

The late R. H. Quick wrote:—"A young teacher who digested half your book would have a good insight into the theory of his calling."

### SCHOOL ORGANIZATION, HYGIENE, AND DISCIPLINE.

(SCHOOL ETHICS.) Price 3s. 6d.

"This manual will be most valuable, for it is founded on practical experience."—*Daily Telegraph.*

Westminster School Book Depot, S.W.; also of Simpkin, Marshall, Hamilton, Kent, & Co., Limited, and all Booksellers.

## 210,000 COPIES HAVE BEEN ISSUED OF BELL'S STANDARD ELOCUTIONIST.

Principles and Exercises, with a copious Selection of Extracts in Prose and Poetry, adapted for Reading and Recitation. By D. C. BELL and ALEX. MELVILLE BELL, F.E.I.S. With Frontispiece and Diagrams, Roxburgh binding, 616 pages, price 3s. 6d.

\* This edition contains 64 additional pages, comprising A NEW SELECTION OF CLASSIFIED RECITATIONS.

The *Scotsman* says:—"Far the best of the many books of the kind."

**LE PETIT PRECEPTEUR**; or, First Steps to French Conversation. By F. GRANDINEAU, formerly French Master to Her Majesty Queen Victoria. Fifty Woodcuts. Sixty-second Edition. Cloth, 1s. 6d.

**DER KLEINE LEHRER**; or, First Steps to German Conversation. On the Plan of "Le Petit Précepteur." Ninth Edition. Cloth, 2s.

LONDON: HODDER & STOUGHTON, 27 PATERNOSTER ROW, E.C.

 Headmasters should apply for

## EYRE & SPOTTISWOODE'S ILLUSTRATED CATALOGUE OF DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

**BOXES OF WATER AND OIL COLOURS,**

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

FOR THE LOCAL EXAMINATIONS.

### DINGLEWOOD SHAKESPEARE MANUALS.

CAN BE USED WITH ANY TEXT BOOK.

Latest Addition:—

**AS YOU LIKE IT. Questions and Notes. 1s.**

"There are few questions an examiner would hit on which are not anticipated in these little books."—*Scottish Guardian.*

JOHN HEYWOOD, LONDON AND MANCHESTER.

## CAREY'S "GRADUS AD PARNASSUM," WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, Price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

## WORKS

BY THE

Rev. G. HUGH JONES.

### Higher Scripture Teaching: St. Luke.

Price 1s. 6d.

### Lesson Papers in Religious Knowledge: St. Matthew.

Price 6d.

"Very scholarly work may be brought within easy grasp of those average pupils who seem very imperatively to need a guiding hand in the preparation of their divinity lessons." *School World.*

"Mr. Hugh Jones has done well in making his references always to the 'Cambridge Bible for Schools.'" *School Guardian.*

"To point out the exact information which University Local examiners consider candidates should possess for 'Pass' or 'Distinction.'" *School Board Chronicle.*

"Have the great merit of limiting and fixing the attention of the student." *J. M. D. Meiklejohn, M.A.*

LONDON: SIMPKIN, MARSHALL, & CO.

BY JOHN S. RAWLE, F.S.A.,

Late Examiner to the Department of Science and Art.

## SECOND GRADE PRACTICAL GEOMETRY, PLANE & SOLID, CURVES, SCALES & PATTERN DRAWING.

REVISED AND ENLARGED. NOW READY.

Containing the additional matter as required by the Departmental Circular of March, 1895, and forming a complete Text-Book for the Science and Art Examinations.

250th Thousand. MORE THAN 600 DIAGRAMS.

Price 1s. Bound in cloth, 2s.

Class Sheets for Practical Geometry	...	...	...	...	1s.
Practical Geometry Test Papers	...	...	...	...	4d.
Freehand Drawing Test Papers	...	...	...	...	1s.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO.

## EXAMINATION PAPER

AS USED BY THE

## COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets	...	...	per Ream,	2s. 6d.
" " 960 " "	...	...	" "	5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets. Remittance should accompany Order.

HEWARD & SHELBORNE, Wholesale and Retail Stationers,  
63 HIGH HOLBORN, LONDON, W.C.

## JOSEPH CILLOTT'S

Gold Medals,  
Paris, 1878,  
1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing);  
and (for Vertical Writing)  
1045, 1046.

## STEEL PENS.

By A. K. ISBISTER, M.A., LL.B.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-KEEPING**, by SINGLE and DOUBLE ENTRY; with Practical Explanations and Exercises on the most useful Forms for Business.

LONDON: LONGMANS & CO., PATERNOSTER ROW.

# Recent Results.

**"A VERY WONDERFUL TRIUMPH."**

## JACKSON'S SYSTEM OF UPRIGHT PENMANSHIP

IN RELATION TO

### "Great Thoughts" Handwriting Competition.

**T**HE recent Competition instituted by the proprietors of "Great Thoughts"—the results of which have just been published in Nos. 349, 350 of that Journal—gives the most surprising and decisive testimony to the inherent merits and unapproached superiority of Upright Penmanship. The fact that this Competition was open to all without favour or distinction, and that it was absolutely independent in its character, only emphasizes the contrast and enhances the success of the **Vertical Writers**. It is hardly necessary to state that **Mr. Jackson was not connected in any way whatever with this Competition, the promoters and adjudicators of which are utterly unknown to him.**

SIX PRIZES were offered to those girls and boys who produced the best written transcriptions of a prose passage chosen by the editor. THOUSANDS of competitors of both sexes sent up their work, and the report states that the task of adjudication was a most difficult one. Five out of the six First Prize Winners come from as many different schools, and EVERY ONE OF THOSE SCHOOLS adopted the **Jackson System of Upright Penmanship** many years ago, with the most gratifying results. The Winning Schools, as given in "Great Thoughts," are here subjoined, together with their achievements in Vertical Handwriting. **THE COINCIDENCE IS NOT ONLY STARTLING, IT IS ACTUALLY UNIQUE IN THE HISTORY OF THE CALIGRAPHIC ART!!!**

1ST PRIZE—NELLIE PLATT, age 8.

**SIR JOSIAH MASON'S ORPHANAGE, BIRMINGHAM.**

(This School is the Grand Silver Challenge Shield-Holder for 1899-1900, and Winner of 173 Prizes and 166 Certificates of Merit in **Jackson's Imperial Competitions** since 1894—Six years.)

1ST PRIZE—DAVID WIGGINS, age 12.

**SEAHAM HARBOUR NATIONAL SCHOOL.**

(This School was the Grand Silver Challenge Shield-Holder for 1897-8, and Winner of 503 Prizes and 263 Certificates of Merit in **Jackson's Imperial Competitions** since 1889—Eleven years.)

2ND PRIZE—LILLIE TYRER, age 12.

**NORMA SCHOOL, WATERLOO, LIVERPOOL.**

(This School was the Grand Silver Challenge Shield-Holder for 1898-9, and Winner of 162 Prizes and 72 Certificates of Merit in **Jackson's Imperial Competitions** since 1894—Six years.)

2ND PRIZE—H. H. SMILES, age 10.)

**SOUTH HETTON BOYS' SCHOOL.**

(This School has been the Winner of 100 Prizes and 313 Certificates of Merit in **Jackson's Imperial Competitions** since 1891—Nine years.)

3RD PRIZE—WINNIE CLARIDGE, age 6.

**LADIES' SCHOOL, 21 ST. MICHAEL'S ROAD, WALLINGTON.**

(This School has been the Winner of 38 Prizes and 52 Certificates of Merit in **Jackson's Imperial Competitions** since 1888—Twelve years.)  
The only other (3rd) Prize Winner, a boy, had been taught on the sloping style, and was 13 years of age.

The above-named Schools also secured 51 out of the 247 Certificates of Merit—more than one-fifth of the entire number awarded.

For Prospectus, Prize List, Specimen Books, and all particulars of Jackson's System of Upright Penmanship, apply to the Publishers,

**SAMPSON LOW, MARSTON & CO., Ltd., St. Dunstan's House, LONDON, E.C.**

# THE ROYAL SCHOOL SERIES.

## BOOKS FOR SECONDARY SCHOOLS.

JUST PUBLISHED.

### GREEK AND ROMAN HEROES.

Selections from Plutarch's Lives, adapted for Class Reading by H. SPENSER, LL.D., Classical Master in the Edinburgh Academy. With Illustrations. Cloth boards, price 2s.

Plutarch has been called "the interpreter of Greece and Rome to Modern Europe." His great biographies are monuments of literary value, which have had more influence upon the leading men of the world than any other product of classical antiquity. Dr. Spenser has now made these biographies accessible to boys and girls. His book will make a fascinating reader, especially in secondary schools.

### FIRST LESSONS IN ENGLISH GOVERNMENT.

An Easy Introduction to the Law and Custom of the Constitution. With many Illustrations, cloth boards, price 1s. 6d.

This is a citizen reader of the best type, well arranged, well worked out on the historical method, and written in a simple and interesting style. It is capably illustrated, and is furnished with a glossary of technical terms.

### THE ROYAL KINDERGARTEN COPY BOOKS.

For Pencil Tracing. Eight Books, Sixteen Pages. Price 1d. each.

The best thing yet produced for infant schools and kindergarten. These books mark a new departure in the teaching of writing to young children. Every letter is traced throughout, but printed in a soft blue tint instead of the dotted black line commonly used. The paper is specially selected for lead-pencil work.

### PICTURE ESSAYS.

An Illustrated Composition Book. 112 pages, with over One Hundred Illustrations. Price 4d., paper cover; or, in limp cloth, 6d.

By this book the scholar gathers most of the material for his essays from a large series of descriptive pictures. Pictures without words, and eighty-five outline essays are provided. The Introduction prefixed contains information on the stops, capital letters, relative pronouns, and letter-writing.

### FRENCH AND GERMAN.

**METHODE NATURELLE POUR APPRENDRE LE FRANÇAIS.** Fondée sur l'Enseignement Intuitif. By GEORGE HOGGEN, M.A. Illustrated. 332 pages, post 8vo, cloth, price 3s. 6d.

**ELEMENTARY OBJECT LESSONS IN FRENCH.** Book I. By ALEC CRAN, M.A. With many Illustrations. Post 8vo, cloth, price 1s. 6d.

**ELEMENTARY FRENCH AND GERMAN OBJECT LESSON WALL SHEETS.** A Series of Eleven Sheets, 21 inches by 31 inches, printed in tints on strong Manilla paper, and mounted on roller. Price 15s. per Set.

These Sheets contain the pictures from "Elementary Object Lessons in French," printed without the text, to serve as subjects for oral conversation.

**OBJECT LESSONS IN FRENCH.** Book II. By ALEC CRAN, M.A. Post 8vo, cloth. With many Illustrations. Price 1s. 6d.

**FRENCH OBJECT LESSON WALL SHEETS.** A Series of Eleven Sheets, 21 inches by 31 inches, printed in tints on strong Manilla paper, and mounted on roller. Price 15s. per Set.

**OBJECT LESSONS IN GERMAN.** By J. J. TROTTER, M.A., German Master, Royal High School, Edinburgh. Based on "Object Lessons in French," by ALEC CRAN, M.A. Illustrated. Post 8vo, cloth, price 2s.

**NELSON'S FIRST GERMAN READER.** Edited by J. J. TROTTER, M.A., German Master, Royal High School, Edinburgh; Author of "Object Lessons in German." Post 8vo, cloth, price 2s.

**NELSON'S FIRST FRENCH BOOK.** Grammar, Reader, and Vocabulary. 96 pages, price 9d. *KEY, price 1s.*

**NELSON'S SECOND FRENCH BOOK.** Grammar, Phrase Book, Reader, and Vocabulary. 128 pages, price 1s. *KEY, price 1s.*

**UN PHILOSOPHE SOUS LES TOITS (EMILE SOUVESTRE).** A Juxtalinear Translation. With Hints to Students, Explanatory Notes, &c. By A. D. J. BARRIBAL, B.A., Lecturer in French, Wesleyan Training College, Westminster. Price 2s.

**VOYAGE AUTOUR DE MA CHAMBRE (XAVIER DE MAISTRE).** With Introduction, Notes, and Exercises. By GEORGE COLLAR, B.A., B.Sc., Headmaster of Stockwell Pupil-Teacher Centre. Price 1s.

**XAVIER DE MAISTRE.—LA JEUNE SIBERIENNE.** A Juxtalinear Translation, with Notes by F. E. DARQUE. Fourth Edition. Price 2s.

JUST PUBLISHED.

**PLINY'S LETTERS, I. XII.** With Introduction, Text, Notes, Translation, Vocabulary, and Examination Papers. Edited by W. J. WESTON, B.A. Price 1s.

### SCIENCE TEXT-BOOKS, &c.

**AN ELEMENTARY COURSE IN PRACTICAL PHYSICS.**

By F. CASTLE, M.I.M.E. With numerous Illustrations, Diagrams, and Exercises. Crown 8vo, extra cloth, price 2s.

**"SECTION ONE" PHYSIOGRAPHY.** For Elementary Physiography, Section I. By THOMAS CARTWRIGHT, B.A., B.Sc. (Lond.), Headmaster Finchley Organized Science School. Price 2s.

**ELEMENTARY PHYSIOGRAPHY.** A Description of the Laws and Wonders of Nature. With numerous Original Illustrations. By RICHARD A. GREGORY, Sixth Edition. With Appendix by THOMAS CARTWRIGHT, B.A., B.Sc. (Lond.). Crown 8vo, 463 pages, price 2s. 6d.

**ADVANCED PHYSIOGRAPHY.** By R. A. GREGORY, F.R.A.S., and J. C. CHRISTIE, F.G.S. With numerous Original Illustrations. Third Edition. Price 4s.

**HONOURS PHYSIOGRAPHY.** By R. A. GREGORY, F.R.A.S., and H. G. WELLS, B.Sc. (Lond.). Cloth extra, price 6s.

**PHYSICAL AND ASTRONOMICAL GEOGRAPHY.** By R. A. GREGORY. Author of "Elementary Physiography." Specially designed for Pupil Teachers and Scholarship and Certificate Candidates. With Original Illustrations. Seventh Edition. Crown 8vo, cloth extra, price 3s. 6d.

**DESCRIPTIVE GEOGRAPHY.** A Text-book for Pupil Teachers, and Scholarship, Certificate, and Matriculation Candidates. By SAMUEL BROOK. With Diagrams and Illustrations. Seventh Edition. 640 pages, price 3s. 6d.

### ELEMENTARY SCIENCE IN OBJECT LESSONS.

Just Issued. A New Series of Handbooks of Elementary Science.

Elementary Science taught in Object Lessons.

Every Lesson founded on Experiment.

Hundreds of Useful Illustrations.

CAREFULLY GRADED.

Books II. to V., 1s. 6d. each. Books VI. and VII., in One Vol., 2s.

The lessons comprised in this series aim at teaching the children to observe carefully, and to make inferences for themselves. Few technical terms have been introduced, and the subjects dealt with are mostly those coming under the daily notice of the scholar.

\*\* New Complete Catalogue of the Royal School Series post free on application.

THOMAS NELSON & SONS, 35 & 36 Paternoster Row, London, E.C.; Parkside, Edinburgh; and New York.

# MESSRS. BELL'S NEW EDUCATIONAL WORKS.

## BELL'S ILLUSTRATED CLASSICS.

EDITED BY E. C. MARCHANT, M.A.,

*Classical Master of St. Paul's School.*

Printed at the Oxford University Press, with numerous illustrations drawn from Authentic Sources, Maps, and Plans. Pott 8vo, price 1s. 6d. each. The Volumes may be had with or without Vocabularies.

### NOW READY.

**Cæsar.—De Bello Gallico. Book IV.** Edited by the Rev. A. W. UPCORR, M.A., Headmaster of St. Edmund's School, Canterbury. Prescribed for London Matric. and O. and C. Schools.

**Cæsar.—De Bello Gallico. Book V.** Edited by A. REYNOLDS, M.A., Assistant-Master at Merchant Taylors' School. [*Preparing*] Prescribed for London Matric., Oxford Local, O. and C. Schools, and College of Preceptors Certificate.

**Cæsar.—De Bello Gallico. Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. Prescribed for Cambridge Local and College of Preceptors Certificate.

**Virgil.—Æneid. Book II.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School. Prescribed for London Matric., January, 1901.

**Virgil.—Æneid. Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. [*Preparing*] Prescribed for Cambridge Local and College of Preceptors Certificate.

**Nutropius. Books I. and II.** Edited by J. G. SPENCER, B.A., Assistant-Master at St. Paul's Preparatory School. Prescribed for College of Preceptors Certificate.

**Horace.—Odes. Book II.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School. [*Preparing*] Prescribed for O. and C. Schools.

**Horace.—Odes. Book III.** Edited by H. LATTER, M.A., Assistant-Master at Cheltenham College. [*Preparing*] Prescribed for Oxford Local, O. and C. Schools, and College of Preceptors Certificate.

**Cæsar.—De Bello Gallico. Book I.** Edited by A. C. LIDDELL, M.A., Assistant-Master at Nottingham High School. [*Shortly*].

**Cæsar.—De Bello Gallico. Book II.** Edited by A. C. LIDDELL, M.A.

**Cæsar.—De Bello Gallico. Book III.** Edited by F. H. COLSON, M.A., Headmaster of Plymouth College, and G. M. GWYHER, M.A., Assistant-Master.

**Cornelius Nepos.—Epaminondas, Hannibal, Cato.** Edited by H. L. EARL, M.A., Assistant-Master at the Grammar School, Manchester.

**Horace.—Odes. Book I.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School.

**Livy. Book IX., chaps. i.—xxix.** Edited by W. C. FLAMSTEAD WALTERS, M.A.

**Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI, and edited by F. E. A. TRAYES, M.A., Assistant-Master at St. Paul's School.

**Ovid.—Metamorphoses. Book I.** Edited by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School.

**Selection from Ovid's Metamorphoses.** Edited by J. W. E. PEARCE, M.A., Merton Court Preparatory School, Sidcup.

**Virgil.—Æneid. Book III.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School. With a Map of the Wanderings of Æneas.

**Virgil.—Æneid. Book IV.** Edited by A. S. WARMAN, B.A., Assistant-Master at the Grammar School, Manchester.

FULL ILLUSTRATED PROSPECTUS POST FREE ON APPLICATION.

NEW VOLUME BY MR PENDLEBURY.

Crown 8vo, 2s. 6d.

**A Short Course of Elementary Plane Trigonometry.** By CHARLES PENDLEBURY, M.A., Chief Mathematical Master at St. Paul's School.

This Short Course of Elementary Plane Trigonometry is intended for the use of Junior Students and of those others who do not require so complete a knowledge of the subject as would be obtained from a study of the author's larger work. In its range this book will be found sufficient for candidates for the Oxford and Cambridge Local Examinations, the College of Preceptors, the Cambridge Previous Examination, the London Intermediate Examination in Arts, the Science and Art Examinations, College Entrance Examinations, and other Examinations of the same character.

Pott 8vo, with Vocabulary, 1s.

**First Exercises in Latin Prose Composition.** By E. A. WELLS, M.A., Highfield School, Southampton.

**Corpus Poetarum Latinorum, a se aliisque denuo recognitorum et brevi lectionum varietate instructorum, edidit JOHANNES PERCIVAL POSTGATE. Part III., 9s. net, containing—**

<b>Grattius</b> ... ..	Edited by J. P. POSTGATE.
<b>Manilius</b> ... ..	„ MALVIN BECHERT.
<b>Phædrus</b> ... ..	„ JAMES GOW.
<b>Ætina</b> ... ..	„ ROBINSON ELLIS.
<b>Persius</b> ... ..	„ W. C. SUMMERS.
<b>Lucanus</b> ... ..	„ W. E. HEITLAND.
<b>Valerius Flaccus</b> ... ..	„ J. B. BURY.

(Ready shortly.)

## HANDBOOKS OF ENGLISH LITERATURE.

Edited by PROF. HALES.

New Volume. Crown 8vo, 3s. 6d.

**The Age of Johnson (1748-1798).** By THOMAS SECCOMBE.

This Volume covers the period set for London B.A. 1890.

Small post 8vo, 5s. each.

**The Letters of Cicero.** The whole extant Correspondence in Chronological Order. Translated into English by EVELYN S. SHUCKBURGH, M.A. In Four Vols., 5s. each. (Vols. I. and II. ready.) [*Bohn's Classical Library.*]

## BELL'S CLASSICAL TRANSLATIONS.

New Volumes. Crown 8vo, 1s. each.

**Æschylus.—The Suppliants.** Translated by WALTER HEADLAM, M.A., Fellow of King's College, Cambridge.

**Thucydides. Book VI.** Translated by E. C. MARCHANT, M.A., Classical Master at St. Paul's School.

**Thucydides. Book VII.** Translated by E. C. MARCHANT, M.A.

**Livy. Book XXI.** Translated by J. BERNARD BAKER, M.A., Tutor of Non-Collegiate Students, Oxford.

**Livy. Book XXII.** Translated by J. BERNARD BAKER, M.A.

## Lockwood's Educational Works.

### DE FIVAS' FRENCH CLASS BOOKS.

- De Fivas, New Grammar of French Grammars.** By Dr. V. DE FIVAS, M.A. Fifty-fourth Edition, Revised and Enlarged. 450 pp., 2s. 6d., strongly bound. \* \* KEY, 3s. 6d.
- De Fivas, Elementary French Grammar and Reader.** Fourth Edition, fcap. 8vo, 1s. 6d., cloth.
- De Fivas, Guide to Modern French Conversation.** Thirty-second Edition, 18mo, 2s. 6d., half-bound.
- De Fivas, Introduction à la Langue Française.** Twenty-eighth Edition, 12mo, 2s. 6d.
- De Fivas, Beautés des Écrivains Français, Anciens et Modernes.** Fifteenth Edition, 12mo, 2s. 6d.
- De Fivas, Le Trésor National.** Eighth Edition, 12mo, 1s. 6d. \* \* KEY, 2s.

Just published, 400 pp., crown 8vo, 7s. 6d., cloth.

**A Handbook of English Literature.** Originally compiled by AUSTIN DOBSON. New Edition, Revised, with New Chapters, and Extended to the Present Time. By W. HALL GRIFFIN, B.A., Professor of English Language and Literature at Queen's College, London.

"Of this book we have to speak in terms of unqualified praise. . . . It may be pronounced a most excellent history of our literature."—*Literature*.

"The best compendium for English literary students, and a most reliable handbook for the literary man."—*Academy*.

"For truth of criticism it is about the best book of its kind."—*Westminster Review*.

"An excellent handbook of English literature."—*Athenæum*.

"Professor Hall Griffin and Mr. Dobson are to be thanked for a very acceptable handbook."—*Journal of Education*.

### COMMERCIAL EDUCATION.

- Lessons in Commerce: A Text-Book for Students.** By Professor R. GAMBARDI. Revised by Professor JAMES GAULT. Second Edition, Revised. Crown 8vo, 3s. 6d., cloth.
- The Foreign Commercial Correspondent.** By C. E. BAKER. Crown 8vo, 3s. 6d., cloth.
- Spanish Grammar and Reader.** By O. KORTH. 2s. 6d., cloth.

### CIVIL SERVICE HANDBOOKS.

- Civil Service History of England.** By F. A. WHITE, B.A. Revised by H. A. DOBSON. Eighth Edition. Fcap. 8vo, 2s. 6d. each.
- Essay Writer.** By HENRY SKIPTON. Fcap. 8vo, 2s. 6d.
- Civil Service Geography.** By L. M. D. SPENCE. 2s. 6d.
- Précis Book.** By W. COSMO MONKHOUSE. 2s. 6d. KEY, 2s. 6d.
- Civil Service Book-Keeping.** Fcap., 1s. 6d.
- Civil Service English Grammar.** By W. V. YATES. 1s. 6d.
- Civil Service First French Book.** By A. MOTTEAU. 1s. 6d. KEY, 2s. 6d.
- Civil Service Coach.** By S. SAVILL. Fcap. 8vo, 2s. 6d.

### WEALE'S EDUCATIONAL SERIES.

#### DICTIONARIES AND GRAMMARS.

- Latin Grammar.** By T. GOODWIN. 1s. 6d.
- Latin and English Dictionary.** By T. GOODWIN. Latin-English, 2s. 6d.; English-Latin, 1s. 6d.
- Greek Grammar.** By H. C. HAMILTON. 1s. 6d.
- Greek and English Lexicon.** By H. R. HAMILTON. Greek-English, 2s. 6d.; English-Greek, 2s.
- Hebrew Grammar.** By Dr. BRESSLAU. 1s. 6d.
- Hebrew-English Dictionary.** By Dr. BRESSLAU. 6s.
- English-Hebrew Dictionary.** By Dr. BRESSLAU. 3s.
- English Grammar.** By HYDE CLARKE, D.C.L. 1s. 6d.
- English Dictionary.** By HYDE CLARKE, D.C.L. 3s. 6d.
- French Grammar.** By G. L. STRAUSS, Ph.D. 1s. 6d.
- French Dictionary.** By A. ELWES. 3s.
- German Grammar.** By G. L. STRAUSS, Ph.D. 1s. 6d.
- German Dictionary.** By N. E. S. A. HAMILTON. 3s.
- Italian Grammar.** By A. ELWES. 1s. 6d.
- Italian Dictionary.** By A. ELWES. 7s. 6d.
- Spanish Grammar.** By A. ELWES. 1s. 6d.
- Spanish and English Dictionary.** By A. ELWES. 6s.
- Portuguese Grammar.** By A. ELWES. 1s. 6d.
- Portuguese and English Dictionary.** By A. ELWES. 5s.

Lists of WEALE'S CLASSICAL SERIES on application.

## MR. EDWARD ARNOLD'S LIST.

**AS YOU LIKE IT.** Edited by S. E. WINBOLT, B.A., Assistant-Master at Christ's Hospital. Cloth, 1s. 3d. (Prescribed for the Cambridge Local and College of Preceptors Examinations, 1900.)

**SCOTT—MARMION.** Edited by G. TOWNSEND WARNER, M.A., Assistant-Master at Harrow School. Cloth, 1s. 6d. (Prescribed for Cambridge Local Examinations, 1900.)

**MILTON—PARADISE LOST.** Books III. and IV. Edited by J. SARGEANT, M.A., Assistant-Master at Westminster School. Cloth, 1s. 3d. (Prescribed for Cambridge Local Examinations, 1900.)

**SCOTT—LAY OF THE LAST MINSTREL.** Edited by G. TOWNSEND WARNER, M.A. Cloth, 1s. 3d. (Prescribed for College of Preceptors Examinations, 1900.)

**MACAULAY—LAYS OF ANCIENT ROME** (including *Ivry* and *The Armada*). Edited by R. L. A. DU PONTET, M.A., Assistant-Master at Winchester College. Cloth, 1s. 6d. (Prescribed for College of Preceptors Examinations, 1900.)

**SELECTIONS FROM TENNYSON'S POEMS.** Edited, with Notes and Introduction, by the Rev. E. C. EVERARD OWEN, M.A., Assistant-Master at Harrow School. Crown 8vo, cloth, 1s. 6d.

**ENGLAND IN THE NINETEENTH CENTURY.** By C. W. OMAN, Fellow of All Souls' College, Oxford; Author of "A History of England," "The Art of War in the Middle Ages," &c. One Vol., crown 8vo, 3s. 6d.

**ENGLISH HISTORY.—For Juniors.** By E. S. SYMES, Author of "The Story of London," "The Story of Lancashire," &c. With Illustrations and Maps. Crown 8vo, cloth, 2s. 6d.

**A HISTORY OF ENGLAND.** By CHARLES OMAN, Fellow of All Souls' College, and Lecturer on History at New College, Oxford; Author of "Warwick the King-maker," "A History of Ancient Greece," "A History of Europe, A.D. 476-928," &c.

New and Revised Edition, fully furnished with Maps, Plans of the Principal Battlefields, and Genealogical Tables. 760 pages, crown 8vo, cloth, 5s.

Also, in Two Parts, each part complete, with Index, 3s. Part I.—From the Earliest Times to 1603. Part II.—From 1603 to 1885.

**GERMAN WITHOUT TEARS.** An Edition in German of Mrs. HUGH BELL'S "French Without Tears." With Illustrations. Book I. now ready, price 9d.

**LES FRANCAIS EN MENAGE.** By JETTA S. WOLFF. With numerous Illustrations. Crown 8vo, cloth, 1s. 6d. An entirely original book, teaching the ordinary conversation of family life in France by a series of bright and entertaining scenes.

**FRENCH WITHOUT TEARS.** A Graduated Series of French Reading Books, arranged to suit the requirements of quite Young Children beginning French. With Humorous Illustrations and a Vocabulary. By Mrs. HUGH BELL, Author of "Le Petit Théâtre des Enfants." Book I., 9d. Book II., 1s. Book III., 1s. 3d.

### SIMPLE FRENCH STORIES.

An entirely new Series of easy Texts, with Notes and Vocabulary, prepared under the General Editorship of Mr. L. VON GLEHN, Assistant-Master at Merchant Taylors' School. Price of each Volume, 9d.

**UNE DRAME DANS LES AIRS.** By JULES VERNE.

**PIF-PAF.** By EDOUARD LABOULAYE.

**LA PETITE SOURIS GRISE** and **HISTOIRE DE ROSETTE.** By Madame DE SÈCUR.

*Others in rapid preparation.*

**VOYAGE AU CENTRE DE LA TERRE.** By JULES VERNE. With Notes and Introduction by R. L. A. DU PONTET, M.A., Assistant-Master at Winchester College. Cloth, 3s. (Prescribed for the Government Certificate Examinations, 1900.)

**HELPS FOR THE STUDY OF VERNE'S "VOYAGE AU CENTRE DE LA TERRE."** By ROSA BASSETT. Crown 8vo, paper, 9d.

A Complete Educational Catalogue will be forwarded post free on application.

LONDON: EDWARD ARNOLD, 37 BEDFORD STREET, STRAND.



# PROFESSOR MEIKLEJOHN'S SERIES.

**The Art of Writing English.** A Manual for Students. With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A. Second Edition. Crown 8vo, 340 pp. . . . . 2s 6d.

"The Art of Writing English' teems with good advice."—*Literary World*.  
"Whatever Prof. Meiklejohn writes is sure to be vigorous and racy, and, on the subject of English composition, he is peculiarly well qualified to speak."  
The Journal of Education.

**One Hundred Short Essays in Outline.** By Professor MEIKLEJOHN. Second Edition. Crown 8vo, 110 pp. . . . . 1s.

These Outline Essays have been prepared to assist Candidates for Queen's Scholarships, for the Civil Service, and in other Examinations. They show the young students how to put their matter into the right perspective, and how to make clear and brief statements. They treat of such subjects as Athletics, The Bank of England, The Bicycle, Competition, The Navy, Newspapers, &c., &c.—in short, subjects generally set in Public Examinations.

**A New Geography on the Comparative Method.** With Maps and Diagrams and an Outline of Commercial Geography. By J. M. D. MEIKLEJOHN, M.A. Twenty-third Edition. 130th Thousand. Crown 8vo, 630 pp. . . . . 4s. 6d.

"A most useful manual for examiners, and full of stimulating matter for students of geography. Its picturesqueness of description and vividness of style make it almost as interesting and enjoyable reading as a book of travels."—*The Journal of Education*.  
"For all that is best worth knowing no better book than this could be studied."—*The Educational News*.

**A School Geography; with Special Reference to Commerce and History.** With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A., sometime Adam de Brome Exhibitioner of Oriol College, Oxford, F.R.G.S. Crown 8vo, 410 pp. . . . . 2s. 6d.

"This is a well-planned book, with many good features, and the promise of the title-page is sedulously fulfilled."—*The Educational Times*.  
"The whole plan of the book has been carefully thought out, and as the result we have a good school geography."—*The School Guardian*.

**The Comparative Atlas.** By J. G. BARTHOLOMEW, F.R.G.S., and Edited by Professor MEIKLEJOHN. Containing 64 Plates and a General Index . . . . . 2s. 6d.

"No atlas that we know at anything like the price gives so much so well."  
The Teachers' Monthly.  
"This is certainly the most comprehensive work ever published at the moderate price of half-a-crown. From the attractive frontispiece, representing the flags of all nations, to the final page on geographical etymology, there is not a wasted inch."—*The Teachers' Review*.

**A New History of England and Great Britain.** With Maps and Tables. By J. M. D. MEIKLEJOHN, M.A. Fifteenth Edition. Crown 8vo, 740 pp. . . . . 4s. 6d.

"I like your History very much. It is suggestive, and does not ignore the social and literary side of things."—Miss A. F. Andrews, *Maida Vale High School for Girls, W.*  
"I am very pleased with the concise statements and orderly marshalling of facts: such an improvement on our ordinary Histories."—E. A. Little, Esq., M.A., *The College, Buxton*.

**The English Language: its Grammar, History, and Literature.** By J. M. D. MEIKLEJOHN, M.A. Nineteenth Edition. Enlarged, with Exercises and additional Analyses. Crown 8vo, 470 pp. . . . . 4s. 6d.

"As stimulating in matter as it is attractive in form. It puts life into the dry bones of fact."—A. J. Watson, Esq., M.A., *Rector, The Academy, Dumbarton*.  
"I gave it to a girl candidate for an English scholarship; she got first place, and valued the help she got from the book."—W. Johnson, Esq., B.A., *Elmfield College, York*.

**General Intelligence Papers; with Exercises in English Composition.** By GERALD BLUNT, M.A. Crown 8vo . . . . . 2s.

The object of these sets of questions—designed not for "crumming," but for a successive help to teachers and students—is to afford some test of general intelligence, common sense, and varied ability.

**A Short Arithmetic.** By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. . . . . 1s.

With Answers, 1s. 6d.

"In the preparation of the 'Short Arithmetic' the authors have chiefly had in view the requirements of pupils varying in age from twelve to sixteen. Examples have been selected from a very wide area. These include the University Local Examinations, the University School Examinations, Examinations of the College of Preceptors and of the Education Department, and the Examinations for County Council Scholarships."

**A School Algebra for Junior Forms.** By F. OSCAR LANE, B.Sc. Lond., Assistant Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. . . . . 1s. 6d.

With Answers, 266 pp. 2s. 0d.

"A very trustworthy book for beginners, extending to indices, surds, and progressions."—*The University Correspondent*.

**A Short Geography, with the Commercial Highways of the World.** Fifteenth Edition. Crown 8vo, 196 pp. . . . . 1s.

"Terse, practical, informative, and statistic. This shilling Geography is exactly what a School Geography needs to be."—*The Teachers' Aid*.  
"Clearness and conciseness exemplified."—*The Private Schoolmaster*.

**A Short History of England and Great Britain.** B.C. 55 to A.D. 1890. Eleventh Edition. Crown 8vo . . . . . 1s.

"In the 'Short History' there is plenty of anecdote, ballad, and stray gems of literature; and we find, though not with its usual emphasis, the Professor's expertness in the use and disposition of type."—*Education*.

**A Short Grammar of the English Tongue, with Three Hundred and Thirty Exercises.** Tenth Edition . . . . . 1s.

This little book is written in the clearest and simplest style for beginners. It contains:—

- |                                 |   |
|---------------------------------|---|
| i. The Simplest Definitions.    | iv. Graduated Methods of Parsing.       |
| ii. Slowly graduated Exercises. | v. Bad Grammar Corrected, with Reasons. |
| iii. Clearly printed Tables.    | vi. Analysis, with Plain Diagrams.      |

**A New Spelling Book.** With Side Lights from History. Eighth Edition. Crown 8vo, 152 pp. . . . . 1s.

"We agree with the main principle here followed—that spelling should be learnt through the eye rather than through the ear."—*The School Guardian*.

**The British Colonies and Dependencies: their Resources and Commerce.** With Chapters on the Interchange of Productions and Climatic Conditions. By M. J. C. MEIKLEJOHN, B.A. Third Edition. Crown 8vo, 96 pp. . . . . 6d.

"This manual is terse and full; intelligently paragraphed and skilfully managed typographically. It does credit to the compiler, and we hope this work may gain the recognition it really merits."—*The Educational News*.

**Africa: its Geography, Resources, and Chronicle of Discovery up to 1897.** By M. J. C. MEIKLEJOHN, B.A. Oxon. Third Edition. Crown 8vo, 76 pp. . . . . 4d.

"This little book is, for its size, remarkably full of information about Africa, and gives pithy explanations of such current expressions as 'sphere of influence' and 'hunter-land,' &c."—*The Teachers' Aid*.

**Europe: its Physical and Political Geography, with Chapters on Latitude and Longitude, Day and Night, and the Seasons.** Adapted to the requirements of the Code, with a Double-Page Map, in Colour. By M. J. C. MEIKLEJOHN, B.A., F.R.G.S. 96 pp. . . . . 6d.

# CAMBRIDGE UNIVERSITY PRESS.

COLLEGE OF PRECEPTORS' EXAMINATIONS, JULY AND DECEMBER, 1900.

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

*Athenæum*.—"The Pitt Press Shakespeare can stand in competition with any of the numerous editions of the sort now showered upon reviewers."

*School World*.—"Every page shows careful scholarship and a ripe literary judgment. It would be difficult to praise this work (or this series) too highly."

*Guardian*.—"Mr. Verity is an almost ideal editor of school texts."

**As You Like It.** 1s. 6d. With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge.

*Guardian*.—"Mr. Verity, the editor, has provided material for all sorts of students. For the beginner we have the notes and a reprint of Charles Lamb's outline of the story. For older readers we have copious extracts from Lodge's 'Rosalynde.' For the examinee, the etymologist, and the curious student, we have the glossary, the index of the important words and phrases, and the notes on metre and on the date and sources of the play. All of these aids evince patient research, accurate scholarship, and thoughtful judgment."

## CAMBRIDGE MILTON FOR SCHOOLS.

*Guardian*.—"This edition will, we feel sure, long continue to be the standard school text of 'Paradise Lost.'"

**Paradise Lost, Books III. and IV.** Edited, with Introduction and Notes, by A. W. VERITY, M.A. 2s.

## PITT PRESS SERIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
<b>Macauley</b> .....	Lays of Ancient Rome (with Ivry and The Armada) .....	J. H. Flather .....	s. d. 1 6
<i>School World</i> .—"In thorough keeping with the other volumes of this series, an evidence of patient labour, and no mean tribute to Macauley himself. . . . The notes are brief and pointed, and two useful maps are appended. The introduction is brief, but exceedingly well done."			
<b>Scott</b> .....	Marmion .....	J. H. B. Masterman..	2 6
<i>Guardian</i> .—"Far and away the best school edition of the poem we have seen; and it will be difficult, probably impossible, to improve on it."			
<b>Scott</b> .....	Lay of the Last Minstrel .....	J. H. Flather .....	2 0
<i>Guardian</i> .—"It is one of the very best edited school-texts ever placed before the public."			
<b>Caesar</b> .....	De Bello Gallico, Books IV.-V. (Subject, Book V.) .....	A. G. Peskett .....	1 6
" .....	De Bello Gallico, Book VI. ....	" .....	1 6
<b>Cicero</b> .....	De Senectute .....	J. S. Reid .....	3 6
<b>Horace</b> .....	Odes, Book III. ....	J. Gow .....	2 0
<b>Livy</b> .....	Book XXII. ....	M. S. Dimsdale .....	2 6
<b>Vergil</b> .....	Aeneid, Books VI. and XII. ....	A. Sidgwick .....	each 1 6
<b>Euripides</b> .....	Medea .....	C. E. S. Headlam .....	2 6
<b>Lucian</b> .....	Menippus and Timon .....	E. C. Mackie .....	3 6
<b>Xenophon</b> .....	Anabasis, Books III. and V. ....	A. Pretor .....	each 2 0

## A NEW FRENCH VERSE READER.

**A Primer of French Verse for Upper Forms.** Edited by FREDERIC SPENCER, Professor of the French Language and Literature in the University College of North Wales; formerly Chief Master of the Modern Side in the Leys School, Cambridge. 3s.

*Guardian*.—"A really valuable contribution to the list of French school books." *Educational Times*.—"The rules are well expressed, and it may confidently be said that a pupil who has read this book with care will acquire an insight into French prosody such as no other 'primer' could give him, and will feel that this is a book to which he can always turn again with pleasure."

*Morning Post*.—"Professor Spencer's little collection of French verse should do much to cultivate an appreciation of French rhythm and poetic thought. Only the English teacher can make a selection of French verses which will appeal to our insular youth. Professor Spencer has certainly made such a selection."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford, Principal of University (Day) Training College, Liverpool, and Lecturer on Education in Victoria University.

*Specially suited for candidates for Queen's Scholarship Examinations, December, 1900, and Certificate Examinations, July, 1900.*

**A Short History of the Expansion of the British Empire, 1500-1870.** By WILLIAM H. WOODWARD. With Maps. Crown 8vo, cloth, 4s.; cloth, extra, gilt top, 5s.

*Athenæum*.—"Thoroughly to be recommended."

*Ball Mall Gazette*.—"Mr. Woodward tells this story in *usum scholarum* in an altogether admirable manner."

*School World*.—"It is full of wisdom applicable to our own day."

*Ball Mall Gazette*.—"In spite of the severe compression necessary the book is thoroughly interesting, and leaves one with clear ideas and a thirst for more. The maps, chronological table, and summary of British possessions are excellent."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*School Guardian*.—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars; their names are a guarantee of their work. These text-books will find their way into numberless preparatory schools and lower forms of public schools; they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary; the student, however elementary his knowledge, needs only the book in hand and a simple grammar."

The following editions have COMPLETE VOCABULARIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
<b>Caesar</b> .....	De Bello Gallico, Books V. and VI. ....	E. S. Shuckburgh ...	each 1 6
<b>Vergil</b> .....	Aeneid, Books VI. and XII. ....	A. Sidgwick .....	1 6
<b>Xenophon</b> ...	Anabasis, Books III. and V. ....	G. M. Edwards .....	1 6

\* \* *Cambridge Editions of Caesar, Vergil, and Xenophon.*—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the *Pitt Press Series* and the *Cambridge Series for Schools and Training Colleges*. The Editions in the *Cambridge Series for Schools and Training Colleges* have Complete Vocabulary. If, in ordering, the Edition required is not specified, the *Pitt Press Edition*, without vocabulary, will be sent.

## ENGLISH GRAMMAR.

New and Enlarged Edition (Thirty-sixth to Forty-fifth Thousand).

**The Elements of English Grammar.** By A. S. WEST, M.A., Trinity College, Cambridge. Fcap. 8vo, 2s. 6d.

*Prefatory Note to the Enlarged Edition.*—Some hundreds of additional Questions and Examples are given in the present edition, and in a few places the wording of the text has been altered. The numbers of the paragraphs remain the same.

*School World*.—"The larger work shows a master hand. It is adapted to the higher forms, and its historical survey contains just what is wanted for examination purposes. . . . Both books deserve a large sale."

**An English Grammar for Beginners.** By A. S. WEST, M.A. 1s.

*School World*.—"The smaller of these two works ought to be extensively used for the teaching of junior forms. Its matter is arranged with the greatest care, its explanations are full and easily adapted to juvenile intelligences. . . . Altogether the book is worthy of high commendation."

**Demonstrations in Greek Iambic Verse.** By W. H. D. ROUSE, M.A., formerly Fellow of Christ's College, Cambridge; a Master at Rugby School. Crown 8vo, 6s.

*Athenæum*.—"Mr. Rouse has written with care and judgment, and his work ought to be decidedly useful to teachers."

*Literature*.—"In many ways an improvement on the work of predecessors in the same field. . . . The exercises are singularly exhaustive and lucid, and the book will be of great service to composition masters and their pupils."

*Academy*.—"A first-rate book."

*Educational Times*.—"We hope that this book will find its way into the hands of many teachers, to the certain benefit both of themselves and of their pupils."

*School World*.—"This is a good book, which should be obtained by every classical master."

*Bookman*.—"An excellent manual for the student, offering both precept and example, both the result of years of experience and labour."

**Geometrical Drawing, With Notes and Examples. Part I.** Plane and Elementary Solid. By W. H. BLYTHE, M.A., Jesus College. 2s. 6d.

*Extract from Preface.*—"This book is intended for Candidates reading Geometrical Drawing for the Science and Art Department, South Kensington, Elementary Stage, for entrance to Sandhurst and Woolwich, and for the Cambridge Preliminary and Junior Local Examinations."

"Part I. contains Plane Geometrical Drawing and Solid Geometry so far as it is included in the Syllabus, Geometrical Drawing (Art), Subject 1 A, page 231, Science and Art Directory, 1899."

**The Formation of Character:** some Educational Aspects of Ethics. By JOHN M'CUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. [Nearly Ready.]

**Outlines of the History of the English Language.** By T. N. TOLLER, late Fellow of Christ's College, Cambridge; Professor of English in the Owens College, Manchester. [Nearly Ready.]

# CLASS LIST

## OF PUPILS WHO HAVE PASSED THE CHRISTMAS EXAMINATION OF THE COLLEGE OF PRECEPTORS.

[Throughout the following List, bracketing of names implies equality.]

### PRIZES.

- General Proficiency.**
- Quine, A. E. (Isbister Prize.) Mr. Heys, Elmfield College, York.
  - Dunham, Miss A. G. (Pinches Prize.) Misses Sell and Harry, Gartlet, Watford.
  - Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.
  - Inkster, R. L. Mr. Oakes, Oakes Institute, Walton, Liverpool.
- Classics.**
- Quine, A. E. Mr. Heys, Elmfield College, York.
  - Charles, Miss D. S. Private tuition.
- Mathematics.**
- Inkster, R. L. Mr. Oakes, Oakes Institute, Walton, Liverpool.
  - Evans, W. D. Mr. Rider, Devonport High School.
- English Subjects.\***
- Steward, G. E. Mr. Bayley, Wellington College, Salop.
  - Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.
  - Howell, H. F. Mr. Bayley, Wellington College, Salop.

\* Lady Gwendolen Onslow, Private tuition, was disqualified for the First Prize for English Subjects in consequence of being over 18 years of age at the commencement of the Examination.

- Modern Foreign Languages.\***
- Charles, L. S. Mr. Hawe, High School for Boys, Croydon.
  - Richards, A. H. Mr. Richards, Stoke Newington Grammar School.
- Natural Sciences.**
- Quine, A. E. Mr. Heys, Elmfield College, York.
  - Holden, J. Mr. Heys, Elmfield College, York.
- Taylor-Jones Prize for Scripture History.**
- Wallis, Miss E. H. Miss Holgate, Guelph College, Clevedon.
- Pitman Medals for Shorthand.†**
- Evans, W. D. (Silver Medal.) Mr. Rider, Devonport High School.
- (Faulkner, P. L. Mr. Cusack, the Cusack Institute, Moorfields.)
- (Wraight, B. W. Mr. Nixon, High School, Romford.)
- (Bronze Medals.)

\* Lady Gwendolen Onslow, Private tuition, was disqualified for the First Prize for Modern Foreign Languages, and Miss I. Y. Craig, Manchester High School for Girls, was disqualified for the Second Prize for Modern Languages, in consequence of being over 18 years of age at the commencement of the Examination.

† A. S. Hurst, Private tuition, was disqualified for the Silver Medal for Shorthand in consequence of being over 18 years of age at the commencement of the Examination.

### List of the Candidates who were FIRST and SECOND in each Subject of Examination.

- |   |   |   |
|---|---|---|
| <p style="text-align: center;"><b>Scripture History.</b></p> <ol style="list-style-type: none"> <li>Wallis, Miss E. H. Miss Holgate, Guelph College, Clevedon.</li> <li>Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.</li> <li>Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.</li> <li>Meredith, L. P. Mr. Giffin, Westminster City School, S.W.</li> <li>Southwell, Miss A. B. Miss Illingworth, Trafalgar Square School, Scarborough.</li> <li>Stutchbury, Miss M. Mrs. Hiatt, Ladies' College, Wellington, Salop.</li> <li>Tuke, Miss B. Misses Simon, Wintersdorf, Birkdale, Southport.</li> </ol> <p style="text-align: center;"><b>English Language.</b></p> <ol style="list-style-type: none"> <li>Steward, G. E. Mr. Bayley, Wellington College, Salop.</li> <li>Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.</li> <li>Kenyon, H. L. Mr. Walmisley, Grammar School, Eccles.</li> </ol> <p style="text-align: center;"><b>English History.</b></p> <ol style="list-style-type: none"> <li>Cox, S. W. C. Mr. Le Sueur, Grammar School, Gillingham.</li> <li>Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.</li> <li>Savage, G. H. Mr. Hooson, Bourne College, Quinton, Birmingham.</li> </ol> <p style="text-align: center;"><b>Geography.</b></p> <ol style="list-style-type: none"> <li>Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.</li> <li>Jones, R. N. Mr. Bayley, Wellington College, Salop.</li> <li>Stroud, Miss V. B. Mrs. Barnes and Miss Mayoss, Alexandra Coll., Southampton.</li> </ol> <p style="text-align: center;"><b>Arithmetic.</b></p> <ol style="list-style-type: none"> <li>Cox, S. W. C. Mr. Le Sueur, Grammar School, Gillingham.</li> <li>Fennings, H. G. Mr. Pulling, Salway College, Leytonstone.</li> <li>Goldberg, J. Mr. Berkowitz, Tivoli House School, Gravesend.</li> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> </ol> <p style="text-align: center;"><b>Algebra.</b></p> <ol style="list-style-type: none"> <li>Cox, S. W. C. Mr. Le Sueur, Grammar School, Gillingham.</li> <li>Davies, G. MacD. Mr. Hawe, High School for Boys, Croydon.</li> <li>Kenner, J. Mr. Kenner, High School, Brentwood.</li> </ol> <p style="text-align: center;"><b>Euclid.</b></p> <ol style="list-style-type: none"> <li>Jackson, W. B. Mr. Bayley, Wellington College, Salop.</li> <li>Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.</li> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> <li>Smith, A. D. Mr. Barnes - Lawrence, Perse Grammar School, Cambridge.</li> <li>Turpin, J. A. Mr. Parlett, St. James' Collegiate School, Jersey.</li> </ol> <p style="text-align: center;"><b>Trigonometry.</b></p> <ol style="list-style-type: none"> <li>Inkster, R. L. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> <li>Evans, W. D. Mr. Rider, Devonport High School.</li> </ol> | <p style="text-align: center;"><b>Mechanics.</b></p> <ol style="list-style-type: none"> <li>Inkster, R. L. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> <li>Atherton, J. H. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> </ol> <p style="text-align: center;"><b>Book-keeping.</b></p> <ol style="list-style-type: none"> <li>England, C. Mr. Thickpenny, Breydon House, Bournemouth.</li> <li>Wraight, B. W. Mr. Nixon, High School, Romford.</li> </ol> <p style="text-align: center;"><b>Mensuration.</b></p> <ol style="list-style-type: none"> <li>Macmillan, D. Mr. Ashby, Sidcot School, Winscombe.</li> <li>Bailey, J. B. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> </ol> <p style="text-align: center;"><b>French.</b></p> <ol style="list-style-type: none"> <li>Carouge, Miss J. H. Private tuition.</li> <li>Blampied, S. Mr. Parlett, St. James' Collegiate School, Jersey.</li> <li>Craig, Miss I. Y. Miss Burstall, Manchester High School for Girls, Private tuition.</li> <li>Onslow, Lady Gwendolen</li> <li>Turpin, J. A. Mr. Parlett, St. James' Collegiate School, Jersey.</li> </ol> <p style="text-align: center;"><b>German.</b></p> <ol style="list-style-type: none"> <li>Hohl, Miss M. E. Private tuition.</li> <li>Welham, J. B. Private tuition.</li> </ol> <p style="text-align: center;"><b>Italian.</b></p> <ol style="list-style-type: none"> <li>Onslow, Lady Gwendolen</li> <li>Scaramocci, N. U. Mr. Borland, Victoria College, Buckingham Palace Road.</li> </ol> <p style="text-align: center;"><b>Spanish.</b></p> <ol style="list-style-type: none"> <li>Lammin, Miss F. L. Misses Thomson and Spragge, Mecklenburg House, Putney.</li> <li>Lammin, Miss S. L. Misses Thomson and Spragge, Mecklenburg House, Putney.</li> </ol> <p style="text-align: center;"><b>Latin.</b></p> <ol style="list-style-type: none"> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> <li>Wilson, S. R. Mr. Fulford, Grammar School, Penistone.</li> </ol> <p style="text-align: center;"><b>Greek.</b></p> <ol style="list-style-type: none"> <li>Charles, L. S. Mr. Hawe, High School for Boys, Croydon.</li> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> </ol> <p style="text-align: center;"><b>Hebrew.</b></p> <ol style="list-style-type: none"> <li>Goldberg, J. Mr. Berkowitz, Tivoli House School, Gravesend.</li> <li>Trapowski, G. Mr. Berkowitz, Tivoli House School, Gravesend.</li> </ol> <p style="text-align: center;"><b>Sound, Light, and Heat.</b></p> <ol style="list-style-type: none"> <li>Inkster, R. L. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> <li>Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.</li> <li>Oakes, C. Mr. Oakes, Oakes Institute, Walton, Liverpool.</li> <li>Tobin, J. A. Private tuition.</li> <li>Wilson, S. R. Mr. Fulford, Grammar School, Penistone.</li> </ol> | <p style="text-align: center;"><b>Electricity and Magnetism.</b></p> <ol style="list-style-type: none"> <li>Roberts, H. E. U. Private tuition.</li> <li>Turpin, J. A. Mr. Parlett, St. James' Collegiate School, Jersey.</li> </ol> <p style="text-align: center;"><b>Chemistry.</b></p> <ol style="list-style-type: none"> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> <li>Steward, G. E. Mr. Bayley, Wellington College, Salop.</li> </ol> <p style="text-align: center;"><b>Natural History.</b></p> <ol style="list-style-type: none"> <li>Savage, G. H. Mr. Hooson, Bourne College, Quinton, Birmingham.</li> <li>Quine, A. E. Mr. Heys, Elmfield College, York.</li> </ol> <p style="text-align: center;"><b>Drawing.</b></p> <ol style="list-style-type: none"> <li>Phillips, W. J. Mr. Hooson, Bourne College, Quinton, Birmingham.</li> <li>Ainsworth, Miss L. W. Mrs. Clark, Stainsbridge College, Malmesbury.</li> <li>Cranfield, Miss E. E. Mrs. and Miss Lloyd, Sleppe Hall, St. Ives, Hunts.</li> <li>Hayward, Miss H. Mrs. Yarrow, Ellerker College, Richmond Hill.</li> <li>Howell, H. F. Mr. Bayley, Wellington College, Salop.</li> <li>Rood, F. S. Private tuition.</li> <li>Walker, Miss C. A. Miss Burstall, Manchester High School for Girls.</li> </ol> <p style="text-align: center;"><b>Music.</b></p> <ol style="list-style-type: none"> <li>Keer, Miss C. M. Misses Harrington and Miss Boobyer, Lonsdale House School, Norwich.</li> <li>Austin, Miss A. C. Misses Beard, Oxford College, Clacton-on-Sea.</li> <li>Gates, Miss E. D. Miss Holgate, Guelph College, Clevedon.</li> <li>Leaper, Miss M. Mrs. Walter, Welland Hall College, Spalding.</li> </ol> <p style="text-align: center;"><b>Political Economy.</b></p> <ol style="list-style-type: none"> <li>Bromley, Miss E. R. S. Misses Thomson and Spragge, Mecklenburg House, Putney.</li> <li>Alcock, Miss E. M. Miss Theodora, Huddo and Westwood Collegiate School, Scarborough.</li> <li>Dunham, Miss A. G. Misses Sell and Harry, Gartlet, Watford.</li> </ol> <p style="text-align: center;"><b>Shorthand.</b></p> <ol style="list-style-type: none"> <li>Hurst, A. S. Private tuition.</li> <li>Evans, W. D. Mr. Rider, Devonport High School.</li> </ol> <p style="text-align: center;"><b>Domestic Economy.</b></p> <ol style="list-style-type: none"> <li>Bush, Miss E. W. Misses Harrington and Miss Boobyer, Lonsdale House School, Norwich.</li> <li>Goodman, Miss M. E. Miss Holmes, Queen's College for Girls, South Humpstead.</li> <li>Hinley, Miss E. F. Miss Johnston, Raleigh Memorial School, Stoke Newington.</li> <li>Stroud, Miss V. B. Mrs. Barnes and Miss Mayoss, Alexandra College, Southampton.</li> </ol> |
|---|---|---|

GENERAL CLASS LIST—BOYS.

N.B.—The small italic letters denote that the Candidate to whose name they are attached was distinguished in the following subjects respectively:—

- a. = Arithmetic.
al. = Algebra.
b. = Botany.
bk. = Bookkeeping.
ch. = Chemistry.
d. = Drawing.
do. = Domestic Economy.
e. = English.
el. = Electricity.
eu. = Euclid.
f. = French.
g. = Geography.
geo. = Geology.
ge. = German.
gr. = Greek.
h. = History.
he. = Hebrew.
i. = Italian.
l. = Latin.
m. = Mechanics.
ms. = Mensuration.
mu. = Music.
nh. = Natural History.
p. = Political Economy.
ph. = Physiology.
s. = Scripture.
sl. = Sound, Light, and Heat.
sh. = Shorthand.
sp. = Spanish.
st. = Trigonometry.
tr. = Welsh.
z. = Zoology.

The small figures 1 and 2 prefixed to names in the Second and Third Class Lists denote that the Candidates were entered for the First and Second Classes respectively.

In the addresses, Acad. = Academy, C. or Coll. = College, Coll. S. = Collegiate School, Comm. = Commercial, End. = Endowed, Found. = Foundation, H. = House, Inst. = Institute, Int. = International, Inter. = Intermediate, Prep. = Preparatory, S. = School, Tech. = Technical, Univ. = University.

First Class.—Honours Division.

- Quine, A.E. s.e.h.a.u.l.ch.ph.sh. Elmfield Coll., York
Inkster, R.L. a.al.tr.ms.sl. Oakes Inst., Walton, Liverpool
Smith, A.D. s.eu.el.ch.sh. Perse Gram. S., Cambridge
Jackson, W.B. eu.ms.ch. Wellington Coll., Salop
Charles, L.S. f.l.gr.sh. High S. for Boys, Croydon
Stewart, G.E. e.al.ch. Wellington Coll., Salop
Jones, R.N. g. Wellington Coll., Salop
Kenner, J. a.al.bk.ms. High S., Brentwood
Evans, W.D. f.sh. Devonport High S.
Turner, A.C. ms.f.sl. Collett H., Bournemouth
Wilson, S.R. l.sl.ch. Gram. S., Penistone
Hawkins, T.J. f. Wellington Coll., Salop
Oakes, C. ms.sl.ch. Oakes Inst., Walton, Liverpool
Ogden, W. ms. Gram. S., Penistone
Holden, J. bk.ch. Elmfield Coll., York
Richards, A.H. Stoke Newington Gram. S.
Beckett, J. s.e.h.bk.ms.z. Westminister City S.
Cox, S.W.C. a.a.al.ch. Gram. S., Gillingham
Davies, G. MacD. ol.ms. High S. for Boys, Croydon
Stone, G. ms. Friends' S., Saffron Walden
Goldberg, J. s.a.bk.ch. Tivoli H., Gravesend
Maenaught, D.D. Grafton H., Manchester
Savage, G.H. s.h.gro. Bourne Coll., Quinton, Birmingham
Yarnall, C.W. sd. Collett H., Bournemouth
Butler, J.N. Silecot S., Winccombe
Wright, B.W. bk.sh. High S., Rounford
Macmillan, D. ms.d. Silecot S., Winccombe
Turpin, J.A. eu.f. St. James' Coll. S., Jersey
Jones, C.J.H. Elmfield Coll., York
Rendell, E. Wilsford H., Devises
Meredith, L.P. s. Westminister City S.
Ward, H.G. Friends' S., Penketh
Leese, J. s. Elmfield Coll., York
Burner, L.H. Portsmonth Gram. S.
Whittle, R. Elmfield Coll., York
Atherton, J.H. m.ms.sl. Oakes Inst., Walton, L'pool
Sterne, H.H. E. Anglian S., Bury St. Ed's
Barker, W.B. Elmfield Coll., York
Bartlett, A.G.D. f.d. Private tuition
Trapowski, G. he. Tivoli H., Gravesend
Tucker, T.K. sd. Portland Gram. S., Plym'th
Jobling, E. Lucton S., Herefords.
Evans, R.H.B. Oakes Inst., Walton, L'pool

First Class.—Pass Division.

- Kenyon, H.L. e. Gram. S., Eccles
Smiles, A. St. Martin's Gr. S., Scarborough
Potter, A.C. Stoke Newington Gram. S.
Ray, F.C. al. Private tuition
Cox, C.D. Gram. S., Shoreham
Nixon, W.A. High S., Romford
Fleming, W. Friends' S., Penketh
Hickling, J.E. ge. Chaloner's S., Branton
Salisbury, A.G. ch. Kingsholme S., Weston-s.-Mare
Tobin, J.A. sd. Private tuition
Harris, W.M. Clyde H., Hereford
Horsman, W. ms. Boys' Middle S., Tiverton
Betbeder, J.F. f. Selhurst Park Coll., S.E.
Smith, H.F. a. Gram. S., Shoreham
Wright, G.E. Brighton Gram. S.
McDonald, R. bk. Portland Gram. S., Plymouth
Williams, A.E. bk. Stoke Newington Gram. S.
Dannatt, P.H. Alresford H., Margate
Howard, H.S. E. Anglian S., Bury St. Ed's
Phillips, W.J. d. Bourne C., Quinton, B'ham
Carr, W. Elmfield Coll., York
Husbands, F.A. Private tuition
Spear, T.H. s. E. Cornwall Coll., Liskard
Faulkner, J.E. Stretford Comm. S.
Smith, G. ch. Oakes Inst., Walton, L'pool
Nicholls, H.W. f.l. Kelly Coll., Tavistock
Faulkner, P.L. sh. The Cusack Inst., Moorfields
Rush, E.P.D. Wilsford H., Devises
Seddon, J. s. Farnworth Gram. S., Bolton
Whitehouse, E. Wellington Coll., Salop
Eddowes, W.R. ms. Leek Gram. S.
Bickerstaff, T.G. sh. Stourwood C., Southbourne, Hants

- Goodman, H.T. Halesowen S., nr. B'ham
Nicholls, G.H. Stoke Newington Gram. S.
Bailey, J.B. ms. Oakes Inst., Walton, L'pool
Fitzmaurice, W.H. Chaloner's S., Branton
Gall, H. ch. d. Private tuition
Tudball, T.B.D. s. Castle Hill S., Easing
Bartholomew, E.E. Holme Wood Coll., Up. Tulse Hill
Croisdale, P.D. High S., Brentwood
Southwell, O. Gram. S., Spalding
Haquouil, G. de la P. a.f. Gram. S., Gillingham
King, W. St. Joseph's Coll., Denmark Hill
Rolls, F.H. St. John's Coll., Green Lanes, N.
Harland, H.J. Brighton Gram. S.
Jenner, L.W. Brighton Gram. S.
Jones, J.T. High S., Brentwood
Sunways, E.R. a. Gram. S., Gillingham
Shoy-Hon, W. Kingswood S., Bath
Bassett, H.W. High S., Romford
Brooks, W.J. Lowestoft Coll., York
French, E.M. Elmfield Coll., York
Swain, A.M. St. John's C., Green Lanes, N.
Booth, F. St. Martin's Gram. S., Scarborough
LeGallais, G. Victoria College, Jersey
Blampied, S. f. St. James' Coll. S., Jersey
Chase, H.P. Lucton S., Herefordshire
Houghton, W.C. Private tuition
Johnson, A.R. Richmond H., Handsworth
Henson, S. Boys' Middle S., Tiverton
Cotthav, F.H. Argyle S., Sunderland
Hiscoek, H.W. Northgate S., Winchester
Tomlin, H. ch. Private tuition
Ainsworth, A.W. Milton Abbas S., Blandford
Skelt, R. Boys' Middle S., Tiverton
Leetham, H.M. Thanet Coll., Margate
Matthewman, T.H. Oakes Inst., Walton, Liverpool
Foster, R.C. bk. Loughton S.
Gardner, R.P. St. John's Roy. Latin S., Buckingham
Haines, S.G. Winchester H., Redland Rd., Bristol
Gruchy, C. f. Gram. S., Gillingham
Johnson, J. Southport Modern S.
Gerrard, H.K. Oakes Inst., Walton, L'pool
Jenne, H.H. bk.f. High S. for Boys, Jersey
Cornwell, S.W. Winchester H., Redland Rd., Bristol
Ehrensperger, H.R. Boys' Coll. S., Aldershot
Pountney, R.P. High S., Iron Bridge, Salop
Scabrook, H.S. Waltham Coll., Waltham Cross
Willcox, C.L.T. f. Hazelcroft, Weston-s.-Mare
Braund, T.B. Apsley S., Kingsdown, Bristol
Higson, W.D. Private tuition
Martin, H. Polytechnic Inter. S., W.
Charnock, E. f. Hindley & Abram Gram. S.
Leach, W.W. Hollybank S., Cheetham Hill
Bailey, T.H. Kingswood S., Bath
Whyte, D.S. Maida Vale S., W.
Hobbs, W. s. Boys' Middle S., Tiverton
Coupland, C.G. bk. Gram. S., Shoreham
Harris, C.P. ms. Kingswood S., Bath
Sawyer, H.S. Northgate S., Winchester
Fennings, H.G. a. Salway Coll., Leytonstone
Rogers, A.S.S. Lucton S., Herefordshire
Slee, A.H. Chaloner's S., Branton
Blurton, C. Alresford H., Margate
Vevers, O.H. Private tuition
Bolsam, H.A.C. sh. High S., Romford
Williams, S. High S. for Boys, Croydon
Hall, E. W. Northgate S., Winchester
Watson, W. R. Oakes Inst., Walton, L'pool
Dickinson, G.H. Ballham S.
Dinean, E.B. King's College S., Wimbledon
Messery, F.G. Northgate S., Winchester
Wright, H. Brighton Gram. S.
Hillman, H.A.M. High S. for Boys, Croydon
Jarvis, H.G. Gram. S., Newton Abbot
Wright, A.H. Halesowen S., nr. B'ham
Etherington, E.C. Thanet C., Margate
Hornof, G.W.T. Polytechnic Inter. S., W.
Shirlaw, L.A. Lucton S., Herefordshire
Robins, F.W. Boys' Coll. S., Aldershot
Brown, H.W. New Coll., Margate
Scorer, F. Barton S., Wisbech
Crane, H. Hillmartin C., Camden Rd., N.W.
Scott, S.L. Kingswood S., Bath
Kensley, D. Loughton S.
Archer, F. Private tuition

- Clare, C.G. Douglas S., Cheltenham
Hickman, T.D. Private tuition
Page, E.R. Stoke Newington Gram. S.
Weller, R.D. Bedford Gram. S.

Second Class.—1st Division.

- Howell, H.F. h.ms.ph.d. Wellington Coll., Salop
Williams, W.A. ms. Wilsford H., Devises
Davis, W.J. sd. Oakes Inst., Walton, L'pool
Raymont, F.R. a.al.ch.d. Ashville Coll., Harrogate
Proudlock, O.M. Perse Gram. S., Cambridge
May, S.G.W. g.a.ch. Raleigh Coll., Brixton
Walton, A.J. a.m.sd. ch. Blemish H., Richmond Hill
Nunnerley, T.B. a. Wellington Coll., Salop
Owen, S.J. a.al.d. Wellington Coll., Salop
Brown, H. a.al. Northgate S., Winchester
Sturges, E. L.d. f.ch. Wellington Coll., Salop
Jones, C.B. a.al.f.ch. Private tuition
Kirkby, W. f.l.ch. Ashburne Gram. S.
Barlow, T.M. a.al.f.ch. Wellington Coll., Salop
Anderson, A.C. a.al. Private tuition
Bennell, H.L. h.g.g. Vermont Coll., Clapton
Phillips, A.B. al. Wellington Coll., Salop
Bussey, L.E. g.d. Raleigh Coll., Brixton
Procter, E.A. f.d. Wellington Coll., Salop
Reeve, W. al. Private tuition
Smith, T.D. f.ch. Ashburne Gram. S.
Tucker, E.E. G. g.a.al. E. Devon County S., Sampford Peverell
Stapleton, A.L. Friends' S., Saffron Walden
Wheater, S. a.f. Scarborough Gram. S.
Bridge, T.E. St. Bede's Coll., Hornsea
Reed, R.B. f.gr. Private tuition
Roberts, H.E.U. d.ch. Private tuition
Wood, W.H. f.l. Ashburne Gram. S.
Edmunds, C.T. h.f. Private tuition
Bayley, H.A.L. f.sh. Wellington Coll., Salop
Bryan, C.W.G. l. Private tuition
Painter, G. a.al.ch.d. Trowbridge High S.
Le Cornu, J.F. f. Oxenford H., Jersey
Pepper, J.E. g.a.al.f. St. Martin's Gram. S., Scarborough
Luce, G.P. f. Oxenford H., Jersey
Cox, H.A. g.a.sh. Mercers' S., E.C.
England, C. a.b.h.d. Breydon H., Bournemouth
Holloway, H. Polytechnic Inter. S., W.
Rollin, S. a.al. Devonport High S.
Wilkinson, W.J. Private tuition
Blake, P.C. a.f. Brighton Gram. S.
Pollard, A.E. a.al.f.d. Esplanade H., Southsea
Gibling, T.W. a. St. John's Royal Latin S., Buckingham
Barlow, W.G. a.d. Blue Coat S., Reading
Sinclair, J.M. a.f. Cliftonville C., Margate
Clarke, E. al. Wellington Coll., Salop
Hurd, H. f. Univ. S., Southport
Neill, W.A.H. Oxenford H., Jersey
West, F.T. Gravesend Modern S.
Brigham, W.F. a.ch.d. St. Martin's Gram. S., Scarborough
Dawson, R.D. e.ms.ch. Private tuition
Bodkin, P.A. ch. Private tuition
Livingston, H.D. al. Gram. S., Bovey Tracey
Morris, W.O. Northgate S., Winchester
Robbins, C. a.al.ch.d. Trowbridge High S.
Brace, C.C.C. al. Vermont Coll., Clapton
Hamilton, G.W. Oakes Inst., Walton, Liverpool
Parkinson, J. a.ch. Lancaster Coll., Morecambe
Rogers, N.P. e.a. Montrose Coll., Brixton Hill
Sooby, G.G. Paragon H., Bracondale, Norwich
Stubbs, J.R. f. Wellington Coll., Salop
Umpleby, F.E. Ashville C., Harrogate
Walker, R. a.ch. Lancaster C., Morecambe
Brown, F.J. Central Found. S., E.C.
Middlton, H. a.ch. Earls Colne Gram. S.
Nicholson, A.W. f. St. Martin's Gram. S., Scarborough
Price, T.B. al. Wellington Coll., Salop
Rolf, C.B. a.al.ch. Perse Gram. S., Cambridge
Swayne, R.W. bk. Private tuition
Wells, W.D. al. Mercers' S., E.C.
Deby, C.A. ch. Ashburne Gram. S.

- Rhemel, C.S. New Coll., Margate
Canning, F.V. a.al. Blue Coat S., Reading
Gibbs, S.R. s.e.gr. Private tuition
Eilen, F.H. a. Wilsford H., Devises
Lee, W. f.ch. Ashburne Gram. S.
Chippindale, C. Elmfield Coll., York
Compe, S.H. ph. Gram. S., Altrincham
Dutton, G.F. d. Ashville Coll., Harrogate
Gair, C.J. D. ch. Elmfield Coll., York
Guzel, A. f. Battersea Polytechnic
Ashdown, E.A.G. a.d.sh. Blue Coat S., Reading
Chinery, L.E. d. Mercers' S., E.C.
Godwin, R.S. a. Gram. S., Gillingham
Nicholls, W.T. a. Silecot S., Winccombe
Proud, R.S. High S., Brentwood
Scott, H.L. a.al.f.g.e. Broadgate S., Nottingham
Welham, J.B. ge. Private tuition
Carter, W. f.d. Friends' S., Penketh
Davis, A.H. d. Private tuition
Martin, W.A. Handel Coll., Southampton
Corney, W.E. Brunswick H., Maidstone
Maiden, W.F. a.d. Gram. S., Shoreham
McMahon, G. f.ch. Birkenhead Inst.
Piquet, C.J. f. Oxenford H., Jersey
Shackleton, C.F. a. al. Whitworth S., Derby
Stewart, J. a. Oakes Inst., Walton, L'pool
Brewer, H.R. a. al. Epson Coll.
Despointes, A.L.J. f. Cliftonville Coll., Margate
Dickinson, T.E. Ashville Coll., Harrogate
King, N.A. Ealing Gram. S.
Pearce, L.H. d. Boys' Coll. S., Aldershot
Read, G.L. g.a. Friends' S., Saffron Walden
Robey, G.L. a.al. Camden Rd. Coll. S., N.
Trelarne, E.G. al. m.ch. Private tuition
Billington, F.H. Wellington Coll., Salop
Bruce, O. Private tuition
Phillips, C.W. d. Wellington Coll., Salop
Alcorta, M. sp. Clyde H., Hereford
Anderson, G.S. a.al. Bracknell Coll., Berks
Brown, J.P. a.f.ch. Birkenhead Inst.
Evans, D.G. g.a.al. Kingswood S., Bath
Green, G.G. a. High S. for Boys, Croydon
Ibbotson, T.H. Manor H., Clapham
Myatt, P.E. H. Leek Gram. S.
Patterson, W. Newcastle Modern S.
Reid, W. ge. Stoke Newington Gram. S.
Comer, D.W. Saham Coll., Walton
Day, H.H. Windsor Hr. Grade S.
Mellard, R.W. a. Wellington Coll., Salop
Brooks, H. g.ch. Earls Colne Gram. S.
Hobbs, J.E. a.al. Woodford C., S. Woodford
Ockenden, S. a. Central Found. S., E.C.
Bomford, L.A. Cliftonville Coll., Margate
Copland, J. f. Private tuition
Cowley, H.R. Gram. S., Romford
Donbavand, T. a.f. St. Martin's Gram. S., Scarborough
Fitzgerald, J.H. d. Cliftonville C., Margate
Parkende and Poyntington S.
Humphry, H.W. a.d. Breydon H., Bournemouth
Lindsey, H. ge. High S., Romford
Parkinson, G.S. Bath Coll.
Sykes, A. f. Pannal Ash Coll., Harrogate
Wellings, G. f.g.e. Waltham Coll., Waltham Cross
Burrighos, G.H. ch. Birkenhead Inst.
Lake, F.W. a.al.ch. Oakes Inst., Walton, Liverpool
Kinnersley, C.J. Winchester H., Redland Rd., Bristol
Aris, G.F. Marlborough Coll., Tue Brook
Letchford, C.P. a. Tenterden S.
MacPherson, W.R.C. Taunton H., Brighton
McDonagh, R.C.P. Private tuition
Rimmer, F. Oakes Inst., Walton, L'pool
Taylor, C.H. Private tuition
Burrage, C.C.W. f. St. Paul's S., W.
Calthrop, E.S. ch. Lynton H., Witney
Logan, W.H. Leamington Coll. S.
Marshall, C.H. Dulwich Coll.
McCloughlin, B.G. Private tuition
Petzsche, R.A. h.g.e. Mercers' S., E.C.
Reaman, C. f.d. E. Anglian S., Bury St. Ed's
Scott, N. bk. d. Osborne High S., W. Hartlep'
Simpton, T.H. a.al. Kingswood S., Bath
Smith, H.M. Ashburne Gram. S.
Tutch, H. Vermont Coll., Clapton
Todd, A.H. f. Knowsley, Torquay
Austin, J. s. f. Private tuition
Lee, T.H. d. Cloughton Coll. S., Birkenhead

BOYS, 2ND CLASS, 1ST DIV.—Continued.
McNeill, M.J. Gram. S., E. Finchley
Pudicombes, F. al. St. Mary's Hall, Cardiff
Langner, R. B. a.

Oxford H., Sutherland Avenue, W.
Bye, N.H. al. Private tuition
Copestake, H.C. a. Whitworth S., Derby
Duncan, D. Ellesmere S., Harrogate
Favell, R.V. Oakham S.

Hardwick, S.H. High S., Sutton, Surrey
Little, S.H. a. High S. for Boys, Croydon
Magill, R.J. al. Holborn Estate Gram. S., W.C.
Saunders, S.M. f.l. Weymouth Coll.
Smith, T.L.

Woodhouse Grove S., Apperley Bridge
Turner, W. d. Bourne Coll., Quinton, B'ham
Barr, W. Salway Coll., Leytonstone
Bewick, R.E. Belmont S., Exmouth
Bouquet, A.G. B. f. Park H., Broadstairs
Brookhurst, A.E. a.

Kingsholme S., Weston-s.-Mare
Dabbs, D.W. St. John's C., Green Lanes, N.
Davies, A.L. High S. for Boys, Croydon
Finlay, A. Private tuition
Jones, E.C. Private tuition
Nixon, H. High S., Romford
Rice, G.E. ge. St. Olave's Gram. S., S.E.
Wright, H.N. Private tuition

Buck, H. Earls Colne Gram. S.
Grant, C.B. Wellington Coll., Salop
Hopkins, S.E. a. d. Friends' S., Saffron Walden
Vickers, A.H. Herne Bay Coll.
Watson, A.J. z. Private tuition

Hayhurst, J.R. al. f. Private tuition
Hutchings, W.C. a. al. d. Devonport High S.
Pickering, M. Gram. S., Penistone
Sabine, W. Pannal Ash Coll., Harrogate
Sherwin, F.L. Salway Coll., Leytonstone

Clark, H.G. f. d. Taunton H., Brighton
Friend, R.H. al. Woodford C., S. Woodford
Lancaster, S.D. d. Bracknell Coll., Berks
Lockyer, H.A. Handel Coll., Southampton
Nibbs, N. McL. al. Private tuition
Verker, M.C. P. Stranraer S., Farnham
Williams, H.M. f. 34 St. Andrew Sq., Edinburgh

Farrow, A.H. Bilton Grange S., Harrogate
Hammond, T.C. al. Ellesmere S., Harrogate
Pickersgill, A.P. Leamington Coll. S.

Folliott, I.A. Handel Coll., Southampton
Hallam, S. al. f. ch. Gram. S., Wortley, Leeds
Hawes, J.H. Private tuition
Humphrey, L.J. ch. Earls Colne Gram. S.
Johnson, C. Sudbury Gram. S.
Mountford, F. a. Leek Gram. S.
White, B.J. Tottenham Coll. S.

Barber, E.H. Stoke Newington Gram. S.
Bartlett, B.T. Private tuition
Cottingham, J.R. Gram. S., Goole
Fowke, M.C. Wykeham H., Clifton
Gibson, W. ge. Polytechnic Inter. S., W.
Grace, E.M. Wellington Coll., Salop
Humphrey, S.W. a. Thorne Gram. S., Doncaster

Ingram, W.M. Alresford H., Margate
Lax, H. Pannal Ash Coll., Harrogate
Lidbetter, J.S. a. Friends' S., Saffron Walden
McTurk, R.W. High S., Brentwood
Shute, J.V. Private tuition
Woollatt, P.C. Private tuition

Cook, W.P. f. Swindon High S.
Doggett, F.A. B. Perse Gram. S., Cambridge
Evans, F.N. Mercers' S., E.C.
Forbes, A.H. Vermont Coll., Clapton
Pearson, J.S. Private tuition
Peck, R.R. Lowestoft Coll.
Shead, G.E. Lowestoft Coll.
Shirlaw, J.S. Lucton S., Herefordshire
Williams, G.W.A. d. Wellington Coll., Salop

Bishop, B.O. s. Kingswood S., Bath
Boxer, C.R. Mercers' S., E.C.
Breton, W.G. al. Leek Gram. S.
Buckley, S.M. Brighton H., Oldham
Hargreaves, T.F. Gram. S., Spalding
Newton, S.B. f. Private tuition
Nicolle, C.B. f. Private tuition

Nudd, F.W. St. James' Coll. S., St. Helier's
Stuckey, E.T. ch. Midhurst Gram. S.
Tribble, H.B. a. The College, Clevedon
Yonge, C.E. Handel Coll., Southampton

Broadbent, E.P. Kingswood S., Bath
Colman, A. Chaloner's S., Braunton
Evans, H. a. al. Ongar Gram. S.
Farnfield, H.V. Woodford C., S. Woodford
Harcourt, L.A. Gram. S., Gillingham
Jones, P.H. Birkenhead Inst.

Drinkwater, B.W. ge. Mercers' S., E.C.
Fryer, H.G. Mercers' S., E.C.
Grainger, J.C. ch. Friends' S., Wigton
Harvey, F.M. Perse Gram. S., Cambridge
Johnson, J. al. Devonport High S.
Rendall, S.S. Clifton Coll., Bristol.
Mundy, A.J. Bechenchiff, Peckham
Pickup, H.A. High S., S'th Shore, Blackp.
Price, H.J. D.G. ch. Bourne Coll., Quinton, B'ham
Rapson, S. Cliftonville Coll., Margate

Rood, F.S. f. d. Private tuition
Ward, C.F. ch. Private tuition
Wright, F.W. a. Ashburne Gram. S.

Abbott, R.S. Waltham C., Waltham Cross
Chambers, H.S. a. Breydon H., Bourne'm'th
Churchill, J. St. Mary's Hall, Cardiff
Finch, G.S. Apsley S., Kingsdown, Bristol
Keely, H.P. Kingswood S., Bath
Lacey, W. Mercers' S., E.C.
Oldershaw, G.F. Oakes Inst., Walton, L'pool
Thompson, W.C. Milton Coll., Ullesthorpe
Wood, F.J. Brighton Gram. S.

Bassil, B.F. Ongar Gram. S.
Berwick, G.H. al. Private tuition
Blagbrough, A. a. Crossley and Porter S., Halifax
Cooke, A. Farnworth Gram. S., Bolton
Davis, C.G. Tudor Hall, Hawkhurst
Griffith, J.W. f. Brighton Gram. S.
James, R.R. Private tuition

Lockwood, J.M. ge. New Coll., Margate
Merewether, W. Clyde H., Hereford
Reckless, P.A. Wesley Coll., Sheffield
Replogle, G.H. B. Private tuition
Somerville, H. al. f. Birkenhead Inst.
Trewby, J.F. a. al. Manor H., Clapham

Bevan, E. d. St. Kilda's C., Waterloo lve
Faulkner, H.S. St. Paul's H., St. Leonards
Garbett, F. Lucton S., Herefords
Holt, W. Oakes Inst., Walton, L'pool
Jones, G.P. a. Private tuition
Marriott, T.G. Brunswick, H., Maidstone
R. binson, J.W. al. Bolton Gram. S.
Salisbury, R.B. Belle Vue, S. Norwich
Wilshire, H. B. Whitworth S., Derby

Second Class.—2nd Division.
Back, F.C. Kingswood S., Bath
Hobson, C.B. Wellington Coll., Salop
Metcalfe, B.B. f. Lewisham Park S., S.E.
Parsonage, J.H. al. f. Nantwich & Acton Gram. S.
Salmon, G.W. Esplanade H., Southsea
Salter, C. Trowbridge High S.
Triggs, B.P. Lowestoft Coll.
Webster, A.E. Boys' Coll. S., Aldershot
Webb, W.H. Weston S., Bath

Burney, W.H.S. f. Private tuition
Cranford, L.G. Englefield H., Highbury
Matthews, S.C.E. Gravesend Modern S.
Manger, P.V. f. Oxenford H., Jersey
Still, E.G.M. Hoe Gram. S., Plymouth
Swann, H.W. Perse Gram. S., Cambridge

Balls, L.C.W. f. Willesden High S.
Garrett, P.A. J.C. Private tuition
Harrow, T.W. Oakes Inst., Walton, L'pool
Masters, J. Private tuition
Middleton, E.R. Leek Gram. S.
Pearson, T.R. Winchester H., Redland Road, Bristol
Tripp, F.H. f. ge. Waltham Coll., Waltham Cross

Beare, J.T. al. f. Gram. S., Newton Abbot
Borrow, G.N. Arlington Pk. C., Chiswick
Dickey, W.C. Portland Coll., Chiswick
Edmiston, J.F. Private tuition
Furness, H. Lancaster C., Morecambe
Gardner, D.S. The College, Weston-s.-Mare
Goldberg, P. he. Tivoli H., Gravesend
Jackson, R. sh. Private tuition
Le Brun, J.R. f. St. James' Coll. S., Jersey
Massingham, H.R. Earls Colne Gram. S.
Moyle, H.H. Private tuition
Parle, F. Private tuition
Smith, R.G. d. Epsom Coll.
Willy, W.E.G. Private tuition

Brown, F. Mercers' S., E.C.
Cavanagh, F.G. d. Devonport High S.
Hill, E.S. Winchester H., Redland Rd., Bristol
Upton, W. Chaloner's S., Braunton
Aplin, J.H. Trowbridge High S.
Broadhead, A.C. Kingswood S., Bath
Brooker, A.B. Farnworth Gram. S., Bolton
Fernie, J.G. Private tuition
Gerrard, H.S. Elmfield Coll., York
Gibson, J.S. Wellington Coll., Salop
Gill, T.W. Marlborough Coll., Tue Brook
Hughes, A.C. Ascham H., Reading
Shepherd, S.G. Wellington Coll., Salop
Sugg, H.H. Oakes Inst., Walton, L'pool
Tyler, P.C. Winchester H., Redland Rd., Bristol
Welsh, W. al. Mercers' S., E.C.
Young, W.F. a. al. Devonport High S.

Breeze, V. Elmfield Coll., York
Bushy, R.G. C. Archbishop Holgate's Gram. S., York
Costabadi, V.A.P. Private tuition
Coxon, W. Swanscombe S., Greenhithe
Dadd, H.J. Hoe Gram. S., Plymouth
Hayward, C.W. Wellington Coll., Salop
Le Feuvre, F. Victoria Coll., Jersey
Pelly, R.G. f. St. Paul's S., W.
Porter, O.F. Cliftonville Coll., Margate
Prentis, M.W. Holme S., S. Norwich Hill
Proud, L. Ongar Gram. S.
Webster, G.E. Boys' High S., Shrewsbury
Williams, W.E. Kingsholme S., Weston-s.-Mare

Barker, E.E. ch. Private tuition
Botting, H.W. Warbreck Coll., Aintree
Colenso, J.E. Private tuition
Cornforth, J.W. Apsley S., Kingsdown, Bristol
Dawson, G. King's Coll. S., Wimbledon
Dunwell, A.S. Mercers' S., E.C.
George, C.H. Northgate S., Winchester
Isaacs, S. he. Private tuition
Lynas, P. Thorne Gram. S., Doncaster
Milsome, B. Northgate S., Winchester
Redfern, E. Friends' S., Penketh
Rees, F.H. C. Mercers' S., E.C.
Palmer, W.H. Private tuition
Taylor, J. van S. Private tuition
Thomson, J. F. f. d. Private tuition
Witty, T.H. Private tuition

Bevan, H. al. St. Kilda's Coll., Waterloo lve
Grey, C.G. d. Fauconberge, Beccles
Hill, F.E. Loughton S.
Hole, S.H. d. Saxby H., Hull
Howell, J.W. St. John's C., Green Lanes, N.

Bacon, P.G. Manor H., Clapham
Burgess, C.H. d. Central Found. S., E.C.
Cheal, A.E. Cliftonville Coll., Margate
Duncan, N.A. Stoke Newington Gram. S.
Hale, C.A. The College, Clevedon
Harvey, T.R. Private tuition
John, B.G. Weston S., Bath
Jones, A.E. a. al. Fauconberge, Beccles
Kitching, A. al. Coll. S., Bishop Auckland
Pawson, J.C. Alresford H., Margate
Reeve, J.L. Private tuition
Unsworth, C. Anerley Coll., S.E.

Andrews, J.E. Mercers' S., E.C.
Arthur, J.D. f. Oxenford H., Jersey
Brewer, C.J. Earls Colne Gram. S.
Evans, F.C. s. Kingswood S., Bath
Miller, H.S. al. Birkenhead Inst.
Potter, J.B. f. Ashburne Gram. S.
Pye, J.W. Thanet Coll., Margate
Ramsay, J.A. High S., Romford
Rogers, W.A. Wellington Coll., Salop
Scammell, T.E. Winchester H., Redland Rd., Bristol
Seabrook, H.H. E. Cornwall Coll., Liskeard
Stedman, A.G. Midhurst Gram. S.
Strickland, H.F. Private tuition
Tessier, N.Y. Private tuition
Leek Gram. S.

Bowden, H.L. St. John's Roy. Latin S., Buckingham
Horton, J.J. Private tuition
Jenkins, T.J. Emlay Gram. S., Newcastle
Lound, R.S. Eastburne Coll.
Mobbs, S.W. d. E. Anglian S., Bury St. Eds
Norris, P.W. Coll. S., Bridgwater
Fateshall, A.F. d. Halesowen S., nr. Birmingham
Richardson, H.S. Whitworth S., Derby
Stamp, L.D. Private tuition
Yerburgh, R.R. St. Paul's H., St. Leonards

Bailey, C.B. a. Gram. S., Spalding
Collinson, J.L. W. f. Swindon High S.
Davey, C. Friends' S., Penketh
Fenton, J. Blackpool Gram. S.
Hughes, T.G. a. al. County S., Abergyle
Perry, E.J. f. Croad's S., King's Lynn
Storr, L. Tottenham Coll.
Sunman, G.R. Grosvenor Coll., Luton
Thornber, E.S. a. al. Carlton Rd. S., Burnley
Weston, N.F. St. Leonards Coll.
Wolfenden, H.K. d. Hornsey Gram. S.

Carroll, B.M. King's Coll. S., Wimbledon
Colliver, V.N. f. Raleigh Coll., Brixton
Edwards, O.M. Comm. & Civil Serv. C., Forest Gate
Kelly, E. f. Wellington Coll., Salop
Lord, C.R. Gram. S., Eccles
Mase, F.W. Croad's S., King's Lynn
Pearce, C.F. Boys' Coll. S., Aldershot
Precious, W. Gram. S., Goole
Scott, J.W. L. f. Dulwich Coll.
Sheldon, G.W. High S. for Boys, Croydon
Solomon, A.T. Lancaster Coll., Macclesfield
Taylor, F.W. Brunswick H., Maidstone
Thompson, R.W. Halesowen S., nr. Birmingham
Turner, H.A. Southport Coll.
Aitken, F.W. Private tuition
Andrews, A.A. New Coll., Margate
Barragry, R. Private tuition
Date, M. Trowbridge High S.
Dawson, W.G. bk. Private tuition
Goldenberg, L. a. Tivoli H., Gravesend
Lane, B.H. Dean Close S., Cheltenham
Lee, E.A. Edward V. Mil. S., Norwich
Loren, B.S. St. Bede's Coll., Hornsea
Middleton, J.E. Blackpool Gram. S.
Montgomery, R.E. 34 St. Andrew Sq., Edinburgh

Richea, E.H. Mercers' S., E.C.
Row, T.B. Friends' S., Saffron Walden
Sproston, H. Private tuition
Tuckey, A.W. ch. Private tuition
Whiteman, J.W. f. Wykeham H., Clifton
Williams, A.D. St. Paul's S., W.
Wilson, R.M. ge. Private tuition
Bathe, C.D. d. Cliftonville Coll., Margate
Goodman, F.J. Private tuition
Hayward, A.L. f. Brighton Gram. S.

Rushton, H. Blackpool Gram. S.
Rutland, A.E. Falmouth Gram. S.
Strang, D.B. Marlborough C., Tue Brook
Tappin, M. Clarendon H., Wateringbury
Thorp, L.G. Kingswood S., Bath
Webster, R.C. Gram. S., Southport
Woolley, A.G. f. Cleave's S., Yalding

Bush, W.J. Wilford H., Devizes
Deuchar, J.L. Belle Vue S., Norwich
Miles, M. Brighton Gram. S.
Taylor, C.H. g. Private tuition
Walker, F.W. ch. Private tuition

Arldill, H.J. Friends' S., Saffron Walden
Gardner, E.B. Oakes Inst., Walton, L'pool
Greensted, F.Y. Sandwich School
Hume, M.L. New Coll., Margate
Lewis, E.L. al. Kingswood S., Bath
Linn, H. d. St. Martin's Gram. S., Scarborough
Luckock, E.J. Stoke Newington Gram. S.
Mumblings, R.J. Lewestoft College
Oswald, J. J. Mercers' S., E.C.
Thornley, F.E. Cliftonville Coll., Margate
Ward, E.H. Devizes Gram. S.
Weddell, H. Newcastle Modern S.
Wright, E.L. Private tuition
Williams, A.P. Mercers' S., E.C.

Bull, E.A. Midhurst Gram. S.
Johnson, F.M. Friends' S., Saffron Walden
Lee, E. Woodhouse Grove S., Apperley Bldge
Ross, E.C. O. Private tuition
Smith, G. Tottenham Coll.
Wright, C.T. Pannal Ash Coll., Harrogate

Burton, W. Private tuition
Carter, P. a. Univ. S., Southport
Clarke, F. Barton S., Wisbech
Crosse, H.A. f. Abingdon S.
Higgs, A.C. Private tuition
Hodgkins, J.R. Gram. S., Burton-on-Trent
Hubbard, C.O. d. Gravesend Modern S.
Lowe, C.E. F. Loughton S.
Redford, G.F. Northgate S., Winchester
Saul, C.M. f. Burlington H., Richmond
Snell, S. d. Devonport High S.
Vaughan, W.W. Private tuition
Woodhouse, R.W. Charterhouse S., Godalming

Battle, F.A. Private tuition
Bryan, R. Anerley Coll., S.E.
Cook, A.L. Gram. S., E. Finchley
Cull, S. Earls Colne Gram. S.
Cullum, R.A. Gram. S., Shoreham
Edinger, F.H. Comm. and Civil Serv. C., Forest Gate
Goat, C.J. a. Lipson S., Plymouth
Mansfield, H.A. Winchester H., Redland Rd., Bristol
Potts, B.L. Epsom Coll.
Rudd, S. al. Willesden High S.
Slinn, G.V. Private tuition

Aitken, A.H. f. Private tuition
Aspinall, J. f. Newton C., Newton Abbot
Camm, T.H. Weston S., Bath
Clarke, T.A. D. Douglas S., Cheltenham
Edsall, T.H. Holborn Estate Gram. S., W.C.
Edwards, E. Clyde H., Hereford
Gayton, W.J.G. Private tuition
Hall, H. J. d. Holborn Estate Gram. S., W.C.
Kay, C. D. Oxenford H., Jersey
Lloyd, C.E. Christ's Coll., Blackheath
Norman, H.J. High S. for Boys, Croydon
Parkinson, W. Oakes Inst., Walton, L'pool
Pearson, W.M. Argyle S., Sunderland
Sannell, W.S. f. d. Malda Vale S., W.
Thompson, H.S. d. Taunton H., Brighton
White, W. al. 34 St. Andrew Sq., Edinburgh

Anderson, O.H. Birkenhead Inst.
Austin, S. Perse Gram. S., Cambridge
Baldwin, J.Y. d. Hermitage S., Bath
Emanuel, E.H. f. Taunton H., Brighton
Hyatt, J. Wilson Coll., Stamford Hill
Masters, H.E. Sandwich School
Merton, H.M. University S., Herne Bay
Neal, C.E. Manor H., Clapham
Simpson, R.G.S. Argyle S., Sunderland
Skinner, T.F. Wesley Coll., Sheffield
Smith, O.J. Earls Colne Gram. S.
Tait, H.P. Tenterden S.
Voase, W. Eton H., Albany St., Hull
Bailey, T.D. sh. Private tuition

Bonnezen, R.T. B. Handel C., S'hampton
Edmunds, H.H. Gram. S., Gillingham
Harcourt, H.W. Mercers' S., E.C.
Hay, J.R. Oakes Inst., Walton, L'pool
Isaacs, J. Tivoli H., Gravesend
Muddiman, J.H. Woodford C., S. Woodford
Vonderheyde, J. Lancaster C., W. Norw'd
Wishlade, T.W. Lucton S., Herefords.

Hayne, E. Burnley Gram. S.
Butcher, F.C. Sudbury Gram. S.
Elton, H.B. Sherborne S., Dorset
Everitt, G.V. Trevu Acad., Camborne
Fincher, S.C. New Coll., Margate
Millar, A.S. f. Private tuition
Plumpton, E.H. Ensworth S.
Sully, F.A. Hart H., Burnham, Som.
Vivian, A.C. St. Paul's S., W.

Elliott, J.E. Private tuition
Friedman, H.B. Tivoli H., Gravesend
G'rrard, C.T. Elmfield Coll., York
Hanson, A.T. Private tuition



BOYS, 2ND CLASS, 2ND Div.—Continued.  
 Howard, D.C. Private tuition  
 Kimpton, W.H. Stationers' S., N.  
 Lake, J. Oakes Inst., Walton, L'pool  
 Nockels, F.L. New Coll., Worthing  
 Orme, C.L.O. Ashburne Gram. S.  
 Pascoe, V.L. Licensed Victuallers' S., S.E.  
 Sims, J.F. Douglas S., Cheltenham  
 Steeple, H. Private tuition  
 Turgate, M.D. Ashville Coll., Harrogate  
 Young, C.T. Woodford Coll., S. Woodford

Amos, S.E. a. St. Augustine's Coll., Ashford, Kent  
 Ash, G.H. Gram. S., Shoreham  
 Bennett, C. Private tuition  
 Edwards, E.L. 31 Water Street, Rhyl  
 Hughes, H.A. Ll. St. John's Roy. Latin S., Buckingham  
 James, R.H. St. Leonards College  
 Mannering, M. High S., Baldslow Rd., Hastings  
 Moore, V. Holborn Estate Gram. S., W.C.  
 Pickmore, R.O. Highbury Park S., N.  
 Small, E.G. Comm. S., Ludlow  
 Strachan, S.W. Brunswick H., Maidstone  
 Tudor, M.T. Private tuition  
 Wells, G.J.H. Tottenham Coll., S. Woodman, G. al. Farnworth Gram. S., Bolton

Benn, P.E. Private tuition  
 Coleman, G.F. a. Manor H., Clapham  
 Deacon, E.O. Stoke Newington Gram. S.  
 Denton, J.C. St. Martin's Gram. S., Scarborough  
 Edwards, W.C. Private tuition  
 Humphrey, H.S. High S. for Boys, Croydon  
 Lyne, W.F. Gram. S., Newton Abbot  
 Mortimer, H.B. Gram. S., Longsight  
 Nash, H. Friends' S., Penketh  
 Vince, L.J. a. Mt. Radford S., Exeter  
 White, J.S. Gram. S., Spalding

Asser, V.G. Gram. S., Shoreham  
 Brake, J.F.E. Private tuition  
 Caithness, W.R. Ealing Gram. S.  
 Clarke, W.J.H. Coll. S., Lapford, Devon  
 Crabbe, R. sh. Private tuition  
 Dockrill, W.A. Brunswick H., Maidstone  
 Farnell, J.P. Mercers' S., E.C.  
 German, F.E. The College, Weston-s.-Mare  
 Hearn, J. Private tuition  
 Loughborough, A.L. Private tuition  
 Lucas, E. d. Farnworth Gram. S., Bolton  
 Morris, S.G. Vermont Coll., Clapton  
 Payne, M.V. Grosvenor Coll., Luton  
 Tohill, E.S. d. Licensed Victuallers' S., S.E.

Bromley, J.W. Claremont C., Blackpool  
 Cole, R.T. Knowsley, Torquay  
 Hedly, J.S. Newcastle Modern S.  
 Johnson, E.H. f. g. e. Herne H., Margate  
 Kaye, N.H. Pannal Ash Coll., Harrogate  
 Laundy, J.H. Salway Coll., Leytonstone  
 Norcombe, T.P. Mt. Radford S., Exeter  
 Oldham, J.S. Fauconberge, Beccles  
 Pell, C.H. Gram. S., Shoreham  
 Ruddock, J.W. Monk Bridge S., York  
 Van Toll, C.H. Worthing Gram. S.  
 Wale, W.H. Gram. S., Newton Abbot

Second Class.—3rd Division.

Bertini, U.F. Breydon H., Bournemouth  
 Carpenter, G. St. John's C., Green Lanes, N.  
 Cook, J.R. Croad's S., Kings' Lynn  
 Gull, W.H. High S. for Boys, Croydon  
 Lee, T.H.T. al. Central Found. S., E.C.  
 Middleton, F.H. St. Augustine's Coll., Maidstone  
 Pentony, R.T. Maidenhead College  
 Roberts, J.H. Birkenhead Inst.  
 Trothowan, N. Devonport High S.  
 Ward, P. ch. Ashville Coll., Harrogate  
 Warr, C. New Coll., Margate

Allchurch, L.B. Ashville Coll., Harrogate  
 Fitter, W.H. Private tuition  
 Flenley, W.E. d. Warbreck Coll., Aintree  
 Seaton, W.D. Clark's Civil Serv. C., W.C.  
 Allardice, W. McD. Private tuition  
 Ayres, R. Coll. S., Boves Park, N.  
 Bourne, A.E. H.S. Private tuition  
 Buckney, E.J. a. Mercers' S., E.C.  
 Clare, H. al. Bourne C., Quinton, B'ham  
 Cromey, D. Trowbridge High S.  
 Crump, J.A. Private tuition  
 Edwards, H.J.C. Coll. S., Ringwood Rd., Poole

French, P.M. St. Augustine's C., Maidstone  
 Jacob, J.H. St. Paul's S., W.  
 Lawfield, F.W. E. Anglian S., Bury St. Ed's  
 Lyne, S.E. al. Gram. S., Newton Abbot  
 Tudor, F.C. Victoria Coll., Buckingham Palace Rd.  
 Ware, F. Loughton S.

Hobson, W.N. Newcastle Modern S.  
 Brown, H.G. Dulwich Coll.  
 Jones-Lloyd, C.T. Wellington Coll., Salop  
 Millyard, C.V. d. Devonport High S.  
 Roache, H.L. d. Private tuition  
 Shaw, J.A. Lancaster Coll., Morecambe  
 Stephany, M. Central Found. S., E.C.  
 Wilton, D. al. Devonport High S.  
 Bowden, W.L. f. Mt. Radford S., Exeter  
 Brown, B. Private tuition  
 Ellison, W. Pembroke Coll., Harrogate

Frøome, H.E. Gram. S., Shoreham  
 Hillier, A.J. Up. Hornsey Rise High S., N.  
 Jephcott, F.G. ge. Private tuition  
 Johnson, R. Holborn Estate Gram. S., W.C.  
 Liddle, T.A. Loughton School  
 Lowther, R.W.H. Highfield S., Chertsey  
 McMurtrie, F.E. Salway C., Leytonstone  
 Parry, H.C. Winchester H., Redland Rd., Bristol

Phillipps, R.A. Midhurst Gram. S.  
 Sutcliffe, W.A. Woodhouse Grove S., Apperley Bridge  
 Tregea, W. Private tuition  
 Thompson, H.G. d. Old Elvet S., Durham  
 Donnellan, J.A. Private tuition  
 Galbraith, W.L. Wellington Coll., Salop  
 Hunt, C.T. Kendrick Boys' S., Reading  
 Martyn, J.N.G. Ivel Bury S., Biggleswade  
 Pearce, H.G. Private tuition  
 Pepler, W.J. Trowbridge High S.  
 Smith, T.B. Monk Bridge S., York

Beer, J.H. Gram. S., Shoreham  
 Davies, F.C. d. Private tuition  
 Eccleshall, J. Farnworth Gram. S., Bolton  
 Mayne, W.H. Ivel Bury S., Biggleswade  
 Morgan, W. J. Lady Hawkins' Gram. S., Kingston  
 Richardson, C.W. Cowes Gram. S.  
 Rodda, J. St. Mary's Hall, Cardiff  
 Sandier, W.S. Balliam School  
 Smith-Neill, C.E. Gram. S., Cowfold, Horsham

Stitt, F.B. Comm. Acad., Crook  
 Targett, A.B. Witton Gram. S., Northwich  
 Board, W.P. Summerleaze Coll. S., E. Harptree  
 Cooper, F.E. bk. Coll. S., Boves Park, N.  
 Tee, H.S. Loughton School  
 Mason, J.H. Private tuition  
 Page, V. High Park Hall Coll., Ryde  
 Russell, E.P. Private tuition  
 Vosper, T. J. Trowbridge High S.  
 Alexander, C.B. Henley H., Kilburn  
 Barnes, E. Private tuition  
 Colles, W.H. Private tuition  
 Crane, H.H. Mercers' S., E.C.  
 Dickenson, E. Carlton Road S., Burnley  
 Doll, W.H. Gram. S., Shoreham  
 James, E.S. P.K. Manor H., Clapham  
 Middleton, H.E. St. John's C., Green Lanes, N.

Packer, A.J. W. Mercers' S., E.C.  
 Parkhouse, H.C. Lipson S., Plymouth  
 Toop, A.R. Trowbridge High S.  
 White, E.R.B. Private tuition  
 Altham, G. Wellington Coll., Salop  
 Balls, W.B. Gram. S., Newton Abbot  
 Fear, H.H. Coll. S., Bridgewater  
 Gregory, L.L. J. Dean Close S., Cheltenham  
 Horton, H., Up. Hornsey Rise High S., N.  
 Mannock, T.C., J. Charleotte, Worthing  
 Mason, R.H. Ashford H., Birkenhead  
 Palmer, W.J. Croad's S., Kings' Lynn  
 Scorer, H.S. Barton S., Wisbech  
 Spray, F.R. Comm. S., Penzance  
 Tindle, R. Singleton H., Newcastle-on-T.  
 Tregurtha, T.W. Comm. S., Penzance  
 Watson, H. Gram. S., Spalding  
 Workman, L.M. Clyde H., Hereford

Abraham, A.E. Brunswick H., Maidstone  
 Brown, A.B. Coll. S., Ringwood Rd., Poole  
 Brown, H.T. Oakes Inst., Walton, L'pool  
 Clements, R.V. Ed. VI. Mid. S., Norwich  
 Dugger, H. Private tuition  
 Davies, W.B. Tutorial S., Penarth  
 Rogerson, A.W. Camden Rd. Coll. S., N.  
 Sewell, R.F. High S., Corbridge-on-T.  
 Smith, W. Carlton Road S., Burnley  
 Street, V. Stourwood Coll., Southbourne, Hants

Alexander, A. Private tuition  
 Boys, J.C. Epsom College  
 Date, S. Trowbridge High S.  
 Drown, H. Univ. S., Stroud Green, N.  
 Hughes, D.H. Colebrook H., Bognor  
 Leaver, J. Friends' S., Penketh  
 Sharp, J.B. The School, Eaton Socon  
 Tate, R.S. King's Coll., Wimbledon  
 Templeton, B. St. Mary's Hall, Cardiff  
 Weitzmann, C.G. Saham Coll., Watton  
 White, H. Stamford Hill Coll. S., N.

Dodson, H.J. Sudbury Gram. S.  
 Figgins, W.P. Devizes Gram. S.  
 Grimwade, A. Central Found. S., E.C.  
 Houghton, W. Lytham Coll., Lancs.  
 King, W.W. Stonyhurst C., Blackburn  
 Malze, E. Marlborough C., The Brook  
 Oliver, W. Hillsborough S., Tun. Wells  
 Perry, G.L. sh. Bradley High S., Newton Abbot

Appleby, F. High S., Romford  
 Ashton, L. Wellington S., Heaton Moor  
 Barkley, J.E. Scarborough Gram. S.  
 Berlandina, A.H. Private tuition  
 Charles, H.L. Clyde H., Hereford  
 Constable, T.G. Weston S., Bath  
 Gardner, W.A. The College, Weston-s.-Mare  
 Nightingale, F. High S. for Boys, Croydon  
 Richmond, W.T. Lonsbury C., Up. Clapton  
 Birrell, W.F. Private tuition

Caley, J.M. Southport Modern S.  
 Elphick, E.E. Durham School  
 Forsyth, D.P. M. St. Aubyn's, Woodford Green  
 Kimpton, H.L. K. Private tuition  
 Morgan, B.M. Mercers' S., E.C.  
 Silversides, J.O. Monk Bridge S., York  
 Smith, G.L. Private tuition  
 Woodrow, C. Private tuition  
 Young, J.S. Felix Inst., Lavender Hill

Bishop, S. Loughton School  
 Burrows, L.W.O. Wynport H., Brighton  
 Cooper, C.E. Private tuition  
 Doe, A.J. d. Saltram Crescent High S., W.  
 Gaunt, T.C. Highbury H., St. Leonards  
 Parke, W.J. a. St. Martin's Gram. S., Scarborough  
 Ramsbottom, H.G. Queen Mary's S., Clitheroe  
 Romeril, P.P. f. Charing Cross S., St. Helier's  
 Salter, F.H. Boys' High S., Shrewsbury  
 Venner, F. Lyttelton Gram. S., Gt. Malvern  
 Williams, M. Comm. S., Penzance

Arbuckle, Q. Thorne Gram. S., Doncaster  
 Brodie, H.W. New Coll., Margate  
 Ellis, F.B.G. Kilgrimol S., St. Annes-on-Sea  
 Woodpool, T. Modern Coll. S., Rhyl  
 Biddle, J.C. Lucton S., Herefords  
 Brock, L.J.S. St. John's C., Green Lanes, N.  
 Drayton, C. Scarborough Gram. S.  
 Jones, W.J.T. Blackpool Gram. S.  
 Leewarden, E. Central Found. S., E.C.  
 Moss, S. Finsbury Park Coll., N.  
 Smith, C.E.H. Wellington Ter. S., Taunton  
 Sowerby, H. Tonbridge School  
 Wood, A.G. Northgate S., Winchester

Baines, W.H. Rydal Mt. S., Colwyn Bay  
 Burns, E.R.G. Worthing Gram. S.  
 Carroll, W.K. Grafton H., Manchester  
 Galloway, N. Private tuition  
 Tuck, C.H. Edward VI. Mid. S., Norwich  
 Wren, T.D. Towcester S.

Downing, C.G. Edward VI. Mid. S., Norwich  
 Glasspole, I. Private tuition  
 Laws, A. Tottenham Coll.  
 Schoaling, S.P. Univ. S., Stroud Green, N.  
 Sparke, H.J. Hounslow Comm. Coll.  
 Stockbridge, J.P. Perse Gram. S., Cambridge  
 Tranter, R.H. Highfield S., Chertsey  
 White, R.G. Private tuition

Grammer, F. Private tuition  
 Little, H. Brighton Gram. S.  
 Mollineux, A.R. Raleigh Coll., Brixton  
 Vassila, R.H. High S. for Boys, Croydon  
 Carley, J. New Coll., Harrogate  
 Chivers, A. Bourne Coll., Quinton, B'ham  
 Dene, A.C. Manor H., Clapham  
 Jobling, B. Lucton S., Herefordshire  
 Midwinter, G.C. Manor H., Clapham  
 Roberts, A.J. Camden Rd. Coll. S., N.

Bailey, W.F. Edward VI., Mid. S., Norwich  
 Blyth, E.G. Woodford Coll., S. Woodford  
 Harvey, C.P.R. Private tuition  
 Moffat, P.W. Kingston S., Yeovil  
 Nichol, W.D. Boys' Coll. S., Whitechurch  
 Spengler, W. Anclery Coll., S.E.  
 Thomas, G.H. The College, Weston-s.-Mare  
 Le Brun, P.J. Belvoir H., St. Peter's, Jersey  
 Clidst, E. High S. for Boys, Croydon  
 Parker, J.A. Cliff House Coll., Hove  
 Sapsford, F.J. Mercers' S., E.C.  
 Smith, H.O. Licensed Victuallers' S., S.E.  
 Wickham, H.B. L'pool Coll. Middle S.

Allen, G.T. Kendrick Boys' School, Reading  
 Beswick, W. Bourne Coll., Quinton, B'ham  
 Huson, S.W. E. Anglian S. Bury St. Ed's  
 Hasleigh, G. Wellington S., Heaton Moor  
 Romanus, S. Nelson Coll., Blackheath  
 Wardle, S.J. L.G. Finsbury Park Coll., N.  
 Bridgen, J.W. Taunton H., Brighton  
 Clidst, E. West Somerset County S.  
 Hubbard, C.R. Edward VI. Mid. S., Norwich  
 Laffer, F. High S. for Boys, Croydon  
 Wilde, J. Gram. S., Sale  
 Williams, J.R. Private tuition  
 Vickers, C.D. Private tuition

Falla, H. f. Pen-y-Craig, St. Helier's  
 Gorringe, A.L. Manor H., Clapham  
 Harwood, A.J. Burnley Gram. S.  
 Lewis, W.H. St. John's C., Green Lanes, N.  
 Penna, V.G. Henley H., Kilburn  
 Sheldon, R.W. Private tuition  
 Wadman, E.T. Grosmont, Dyke Road, Brighton

Bowrey, F.H. Crossley & Porter S., Halifax  
 Chalmers, V.F. Snaresbrook Coll.  
 Gould, P.O. Corner H., Godstone  
 Moore, E.P. St. John's, Worthing  
 West, P.T. Loughton S.  
 Blades, J.W. Osborne High S., W. Hartlepool  
 Crawford, V.G. Trowbridge High S.  
 Falconer, T. d. Friends' S., Wigton  
 Paget, J.M. Loughton S.  
 Portway, J.B. Castle Hill S., Ealing  
 Sayer, E.W. Private tuition  
 Wadsworth, J.H. Crossley and Porter S., Halifax  
 Weston, A.L. Private tuition

Bemrose, R. Boys' High S., Iron Bridge, Salop  
 Bridger, H. New Coll., Worthing  
 Campbell, C.M. Private tuition  
 Cole, C. Edward VI. Mid. S., Norwich  
 Creed, B.E. Handel Coll., Southampton  
 Hardy, D.W. Private tuition  
 Haskell, E.G. Private tuition  
 Laughton, J.A. Private tuition  
 Mason, H.S. Gram. S., Chepstow

Third Class.—1st Division.

Cahen, L. a. f. g. e. St. John's Coll., Green Lanes, N.  
 Wilenski, R.H. Maida Vale S., W.  
 Coley, W.G.G. Northgate S., Winchester  
 Phillips, L.L. al. Private tuition  
 Pyle, O.E. Gram. S., Shoreham  
 McIlroy, F. a. al. ch. Devonport High S.  
 Lindell, H.A.W. a. High Cos., Brentwood  
 Humphrey, H.J. a. Blue Cos., Reading  
 Field, H.T. d. Eton H., Albany St., Hull  
 Amore, H.J. Castle Hill S., Ealing  
 Grimoldby, G.A. New Coll., Margate  
 Brenner, G. a. Oakes Inst., Walton, L'pool  
 Cotton, S.F. Kingswood S., Bath  
 Congdon, T.E. E. Cornwall C., Liskeard  
 Rondell, E.F. Wilsford H., Devizes  
 Kelly, J.H. a. E. Cornwall Coll., Liskeard  
 Ledger, A.V. Private tuition  
 Sims, W.G. Brunswick H., Maidstone  
 Volium, L. St. Martin's Gram. S., Scarborough  
 Buckmaster, F.H. f. Devonport High S.  
 Mounson, C.F. d. Bourne Coll., Quinton, Birmingham

Wilson, J.D. ch. St. Paul's S., W.  
 Rogers, F. Medburn St. S., Somers Town  
 Berry, A. St. John's Coll., Green Lanes, N.  
 Nixon, T. Tottenham Coll.  
 Roberts, C. a. ch. Devonport High S.  
 Campbell, R.P. Warrior Sq. S., Southend  
 Grove, J.P. e. a. e. u. Halesowen S., near Birmingham  
 King, H.W. Breydon H., Bournemouth  
 Brown, R.R. West Cliff H., Dawlish  
 Hewitt, B.A. g. a. al. f. d. Licensed Victuallers' S., S.E.

Hughes, W.H. Comm. S., Ludlow  
 Baker, A. s. g. a. e. u. Coll. S., Lapford, Devon  
 Mockett, W.S. New Coll., Margate  
 Pollock, E.A. Argyle H., Sunderland  
 Audley, R. Leek Gram. S.  
 Lake, E.H. d. Lowestoft Coll.  
 Scott, D.G. St. John's, Worthing  
 Evans, J.W. Birkenhead Inst.  
 Greenway, E.E. s. e. h. g. a. Brean Villa S., Weston-s.-Mare  
 Hope, P.C. Mercers' S., E.C.

Lord, W.E. e. g. a. e. u. d. Wellington Coll., Salop  
 Porter, H.A. e. Gravesend Modern S.  
 Westlake, L.T. Kingswood S., Bath  
 Blyton, H.A. Gram. S., Spalding  
 Croucher, F.J. Mercers' S., E.C.  
 MacLione, R.G. Private tuition  
 Taylor, W.H. E. Devon County S., Sampford Peverell  
 Turner, L.F. Brunswick H., Maidstone  
 Champenny, C.C. e. a. al. e. u. d. The College, Weston-s.-Mare

Kitson, A.J. D. St. Paul's S., W.  
 Allott, H. e. a. al. e. u. f. Private tuition  
 Davis, C.W. Cliftonville Coll., Margate  
 Heator, J. St. Paul's S., W.  
 Seward, A. s. e. a. al. e. u. d. Blue Coat S., Reading  
 Wood, C.H. g. a. al. d. Elmfield Coll., York  
 Aust, F.G. Warbreck Coll., Aintree  
 Cantlay, J. St. John's Roy. Latin S., Buckingham  
 Colson, F.E. Loughton S.  
 Davies, W. Birkenhead Inst.  
 Gooch, J.G. Gram. S., Spalding  
 Holden, G.C. Farnworth Gram. S., Bolton  
 Prosser, L.G. a. e. u. d. Comm. S., Ludlow  
 Souch, W.J. h. a. e. u. d. Science, Oxon  
 Stevens, R.S. h. a. e. u. d. Coll. S., Lapford, Devon

Barnes, E. Perse Gram. S., Cambridge  
 Pithford, E. Wellington Coll., Salop  
 Milton, E.S.R. e. h. g. e. u. f. g. e. Highbury H., St. Leonards  
 Prebble, M. Sandwich S.  
 Venmore, A.J. Shrewsbury Coll.  
 Yeudell, W.J. s. e. h. g. a. e. u. Coll. S., Lapford, Devon

Jigins, H.A. a. Gravesend Modern S.  
 Jones, A.B. Newcastle Modern S.  
 Kahane, J. f. g. e. Kersal S., Manchester  
 Tame, W.H. Trowbridge High S.  
 Thornley, L.H. Cliftonville Coll., Margate  
 Patterson, J. e. a. e. u. Oakes Inst., Walton, L'pool

Curtis, F.W. Coll. S., Ringwood Rd., Poole  
 Gastrell, F. Oakes Inst., Walton, L'pool  
 Gavin, C.S. Gram. S., Gillingham  
 Jolliffe, T. St. Austell S.  
 Scruby, J. g. e. Waltham C., Waltham Cross  
 Thompson, G. a. al. e. u. d. Wellington Coll., Salop

Altham, G. Wellington Coll., Salop  
 Balls, W.B. Gram. S., Newton Abbot  
 Fear, H.H. Coll. S., Bridgewater  
 Gregory, L.L. J. Dean Close S., Cheltenham  
 Horton, H., Up. Hornsey Rise High S., N.  
 Mannock, T.C., J. Charleotte, Worthing  
 Mason, R.H. Ashford H., Birkenhead  
 Palmer, W.J. Croad's S., Kings' Lynn  
 Scorer, H.S. Barton S., Wisbech  
 Spray, F.R. Comm. S., Penzance  
 Tindle, R. Singleton H., Newcastle-on-T.  
 Tregurtha, T.W. Comm. S., Penzance  
 Watson, H. Gram. S., Spalding  
 Workman, L.M. Clyde H., Hereford



BOYS, 3RD CLASS, 1ST DIV.—Continued.  
 Binns, C.S. *e.a.d.* Ashville C., Harrogate  
 Eason, H.A.E. *e.a.d.* Edgbaston Acad., B'ham  
 Matthews, C.G. Devonport High S.  
 Moss, W.A. Warrior Sq. S., Southend  
 Mott, J.J. Gram. S., E. Finchley  
 Sims, D.P. *e.g.a.f.d.* Burlington Coll., Spring Grove, Isleworth  
 Spofforth, J. Thorne Gram. S., Doncaster  
 Dunn, F.P. Mercers' S., E.C. Wellington Coll., Salop  
 Marks, W.S. The College, Clevedon  
 Russell, O.S. Gravesend Modern S.  
 York, R. *a.d.* Wellington Coll., Salop  
 Blackburn, W. Pannal Ash Coll., Harrogate  
 Brampton, L. Sudbury Gram. S.  
 Firth, J.B. Comm. & Civil Serv. C., Forest Gate  
 Hood, F.W. Laughton S., Southsea  
 Hudson, F.J. *a.d.* Thorne Gram. S., Doncaster  
 Laight, H. A. Edward VI. Mid. S., Norwich  
 McClymont, C.S. Private tuition  
 Shepherd, G.G. *e.h.g.a.* Licensed Victuallers' S., S.E. Thorney, J.W. *a.d.* Thorne Gram. S., Doncaster  
 Watson, H.B. Stoke Newington Gram. S.  
 Waugh, G.W. Elmfield Coll., York  
 Weldon, H.A.C. Ealing Gram. S.  
 Whitehead, C.C. *a.d.* Perse Gram. S., Cambridge  
 Harrison, P. D. Friends' S., Saffron Walden  
 Tonkin, S. *a.d.* Oakes Inst., Walton, L'pool  
 Coleman, B. *s.e.d.* Perse Gram. S., Cambridge  
 Croser, H.R.S. New Coll., Margate  
 Lawson, B. *a.d.* Thorne Gram. S., Doncaster  
 Rees, W.H.P. *a.f.* 22 Royal York Crescent, Clifton  
 Galloway, H. St. Paul's S., W. Gavin, C.M. Gram. S., Gillingham  
 Gill, S.E. Trowbridge High S.  
 Holland, J.B. Ashville Coll., Harrogate  
 Lough, G. Hurst Lodge S., East Putney  
 Marston, G.S. *a.f.* Ashburne Gram. S.  
 Moody, G.S. *a.d.* Tottenham Coll. S.  
 Rusbridge, A. York H., Reading  
 Shearman, H.H. *a.d.* Perse Gram. S., Cambridge  
 Austin, J.W. Boys' Coll. S., Whitechurch  
 Bell, H.E. New Coll., Margate  
 Coates, W.E. Elmfield Coll., York  
 Davies, H.G. *a.f.* Highfield S., Highgate  
 Hamlyn, T.M. The Abbey S., Penzance  
 Keen, E.B. Epsom Coll.  
 Lobel, E. *f.g.* Kersal S., Manchester  
 Miers, H. *a.d.* St. Martin's Gram. S., Scarborough  
 Richardson, W.L. Hipperholme Gram. S.  
 Rutter, H.A. High S. for Boys, Croydon  
 Stone, G. *a.d.* Wellington Coll., Salop  
 Tooby, H.T. *a.d.* Clyde H., Hereford  
 Bennett, R.T. St. Paul's S., W. Chapinam, J. W. E. Anglian S., Bury St. Ed's  
 Greaves, G.H. Comm. & Civil Serv. C., Forest Gate  
 Marshall, C.J. *a.d.* Bracknell C., Berks  
 Boulton, W.E. Private tuition  
 Brisbane, C.Y. *e.h.a.u.* Wellington Coll., Salop  
 Collins, J.R. Private tuition  
 Dalow, H.P. Marlboro' Coll., Tue Brook  
 Goulbourn, V. Ealing Gram. S.  
 Harrison, J.C. Private tuition  
 Kibbler, H. D. Private tuition  
 Langham, K.W. *e.a.d.* Wellington Coll., Salop  
 Relf, C.H. Brunswick H., Maidstone  
 Scholey, A. Russell End S., Ledbury  
 Shaw, R.C. *a.a.* Tottenham Coll. S.  
 Bentall, L. New Coll., Worthing  
 Bone, H. Private tuition  
 Cater, C.D. St. Leonards Coll. S.  
 File, F.G.H. Brunswick H., Maidstone  
 Fincher, P.R. New Coll., Margate  
 Gainsford, A.J. *e.* Towcester School  
 Gordon, E. Gratton H., Manchester  
 Ley, A.J. Gram. S., Gillingham  
 Oxendale, C.E. Ashville Coll., Harrogate  
 Palmer, C.E. *e.a.* Clifton Coll., Harrogate  
 Robson, W.E. *e.a.d.* St. Martin's Gram. S., Scarborough  
 Rollin, W. Private tuition  
 Smithers, R. *s.a.a.* Clacton Gram. S.  
 Spencer, S. *f.g.* Broadgate S., Nott'ham  
 Stewart, J. *a.d.* Oakes Inst., Walton, Liverpool  
 Washbourn, T. *e.a.f.* Swindon High S.  
 Waugh, H.F. *a.d.* Tottenham Coll. S.  
 West, R.O. *g.d.* E. Anglian S., Bury St. Ed's  
 Barnes, W.L. *a.d.* Ashville C., Harrogate  
 Biggs, G.G. *a.d.* Mod. S., Maidenhead  
 Brooks, J.L. Witney S. of Science, Oxon.  
 Burke, A.J. Polytechnic Inter. S., W. Casserley, W.S. *s.f.* St. John's Coll., Green Lanes, N.

Davis, R.W. *e.a.d.* Westbourne S., Paddington  
 Downes, D.L. Milton Coll., Ullesthorpe  
 Eaton, W.E. *e.a.d.* Wellington Coll., Salop  
 Fewson, W. Eton H., Albany St., Hull  
 Hall, F.G. Northgate S., Winchester  
 Hill, C.H. *e.a.* Jersey Modern S.  
 Kenner, T.W. *a.* High S., Brentwood  
 Kennedell, C.C. Comm. S., Astley Bridge  
 Le Sueur, H.J. *e.* Ashton C., St. Helier's  
 Liversedge, S.G. Barnsley High S.  
 O'Reilly, H.W. Boys' Coll., Devizes  
 Phillips, H.F. *a.* East Anglian S., Bury St. Edmunds  
 Price, W.L. *a.d.* Wellington Coll., Salop  
 Austin, H. *a.d.* Wellington Coll., Salop  
 Billington, R. *h.a.* Wellington Coll., Salop  
 Brand, W.D. Manor H., Clapham  
 Gorringe, H.M. Burgess Hill High S., Sussex  
 Hollowell, A.E. *a.* Halesowen S., nr. B'ham  
 Keeley, W. *a.* Brunswick H., Maidstone  
 Loveless, H.H. Raleigh Coll., Brixton  
 Lowe, A.C. Pembroke Coll., Harrogate  
 Ponnard, E.O. The College, Clevedon  
 Rainforth, H.S. Private tuition  
 Smith, C.G. Central Found. S., E.C.  
 Stephens, T.H. Private tuition  
 Toftell, F.O. *a.s.* Grosvenor Coll., Luton  
 Wilkinson, N.P. *a.* High S., Whitley Bay  
 Wilson, A. *a.* Elmfield Coll., York  
 Womersley, R. New Coll., Harrogate  
 Appleton, A.B. *a.* Earls Colne Gram. S.  
 Bennett, W.R. *a.d.* Devonport High S.  
 Byrnes, W.T. *a.* Coll. S., Lapford, Devon  
 Day, A.W. *d.* Stoke Newington Gram. S.  
 Deverill, C.H. High Street S., Burnham, Bucks  
 Henderson, A. *h.a.* Friends' S., Penketh  
 Jones, A.C. *G.a.* Cliftonville Coll., Margate  
 Kellett, J.M. *a.d.* Ashville Coll., Harrogate  
 Mitchell, A.G. *a.d.* Ongar Gram. S.  
 Phillips, B.B. Private tuition  
 Procter, J. *d.* St. Paul's S., W. Riehes, S. *a.* Leek Gram. S.  
 Taylor, V. *a.d.* Wellington Coll., Salop  
 Todd, H.W. *d.* Merton H., Penmaenmawr  
 Woodruffe, R. *e.a.d.* Wellington Coll., Salop  
 Barnish, L. *a.d.* Scarisbrick C., Birkdale  
 Bileyn, J.W. Trafalgar H., Lee-on-Solent  
 Bowyer, H. *h.k.* Stoke Newington Gram. S.  
 Braunsdon-Bransbury, V. D. Warwick H., Southsea  
 Fuller, A. *a.d.* Cleaves S., Yalding  
 Harris, A.J. *a.* Licensed Victuallers' S., S. E. Howes, J.H.N. *sh. a.* Friends' S., Saffron Walden  
 Jackson, A.V. Finsbury Park Coll., N. Lee, V.M. *a.* Great Ealing S.  
 McClay, T. Oakes Inst., Walton, L'pool  
 Mottram, J.S. *a.* Earls Colne Gram. S.  
 Smith, H.H. Lucton S., Herefords  
 Taylor, R.T. Private tuition  
 Ainsworth, A.T. Leek Gram. S.  
 Beattie, A.P. *s.* Brunswick H., Maidstone  
 Browning, W.J. Northgate S., Winchester  
 Clarke, R.E. *d.* E. Anglian S., Bury St. Ed's  
 Clarkson, R. *a.d.* Winchester H., Redland Rd., Bristol  
 Davies, W.E. Private tuition  
 Glehill, E. *a.a.* Witney S. of Science, Oxon  
 Glover, H.H. *a.f.* Herne Lay Coll.  
 Gunn, H. Ashley H., Workshop  
 Harvey, A. *d.* Sandwich S.  
 Jackson, A.N. Wellington Coll., Salop  
 Mackintosh, W. *e.h.a.d.* Fulham Gram. S.  
 Maude, A. Friends' S., Saffron Walden  
 Marks, A.S. Private tuition  
 Massey, C.E. *al.* Leek Gram. S.  
 Spedding, J. E. Private tuition  
 Stoney, M.P. Epsom Coll.  
 Swinhoe, M.C. Private tuition  
 Bates, S.H. *s.* St. John's C., Green Lanes, N.  
 Brown, A.C. Wilson Coll., Stamford Hill  
 Clayton, F.H. *a.* Arlington Park Coll., Chiswick  
 Court, A.F. *a.d.* Oakes Inst., Walton, Liverpool  
 Curry, R.F. *g.e.u.* Highbury H., St. Leonards  
 Dixon, A.A. *a.* Coll. S., Bishop Auckland  
 Gatehouse, F.B. Private tuition  
 Gray, G.N. Winchester H., Redland Rd., Bristol  
 Hopkins, D. *a.d.* Friends' S., Saffron Walden  
 Jackson, A.E. *d.* West Brighton High S.  
 Maxwell, G.S. Manor H., Clapham  
 Powell, D.H. *a.* Witney S. of Science, Oxon  
 Rowell, T.E. *a.d.* Newcastle Modern S.  
 Rylands, H.J. *s.a.d.* Eastbourne Old S.  
 Spencer, W.R. *a.d.* Ashville C., Harrogate  
 Stathers, R.W. Bridlington Comm. S.  
 Sydenham, J.W. *e.a.* Kendrick Boys' S., Reading  
 Wellings, C. *a.d.* Waltham Coll., Waltham Cross  
 Willett, E.W. *a.* Taunton H., Brighton  
 Bullard, E.G. St. Paul's S., W.  
 Byrne, F. Private tuition

Chippindale, O. *a.* Elmfield Coll., York  
 Gladwell, F.M. The College, West n.s.-M.  
 Goodall, C.E. Mercers' S., E.C.  
 Hickman, W.T. Ratcliffe Coll., Leicester  
 Mochiz, E.G. *s.f.g.* King's C., Wimbledon  
 Marshall, A.J. *a.* Devonport High S.  
 Martindale, J.B. *s.g.a.* Kilgrimol S., St. Annes-on-Sea  
 Robson, J.W. *a.d.* Benwell Delaval S., Newcastle  
 Sanders, A.P. Oakes Inst., Walton, L'pool  
 Southgate, E.G. Lucton S., Herefords.  
 Titcomb, F. Witney S. of Science, Oxon  
 Tyrrell, E. *d.* Edward VI. Mid. S., Norwich  
 Williams, W.E. *a.* Oakes Inst., Walton, L'pool  
 Ashby, N. Scarborough Gram. S.  
 Birtwistle, F.J. Kilgrimol S., St. Annes-on-Sea  
 Burn, J. *a.d.* Benwell Delaval S., Newcastle  
 Cleave, T.C. Devonport High S.  
 Cooke, N. *a.* Farnworth Gram. S., Bolton  
 Doble, F.C. Vicarage S., Bradworthy, Devon  
 Fielding, J. Blackpool Gram. S.  
 Goring, F.J. Kendrick Boys' S., Reading  
 Grahamsley, W.T. New Coll., Harrogate  
 Harris, C.L.R. Hull Gram. S.  
 Holliday, F. *a.a.* Gram. S., Goole  
 Hutchins, R.A. *g.* Mary St. H., Taunton  
 Longlands, J. *a.d.* Benwell Delaval S., Newcastle  
 Newhouse, C.G. *ch.* Edward VI. Mid. S., Norwich  
 Pink, P. *s.a.d.* Perse Gram. S., Cambridge  
 Rankin, J. *e.g.a.e.* Cowes Gram. S.  
 Rodwell, A.T. Devizes Gram. S.  
 Squire, A.J. St. John's Coll., Southend  
 Tubb, G.A. *a.d.* Modern S., Maidenhead  
 Wilson, S.M. New Coll., Margate  
 Banks, E.C. Gram. S., Eccles  
 Calvert, A.D. Cliff House Coll., Hove  
 Clarke, H.J. *d.* Shepton Mallet Gram. S.  
 Cooper, T.G. *a.d.* University S., Herne Bay  
 Foreman, V.O. *a.f.* Epsom Coll., S'pithsea  
 Gill, P.E. *a.d.* Bickerton H., Southport  
 Hill, W. *a.* Windsor Hr. Grade S.  
 Hodgson, S.M. High S., Brentwood  
 Kassel, J. *a.* Gram. S., Howden  
 Mercer, R. *a.d.* Oakes Inst., Walton, L'pool  
 Moore, T.S. Elmfield Coll., York  
 Morgan, F.W. *e.* Technical C., Bradford  
 Pirnot, A.N. Oxentord H., Jersey  
 Richardson, D. High S. for Boys, Croydon  
 Wallis, C. *s.* Stamford Hill Coll. S., N.  
 Anderson, R. *a.* Argyle H., Sunderland  
 Brown, M.F. *a.f.* Cleaves S., Yalding  
 Creagh, E. *a.* Ealing Dean S.  
 Dow, L.E. Friends' S., Wigton  
 Easley, H. *a.* Wellington Coll., Salop  
 Glass, W.H. Wilsford H., Devizes  
 Goodwin, E.E. Boys' High S., Shrewsbury  
 Hearder, W.S. Gram. S., Newton Abbot  
 Henderson, D.G. *d.* Comm. & Civil Serv. C., Forest Gate  
 Hill, R. *c.* Southport Modern S.  
 Hodgkinson, H. *a.d.* Wellington Coll., Salop  
 Howson, H.G. *a.* Stoke Newington Gram. S.  
 Jackson, G.T. *a.d.* High S., Brentwood  
 Jones, V.P. Wellington Coll., Salop  
 Joy, W.H. Gravesend Modern S.  
 Kemp, S.H. *s.d.* Elmfield Coll., York  
 Langdon, P.L. *e.a.* Upper Hornsey Rise High S., N.  
 Middleton, H.P. Manor H., Clapham  
 Pearce, S.E.H. Brunswick H., Maidstone  
 Rashbrook, H.M. *a.d.* Devonport High S.  
 Sewell, E.D. Private tuition  
 Taylor, H.H. Ashville Coll., Harrogate  
 Taylor, W. *e.u.* Highbury H., St. Leonards  
 Turner, T.E. Ashburne Gram. S.  
 Yendell, A.H. Coll. S., Lapford, Devon  
 Buswell, W.D. Wallingford Gram. S.  
 Colman, C.P. *al.* St. Bede's Coll., Hornsea  
 Cook, R.O. *e.a.* Highfield S., Highgate  
 Cooper, C.R. *h.a.* Halesowen S., nr. B'ham  
 Gilbert, B.J. *e.u.* St. Kilda's C., Waterlooville  
 Holt, F.A. *a.f.* Merton H., Penmaenmawr  
 Horner, A.L. Winchester H., Redland Rd., Bristol  
 Jordan, C.T. *e.g.z.* St. Leonards Coll.  
 Light, G.S. *s.* Brunswick H., Maidstone  
 Mardon, W.J.T. Gram. S., Bovey Tracey  
 Maxwell, N. *e.f.d.* Oxford H., Sutherland Avenue, W.  
 Moore, F.A. *a.* Perse Gram. S., Cambridge  
 Peacock, J.W.B. *a.* Lancaster Coll., Morecambe  
 Reading, G.J. *a.* Licensed Victuallers' S., S. E.  
 Robinson, V. St. John's C., Green Lanes, N.  
 Tanner, J.C. Milton Coll., Ullesthorpe  
 Tomkins, W.F. Edward VI. Mid. S., Norwich  
 Uff, T.H. *g.a.d.* Public Coll., Torquay  
 Visk, H.C. Brighton Gram. S.  
 Wall, S.H. St. Aubyn's, Woodford Green  
 Willis, J.H. *d.* Woodabay S., Weston-s.-Mare  
 Winterbottom, B. 31 Water St., B'ham  
 Addison, H.G. *gr.* Private tuition

Anderson, H.G. *e.u.* Friends' S., Wigton  
 Bagshaw, W.N. *e.* Ellesmere S., Harrogate  
 Barrett, L. Waltham S.  
 Bennett, E.K. *e.g.* Elm H., Warrham  
 Boon, W.B. *a.d.* St. Winifred's S., Torquay  
 Bottery, G.R. *a.* Wellington Coll., Salop  
 Chubb, J.W.R. Gram. S., Shoreham  
 Colford, H.W. *d.* Comm. S., Ludlow  
 Culverwell, H.E. *g.a.* Winchester H., Redland Rd., Bristol  
 Dixon, W.H. *a.* Ashburne Gram. S.  
 Dyer, S.A. *d.* Swindon High S.  
 Everitt, F.C. *e.* Anglian S., Bury St. Ed's  
 Fearnhead, W. *s.* Claremont C., Blackpool  
 Green, R.C.C. Highbury H., St. Leonards  
 Helson, E. *g.a.* E. Devon County S., Sampford Peverell  
 Hewlett, V.G. Kendrick Boys' S., Reading  
 Hoyle, J. *e.g.a.* Kilgrimol S., St. Annes-on-Sea  
 Hughes, H. *s.e.g.* Highfield S., Highgate  
 Hyde, C.R. *h.a.* Gravesend Modern S.  
 Kemp, G.W. Licensed Victuallers' S., S. E.  
 Kingzett, E.P. Private tuition  
 Mannington, C. Highbury H., St. Leonards  
 Masters, E.F. Sandwich S.  
 Mawson, G.R. Comm. S., Ludlow  
 Monieriff, A. Anerley Coll., S. E.  
 Roskilly, C. *a.* Hoe Gram. S., Plymouth  
 Russell, D.J. High S., Brentwood  
 Sargeant, H.W. Raleigh Coll., Brixton  
 Saul, T.A. *al.* Southport Modern S.  
 Sledmere, C. *a.d.* Clyde H., Hereford  
 Stiebling, R.E. Polytechnic Inter. S., W. Stuart, G.R. De Gresley Lodge, Southsea  
 Tarrant, O.E. Bourne Coll., Quinton, B'ham  
 Tickle, E. Catford Coll. S., S. E.  
 Waterson, E.H. *e.u.* Bracknell Coll., Berks  
 Adley, W. Friends' S., Penketh  
 Bateman, R. Farnworth Gram. S., Bolton  
 Chave, W.H. *a.d.* E. Devon County S., Sampford Peverell  
 Davidson, O.F. *a.d.* Elmfield Coll., York  
 Deacon, S. *a.d.* High S. for Boys, Croydon  
 Dupleck, T.G. *a.d.* High S. for Boys, Croydon  
 Eldon, K.J. *f.* Gram. S., Chesham  
 Emdred, E. *a.* Earls Colne Gram. S.  
 Evans, W.H. *a.* Colebrook H., Bognor  
 Forsyth, G.A. *a.* St. Aubyn's, Woodford Green  
 Fox, G.N. Epsom Coll.  
 Grace, S.W. *g.* Colebrook H., Bognor  
 Jones, H. *d.* Wellington Coll., Salop  
 Jones, L.W.I. Strauner S., Fareham  
 Lumbuck, F. *a.d.* Ashville Coll., Harrogate  
 Lucas, E.J. Trowbridge High S.  
 Lucas, J. *a.f.* Oxentord H., Jersey  
 McWilliam, A. Farnworth Gram. S., Bolton  
 Mooney, W. Oxentord H., Jersey  
 Moss, L.H. *e.a.f.* S. Park Coll., Wimbledon  
 Parker, J.F. *e.* Private tuition  
 Parkers, R.C. *a.* Wilsford H., Devizes  
 Payne, W.S. *e.a.* Licen'd Victuallers' S., S. E.  
 Ratcliff, S.A. *a.* Castle Hill S., Ealing  
 Ross, G. De Gresley Lodge, Southsea  
 Simpson, W. Sidcot S., Wincombe  
 Stanley, J.C. *a.* Sydenham H., Leamington  
 Ward, J. *a.* Elmfield Coll., York  
 Wildman, W.S. *e.g.a.* Kilgrimol S., St. Annes-on-Sea  
 Wright, H. *a.* Bracknell Coll., Berks  
 Yelland, W.M. *e.a.* St. Anstoll S.  
 Adams, W.G. Clyde H., Hereford  
 Bradley, W. Brunswick H., Maidstone  
 Burrows, H.F. *a.f.* St. John's Coll., Southend  
 Clarke, G. Salway Coll., Leytonstone  
 Conrad, P.S. *f.* Portsmouth Gram. S.  
 Croser, S.W. *a.* Sandwich S.  
 De Fraine, A.C. Private tuition  
 Dezenstre, A. *f.* Catford Coll. S., S. E.  
 Gill, G.H. Private tuition  
 Haunnett, D. St. Mary's Hall, Cardiff  
 Hoddell, J.E. *a.d.* Clyde H., Hereford  
 Horth, H.E. Clyde H., Hereford  
 Jones, C. *d.* Tottenham Coll. S.  
 Lawrence, S.G. *a.* University S., Herne Bay  
 Low, W.J. *a.d.* Southport Modern S.  
 Malley, H.W.R. Devonport High S.  
 Marsh, G.W. *d.* Epsom Coll.  
 Matthews, H. *al.* Mt. Radford S., Exeter  
 McEwan, O. Devonport High S.  
 McPherson, D.C. Winchester H., Redland Rd., Bristol  
 Murden, A.E. *a.d.* Perse Gram. S., Cambridge  
 Noble, R.S. Lancaster Coll., Morecambe  
 Norman, W.G. Shepton Mallet Gram. S.  
 Parkinson, S.S. Gravesend Modern S.  
 Perkin, J.N. E. Devon County S., Sampford Peverell  
 Poole, C.H. The College, Clevedon  
 Sanderson, J. *a.* Lyttelton Gram. S., Malvern  
 Spencer, P.J. *e.u.* Modern S., Maidenhead  
 Street, T.E. *ch.* Private tuition  
 Sudweeks, W.R. Wilsford H., Devizes  
 Theeman, C.H. Cliftonville Coll., Margate  
 Willetts, J.T. Halesowen S., nr. B'ham  
 Baldwin, L.S. Kendrick Boys' S., Reading  
 Billingham, C.E. Wilsford H., Devizes  
 Buchanan, E.C. Brighton Gram. S.  
 Burton, J.C. Gratton H., Manchester  
 Cockett, H.A. Brunswick H., Maidstone  
 Clark, H.A. Lucton S., Herefords.  
 Cochran, P. *a.* Gram. S., Bovey Tracey  
 Cocks, F.G. Dunvevel Coll., Launceston

BOYS, 3RD CLASS, 1ST DIV.—Continued.  
 Cooper, G. Lowestoft Coll.  
 Currie, B.M. Prelim. Medical S., E.C.  
 Darley, W. Pannal Ash Coll., Harrogate  
 Davis, C.A.I. d.  
 Brean Villa S., Weston-s.-Mare  
 Ferraro, J.H. Devonport High S.  
 Gibbs, R.C. Salway Coll., Leytonstone  
 Griffiths, G.P. a. Ed. VI. Mid. S., Norwich  
 Grove, E.C. a. Halesowen S., nr. Blham  
 Hess, J.R.M. a. Friends' S., Saffron Walden  
 Ketto, W.H. Arlington Pk. C., Chiswick  
 Leggett, C.W.C. a. d.  
 Eton H., Albany St., Hull  
 Lewis, R.P. Woodabay S., Weston-s.-Mare  
 Macnaughton, A.W. Ebor S., Bexhill  
 Miell, R.H. West Brighton High S.  
 Murch, A. Belle Vue S., Norwich  
 Norden, D.C. St. Kilda's C., Waterlooville  
 Osborn, E.A. Gram. S., Spalding  
 Pile, J.E. c. St. Kilda's C., Waterlooville  
 Posgate, G. a. d. Gravesend Modern S.  
 Smiles, S. d. Argyle H., Sunderland  
 Surridge, V.E.S. f.  
 Highbury H., St. Leonards  
 Ward, L.L. a. Modern S., Maidenhead  
 Zoccola, U.C. i. Maidenhead Coll.  
 Benton, N.M. a. Highbury H., St. Leonards  
 Biden, W.M. Epsom Coll.  
 Chorley, F. a. d. Oakes Inst., Walton, L'pool  
 Dalrymple, W. a. Oakes Inst., Walton, L'pool  
 Davidson, A.M.C. Friends' S., Saffron Walden  
 Dickinson, R.C. Balham School  
 Forster, E.H. Thorne Gram. S., Doncaster  
 Foster, H. a. Lucton S., Hereford  
 Godden, G.L. Merton H., Southwick  
 Hassett, P. Dudley Middle-class S.  
 Howkins, G.P. Milton Coll., Ullesthorpe  
 Hudson, W.H.F. a. d. Esplanade H. S. thea  
 Jewell, D.T. f. Newhaven Coll.  
 Lax, G. Pannal Ash Coll., Harrogate  
 LeQueene, C. Charing Cross S., St. Holers  
 Liles, W.E. a. c. Perse Gram. S., Cambridge  
 Loveridge, E.G. a. d. Trafalgar H., Winch'st  
 Mackison, A.H. St. John's Coll., Green Lanes, N.  
 McDonnell, G. Wiral Coll., Rock Ferry  
 McDougal, R.H. a. d. Benwell Delaval S., Newcastle  
 Shackle, G. g. Waltham C., Waltham Cross  
 Webb, G.W. a. Perse Gram. S., Cambridge  
 Weeks, F.H. a. Kendrick Boys' S., Reading  
 Adams, H.A. Devonport High S.  
 Barlow, E. f. g. Waltham C., Waltham Cross  
 Chapple, L. e. St. John's Hr. Grades, Penze  
 Coates, G.F. H. s. g. a. Kilgrinmol S., St. Annes-on-Sea  
 Cohen, A.J. Great Ealing S.  
 Collier, T. Farnworth Gram. S., Bolton  
 Cope, T. St. Augustine's S., Longton  
 Cortfield, C.H. St. John's C., Green Lanes, N.  
 Eddington, A.J. a. Sidcot S., Winscombe  
 Fenwick, E. f. Waltham C., Waltham Cross  
 Franks, E. a. Crossley & Porter S., Halifax  
 Hase, H.S. Edward VI. Mid. S., Norwich  
 Jackson, J. Balham S.  
 Linnouzin, G.A. High S. for Boys, Croydon  
 Major, F.W. Shrewsbury Coll.  
 Malzard, F.J. f. Salvandy Terr. S., Jersey  
 Milnes, C. Christ Ch. Hr. Grade S., S'port  
 Nightingale, J.M. St. Bede's Coll., Hornsea  
 Pritchard, W.J. a. London Coll. Gram. S., Holloway  
 Spring, S.H. a. Stoke Newington Gram. S.  
 Sturgeon, S.M. ex. Polytechnic Inter. S., W.  
 Toftand, R.A. g. a. Licensed Victuallers' S., S. E.  
 Walker, E. a. d. Friends' S., Saffron Walden  
 Williamson, W. W. c. Ed. VI. Mid. S., Norwich  
 Wire, B.J. a. Comm. & Civil Serv. C., Forest Gate  
 Atkinson, A. St. Martin's Gram. S., Scarborough  
 Barlow, H.H. a. d. Eton H., Albany St., Hull  
 Benjamin, R.S. Great Ealing S.  
 Bentley, A.E. a. Comm. S., Ludlow  
 Birtwhistle, C.H. d. Private tuition  
 Blyth, N.B. Perse Gram. S., Cambridge  
 Booth, H. a. Elmfield Coll., York  
 Brookes, T.H. a. Lyttelton Gram. S., Malvern  
 Cumber, J. a. d. Thorne Gram. S., Doncast'r  
 Dadd, F. E. a. St. John's C., Green Lanes, N.  
 Duggieby, C.S. St. Martin's Gram. S., Scarborough  
 Feather, N. d. New Coll., Harrogate  
 Fox, W. E. Sidcot S., Winscombe  
 Gardiner, A. E. St. Paul's S., W.  
 Goodchild, G. High S., Brentwood  
 Harvey, I. E. g. High S., Romford  
 Hollingsworth, C. Private tuition  
 Hundley, G. d. Loughton S.  
 Lake, R.G.J. e. Ilfracombe Coll.  
 Law, B. J. a. New Coll., Harrogate  
 Marshall, E. J. a. d. Cathcart Coll., Cathcart Hill, N.  
 McCallum, D. Clarence H., Fife  
 McCallum, R. a. Devonport High S.  
 Mulford, W. a. d. Boys' Middle S., Tiverton  
 Nightingale, A. High S. for Boys, Croydon

Osborne, J.G. a. Worthing Gram. S.  
 Price, L.J. a. d. High S., Chapel Place, Runcorn  
 Samuel, H.B. c. a. f. Mania Vale S., W.  
 Sargent, R.W. FitzG. Private tuition  
 Shipley, E. a. d. Benwell Delaval S., Newcastle  
 Since, C.M. W. a. Southdown C., Eastbourne  
 Stanton, E. H. Towcester School  
 Stefford, H.M. Oxford H., Sutherland Avenue, W.  
 Taylor, F.C. a. Modern S., Maidenhead  
 Tinsley, P.G. a. Gram. S., Spalding  
 Trumper, T. V. Devizes Gram. S.  
 Turnbull, R.C. High S., Sutton, Surrey  
 Wallis, G.F. C. Farnham Gram. S.  
 Wright, F. a. Wellington Coll., Salop  
 Arnold, H. Balham S.  
 Belton, H.H. E. Anglian S., Bury St. Ed's  
 Bennett, J. Barton S., Wisbech  
 Brown, R.K. Grosvenor Coll., Luton  
 Evans, M.G. Trowbridge High S.  
 Hawksworth, T.E.S. a. d. Derwent H., Bamford  
 Howard, J.K.E. a. St. Aubyn's Woodford Green  
 Hubbard, R.L.F. Clyde H., Hereford  
 Leach, C.E. Gram. S., Shoreham  
 Lowe, D.P. Southport Modern S.  
 Lowe, J. e. d. Friends' S., Penketh  
 Middleton, H. Leek Gram. S.  
 Neville, P.A. Westminster City S.  
 Newbery, H. g. a. Tudor Hall, Hawkthurst  
 Phipps, W.A. a. c. Perse Gr. S., Cambridge  
 Reeve, H. a. d. Burlington C., Spring Grove, Isleworth  
 Russell, J.D. Minster Yard S., York  
 Siskstone, P.S. Grafton H., Manchester  
 Sim, H. Balham S.  
 Smith, L.S.C. Lucton S., Hereford  
 Stroe, T.W.R. Castle Hill S., Ealing  
 Tanner, R.M. Oxenford H., Jersey  
 Tanner, A.N. a. f. Northgate S., Winchester  
 Taylor, W.F. Gram. S., Romford  
 Wetley, E.H. s. Winchester H., Redland Rd., Bristol  
 Willson, H.T. a. Friends' S., Saffron Walden  
 Wright, P.C. Kendrick Boys' S., Reading  
 Young, A. Stourwood C., Southbourne, Hants  
 Aldridge, F.R. Balham S.  
 Bartlett, J.K. Cliftonville Coll., Margate  
 Berger, H.E. g. e. New Coll., Margate  
 Bird, S.C. a. c. Perse Gram. S., Cambridge  
 Bird, W.A. E. Anglian S., Bury St. Ed's  
 Budd, W. a. Midhurst Gram. S.  
 Bush, W.T. a. Brunswick H., Maidstone  
 Claypole, A. Barton S., Wisbech  
 Cock, J.W. Finsbury Park Coll., N.  
 Cuddeford, H.G. f. Hurst Lodge S., East Putney  
 Eccles, H.N. Channel View S., Clevedon  
 Edwards, W.G. Castle Coll., Guildford  
 Ford, C.W. Westfield H., Reading  
 Gilling, E. Ashley H., Workson  
 Hatch, C. a. Christ Ch. Hr. Grades, S'port  
 Haworth, H.R. Lytham Coll., Lancs.  
 Hearsey, A.F. a. Worthing Gram. S.  
 Holland, H.M. a. Ashville Coll., Harrogate  
 Houghton, J.E. Cliftonville C., Margate  
 Humphry, A.S. Iselden S., Bournemouth  
 Joyner, R.A. The College, Clevedon  
 Large, E.H. Woolston Coll., Southampton  
 Lewis, M. St. John's C., Green Lanes, N.  
 Lias, J. W. Bradley High S., Newton Abbot  
 Madeley, F. W. h. a. Bracknell Coll., Berks  
 Mason, F.H. a. Brunswick H., Maidstone  
 Middlebrough, G. Ousegate S., Selby  
 Mott, C.A. a. d. Richmond H., Handsworth  
 Nock, H. g. a. Wellington Coll., Salop  
 Patterson, J. Newcastle Modern S.  
 Perkins, H.C.L. Taunton H., Brighton  
 Phillip, N. Y. g. Highbury H., St. Leonards  
 Pragnell, F. a. Newcastle Modern S.  
 Pringle, H. g. e. High S., Romford  
 Robinson, A.L. a. Bickerton H., Southport  
 Roper, A.F. a. Friends' S., Saffron Walden  
 Stabell, A. a. Argyle H., Sunderland  
 Stansmore, R. e. St. Kilda's Coll., Waterlooville  
 Stratton, R.E. Gram. S., Sale  
 Townson, W.K. Private tuition  
 Turner, P.G.C. f. Bowood H., Folkestone  
 Waite, B. a. York H., Reading  
 White, E. f. Up. Hornsey Rise High S., N.  
 Wild, H. a. Bickerton H., Southport  
 Wood, H.W. a. Northgate S., Winchester  
 Appleby, R. z. a. High S., Romford  
 Ayles, R.S. Private tuition  
 Bailey, J.O.S. The College, Clevedon  
 Banks, A.G. z. Bickerton H., Southport  
 Bausor, T.P. a. Perse Gram. S., Cambridge  
 Bond, C.A. a. Central Found. S., E.C.  
 Scarless, C. Cathedral King's S., Worcester  
 Coulthurst, T. Castle Hill S., Ealing  
 Cross, P. Lyttelton Gram. S., Malvern  
 Curtis, J.O. h. Winchester H., Redland Rd., Bristol  
 Davies, F.W. Old College, Carmarthen  
 Gravenell, H.W. Ongar Gram. S.  
 Greenwood, H. Elmfield Coll., York  
 Hall, V.B. Brondebury Coll.  
 Harral, W.H. Crossley & Porter S., Halifax

Harrison, W. Ashville Coll., Harrogate  
 Harvey, P. D. Loughton School  
 Holroyd, T.H. 5 Wyndham Rd., Edgbaston  
 Johns, H.A. Salway Coll., Leytonstone  
 Jolly, J. C. 20 West Cliff, Preston  
 Lethier, C.R. a. d. St. Martin's Gram S., Scarborough  
 Lyle, J. E. Anglian S., Bury St. Ed's  
 MacLean, G.H. Newcastle Modern S.  
 Moore, T.J. a. Gravesend Modern S.  
 Needham, F.A. e. a. Raleigh Coll., Brixton  
 Omslow-Ford, M. St. Paul's S., W.  
 Otteley, F.L. Highbury Park S., N.  
 Palfrey, T. Sudbury Gram. S.  
 Palmer, A.A. Private tuition  
 Perry, E.W. e. a. Highfield S., Chertsey  
 Sessol, S.J. Tivoli H., Gravesend  
 Stanners, R.W. 14 Grosvenor Crescent, Scarborough  
 Thompson-Smith, E. a. d. Oxford H., Brighton  
 Wilkins, A. Gram. S., Gillingham  
 Wilson, T.G. a. Oakes Inst., Walton, L'pool  
 Blair, E.G. z. Hythe S.  
 Bradbeer, R.G. a. Winchester H., Redland Rd., Bristol  
 Brady, H.V. Stoke Newington Gram. S.  
 Bush, H.T. Brunswick H., Maidstone  
 Cima, V.A. a. Fitzroy Coll. S., W.  
 Cook, A. a. d. Bickerton H., Southport  
 Dalton, G.L. Cloughton Coll. S., Birkenhead  
 Edlin, A.C. Private tuition  
 Ellis, A.G. a. Private tuition  
 Fox, A.R. The Crescent S., Sheffield  
 Gendle, G.G. Bradley High S., Newton Abbot  
 Hardie, E. Edward VI. Mid. S., Norwich  
 Hobbes, J.F. a. d. Wellington Coll., Salop  
 Hoskins, W.J. e. Wellington Coll., Salop  
 Hoyland, C. Ashley H., Workson  
 Hill, A.W. Private tuition  
 Huddy, W.H. a. Devonport High S.  
 Hurry, J. a. Barton S., Wisbech  
 Irving, H. Birkenhead Inst.  
 Jeteries, A.G. Edward VI. Mid. S., Norwich  
 Jones, M.F. Private tuition  
 Kempe, C. g. e. Waltham C., Waltham Cross  
 Leith, R. a. c. Waltham C., Waltham Cross  
 Levey, R.P. Nelson Coll., Blackheath  
 Luckock, H.A. a. Stoke Newington Gram. S.  
 Naf, O. Waltham C., Waltham Cross  
 Nicholson, G.T. e. Benwell Delaval S., Newcastle  
 Fernie Coll., Highgate  
 Ray, C. Coll. S., Bridgewater  
 Twentyman, E. Gram. S., Romford  
 Woodbridge, P.P. Highbury H., St. Leonards  
 Argent, A. a. High S. for Boys, Croydon  
 Batt, F.J. Private tuition  
 Clarke, R.N. Holborn Estate Gram. S., W.C.  
 Curry, J. C. a. Claremont H., Wateringbury  
 Darley, T. Pannal Ash Coll., Harrogate  
 Drake, H. a. d. Oakes Inst., Walton, L'pool  
 Edwards, S.W. c. a. f. o. e. Waltham Coll., Waltham Cross  
 Fisher, H.R. d. The Coll., Walton-on-Naze  
 Fitch, C. a. c. Oxford H., Brighton  
 Foreman, F.C. s. g. a. Brunswick H., Maidstone  
 Gibbs, L.H. H. a. Comm. & Civil Serv. Coll., Forest Gate  
 Hartley, R.K. a. Holly Bank S., Cheetham Hill  
 Henderson, W.S. Balham S.  
 Hough, E.S. New Cross Coll. S.  
 Howell, R. Gram. S., Gillingham  
 Hunter, A. a. Ashburne Gram. S.  
 Hunter, W.M. Vermont Coll., Clapton  
 Hurst, A.S. sh. Private tuition  
 Jackson, P.E. d. Elmfield Coll., York  
 Lakeman, L. a. d. Hart H., Burnham, Som  
 Lotzinger, M. W. Herne Bay Coll.  
 Manning, A.F. a. Kendrick Boys' S., Reading  
 Mawdsley, A.J. Bickerton H., Southport  
 Moss, E. Bickerton H., Southport  
 Rendell, F. Gram. S., Newton Abbot  
 Robson, W. a. d. Elmfield Coll., York  
 Saul, W.B. d. Southport Modern S.  
 Shenton, W.L.E. s. Northgate S., Winchester  
 Stedman, H. Brunswick H., Maidstone  
 Sutton, G.A.H. a. Lancaster C., Morecambe  
 Swindley, N. Birkenhead Inst.  
 Wadsworth, C.P. z. Gram. S., Goole  
 Warth, T.J. Manor H., Clapham  
 Watkinson, F. a. Ashburne Gram. S.  
 Welborne, W.E. a. d. Wimbledon Coll. S.  
 Wilde, C.A.H. F. a. Earls Colne Gram. S.  
 Wilkinson, W.L. Castle Hill S., Ealing  
 Wills, J.D. Gram. S., Sale  
 Abraham, W. Up. Hornsey Rise High S., N.  
 Allison, F. a. Higher Grade S., Selby  
 Baker, L. Colebrook H., Bognor  
 Baldwin, C.W.T. z. Private tuition  
 Barton, H. K. d. Brean Villa S., Weston-s.-M.  
 Bromley, E.G. Stoke Newington Gram. S.  
 Castle, A.H. Friends' S., Saffron Walden  
 Caudell, E. C. s. Hythe S.  
 Chart, E.F. East Anglian S., Bury St. Ed's  
 Chadwell, S.H. Brunswick H., Maidstone  
 Downes, A.L. Milton Coll., Ullesthorpe  
 Franklyn, A.T. Lyttelton Gram. S., Malvern

Grant, B.C. e. d. Devonport High S.  
 Harris, C.A. a. d. Brunswick H., Maidstone  
 Heath, C. Licensed Victuallers' S., S. E.  
 Hendry, J. Colebrook H., Bognor  
 Horne, J. d. Academy, Crewe  
 Lee, R. d. Ellesmere S., Harrogate  
 Mackintosh, W.B. a. LawuH., Clapham Rd.  
 Maule, A.P. L. a. d. Claremont C., Blackpool  
 Moody, A.V. e. a. d. Cricklewood S., N.W.  
 Neesham, J.C. Raleigh Coll., Brixton  
 Peables, A. Woodford Coll., S. Woodford  
 Saunders, H.E. High S., Brentwood  
 Smart, F.W.H. Cliftonville Coll., Margate  
 Smythurst, J.F. a. d. Liskeard High S.  
 Squire, J.B. a. High S., Brentwood  
 Taylor, A.C. Highbury H., St. Leonards  
 Taylor, F.W. Holborn Estate Gram. S., W.C.  
 Thompson, C. Friends' S., Penketh  
 Tippen, F.J. Cleave's S., Yalding  
 Waldron, L.M. Private tuition  
 Aitken, J. Gram. S., Spalding  
 Algar, F.W. a. Edward VI. Mid. S., Norwich  
 Baker, B. Loughton S., Staffordshire  
 Bamrose, P. Boys' High S., Iron Bridge, Salop  
 Bennett, T. a. d. Benwell Delaval S., N'castle  
 Birtwhistle, W.M. s. a. d. Kilgrinmol S., St. Annes-on-Sea  
 Beit, P.E. Lyttelton Gram. S., Malvern  
 Bolton, E.R. Private tuition  
 Boulton, H.V. a. d. Wellington Coll., Salop  
 Box, L.A. a. High S. for Boys, Croydon  
 Browne, F. St. John's Hr. Grade S., Penze  
 Coard, G.A. Woodford Coll., S. Woodford  
 Corline, A.E. St. Winifred's S., Torquay  
 Cross, E.W. a. d. Lancaster Coll., W. Norwich  
 Emanuel, M. Tivoli H., Gravesend  
 Evershed, R.A. a. Burgess Hill High S., Sussex  
 Furse, J.J. Hoe Gram. S., Plymouth  
 Grave, F. Gram. S., Romford  
 Griffith, H.H. Oxford H., Brighton  
 Hammond, G.S. Bickerton H., Southport  
 Hill, R.G. Gram. S., Newton Abbot  
 Hince, L. Milton Coll., Ullesthorpe  
 Holson, J. Stoke Newington Gram. S.  
 Keech, C.A. Crossley & Porter S., Halifax  
 Lunt, D.G. 5 Wyndham Rd., Edgbaston  
 Mackenzie, K.L. Clark's Civil Serv. C., W.C.  
 Martin, H.E.L. e. Winchester H., Redland Rd., Bristol  
 Martyn, P. a. d. St. Austell S.  
 McCracken, E. Friends' S., Wigton  
 McLachlan, W.S. a. Croad's S., King's Lynn  
 Moreton, A.G. d. High St. S., Burnham, Bucks  
 Patton, T. High S., Corbridge-o-T.  
 Pring, F.J.H. Wellington Ter. S., Taunton  
 Rees, B. a. St. Mary's Hall, Cardiff  
 Reeve, H. Private tuition  
 Rolfe, E.W. a. Modern S., Maidenhead  
 Roscher, M.L. a. Friends' S., Saffron Walden  
 Scott, A.F. Cliftonville Coll., Margate  
 Slade, J.O. a. Lawn H., Clapham Rd.  
 Wise, A.J. King's Coll., Wimbledon  
 Allen, G.H. a. High S., South Shore, Blackpool  
 Allen, V.B. a. High S., South Shore, Blackpool  
 Barlow, H.T. West Cliff S., Ramsgate  
 Batrieh, A. Archbp. Holgate's Gram. S., York  
 Bett, R. a. Barton S., Wisbech  
 Bevans, E.L. e. f. Merton H., Southwick  
 Browne-Cave, E.J. c. Oakes Inst., Walton, Liverpool  
 Bull, H.S. Stoke Newington Gram. S.  
 Colridge, F. Bradley High S., Newton Abbot  
 Cubitt, T.P. a. d. Ed. VI. Mid. S., Norwich  
 Davey, F. Friends' S., Penketh  
 Evans, R. Oxford H., Brighton  
 Exton, L. Stourwood C., S'bourne, Hants  
 Field, C.K. King's Coll. S., Wimbledon  
 Freeman, P. Perse Gram. S., Cambridge  
 Holmes, I.S. Cleave's S., Yalding  
 Knill, E.P. d. Apsley S., Kingsdown, Bristol  
 Mole, W.F. e. Fulham Gram. S.  
 Moon, W.J. Kingswood S., Bath  
 Organ, W. a. Redland Grove Coll., Bristol  
 Perkins, R.F. Gram. S., Spalding  
 Poppewell, R.E.C. a. Midhurst Gram. S.  
 Sands, R.H. Ilfracombe Coll.  
 Smallpeice, H.G. Northgate S., Winchester  
 Smith, C.B. Rose Hill S., Bowdon  
 Taylor, J.C. a. Kilgrinmol S., St. Annes-on-Sea  
 Walmesley, J.T. a. Brighton H., Oldham  
 Watkins, R.N. Boys' High S., Shrewsbury  
 Wigg, H.O. a. High S., Brentwood  
 Wilson, F.T. Bourne Coll., Quinton, B ham  
 Woods, F. Licensed Victuallers' S., S. E.  
 Wright, J. Southport Modern S.  
 Adam, S.D. Oxford H., Sutherland Av., W.  
 Bates, F.C. g. Brunswick H., Maidstone  
 Bebbington, G.H. a. Ashville C., Harrogate  
 Bell, H.W. g. a. York Manor S., York  
 Billing, J. e. Hart H., Burnham, Som.  
 Bisset, F.W. a. New Coll., Worthing  
 Brandreth, H.D. Gram. S., Bovey Tracey  
 Buckell, E.F.W. Eastman's R. N. Acad., Winchester

BOYS, 3RD CLASS, 1ST DIV.—Continued.

Burton, H.C. Whitworth S., Derby
Conlthurst, R.L. Southgate Coll., N.
Crow, P.A. Comm. & Civil Serv. C., Forest Gate
Dennis, E.A. Private tuition
Dencliar, A.C. Belle Vue S., Norwich
Dorey, E.A. Ashton Coll., St. Heliers
Downing, A.L. Edw. VI. Mid. S., Norwich
Forbes, J. Farnworth Gram. S., Bolton
Green, F. d. Raleigh Coll., Brixton
Hampson, S. Castle Hill S., Ealing
Hulse, C.E. Longton S., Staffordshire
King, L.J. h.a. Northgate S., Winchester
Morris, D. Wirral Coll., Rock Ferry
Payne, R. de P. a. Esplanade H., Southsea
Procter, H. Linden H., St. John's, S.E.
Shardlow, H.A. d. Derwent H., Bamford
Skinner, C.V. a. f. Licensed Victuallers' S., S.E.
Skinner, L. St. John's Hr. Grade S., Penge
Smith, W.G. a. Gram. S., Spalding
Stumpter, A.A. Private tuition
Symons, C.J. Coll. S., Bridgwater
Valentine, S.B. a. f. E. Anglian S., Bury St. Ed's
Vincent, S.M. Plymouth Public S.
Ward, A.G. Devonport High S.
Weller, C. Private tuition
Withinshaw, C.V. Westgate Coll., Westgate-on-Sea
Woolstencroft, G. d. Friends' S., Penketh

Third Class.—2nd Division.

Addison, A.H. Highbury H., St. Leonards
Arthur, A.J. d. Wellington Coll., Salop
Bensley, H.F. g. Wellington Coll., Salop
Bostock, S.M. a. Taunton H., Broughton
Cabot, T.A. Oxenford H., Jersey
Chandler, A.R. King's Coll., Wimbledon
Chapman, G. Winchester H., Redland Rd., Bristol
Clare, S.R. Edward VI. Mid. S., Norwich
Cooper, H.E. a. Modern S., Maidenhead
Coulson, H. Scarborough Gram. S.
Elliott, S. Stamford Hill Coll. S., N.
Farrants, E.H. Earls Colne Gram. S.
Fulcher, E.G. Towcester S.
Godden, C.F. Castle Hill S., Ealing
Holden, O.M. Halesowen S., nr Birham
Horne, P. a. Northampton H., Cheltenham
Hunns, E.J. Grafton H., Manchester
Jeteries, E.L. Edward VI. Mid. S., Norwich
Kirby, H.C. York Manor S., York
Lavey, S.B. a. d. Great Ealing S.
Lewis, E.C. Woodabay S., Weston-s.-Mare
Mallan, G.J. P. a. Fivoli H., Gravesend
Mayer, P.L. Wellington Coll., Salop
Messervy, L. d. Northgate S., Winchester
Moodle, R. Wilson Coll., Stamford Hill
Morton, C. a. Leek Gram. S.
Murolok, H.M. Highbury H., St. Leonards
Newbery, D.H. Eastbourne Old S.
Nicholson, E.J. Briddington Comm. S.
Nicholson, R. McV. Epsom Coll.
Prond, A.W. Mercers' S., E.C.
Shackleton, H.S. a. Whitworth S., Derby
Shillston, A. a. Hythe S.
Still, J. Oakes Inst., Walton, L'pool
Symons, C.H. Maidenhead Coll.
Thomson, E.R. E. Anglian S., Bury St. Ed's
Titford, W.B. Leigh Hall C., Leigh, Essex
Tolman, W.H.J. Elton High S., Bristol
Watson, F.E. Loughton School
Webber, S.A. Coll. S., Bridgwater
Welch, C.H. Private tuition
Westacott, H.H. g. a. Chaloner's S., Braunton
Alma H. Paington
Devonport High S.
Wilmor, J.P.
Woolley, S.L.
Aron, F.A. f. g. Norman Rd. S., Rusholme
Austin, E.R. Boys' Coll. S., Whitechurch
Banfill, W.H.E. a. Acton Comm. S.
Bell, H. A. Cloughton Coll. S., Birkenhead
Bolton, J.W. a. d. York Manor S., York
Bryant, F.W. Edward VI. Mid. S., Norwich
Budge, J.A. D. Croad's S., King's Lynn
Chew, J.E. a. d. The College, Weston-s.-Mare
Collins, I. g. Tutor Hall, Hawkhurst
Coxon, R. St. Martin's Gram. S., Scarborough
Davies, B.H. Birkenhead Inst.
Dixon, O.G. P. h. a. Kendrick Boys' S., Reading
P. Hillsborough S., Tunb. Wells
Ford, F.W. a. d. Clyde H., Hereford
George, W. T. Edward VI. Mid. S., Norwich
Hall, R. a. Ashburne Gram. S.
Hamilton, J. a. Wellington Coll., Salop
Jewell, H. f. Newhaven Coll.
Jones, C.S. Balham S.
Jones, C.G. a. Comm. & Civil Serv. C., Forest Gate
Kerry, R. Univ. S., Stroud Green, N.
Kitcher, A.H. East Cliff S., Bournemouth
LeMonnier, L.C. Pen-y-Craig, St. Heliers
Manning, C.F. Eastbourne Old S.
McCarthy, J.W. a. d. St. John's Royal Latin S., Buckingham
Neville, W.F. a. Blackpool Gram. S.
Page, G. e. a. Edward VI. Mid. S., Norwich
Pett, W.H. New Cross Coll. S.

Pratt, B.E. a. Norwood Central High S.
Robinson, C.H. Northgate S., Winchester
Rowley, T. Warbreck Coll., Aintree
Sharpus, J.W. Maidenhead Coll.
Simmons, H.S. e. Burgess Hill High S., Sussex
Smith, A.M. Elmfield Coll., York
Sutcliffe, C.B. a. d. Lytham Coll., Lytham
Symonds, G.J. d. Lyttelton Gram. S., Malvern
Thomson, J.K. Ashford H., Birkenhead
Vickery, J.S. Apsley S., Kingsdown, Bristol
Berlandina, H.H. e. Private tuition
Burton, C.G. Wilsford H., Devizes
Clemenson, P.C. Coll. S., Bishop Auckland
Dandridge, W. Herne Bay Coll.
Drake, G.L. Comm. & Civil Serv. C., Forest Gate
Fairweather, P.E. Comm. & Civil Serv. C., Forest Gate
Gatenby, H. Briddington Comm. S.
Gambier, C. Helmsdon, Brighton
Gibbs, M.A. Private tuition
Girling, C.E. Barton S., Wisbech
Hanson, F.W. g. a. Norwood Central High S.
Highton, R. Southport Modern S.
Jones, W. Longton S., Staffordshire
Keable, R. e. a. High S. for Boys, Croydon
Kenward, F.R. E. The Douglas S., Cheltenham
Kinnersley, W.H. Winchester H., Redland Rd., Bristol
McKinley, H. St. Martin's Gram. S., Scarborough
Middleton, W. e. St. John's Hr. Grade S., Penge
Miller, H.L. Burgess Hill High S., Sussex
Morris, W.F. Kendrick Boys' S., Reading
Nicolle, C.D.K. Jersey Modern S.
Palmer, H.S. Paragon H., Bracondale, Norwich
Phillips, E. McK. Devonport High S.
Rogers, H.T. Egerton Park Coll., Bexhill
Scrase, H.A. Brighton Gram. S.
Sparkes, C.D. I. Merton H., Southwick
Stone, R. Uxbridge Prep. S.
Tomlin, P.S. Leigh Hall C., Leigh, Essex
Tompkins, W.H. a. Willow H., Walsall
Woodley, J.R. Stamford Hill Coll. S., N.
Wright, A.A. Balham S.
Axworthy, C.F. a. d. St. Winifred's S., Torquay
Balls, H.L. Clacton Gram. S.
Bates, H.F. Gram. S., Spalding
Bolton, F.B. a. Preston Class. & Comm. S.
Brent, L.C. Woodford Coll. S., Woodford
Butcher, T.W. Wilsford H., Devizes
Butterworth, C. a. Ashville C., Harrogate
Clayton, W.F. a. Bilton Grange S., Harrogate
Cluer, A.C. Up. Hornsey Rise High S., N.
Cooper, A.R. Shepton Mallet Gram. S.
Dalton, E.a. Gravesend Modern S.
Dawson, C.C. Ed. VI. Mid. S., Norwich
Derry, W.R. a. Christ Ch. Hr. Gr. S., Southport
Downes, A.C. King's Coll., Wimbledon
Duckham, T.H. St. Gwlliw, Newport, Mon.
Emmott, F. Crossley & Porter S., Halifax
Glenister, W.M. Highbury H., St. Leonards
Hardman, C.H. High S., South Shore, Blackpool
Johnson, A. Banham Gram. S., Attleboro'
Jones, F.C. Whitechurch Gram. S.
Lee, S.M. a. Sutherland H., Yarmouth
Michell, L.W. Maida Vale S., W.
Morrell, F.A. High Park Hill Coll., Ryde
Oliver, F.M. a. Salway Coll., Leytonstone
Redgate, J.E. g. East Bridgford Coll.
Reed, E.L. Salway Coll., Leytonstone
Ritson, J.A. High S., Corbridge-on-T.
Rutherford, H.C. Private tuition
Shentall, H. Bilton Grange S., Harrogate
Simson, D.C.U. Highbury H., St. Leonards
Smith, H. Crossley & Porter S., Halifax
Smith, H.B. St. Paul's S., W.
Smith, W. a. Leek Gram. S.
Spencer, S. York H., Reading
Thorp, W. Anerley Coll., S.E.
Tidbury, C.H. Kendrick Boys' S., Reading
Trumble, F.J. High S. for Boys, Croydon
Williams, A.M. Comm. S., Astley Bridge
Williams, J.B.R. a. Comm. S., Ludlow
Wood, L.T. a. Colebrook H., Bognor
Audas, R.S. Private tuition
Bado, C.W. Comm. S., Penzance
Bagnall, G.E. g. a. Nelson Coll., Blackheath
Baines, W.J.B. a. The College, Clevedon
Baker, M.G. Private tuition
Blunden, O. Archbp. Holgate's Gram. S., York
Bolingbroke, H.T. Brighton Gram. S.
Brooker, F. Farnworth Gram. S., Bolton
Brown, M.V.E. Up. Hornsey Rise High S., N.
Champion, G.T. The College, Clevedon
Chaver, C.S. Private tuition
Davenport, E.B. a. Comm. S., Ludlow
Elborough, C. Private tuition
Emmatt, R. Ellesmere S., Harrogate
Fitch, E.W. a. d. Ascham C., Clacton-on-Sea

Fradd, P.H. St. Winifred's S., Torquay
Gardiner, E.G. d. High Park Hill Coll., Ryde
Gouldbourne, A.F. d. Wellington C., Salop
Hayes, W.A. a. Claremont Coll., Blackpool
Honnell, C. Coll. S., Bowes Park, N.
Holland, J.M. Barton S., Wisbech
Huntley, A.E. e. a. The Coll. Weston-s.-Mare
Hutson, E.G. Alresford H., Margate
James, J.P. Comm. S., Penzance
Jones, W.C. Ashgrove S., Clifton
Le Sueur, P. Jersey Modern S.
Mackintosh, A.B. a. Lawn H., Clapham Rd.
McGonn, R. Maidenhead Coll.
McHutchon, J.A. Highbury Park S., N.
Mills, O.R. Winchester H., Redland Rd., Bristol
Morey, R. Cowes Gram. S.
Munckton, H. a. d. Hart H., Burnham, Som.
Robinson, H. d. Wellington Coll., Salop
Smallbone, E.W. d. Pierremont Coll., Broadstairs
Smith, H.M. Whitworth S., Derby
Spink, A. a. d. Elmfield Coll., York
Sullivan, R. Cowes Gram. S.
Thomas, E.J. a. Kendrick Boys' S., Reading
White, B. Felsted S.
Axtens, P. Hart H., Burnham, Som.
Birkill, W. a. Lyttelton Gram. S., Malvern
Charles, S.W. High S. for Boys, Croydon
Chesman, A.M. Grosvenor Coll., Luton
Chivers, P.R. P. a. d. Persse Gram. S., Cambridge
Denham, N.E. Clifton Coll., Harrogate
Desprez, R.V. e. a. d. Gram. S., Stratham
Dorset, F.T. a. Halesowen S., near B'ham
Edwards, A.J. a. Leek Gram. S.
Flack, H.W. St. Paul's S., W.
Goddard, H.M. Wellington Coll., Salop
Gorringe, R.E. Ealing Gram. S.
Hardy, W.S. Finsbury Park Coll., N.
Harland, R. St. Martin's Gram. S., Scarborough
Haworth, J.A. S. I. Almondsbury Gram. S.
Impey, W. Sidcot S., Winscombe
Ireland, G. Woodabay S., Weston-s.-Mare
Lambert-Shea, W.A. Private tuition
Marden, S.T. a. Ascham C., Clacton-on-Sea
Montague, M.R. New Coll., Margate
Morrish, J. Trowbridge High S.
Mould, A. Brunswick H., Maidstone
Pugh, M.H. a. Reading Coll. S.
Richardson, J.M. Private tuition
Richardson, S.G. Private tuition
Spawford, G.C. Henley H., Kilburn
Stevenson, B. Caversham H., Caversham
Thurston, H.F. a. Nelson Coll., Blackheath
Wale, W.P. a. Midhurst Gram. S.
Wheatley, J. d. Allenby Coll., Derby
Whittle, J.R. d. Farnworth Gram. S., Bolton
Williams, E.R. a. Hoe Gram. S., Plymouth
Alford, C.P.W., Arlington Pk. C., Chiswick
Arnott, O. Private tuition
Barley, C.D. Belmore H., Cheltenham
Barnes, J.C. a. Cread's S., King's Lynn
Burton, D. g. a. Nelson Coll., Blackheath
Bush, A.G. Private tuition
Cathcart, G.D. d. Cathcart Coll., Cathcart Hill, N.
Clements, W.V. Winchester H., Redland Rd., Bristol
Cole, W.V. Belmore H., Cheltenham
Copp, A.H. e. Hfracombe Coll.
Cowden, W. Sandford Acad., Newcastle-on-Tyne
Davis, G. a. Great Ealing S.
Dodd, T. s. a. Academy, Crewe
Duncan, E. St. C. Houslow Comm. Coll.
Eaton, E.E. Scarisbrick Coll., Birkdale
Eaton, N.A. a. Leek Gram. S.
Farrer, H.G. Lancaster Coll., Morecambe
Fieldhouse, S. The College, Clevedon
Godwin, T.V. New Coll., Margate
Hog, A.W. Hurst Lodge S., East Putney
Jones, O. eu. University S., Herne Bay
King, W.H. a. St. Leonards Coll. S.
Lefaux, W. Lancaster Coll., W. Norwood
Livock, S.G. Paragon H., Bracondale, Norwich
Manby, B.F. Crompton S., Southend
Masters, J.M. a. Brunswick H., Maidstone
Osborne, D.H. Maidenhead Coll.
Palfrey, R. e. g. Sudbury Gram. S.
Parkhouse, O. Lipsot S., Plymouth
Pennington, J.W. Boys' Coll. S., Whitechurch
Penrose, A.V. a. Wimbledon Coll. S.
Pimock, W.A. Birkenhead Inst.
Porter, J.H. Whitworth S., Derby
Preston, F.B. Grafton H., Manchester
Reveirs, G.L. a. Lancaster C., W. Norwood
Richardson, S.H. e. d. Scarisbrick Coll., Birkdale
Ross, F. a. Marlborough Coll., Tue Brook
Ruddle, C.G. Granville Coll., Ramsgate
Rutter, S. Edward VI. Mid. S., Norwich
Sawtell, G.H. Gram. S., Gillingham
Smith, R.A.V. d. Ed. VI. Mid. S., Norwich
Speyer, H.F. R. s. Westgate Coll., Westgate-on-Sea
White, W.H.G. Private tuition
Wigham, A. Friends' S., Wigton

Biddulph, R.N.W. Private tuition
Blair, R.O. g. a. Elmfield Coll., York
Blythe, M.J. Cambridge H., Coventry
Bowles, P.E. Central Found. S., E.C.
Broad, H.E. High S., Romford
Brunton, J.N. Ashville Coll., Harrogate
Casson, H.E.L. Willesden High S.
Cowel, E. Loughton S.
Denson, T.R. a. Wellington Coll., Salop
Donaldson, A. Friends' S., Penketh
Ewbank, W.F. Marlborough C., Tue Brook
Farnfield, B.S. Woodford C., S. Woodford
Fisher, B.C. d. Southgate Coll., N.
Fletcher, A.J. Chaloner's S., Braunton
Fordham, E. Persse Gram. S., Cambridge
Graham, R.G. Wyllies, Cuckfield
Greenland, S.O. Wimbledon Coll. S.
Hancock, P. Birkenhead Inst.
Harvey, W.N. Highfield S., Rock Ferry
Jones, S. a. Esplanade H., Southsea
Keatch, H. a. South Park C., Wimbledon
Christ Ch. Hr. Grade S., Southport
Maunheiser, E.A. Oxford H., Brighton
McManus, C.J. West Brighton High S.
Milsom, H.J. St. John's Roy. Lat. S., Buckingham
Mogg, F.L. a. Devonport High S.
Neeses, R.W. Herne H., Margate
Osborne, H. Kendrick Boys' S., Reading
Parker, G.L. a. St. Leonards Coll. S.
Peggs, F. Tottenham Coll. S.
Phipps, H.W.F. Ongar Gram. S.
Price, R.R. a. d. High S., Chap. Pl., Runcorn
Rickard, J.W. a. Rutland S., Filey
Robinson, H.W. Bilton Grange S., Harrogate
Smith, E.H. d. Almondsbury Gram. S.
Smyth, W.M.F. Redland Grove C., Bristol
Stevens, G.P. Private tuition
Trower, R.G. Gram. S., Shoreham
Tudball, W.A. Castle Hill S., Ealing
Wardill, J.J. Briddington Comm. S.
Wicks, G. Belmore H., Cheltenham
Armstrong, A.B. Stranraer S., Farnham
Avery, C.W. Chaloner's S., Braunton
Baldwin, B.S. a. Thorne Gram. S., Doncaster
Bastard, E.S. a. Mary St. H., Taunton
Brewerton, T. a. d. Scarisbrick C., Birkdale
Brewerton, T.A. Scarisbrick C., Birkdale
Burling, F. a. d. Barton S., Wisbech
Clegg, G.H. d. Westgate C., Westgate-on-Sea
Crisp, H.C. a. Ashville Coll., Harrogate
Dean, C.E. a. Boys' Coll. S., Aldershot
Folker, E.R. Willesden High S.
Grant, D. High S. for Boys, Croydon
Grundy, T. a. Friends' S., Penketh
Henley, W.P. Sudbury Gram. S.
Hilton, H.C. e. Leigh, Lanes.
Hutson, G.L. Bickerton H., Southport
Isaacs, C.Y. a. Pierremont C., Broadstairs
Jackson, T.N. St. Bede's Coll., Horsea
Jones, S.G. Westfield H., Reading
Kenworthy, W.P. Private tuition
Lechup, C.E. d. Cliftonville Coll., Margate
Lewis, L.R. Highbury Park S., N.
Lindsey, E.J. Anerley Coll., S.E.
McNicoll, J.M. a. Crossley & Porter S., Halifax
Merrett, H. a. Portway High S., Bath
Millard, S.W. Manor H., Clapham
Pankhurst, W. a. d. Burlington C., Spring Grove, Isleworth
Payne, A.J. a. Ongar Gram. S.
Pennington, O.F. Christ Ch. Hr. Grade S., Southport
Pickard, F.C. Russell End. S., Ledbury
Riches, P.G. a. Leek Gram. S.
Smith, W.D. s. Gram. S., Gile
Southwell, F.E. Clarence H., Filey
Taylor, M.C. Etonhurst, Weston-s.-Mare
Todd, F.R. Prep. S., Minehead
Trotnan, H.T. Gram. S., E. Finchley
Tromson, H. a. Ashville Coll., Harrogate
Trowbridge, F.W. Reading Coll. S.
Unwin, F. a. Ashburne Gram. S.
Wilkinson, R. Elmfield Coll., York
Willmott, A.S. Castle Hill S., Ealing
Woodall, J.E. g. a. Halesowen S., nr Birmingham
Woodbridge, W.N. Houslow Com. Coll.
Wye, A.S. Kendrick Boys' S., Reading
Ball, C.A. Hfracombe Coll.
Booth, H.T. Mercers' School, E.C.
Borrow, C. Arlington Pk. Coll., Chiswick
Brook, A.J. Balham S.
Byrom, J.W. eu. Gram. S., Sale
Cohen, C.B. St. John's C., Green Lanes, N.
Cheadle, F. Boys' High S., Iron Bridge, Salop
Cowlin, P.W. Sidcot S., Winscombe
Cox, S.S. Edward VI. Mid. S., Norwich
Dallow, C. Comm. S., Ludlow
Dodds, G.H. a. High S., Corbridge-on-T.
Farmer, E.M. Crossley & Porter S., Halifax
Galloway, J.K. a. Oakes Inst., Walton, Liverpool
Goodall, E.C. Cliftonville Coll., Margate
Gregory, R. a. Archbp. Holgate's Gram. S., York
Harris, J.D. Tivoli H., Gravesend

**BOYS, 3RD CLASS, 2ND DIV.—Continued.**  
 Heaton, C. a. Southport Modern S.  
 Hill, E. Waltham Coll., Waltham Cross  
 Hughes, A.J. H. Sandwich S.  
 Ingram, W.G. a. Wilton Grove S., Taunton  
 Lancaster, H.H. a. Blackpool Gram. S.  
 Longman, E.G. Clacton Gram. S.  
 Mabbott, C.J. Comm. S., Penzance  
 Maxwell, W. Blackpool Gram. S.  
 Morse, J.P. Ebor S., Bexhill  
 Peaty, A. a. St. Mary's Hall, Cardiff  
 Robathan, A.H. a. Combe Lodge S., Gt. Malvern  
 Rose, M. a. Halesowen S., nr. B'ham  
 Smith, A.R. a. Sudbury Gram. S.  
 Vaughan, L. Academy, Crews  
 Webster, L. F. Perse Gram. S., Cambridge  
 Willis, R. C. Devonport High S.  
 Wright, S. Wellington S., Heaton Moor

**Arnold, C.G.** Bourne C., Quinton, B'ham  
**Arthur, E.C.** a. Brunswick H., Maidstone  
**Bilton, J.G.** Leek Gram. S.  
**Bond, W.J.** Gram. S., Newton Abbot  
**Churchill, W. a.** St. Mary's Hall, Cardiff  
**Clark, A.E. d.** Bracknell Coll., Berks.  
**Dale, J. W.** Tudor Hall, Hawkhurst  
**Day, H.A.** Northgate S., Winchester  
**Eastbury, C.P.**  
**Ginchey, H.** Redland Rd., Bristol  
**Ellis, G.E. e.** Reading Coll. S.  
**Foxcroft, S.** Elmfield Coll., York  
**Fuller, R.S.** Castle Hill S., Ealing  
**Godfrey, A.H. a.d.** Devizes Gram. S.  
**Gorringe, W.S.** Burgess Hill High S., Sussex  
**Gough, L.J. d.**  
**Bourne Coll., Quinton, Birmingham**  
**Grain, R.H. W.** St. James' Coll. S., Jersey  
**Green, A. S.** The Douglass, Cheltenham  
**Harris, F.S.** Private tuition  
**Hine, A.G.** The Cedars, Uxbridge Rd., W.  
**Lake, W.W.** The Cedars, Uxbridge Rd., W.  
**Martin, F.M.** Gravesend Modern S.  
**Merrifield, A.** Comm. S., Penzance  
**Monk, F.** Coll. S., Bishop Auckland  
**Normanton, T.P. a.**  
**Crossley & Porter S., Halifax**  
**Norris, H.P.** Lonsbury Coll., Up. Clapton  
**Oliver, R.C.** Tutorial S., Penarth  
**Parrott, S.C. a.** Grosvenor Coll., Luton  
**Price, H.W.** Coll. S., Bridgewater  
**Read, A.F.** Devonport High S.  
**Robertshaw, J.W. a.**  
**Fannal Ash Coll., Harrogate**  
**Smith, G.E.** Highbury Park S., N.  
**Symons, C.H.** Gram. S., Shoreham  
**Tifford, B.B.** Leigh Hall Coll., Leigh, Essex  
**Ward, C.H. a.d.** Derwent H., Bamford  
**Williams, A.H.** Mary St. H., Taunton  
**Wood, T.E.** New Coll., Harrogate

**Abbott, E.** Salway Coll., Leytonstone  
**Aylwin, C.T.** Stranraer S., Farnham  
**Baskerville, R.H.** Grafton H., Manchester  
**Bar, S.** Salway Coll., Leytonstone  
**Bentall, F.** New Coll., Worthing  
**Brown, P.S.** Ascham Coll., Clacton-on-Sea  
**Corke, R.** Crompton S., Southend  
**Curnock, G.W.** Acton Comm. S.  
**Ditmas, T.O.B.** Wellington Ter. S., Taunton  
**Dudley, J. W. a.** Elmfield Coll., York  
**Eastbrook, D.** St. Mary's Hall, Cardiff  
**Embleton, C.F.** Blackpool Gram. S.  
**Few, J.R.** Wilsford H., Devizes  
**Fisher, G.W.** The Coll., Walton-on-the-Naze  
**Fiske, H.B.** Burgess Hill High S., Sussex  
**Gilbert, H.B.** Reading Coll. S.  
**Glenister, R.T.** Tudor Hall, Hawkhurst  
**Godwin, S.V.** New Coll., Margate  
**Groves, S.** Spencer H., Northampton  
**Hadaway, G.D. a.**  
**Comm. & Civil Serv. C., Forest Gate**  
**Harvey, A. a.** Comm. S., Penzance  
**Hibbs, G.A. d.**  
**Stourwood Coll., Southbourne, Hants**  
**Jacobs, W.J.** Belgrave H., Littlehampton  
**Jensen, J.D.** Private tuition  
**Jones, S.L.** The Cedars, Uxbridge Rd., W.  
**Lewis, J. e.** Great Ealing S.  
**Levy, A.** Tivoli H., Gravesend  
**Lister, J.N.** Bailey S., Old Elvet, Durham  
**Marchant, H.E.** Esplanade H., Southsea  
**McKay, D.** Wilson Coll., Stamford Hill  
**Milne, T.B.** Oakes Inst., Walton, L'pool  
**Perrett, J.L.** The College, Clevedon  
**Pratt, C.C.** High S., Brentwood  
**Rice, E.M. a.** Oxford H., Brighton  
**Riches, B.R. a.** Ed. VI. Mid. S., Norwich  
**Righton, E.R. a.**  
**The Douglas S., Cheltenham**  
**2Rose, E.** Warbreck Coll., Aintree  
**Rowley, E.O. d.** Balham S.  
**Taylor, C.S.** Balham S.  
**Triffitt, J.W.** Scarborough Gram. S.  
**Van Toll, H.F.G.** Worthing Gram. S.  
**Waddell, F.** Ashville Coll., Harrogate  
**Warr, W.G. a.**  
**St. John's Royal Latin S., Buckingham**  
**Webb, E.** Bracknell Coll., Berks  
**Withinshaw, A. a.** Ashville C., Harrogate

**Bickerstaffe, E.** Stourwood Coll., Southbourne, Hants  
**Blight, H.V.**  
**Holmwood H., South Hill Park, N.W.**  
**Chapman, R.F.** Maidenhead Coll.  
**Conquest, C.D.** Ivel Bury S., Biggleswade  
**Corke, D. f.** Crompton S., Southend  
**Cashion, C.A.** Ed. VI. Mid. S., Norwich  
**DeL.A.R. a.d.** Ed. VI. Mid. S., Norwich  
**Elliott, R.L.** Boys' Coll. S., Aldershot  
**Galpin, H.J.A.** Lipson S., Plymouth  
**Greenwood, S.E. d.** Ashville C., Harrogate  
**Gulliver, A.E.** Reading Coll. S.  
**Halladay, W.H.** Ongar Gram. S.  
**Harrison, N.M.**  
**The College, Weston-s-Mare**  
**Russell End S., Ledbury**  
**Hinton, J.L.** Mt. Radford S., Exeter  
**Horman, F.** Oxenford H., Jersey  
**Horn, A.C.** Balham S.  
**Horne, R.M.** Manor H., Clapham  
**Lipson S., Plymouth**  
**James, E.E.** Gravesend Modern S.  
**Joel, P.S. a.** Ebor S., Bexhill  
**Jones, J.D.** Kasner, K.K.P. Castle Hill S., Ealing  
**Kasner, K.K.P.** Oxenford H., Jersey  
**Lecher, H.J.** Warbreck Coll., Aintree  
**Leiburn, J.** Salway Coll., Leytonstone  
**Mills, W.H.** Coll. S., Boves Park, N.  
**Northen, W.** Barton S., Wisbech  
**Payne, A.J.** Belgrave H., Littlehampton  
**Rees, F.** Academy, Crews  
**Renton, E.G.** Ellesmere S., Harrogate  
**Rogers, L.C.C.** Wellington Ter. S., Taunton  
**Smith, R.G.** Loughton S.  
**Sumner, T.** Cambridge H., Coventry  
**Thompson, E.B. d.**  
**The Cedars, Uxbridge Rd., W.**  
**Luton S., Herefords.**  
**Watkins, D.** Gram. S., Spalding  
**White, C.W. a.** Wilson, A.T. High Caythorpes, Bridlington  
**Wilson, A.T.** Ebor S., Bexhill  
**Woodcock, R.S.**

**Baker, C.B.** Ealing Dean S.  
**Braund, R.M.** Gram. S., Romford  
**Brookman, P.H. a.** Laugharne S., Southsea  
**Brown, T.M.** Balham S.  
**Burbidge, F.C.** New Coll., Worthing  
**Charlewood, H.R. a.d.**  
**Westbourne S., Paddington**  
**Cullen, C.V.** Boys' Coll. S., Aldershot  
**Dobson, C.H.** Hurst Lodge S., E. Putney  
**Doo, H.E. a.** Perse Gram. S., Cambridge  
**Elliot, P. H. T. a.** Perse Gram. S., Cambridge  
**Goodrick, G.** High S. S., Shore, Blackpool  
**Gurteen, O.** Ascham Coll., Clacton-on-Sea  
**Hansell, A. W.** St. Paul's S., W.  
**Heyward, P.S.**  
**Bradley High S., Newton Abbot**  
**Hill, H.** Southport Modern S.  
**Blackson, R.H.** Oakes Inst., Walton, L'pool  
**Legate, E.G. d.** Esplanade H., Southsea  
**Main, F.W. a.d.**  
**The Coll., Highbury New Park, N.**  
**Maliphant, C.W.** Barton S., Wisbech  
**Marshall, G.W.S. d.**  
**Cathcart College, Cathcart Hill, N.**  
**Martin, G.J.M.** Boys' Coll. S., Aldershot  
**Metcalfe, S. a.** Argyle H., Sunderland  
**Nunn, A.F.** Maida Vale S., W.  
**Nunn, J. a.** Burgess Hill High S., Sussex  
**Partridge, F.W.** Farnworth Gram. S., Bolton  
**Partridge, F.W.** Fannal Ash C., Harrogate  
**Poake, A.G.** Private tuition  
**Phillip, F.Y.** Highbury H., St. Leonards  
**Pickup, R.W.** Private tuition  
**Purvis, F.C.** Gram. S., Newton Abbot  
**Rayner, H.A.** Oakes Inst., Walton, L'pool  
**Richards, J.H.** Wellington Coll., Salop  
**Smith, A. a.** Carlton Road S., Burnley  
**Spurgeon, E. LaM.** New Coll., Worthing

**Bella, J.W.B.** West Cliff S., Ramsgate  
**Bowron, N.W.** Maida Vale S., W.  
**Brasher, E.E.** Wallingford Gram. S.  
**Butler, W.S. a.** Brighton H., Oldham  
**Cooper, W.E. e.**  
**Archbishop Holgate's Gram. S., York**  
**Crowther, F. a.** Ashley H., Workson  
**D'Alcorn, H.W.E.** Gram. S., Spalding  
**Davies, L.** Claremont H., Waterbury  
**Foulstone, C.** Ashley H., Workson  
**Fox, A.E.** Wilson Coll., Stamford Hill  
**Freengrass, H.W.**  
**Holme Wood Coll., Upper Tulse Hill**  
**Grimwood, E.E.** Sudbury Gram. S.  
**Homewood, C.A.** Gram. S., Shoreham  
**Irvine, E.** Elmfield Coll., York  
**Joachim, L.** High S., Sutton, Surrey  
**John, B.H.** Weston S., Bath  
**Jones, H.L.** Grafton H., Manchester  
**Jordan, H. g.** Modern Coll. S., Rhyl  
**Keelwell, G. a.** Redland Grove C., Bristol  
**Laslett, W.H.** Farnworth Gram. S., Bolton  
**Lyon, S.** Cathcart Coll., Cathcart Hill, N.  
**Mills, W.G.** King's Coll. S., Wimbledon  
**Moore, J.G.** Elmfield Coll., York  
**Rawlinson, E.** Earls Colne Gram. S.  
**Rynolds, A.** Wellington S., Heaton Moor  
**Rushworth, W.J.** Upton S., Slough  
**Shaw, F.B. a.d.**  
**High S., South Shore, Blackpool**  
**Sim, E.B.** Oxenford H., Jersey  
**Vincent, R.B. e.** Finsbury Park Coll., N.

**Webber, F.B.** Maidenhead College.  
**Wilson, J.C.** Highbury Park S., N.  
**Wilson, S.A.** High S., Brentwood  
**Wilson, V.J.M.** Liverpool Coll. Middle S.

**Arnelli, G.G. a.** Oxenford H., Jersey  
**Barb, J.F.** Cliftonville Coll., Margate  
**Blay, S.T.** Stoke Newington Gram. S.  
**Bowen-Davies, E.** Private tuition  
**Brake, G.R.H. a.**  
**St. John's Royal Latin S., Buckingham**  
**Chilton, P.J.** Loughton S.  
**Coleman, S.J.M.** Lucton S., Herefords.  
**Colson, W.H. a.** Loughton S.  
**Cooper, F.S.** Univ. S., Herne Bay  
**Craig, W.** Hfracombe Coll.  
**Curry, W.** St. Martin's Gram. S., Scarborough  
**Dickins, S.H.**  
**Cloughton Coll. S., Birkenhead**  
**Edwards, A.F.M.** Hurst Lodge S., E. Putney  
**Elvidge, J.G.** Finsbury Park Coll., N.  
**Fright, G.E.** Coll. S., Bishop Auckland  
**Fryer, O.H.** London C. Gram. S., Holloway  
**George, J. O.** Private tuition  
**Gilbert, E.M.** Claremont H., Waterbury  
**Gubert, A.** Highbury H., St. Leonards  
**Hawdon, A.F. d.** Newcastle Modern S.  
**Hill, D. F.** Trowbridge High S.  
**Jones, G.R.** Oakes Inst., Walton, L'pool  
**Markwell, A.G.** Cliff House Coll., Hove  
**Milton, J.** Castle Coll., Guildford  
**Needham, H.** Merton H., Penmaenwarr  
**Osborn, B.** Academy, Crews  
**Pashley, G.H. a.**  
**Thorne Gram. S., Doncaster**  
**Pethybridge, T.L.** Gram. S., Bovey Tracey  
**Royal, J.H.** Private tuition  
**Russell, E.B.** Cleave's S., Yalding  
**Sanderson, G.A.** Upton S., Slough  
**Shute, H.C.** Redland Grove Coll., Bristol  
**Smith, G.D.** Gram. S., Sale  
**Smith, N.E. a.** Longton S., Staffordshire  
**Somerville-Woodiwis, R.** Private tuition  
**Telfer, H. a.** Almondsbury Gram. S.  
**Totty, J. a.** Christ Ch. Ir. Gr. S., Southport  
**Van Zwanenberg, G.**  
**The College, Highbury New Park, N.**  
**Weldon, J. d.** St. Bode's Coll., Hornsea  
**Westby, F.** The College, Henton  
**Wood, S.A.** Bourne Coll., Quinton, B'ham

**Aylward, S.** Clacton Gram. S.  
**Beal, H.G.** Oxford H., Brighton  
**Bevan, F.A.** Private tuition  
**Bigo, M.** Great Ealing S.  
**Bowker, A.E.** Fulham Gram. S.  
**Burgess, I.E. d.** New Coll., Margate  
**Cotter, V.F.H.** Kingston S., Yeovil  
**Coupe, W.H. a.d.**  
**Preston Class and Comm. S.**  
**Cunnah, E.E.** Private tuition  
**Curnow, T.G. d.** Comm. S., Penzance  
**Davey, W.H. d.** Gram. S., Gillingham  
**Doming, G.** St. Leonards Coll. S.  
**Duckett, F.J.** Tudor Hall, Hawkhurst  
**Dyer, H.** Boys' Middle S., Tiverton  
**Edwards, J. McC.** Private tuition  
**Gastean, H.**  
**School for Sons of Officers, Woolwich**  
**Gibbons, H.G.**  
**Apsley S., Kingsdown, Bristol**  
**Gooch, E.H.** Thorne Gram. S., Doncaster  
**Greyson, S.A.** Thorne Gram. S., Doncaster  
**Griffin, J.E.H. a.** Walthamstow Modern S.  
**Hall, T.E.B.** The Abbey S., Penzance  
**Harding, H.** Academy, Crews  
**Hawkes, B.** Trowbridge High S.  
**Hunt, C.H.** Reading Coll. S.  
**Kempster, M. d.** The College, Clevedon  
**King, H.M.** Coll. S., Grimsby  
**Knowles, G.A. a.**  
**The College, Weston-s-Mare**  
**Knox, E.M. a.d.**  
**St. Martin's Gram. S., Scarborough**  
**Leith, M.** Waltham Coll., Waltham Cross  
**Leseuer, W.G.** Salvandy Terrace S., Jersey  
**Pascall, A.H.** Gram. S., Sale  
**Rant, T.S.** Edward VI. Mid. S., Norwich  
**Robertson, C.L.**  
**Westgate Coll., Westgate-on-Sea**  
**Secombe, T.** Hart H., Burnham, Som.  
**Smith, J.W.** Newcastle Modern S.  
**Smith, W.H. a.** Higher-Grade S., Selby  
**Snell, S.E.**  
**E. Devon County S., Sampford Peverell**  
**Trimmer, G.C.** Salway Coll., Leytonstone  
**Tuck, A.C.** Edward VI. Mid. S., Norwich  
**Vincent, F.** Barton S., Wisbech  
**Willows, B.L.**  
**Winchester H., Redland Rd., Bristol**  
**Wing, R.A.** Private tuition

**Adams, W.** Gram. S., Shoreham  
**Anc. A.C.** Archbp. Holgate's Gram. S., York  
**Bainbridge, J. C.**  
**Crossley & Porter S., Halifax**  
**Baker, C.** West Brighton High S.  
**Baxter, H.T.** Hounslow Comm. Coll.  
**Benbow, P.**  
**Boys' High S., Iron Bridge, Salop**  
**Billiard, H.A.** Sandwich School  
**Burrough, H.M.** Private tuition  
**Cerutti, M.** Lawn H., Clapham Rd.  
**Chalk, R. F. J.** St. John's Coll., Southend  
**Colson, F. C. a.** Woodford C., S. Woodford

**Crews, R.W.F.** Devonport High S.  
**Davies, A.E.** Finsbury Park Coll., N.  
**Doyle, G.S.** Cricklewood S., N.W.  
**Dye, H.** Esplanade H., Southsea  
**Evans, J.** The College, Henton  
**Green, W.H.** Woodford Coll., S. Woodford  
**Grigsby, F.G.** Reading Coll. S.  
**Hall, S.** Finsbury Park Coll., N.  
**Hobson, G.K.** Wellington Coll., Salop  
**Hodgson, J.** Stamford Hill Coll. S., N.  
**John, J. O.** New Coll., Harrogate  
**Jones, T.B. a.**  
**St. John's Royal Latin S., Buckingham**  
**Morgan, L.J.** Mt. Radford S., Exeter  
**Moylan, H.L. d.**  
**Kendrick Boys' S., Reading**  
**Osborn, J.R.** Woodford Coll., S. Woodford  
**Pindar, J.C.**  
**Blenheim H., Scunthorpe, Doncaster**  
**Prebble, W.** Sandwich S.  
**Reeks, G.P.**  
**Stourwood Coll., Southbourne, Hants**  
**Roberts, E.** St. Mary's Hall, Cardiff  
**Row, J.H. d.** Comm. S., Penzance  
**Russell, A.G.** Highbury Park S., N.  
**Scantlebury, R.** Devonport High S.  
**Scarbright, F.F.** Central Found. S., E.C.  
**Short, O.S.** Oldfield Park S., Bath  
**Stone, G.E.** Gram. S., Gillingham  
**Thorpe, S.H.** Cathcart C., Cathcart Hill, N.  
**Turnbull, P.** Westbourne Rd. S., Sheffield  
**Turner, J.H.** Beechencliff, Peckham  
**Vaughan, B.** St. Mary's Hall, Cardiff  
**Warlow, W.**  
**Winchester H., Redland Rd., Bristol**  
**Watson, J. d.** Sudbury Gram. S.  
**Williams, A.J. a.** Devonport High S.  
**Willett, R.D. a.** Salway Coll., Leytonstone  
**Woolnough, C.A.** New Coll., Worthing

**Alexander, S.F.** Univ. Coll. S., W.  
**Allan, A.D.G.** St. John's C., Green Lanes, N.  
**Allin, B.S.** Private tuition  
**Ayrton, G.A.W.** New Coll., Harrogate  
**Barnett, H.W.** Reading Coll. S.  
**Bayly, A.J.** York H., Folkestone  
**Bolitho, W.C.G.** Philological S., Southsea  
**Brown, B.H.** Stamford Hill Coll. S., N.  
**Butcher, P.** Gravesend Modern S.  
**Carter, R.H.** Wilton Grove S., Taunton  
**Carter, T.** Bickerton H., Southport  
**Cullum, J.G.** Gram. S., Shoreham  
**Drake, H.** High S. for Boys, Croydon  
**Faulkner, W. d.** Barton S., Wisbech  
**Francis, F.** Laugharne S., Southsea  
**Hill, H.V.** Gram. S., Streatham  
**Jackson, A.C. a.**  
**High S., South Shore, Blackpool**  
**Jackson, V. a.** New Cross Coll. S.  
**Jones, E. a.** Wellington S., Heaton Moor  
**Knowles, N.** Bourne Coll., Quinton, B'ham  
**Lathbury, R.L.** Highfield S., Chertsey  
**Lovell, A.J. a.** The Douglas S., Cheltenham  
**Maclean, N.** High S. for Boys, Croydon  
**Pemberton, L.H.** Devonport High S.  
**Scott, G.** Oakes Inst., Walton, L'pool  
**Smith, N.M.** Stoke Newington Gram. S.  
**Smoker, G.D. Coll. S., Ringwood Rd., Poole**  
**Thomas, C.V.** St. Bede's Coll., Hornsea  
**Tucker, A. 14, Grosvenor Crescent, Scarborough**  
**Winter, G.** Wallingford Gram. S.

**Barnett, A. J.** Great Ealing S.  
**Bloodworth, W.J.**  
**The Douglas S., Cheltenham**  
**Bourdas, E.** Hereford Cathedral S.  
**Bowman, J.K.** Laugharne S., Southsea  
**Burnip, C.W.** Comm. Acad., Crook  
**Burrell, H.V.** Arlington Park C., Chiswick  
**Davies, F.D. d.**  
**Stourwood Coll., Southbourne, Hants**  
**Edwards, H.** Brunswick H., Maidstone  
**Evans, R.F.M.** Lucton S., Herefords.  
**Felder, F.** Trafalgar H., Winchester  
**Glaze, F.C. a.** Halesowen S., nr. Birmingham  
**Gordon, C.O.** St. Bee's Coll., Southsea  
**Gough, C.** Wellington Coll., Salop.  
**Green, R.T. d.** Barnsley High S.  
**Gross, H.R.** Wilsden High S.  
**Gunn, D.R.** Salway Coll., Leytonstone  
**Hall, D.** University S., Herne Bay  
**Hatfield, D. a.** Devonport High S.  
**Ingram, C.E.S.** Private tuition  
**Leconte, R.A. J.** Burgess Hill High S., Sussex  
**Keyte, H.W.** Claremont Coll., Blackpool  
**Kingdon, H.W. d.**  
**Pierremont Coll., Broadstairs**  
**Maxted, F.R.** Brunswick H., Maidstone  
**May, C.W.** King's Coll., Wimbledon  
**Noel, G.** St. James' Coll. S., Jersey  
**Parker, O.** Gram. S., Newton Abbot  
**Pettit, G.J.** Northgate S., Winchester  
**Pratt, S.** Holloway Coll., N.  
**Skardon, G.F.** Hoe Gram. S., Plymouth  
**Stacey, A.C.** West Cliff S., Ramsgate  
**Theobald, E.J.F.** Wilsford H., Devizes  
**Warren, W.H.** Weston S., Bath  
**Waterson, H. a.**  
**High S., South Shore, Blackpool**

Third Class.—3rd Division.

**Blaker, J.H.** Egerton Park Coll., Bexhill  
**Brown, C.A.** Private tuition



BOYS, 3RD CLASS, 3RD DIV.—Continued.

2Bullpitt, H. Belvedere, Hayward's Heath
Chew, J. High S., South Shore, Blackpool
2Coates, J. C. Lucton S., Herefords.

2Batesman, H. W. J. s. Westfield H., Reading
Baxter, N. S. Hurst Lodge S., East Putney
2Boardman, R. Christ's Coll., Blackheath

2Baker, A. E. Lucton S., Herefords.
Brown, F. J. d. Claremont H., Waterbury
2Button, F. Carlton Road S., Burnley

2Haley, T. New Coll., Harrogate
Heslop, F. A. C. High S., S. Shore, Blackpool
Howitt, L. B. Herne Bay Coll.

Schroter, J. A. Oakes Inst., Walton, L'pool
Simmons, C. E. Cliftonville Coll., Margate
Smith, B. A. Hurst Lodge S., East Putney

Ames, H. o. St. Martin's Gram. S., Scarborough
Arthur, N. Oxenford H., Jersey
Baker, A. Stourwood C., S'thbourne, Hants

2Aston, F. E. York Manor S., York
Bates, H. High S. for Boys, Croydon
Birch, S. Exbridge Preparatory S.

2Armitage, W. Crossley & Porter S., Halifax
Barnes, U. C. Gram. S., Gillingham
Betts, F. G. Croad's S., Kings Lynn

2Adams, T. J. St. Bede's Coll., Hornsea
Anderson, E. V. Gram. S., Gillingham
Barrett, S. a. Gram. S., E. Finchley

2Bradley, F. T. H. Leigh Hall C., Leigh, Essex
Browning, S. L. d. West Brighton High S.
2Finlayson, H. P. Prelim. Medical S., E. C.

2Haley, T. New Coll., Harrogate
Heslop, F. A. C. High S., S. Shore, Blackpool
Howitt, L. B. Herne Bay Coll.

Venn, H. S. Coll. S., Bridgewater
Watt, A. J. Southport Modern S.
Winkworth, S. R. a. Gram. S., Shoreham

2Biggs, F. York H., Reading
Binmore, H. A. High S., Brentwood
Boddington, G. R. Bourne Coll., Quinton, B'ham

2Osborne, C. W. Hounslow Comm. Coll.
2Philips, J. D. School for Sons of Officers, Woolwich
Pierce, J. H. Wellington Coll., Salop

2Armitage, W. Crossley & Porter S., Halifax
Barnes, U. C. Gram. S., Gillingham
Betts, F. G. Croad's S., Kings Lynn

2Adams, T. J. St. Bede's Coll., Hornsea
Anderson, E. V. Gram. S., Gillingham
Barrett, S. a. Gram. S., E. Finchley

2Garnett, F. J. Tudor Hall, Hawkhurst
Gibbins, H. Trafalgar H., Winchester
Hayles, H. B. West Cliff S., Ramsgate

2Aldred, A. Gram. S., Sale
Baldwin, H. R. Lucton S., Herefords.
Barlow, A. d. Polytechnic Inter. S., W.

Bowle, A. H. Hounslow Comm. Coll.
Buck, A. F. Boys' Coll. S., Aldershot
Corke, V. C.

2Gardner, E. N. Oakes Inst., Walton, L'pool
Garratt, A. E. a. Southport Modern S.
Grieve, J. W. Balham S.

2Armitage, W. Crossley & Porter S., Halifax
Barnes, U. C. Gram. S., Gillingham
Betts, F. G. Croad's S., Kings Lynn

2Baker, G. A. Birkenhead Inst.
Candwell, H. Trafalgar H., Winchester
Gregory, W. A. Upton S., Slough

2Ashworth, H. Carlton Road S., Burnley
Batt, W. E. Devonport High S.
Broadhead, S. W. V. Lipson S., Plymouth

2Adams, F. a. St. John's Royal Latin S., Buckingham
Bolton, G. O. Victoria Coll., Buckingham Palace Rd.

2Beal, W. J. Archbp. Holgate's Gram. S., York
2Carrish, J. W. Ashton Coll., St. Heliers
Driskill, J. C. Gram. S., Shoreham

BOYS, 3RD CLASS, 3RD DIV.—Continued.  
 Jones, W. St. John's Royal Latin S., Buckingham  
 Laing, H. Burlington Coll., Spring Grove, Isleworth  
 Nevell, C. Clifford S., Beckington, Bath  
 Parsonson, H. E. Trowbridge High S.  
 Rainforth, E. P. Private tuition  
 Russell, H. Private tuition  
 Sturrock, F. a. Salway Coll., Leytonstone  
 Tucker, B. E. Gram. S., Bovey Tracey

Amos, R. B. Stretford Comm. S.  
 Bailey, G. C. Stoke Newington Gram. S.  
 Balden, J. W. Archbp. Holgate's Gram. S., York  
 Bond, H. Lucton S., Hereford  
 Bruce, R. H. High S. for Boys, Croydon  
 Evans, H. A. Castle Coll., Guildford  
 Henderson, W. Windsor Hr. Grade S.  
 Holdgate, W. G. Perse Gram. S., Cambridge  
 Jones, R. E. Wellington Coll., Salop

Langner, D. J. Oxford H., Sutherland Avenue, W.  
 Masters, H. J. Belgrave Villa S., Lee, S. E.  
 Matthews, C. L. Woolston Coll., Southampton  
 Millington, E. N. Wellington Coll., Salop  
 Moutrie, A. E. Catford Coll. S., S. E.  
 Nicholson, C. D. P. Montrose H., Plymouth  
 Rothwell, P. Castle Coll., Guildford  
 Self, P. S. Stoke Newington Gram. S.  
 Shinn, G. Wellington S., Heaton Moor  
 Street, R. O. a. Stourwood Coll., Southbourne, Hants  
 Thornett, A. V. Ongar Gram. S.  
 Turner, C. H. Stranraer S., Fareham

Allen, P. a. Trafalgar H., Winchester  
 Aspinall, J. Crossley and Porter's, Halifax  
 Davis, A. A. a. Raleigh Coll., Brixton  
 Guille, H. Upton S., Slough  
 Hall, E. G. Lucton S., Hereford  
 Hine, C. H. Gram. S., E. Finchley  
 Jackson, T. D. Cliftonville Coll., Margate

Kendall, G. Elmfield Coll., York  
 Read, R. Carlton Road S., Burnley  
 Rowland, P. Acton Comm. S.  
 Smith, R. Preston Class. and Comm. S.  
 Wright, H. B. Dudley Coll. S.

Barfoot, G. A. Stranraer S., Fareham  
 Baron, R. High S., South Shore, Blackpool  
 Collings, J. E. Charing Cross S., St. Heliers  
 Dalton, E. K. Gravesend Modern S.  
 Day, O. Archbp. Holgate's Gram. S., York  
 Fielden-Taylor, B. Private tuition  
 Groves, W. E. Beechencliff, Peckham  
 Pybus, V. Cambridge H., Bridlington Quay  
 Russell, N. H. Stoke Newington Gram. S.  
 Sleep, H. C. 38, Tavistock Pl., Plymouth  
 Smith, J. Blackpool Gram. S.  
 Waller, E. L. Burlington H., Richmond  
 White, C. Barton S., Wisbech

Cookson, E. Oakes Inst., Walton, L'pool  
 Dardart, L. C. Weston S., Bath

Davis, E. C. Lyttelton Gram. S., Malvern  
 Johnson, B. S. Loughton S.  
 Meldrum, A. H. Gram. S., Sale  
 Newman, A. R. Christ's Coll., Blackheath  
 Parr, L. O. S. Gram. S., Sale  
 Raines, J. M. Archbishop Holgate's Gram. S., York  
 Wainwright, T. Southport Modern S.

Adams, A. Gram. S., E. Finchley  
 Barrett, P. H. Arlington Pk. Coll., Chiswick  
 Castle, A. C. Gram. S., E. Finchley  
 Cummings, L. P. Argyle H., Sunderland  
 Dean, W. Highfield S., Rock Ferry  
 Hobbs, E. Maidenhead Coll.  
 Lavell, M. D. St. John's Royal Latin S., Buckingham  
 Rivers, A. P. Trafalgar H., Winchester  
 Scherf, W. Polytechnic Inter. S., W.  
 Shirraw, A. Lucton S., Hereford

GENERAL CLASS LIST — GIRLS.

(For list of abbreviations, see page 94.)

**First Class.—Honours Division.**  
 Dunham, A. G. s.e.g.f.g.e.l.s.d.p. Gartlet, Watford  
 Fry, B. s.h.n.e.u.ph. Red Maids' S., Bristol  
 Southwell, A. B. s.ph. Trafalgar Sq. S., Scarboro'  
 Alecock, E. M. s.ph.p. Haddo & Westwood Col. S., Scarboro'  
 Stutchbury, M. s.f.d. Ladies' Coll., Wellington, Salop  
 Pulling, G. E. f. Salway C., Leytonstone  
 Taff, E. E. s.ph.d. George Green S., Poplar  
 Cumming, M. M. s.h. Ladies' Coll., Wellington, Salop  
 Rush, E. W. s.f.ph.mu.do. Lonsdale H., Norwich  
 Robinson, C. Haddo & Westwood Coll. S., Scarboro'  
 Fletcher, E. M. f.do. Arundel H., Scarboro'  
 Macey, D. s.e. Milton Mount C., Gravesend  
 Dixon, F. s. Brookville, Filey  
 Gates, E. D. s.f.mu. Guelph Coll., Clevedon

**First Class.—Pass Division.**  
 Ford, E. A. s.mu. Eton H., Sheffield  
 Craig, I. Y. f.g.e.l. Manchester High S. for Girls  
 Cox, C. s.f. Milton Mount C., Gravesend  
 Manby, C. A. M. Crompton S., Southend  
 Quibell, E. M. Ladies' Coll., Wellington, Salop  
 Geeson, O. M. f. Slepe Hall, St. Ives, Hunts  
 Clarson, D. Ladies' Coll., Wellington, Salop  
 Marples, W. E. Treverbyn, Hornsey Lane, N.  
 Halket, J. I. George Green S., Poplar  
 Cranfield, E. E. s.d. Slepe Hall, St. Ives, Hunts  
 Dobbs, B. E. Ladies' Coll., Wellington, Salop  
 Franklin, M. H. s. Ladies' Coll., Wellington, Salop  
 Deane, B. M. s.f. Lonsdale H., Norwich  
 Shovelton, M. A. Private tuition  
 Eaton, G. A. s. Ladies' Coll., Wellington, Salop  
 Beart, A. f.mu. Slepe Hall, St. Ives, Hunts  
 Vergette, N. F. s. 26 Ashley Rd., Hornsey Rise  
 Tyler, W. L. s. Slepe Hall, St. Ives, Hunts  
 Hicklin, F. d. St. Editha's S., Tamworth  
 Zillensen, J. M. f.g.e. Mecklenburg H., Putney

Aldous, A. Milton Mount C., Gravesend  
 Allen, E. M. Harley H., Hereford  
 Bennett, B. M. s. Sidcot School, Winscombe  
 Dugard, E. B. Ladies' Coll., Wellington, Salop  
 Shann, E. A. Enmoor Lodge Coll. S., New Leeds  
 Brooks, K. f. Milton Mount C., Gravesend  
 Bath, I. H. Vale View H., Devezes  
 Bourke-Wright, A. M. s.f.mu. Wincham Ladies' Coll.  
 Jones, A. E. Ladies' Coll., Wellington, Salop  
 Brame, D. P. Harborne Ladies' Coll.  
 Houghton, G. M. s.ph. 26 Ashley Rd., Hornsey Rise  
 Tonks, M. N. Ladies' Coll., Wellington, Salop  
 Massiah, I. bk. St. Kilda's Coll. S., Bristol  
 Bromley, E. R. S. s.p. Mecklenburg H., Putney  
 Phillips, S. P. Fonthill S., Barnsley  
 Lea, F. s.bk. Onsegate S., Selby  
 Barlow, A. E. Crossbeck H., Ilkley  
 Parker, E. Clough S., Reigate  
 Patterson, J. S. Crossbeck H., Ilkley

Scott, J. Brentwood, Southport  
 Aldrich, K. M. s.d. Wakefield H., Norwich  
 Beestelstone, M. s.mu. St. Helier's Coll., Shifnal  
 Moomyn, M. f. Clough S., Reigate  
 Cutton, C. M. s.f.do. 26 Ashley Rd., Hornsey Rise  
 Reynolds, C. D. s.f. Guelph Coll., Clevedon  
 Walker, C. A. d. Manchester High S. for Girls  
 Leaper, M. mu. Welland Hall C., Spalding  
 Pugsley, R. E. e.sh. Helvetia H., Jersey  
 Tucker, M. L. bk. St. Kilda's Coll. S., Bristol

Allen, H. M. s. Ladies' Coll., Wellington, Salop  
 de Moulpied, H. R. s.f. Wintersdorf, Birkdale  
 Haines, T. M. Brompton Science S., S. W.  
 Hiscock, M. C. Alexandra C., Southampton  
 Smith, M. P. Sidcot S., Winscombe  
 Thomas, M. E. s. Summerfield Hall, Maessywmmer  
 Wallis, E. H. s.f. Guelph Coll., Clevedon  
 Cooper, B. s. Ladies' Coll., Wellington, Salop  
 King, D. J. Vale View H., Devezes  
 Tuke, B. s. Wintersdorf, Birkdale  
 Dixon, B. E. 20 York Villas, Brighton  
 Startup, C. L. s.f. Slepe Hall, St. Ives, Hunts  
 Bainbridge, H. W. Wintersdorf, Birkdale  
 Blackburn, D. s. Church Mid. Cl. S., Leeds  
 Gordon-Cramer, E. A. f. George Green S., Poplar

Owens, A. E. The Queen's S., Chester  
 Thompson, F. F. Harley H., Hereford  
 Goate, S. M. d. St. Mary's S., Bungay  
 Luce, E. A. s.f.sh. Helvetia H., Jersey  
 Winbush, W. M. bk. Brondesbury High S. for Girls  
 Woodman, D. North Park Coll., Croydon  
 McGrath, F. bk. Private tuition  
 Bristow, F. mu.de. Ellesmere H., Whitechurch  
 Vickers, B. Hazel Grove High S., Stockport  
 Jolliffe, E. M. Vale View H., Devezes  
 Wilson, F. G. Reginald Terrace S., Leeds  
 Hardisty, M. B. High S., Chingford  
 Stevens, L. M. Hughenden, Bekhill  
 Winbush, D. Brondesbury High S. for Girls  
 Allen, E. Stoke S. for Girls, Devonport  
 Neal, M. Eton H., Sheffield  
 Wyatt, D. C. Friends' S., Saffron Walden  
 Hewson, G. E. Alwyne Coll., Canonbury  
 Powell, R. A. mu. Ellesmere H., Whitechurch  
 Harries, G. M. Slepe Hall, St. Ives, Hunts  
 Porter, E. A. 26 Ashley Rd., Hornsey Rise  
 Pinley, M. W. mu. Sidgwick H., Hr. Broughton  
 Simpson, E. W. Arundel H., Scarboro'  
 Frowde, C. D. Private tuition  
 Hayward, H. d. Ellerker C., Richmond Hill  
 Walker, E. Ellerker Coll., Richmond Hill  
 Brewer, K. M. s.mu. Arlington H., Newport, Mon.

Hunt, M. L. s.f. Girls' High S., Sudbury, Suffolk  
 Jones, G. C. Wintersdorf, Birkdale  
 Scott, F. M. Wakefield H., Norwich  
 Thomas, E. Raleigh S., Stoke Newington  
 Waggott, K. E. s. Salem H., Sunderland  
 Grimshaw, M. Enmoor Lodge Coll. S., New Leeds  
 Clifford, K. E. Private tuition

Dodd, C. H. M. f. Ellerslie Ladies' S., Bromsgrove  
 Writts, E. M. Brompton Science S., S. W.  
 Drenan, O. Ellerker Coll., Richmond Hill  
 Chapman, A. M. Private tuition  
 Weedon, L. A. George Green S., Poplar  
 Harman, A. E. Hastings High S.  
 Chapman, D. F. Private tuition

**Second Class.—1st Division.**  
 Ramsay, F. M. f.sh. St. John's Coll., Sutton, Surrey  
 Stroud, V. B. s.g.do. Alexander Coll., Southampton  
 Lammin, S. L. s.f.sp. Mecklenburg H., Putney  
 Clayton, G. d. St. Bernard's, Southsea  
 Hickman, A. M. s.e.z. Mecklenburg H., Putney  
 Stuart Menteth, L. F. f.g.e.i.d. Ashburne H., Chepstow  
 Stutchbury, E. s.g. Ladies' Coll., Wellington, Salop  
 Pither, K. e.a. Milton Mount C., Gravesend  
 Steinhald, D. s.f.d. Wintersdorf, Birkdale  
 Hohl, M. E. f.g.e. Private tuition  
 Webb, G. C. s.g. Ladies' Coll., Wellington, Salop  
 Jaggard, E. M. mu. Ripley H., Bury St. Ed's  
 Moody, H. E. a.d. St. Andrew's Hall S'port  
 Nairne, A. f. Convent of Loreto, Hulme  
 Guthrie, J. a.d. Milton Mount Coll., Gravesend

Jennings, M. mu. 6 Orchard Gardens, Teignmouth  
 Richards, L. E. f. St. John's Hill S., Shrewsbury  
 Dawson, S. C. f. Mecklenburg H., Putney  
 Good, D. f. Mecklenburg H., Putney  
 Wolf, F. S. f.g.e. Mecklenburg H., Putney  
 Cranfield, N. f.d. Slepe Hall, St. Ives, Hunts  
 Thorley, M. Friends' S., Penketh  
 Wolstenholme, M. s.f. Milton Mount Coll., Gravesend  
 Keer, C. M. d.mu. Lonsdale H., Norwich  
 Montford, A. d. Friends' S., Saffron Walden  
 Lee, M. M. P. s.a.f. Queen's Coll., Twickenham  
 Odam, E. R. T. North End High S., Portsmouth  
 Thomas, M. J. T. a.mu. St. Maur Coll., Chepstow  
 Denison, D. s.f.d. Wintersdorf, Birkdale  
 Murray, J. M. f. Private tuition  
 Travis, H. G. M. d. Eversley H., Willesden Green  
 Barritt, M. C. Friends' S., Saffron Walden  
 Drover, E. Westbourne H., Cowes  
 Tinsley, H. E. f. Ellerslie Ladies' S., Bromsgrove  
 Baugh, F. L. St. Andrew's Hall, Southport  
 Bennett, E. f.g.e. Milton Mount Coll., Gravesend  
 Cooper, H. a.ch. Friends' S., Wington  
 Dun, E. S. High S., Chingford  
 Whitehead, D. Friends' S., Saffron Walden  
 Gunson, E. L. f.d. Westcombe, Dyke Rd., Brighton

Jones, A. M. s. Ladies' Coll., Wellington, Salop  
 Parker, G. E. f.g.e.d. Hendon Coll., N. W.  
 Bennett, M. E. Girls' Coll. S., Aldershot  
 Gray, E. H. Ellerslie Ladies' S., Bromsgrove  
 Ainsworth, L. W. d. Stainsbridge Coll., Malmesbury  
 Helder, F. E. Wintersdorf, Birkdale

Jenkins, R. a. Milton Mount C., Gravesend  
 Grassam, N. A. Spalding Central Classes  
 Robins, H. J. Wynand H., Bowes Park  
 Chappell, H. C. Waveney H., Harleston  
 Edwards, E. C. M. s.d.do. Comm. & Civil Serv. Coll., Forest Gate  
 Harries, A. B. Slepe Hall, St. Ives, Hunts  
 Pope, C. E. Ravenscourt H., Ravenscourt Park, W.  
 Baker, R. A. s.d. Queen's C., Twickenham  
 Galsdon, E. M. s. 5 Clapton Square, N. E.  
 Reynolds, F. E. a. Faldon View S., Exeter  
 Waldram, F. L. a.mu. Russell H., Grimsby  
 Pickett, J. Verecroft, Devezes  
 Wales, E. F. f.g.e. Brean Down H., Burnham, Som.

Mayo, I. G. R. Lancefield S., Southend  
 Jelton, D. f.d. Private tuition  
 Smith, H. S. Wakefield H., Norwich  
 Darby, M. A. a.f. Roan Girls' S., Gr'wich  
 Hawke, M. L. f.d.mu. Bellevue, St. Austell  
 Hayes, M. G. s. Westbourne High S., Bournemouth  
 Brewer, M. S. Private tuition  
 Hallam, K. mu. Welland Hall C., Spalding  
 Hunt, E. F. do. Raleigh S., Stoke Newington  
 Small, M. K. ph. 12 Plashet Rd., Plaistow  
 Earnshaw, E. M. Girls' High S., Cheddle  
 Morley, D. A. s. Eastrop H., Chichester  
 Oldham, J. s. Ladies' Coll., Wellington, Salop

Evans, E. W. s.mu. Totnes Girls' S.  
 Kelsey, B. Milton Mount Coll., Gravesend  
 Wharton, B. Friends' S., Penketh  
 Woodbridge, A. A. Langley H., Ashbourne  
 Carr-Jackson, W. f.g.e. Hendon Coll., N. W.  
 Cole, D. F. Cooihurst S., Crouch End  
 Dun, A. L. High S., Chingford  
 Gill, E. a. St. Andrew's Hall, Southport  
 Wibberley, A. M. Langley H., Ashbourne  
 Batty, M. Milton Mount Coll., Gravesend  
 Bonner, E. A. Wintersdorf, Birkdale  
 Carter, J. E. Mornington H., W. Kensington  
 Craven, A. A. Crossley & Porter S., Halifax  
 Heape, C. M. Ladies' Coll., Wellington, Salop  
 Hedderwick, E. The Limes, Chiswick  
 Roberts, F. M. Avondale, Liverpool  
 Ruffell, F. Milton Mount Coll., Gravesend  
 Shields, H. K. Alexandra C., Southampton  
 Stephens, E. M. h.f. Brownhills H., Southampton

Bretherton, G. E. f. Milton Mount Coll., Gravesend  
 Cowderoy, W. a. Kendrick H., Brighton  
 Gates, M. R. Guelph Coll., Clevedon  
 Hinds, K. M. f.g.e. The Mount, Banbury  
 Mackie, A. McM. Southbrooke, Middlebro'  
 Daniels, L. M. Ten Mile Villa, Chigwell  
 Dearlove, E. M. St. Margaret's High S., Lee, S. E.  
 Dent, E. A. Onsegate S., Selby  
 Derwent, G. Arundel H., Scarboro'  
 Johnson, A. Ashburne H., Chepstow  
 Mason, M. M. f. Ellerslie Ladies' S., Bromsgrove  
 Morley, B. C. Eastrop H., Chichester  
 Staeger, V. M. Crossley & Porter S., Halifax  
 Hamar, C. J. Ellesmere H., Whitechurch  
 Heywood, A. F. s.h.f. Private tuition  
 Wilkinson, A. d. Milton Mt. C., Gravesend  
 Bingham, E. D. e. Wakefield H., Norwich  
 Briggs, N. Brentwood, Southport  
 Charlesworth, F. Sheffield Mid. Cl. S.



**GIRLS, 2ND CLASS, 1ST DIV.—Continued.**  
 Harries, G. Milton Mount Coll., Gravesend  
 Moon, W. Milton Mount Coll., Gravesend  
 Moscrop, G. E. Crossbeck H., Ilkley  
 Chappell, E. A. Waveney H., Harleston  
 Curtis, E. E. f. Worthing Gram. S.  
 Dingley, C. Cumberland C., Cock's Green  
 King, H. F. a. m. u. Gartlet, Watford  
 Low, M. D. Private tuition  
 Willoughby, H. M. s. Private tuition  
 Clay, A. E. a. Milton H., Atherstone  
 Clayton, M. E. d. Senior Practising S., Stockwell Coll.  
 Crocker, A. d. St. Andrew's Hall, S'thport  
 Pascoe, A. E. George Green S., Poplar  
 Freeman, C. a. p. h. North Hackney High S.  
 Bayton, T. E. a. Roan Girls' S., Greenwich  
 Bowyer, G. Roan Girls' S., Greenwich  
 Finley, F. M. Girls' Coll. S., Aldershot  
 Henderson, D. A. Milton Mt. C., Gravesend  
 Rushton, M. Burnley Hr. Grade S.  
 Evans, J. E. f. m. u. St. David's S., Carnarvon  
 Robinson, E. St. Andrew's Hall, Southport  
 Thomas, L. H. f. Hendon Coll., N. W.  
 Balmforth, E. G. Church Mid. Cl. S., Leeds  
 Carouge, J. H. f. d. Private tuition  
 Chandler, C. A. f. Roan Girls' S., Greenwich  
 Gaston, E. p. N. Hackney High S.  
 Scott, S. S. 32 Cromwell Avenue, Highgate  
 Stutchbury, L. Ladies' Coll., Wellington, Salop  
 Bennett, E. M. 6 Orchard Garl's, Teignm'th  
 Paterson, M. Friends' S., Wigton  
 Toovey, M. Private tuition

**Second Class.—2nd Division.**

Chapman, D. M. f. Private tuition  
 Duake-Cohen, M. Private tuition  
 Carter, E. Park Road S., Bingley  
 Coward, F. M. Ellesmere H., Whitechurch  
 Ibbotson, A. M. f. Private tuition  
 Carler, A. E. Private tuition  
 Smith, E. Stainsbridge Coll., Malmesbury  
 Boothroyd, A. D. e. f. Brentwood, Southport  
 Correll, D. Slepe Hall, St. Ives, Hunts  
 Dean, M. C. s. Wintersdorf, Birkdale  
 Hinds, E. C. f. g. e. The Mount, Banbury  
 Lodge, M. G. d. Hazelhurst, Penarth  
 Thornley, L. Bolton High S., St. Ives  
 Baskett, M. K. Ellerker Coll., Richmond Hill  
 Blake, E. G. Freemantle High S., Southampton  
 Ficken, E. R. f. Roan Girls' S., Greenwich  
 Jones, M. s. Frimley Road S., Camberley  
 Moore, F. E. George Green S., Poplar  
 Ward, G. A. Cornwallis High S., Hastings  
 Earle, H. E. e. Reedham Orphanage, Purley  
 Haynes, E. B. Private tuition  
 License, M. s. Church Mid. Cl. S., Leeds  
 Main, M. C. m. u. St. Cloud, Southsea  
 Martin, B. Ladies' S., The Close, Brighton  
 Pengilly, K. Arville Coll., Rhyl  
 Robinson, B. Hemdean H., Caversham  
 Saiegon, M. M. f. St. Joseph's Conv., W. Hartlepool  
 Staddon, W. M. St. Winifred's S., Torquay  
 Thornbery, N. St. Monica's S., Edgbaston  
 Tilt, K. A. Oakhill High S., Beckenham  
 Williams, E. M. f. Elvaston, Thurlow Park Road, S. E.  
 Barnard, H. J. f. Tivoli H., Gravesend  
 Bond, A. D. do. High S., King Square, Bridgewater  
 Deverell, A. M. E. g. f. 6 Chandos Road, Buckingham  
 Edwards, E. J. Lithend Ladies' S., Bishops Waltham  
 Enness, B. E. West St. S., Buckingham  
 Hansell, A. M. a. Private tuition  
 Lewis, E. d. Private tuition  
 May, M. C. Westview, Grosvenor, Margate  
 Moore, M. E. s. Prospect H., St. Neots, Hunts  
 Slater, M. E. S. St. Hilda's, Littlehampton  
 Wheatley, B. High S., Rothwell  
 Woodcock, R. T. Guelph Coll., Clevedon  
 Bray, K. F. Cornwallis High S., Hastings  
 Griffiths, E. M. f. Milford H., Newport, Mon.  
 Hogben, M. St. Cloud, Southsea  
 Robinson, D. Minerva Coll., Dover  
 Smith, O. M. g. Clarence Coll., Wood Green  
 Doward, F. St. Andrew's Hall, Southport  
 Ivens, E. G. Leigh Bank Coll., Leamington  
 Jordan, W. M. Church H., Beckley, Sussex  
 Learner, H. Clough S., Reigate  
 Parker, K. St. Andrew's Hall, Southport  
 Weir, I. R. s. Roan Girls' S., Greenwich  
 Anslow, G. St. David's S., Carnarvon  
 Bailey, A. E. M. Brondesbury High S. for Girls  
 Blacklock, M. Friends' S., Wigton  
 Cherrert, E. M. Alexandra C., Southampton  
 Clarke, S. M. Girls' Coll. S., Aldershot  
 Dawson, I. E. d. Wintersdorf, Birkdale  
 Dodd, E. L. Somerville H., Northampton

Duffett, H. M. f. Lithend Ladies' S., Bishops Waltham  
 Ebdon, G. M. s. Modern High S., Penge  
 Goodison, M. Milton Mount C., Gravesend  
 Gurney, L. M. Hughenden, Bexhill  
 Miles, E. B. Eton H., Cheltenham  
 Morrison, M. M. Welland Hall C., Spalding  
 Palmer, L. Clarence Coll., Wood Green  
 Raven, D. O. f. Arundel H., Scarborough  
 Todd, A. W. 14 Wilson Street, Derby  
 Bell, N. M. Fairholme, Rhyl  
 Botting, C. Sunfield H., Wellington, Salop  
 Hinge, T. Wm. Gibbs S., Faversham  
 Kelly, E. Milton Mount Coll., Gravesend  
 Tinley, M. Ashley H., Workop  
 Allen, L. f. Stoke S. for Girls, Devonport  
 Butt, E. M. College H., Newbury  
 Dening, E. C. f. Toulton, Cothelstone, Taunton  
 Gardner, B. Modern High S., Penge  
 Graham, E. M. Graunville H., Southampton  
 Jones, F. M. Ladies' Coll., Wellington, Salop  
 Lillywhite, E. Stanmore H., Richmond  
 White, M. A. Private tuition  
 Anners, E. Brompton Science S., S. W.  
 Bullock, E. M. Lithend Ladies' S., Bishops Waltham  
 Etches, M. B. Ellesmere H., Whitechurch  
 Freegard, M. f. 6 Chandos Rd., Buckingham  
 Gotelec, K. Ellerker Coll., Richmond Hill  
 Harlic, C. f. Private tuition  
 Hills, F. A. g. e. St. Cuthbert's C., Forest Hill  
 Hind, M. L. Slepe Hall, St. Ives, Hunts  
 Maddison, N. B. Private tuition  
 Olney, D. A. Modern High S., Penge  
 Thomas, M. E. Harley H., Hereford  
 Weaver, F. L. South Cropton Coll.  
 Austin, A. C. m. u. Oxford Coll., Clacton-on-S.  
 Bailey, E. A. e. Spalding Coll. S.  
 Coldham, M. f. Girls' High S., Sudbury, Suffolk  
 Curling, M. The Laurels, Herne Bay  
 Dunn, D. M. St. John's S., Lichfield  
 Hughes, A. M. K. Sandwich S.  
 Norris, I. Guildown Coll. S., Tunbridge Wells  
 Roscollor, A. M. High S., Radcliffe, Manchester  
 Rowe, A. Brook Green Coll., W.  
 Wallis, J. M. Slepe Hall, St. Ives, Hunts  
 Abbott, A. St. Hilda's, Exeter  
 Aitken, J. f. Wintersdorf, Birkdale  
 Balslaw, F. E. Comm. S., Astley Bridge  
 Cowey, W. V. d. 34 School Hill, Lewes  
 Daws, M. C. Church H., Beckley, Sussex  
 Driscoll, E. A. f. Ashton H., St. Clements, Jersey  
 Kidd, E. P. Devonshire H., Bridlington  
 Norman, F. G. Guelph Coll., Clevedon  
 Thornburn, E. M. f. Slepe Hall, St. Ives, Hunts  
 Dening, M. M. B. f. Toulton, Cothelstone, Taunton  
 Harraway, M. J. Verecroft, Devizes  
 Horrocks, G. Rockville S., Chorlton-cum-Hardy  
 Johnson, L. ph. Forest View H., Chingford  
 Jones, E. V. Milford H., Abergavenny  
 Caffin, E. V. m. u. Tredegar H., Brighton  
 Eaton, E. M. A. St. Mary's S., Whitechurch  
 Edmonds, N. W. Kendrick H., Brighton  
 Edmondson, L. Cambridge H., York  
 Higgins, M. York H., Stony Stratford  
 Humber, E. M. Colborn S., Bow  
 Mowbray, B. Welland Hall Coll., Spalding  
 Oliver, M. B. L. d. Mornington H., W. Kensington  
 Williams, A. L. Hoe Park S., Plymouth  
 Bennett, S. f. g. e. Craigholm, Buxton  
 Bone, E. M. Waverley Coll., Stroud Green  
 Crampton, L. C. f. Fairlawn S., Newmarket  
 Cullum, K. D. m. u. Arlington H., Newport, Mon.  
 Davies, M. A. Summerfield Hall, Maescywnmer  
 Dickinson, A. E. Eton H., Sheffield  
 Jennings, M. Grey Coat Hosp., Westminster  
 Jones, M. G. m. u. Arlington H., Newport, Mon.  
 Long, B. Frimley Rd. S., Camberley  
 Rogerson, E. A. High S., Oakengates, Salop  
 Thomas, E. Milton Mount C., Gravesend  
 Anderson, J. F. Alexandra C., Southampton  
 Bernhardt, B. C. d. Private tuition  
 Booty, I. C. f. d. Clarence H., Filey  
 Corbould, M. Ellerker Coll., Richmond Hill  
 Earl, N. M. Ellesmere H., Whitechurch  
 Golyde, U. B. Crossbeck H., Ilkley  
 Hole, M. Clarendon Coll., Clifton  
 Pearson, M. L. a. Clarence C., Wood Green  
 Raby, M. D. Wintersdorf, Birkdale  
 Royle, L. M. Brentwood, Southport  
 Smith, G. High S., Dukinfield, Cheshire  
 Anslow, M. E. D. f. St. David's S., Carnarvon  
 Foster, N. S. Joseph's Conv., W. Hartlepool  
 Gibbons, N. B. d. Sidcot S., Winscombe  
 Kingscome, M. M. Private tuition  
 Lyon, R. Tivoli H., Gravesend  
 Lyell, G. E. f. Eagley Bank, Southport  
 Stock, D. d. Sidcot S., Winscombe  
 Taylor, E. Clanville H., Stoke Newington  
 Walter, M. A. Girls' High S., Wanstead  
 Cargill, R. V. f. Private tuition

Carter, E. M. Sidcot S., Winscombe  
 Maddison, E. A. Private tuition  
 Pither, E. Milton Mount C., Gravesend  
 Westlake, I. T. Grosvenor S., Wokingham  
 Woodhams, F. B. St. Hilda's, Littlehampton  
 Wren, W. P. s. f. Hope Lodge, Bexley Heath  
 Butt, F. M. d. Wintersdorf, Birkdale  
 Jones, G. Modern High S., Penge  
 Pearce, M. Stoke S. for Girls, Devonport  
 Sharpe, K. Ladies' S., The Close, Brighton  
 Sharpe, S. C. A. Cedar H., Ramsgate  
 Smart, C. P. The Mount, Banbury  
 Thorn, M. E. s. Willesden High S. for Girls  
 Unsworth, A. L. Saxtonholme, Whalley Range  
 Everest, F. C. Grosvenor S., Wokingham  
 Fairweather, W. Stainsbridge Coll., Malmesbury  
 Hawke, M. Bellevue, St. Austell  
 Learner, M. Clough S., Reigate  
 Mott, F. H. Fern Lea, St. Leonards  
 Smith, L. G. Ellesmere H., Whitechurch  
 Tyrrell, G. M. Roan Girls' S., Greenwich  
 Wallis, J. K. Slepe Hall, St. Ives, Hunts  
 Chatterton, W. St. George's H., Doncaster  
 Forshaw, A. H. g. e. Private tuition  
 Jenner, M. E. E. d. Colonnade Gdns. S., Eastbourne  
 Jones, N. I. Ystrad H., Newport, Mon.  
 Phillips, G. E. Grosvenor Coll., Iford  
 Salt, A. Beechoine Coll., Belper  
 Underdown, G. Monk Bridge S., York  
 Wallace, H. J. 5 Osnaburgh Terrace, N. W.  
 Williams, F. Grey Coat Hospital, Westminster  
 Hartley, C. M. Raleigh S., Stoke Newington  
 Horne, A. K. Sunny Bank Coll., Wilmslow  
 Nottage, M. Clark's Coll. High S., Fitzroy Sq., W.  
 Payne, L. M. f. West Ham High S.  
 Stephenson-Jellie, E. Private tuition  
 Clout, C. M. Modern High S., Penge  
 Edmondson, H. C. M. Westview, Grosvenor, Margate  
 Frost, A. West Ham High S.  
 Kerr, E. B. St. Winifred's S., Torquay  
 Thomas, M. E. Summerfield Hall, Maescywnmer  
 Callander, G. G. Coborn S., Bow  
 Clayton, M. Welland Hall Coll., Spalding  
 Hobson, J. A. Highfield S., Addiscombe  
 Read, M. Park H., Blackburn  
 Swift, R. M. St. Helier's Coll., S'hamal  
 Wilson, F. High Caythorpe S., Bridlington  
 Willcocks, E. B. Hythe S.  
 Arkell, K. M. Malvern H., Reading  
 Holloway, M. M. s. Roan Girls' S., Greenwich  
 Lewis, M. A. E. Arlington H., Newport, Mon.  
 Matthews, E. Milton Mount Coll., Gravesend  
 Powicke, A. Milton Mount Coll., Gravesend  
 Reeves, C. d. Wellington Coll., Hastings  
 Wilson, V. C. A. Mecklenburg H., Putney  
 Bevan, S. S. Gartlet, Watford  
 Black, A. L. Wakefield H., Norwich  
 Bowers, H. The Laurels, Herne Bay  
 Cudlipp, D. A. St. Winifred's, Southampton  
 Davis, D. V. Hope Lodge, Bexley Heath  
 Hillier, K. E. Mayfield Coll., Marlborough  
 Murray, B. Private tuition  
 Watt, W. A. Private tuition  
 Atkinson, G. Mecklenburg H., Putney  
 Goodwin, N. M. Torrhill Coll., Hastings  
 Hooker, M. C. Alexandra C., Southampton  
 Pearce, M. V. Girton H., Yeovil

**Second Class.—3rd Division.**

Archer, S. A. m. u. Ashleigh H., Tutbury  
 Brooks, E. Ebley H., East Putney  
 Culpin, E. Spalding Coll. S.  
 Godley, C. Ashley H., Workop  
 Holt, E. Crossbeck H., Ilkley  
 Ievers, N. B. f. Tona Cottage, Sutton Coldfield  
 Longman, H. N. Devonshire H., Wincanton  
 May, D. Oxford Coll., Clacton-on-Sea  
 Rank, E. d. Wintersdorf, Birkdale  
 Smeal, L. Friends' S., Wigton  
 Staden, F. Slepe Hall, St. Ives, Hunts  
 Terrey, I. A. d. Brownhill's H., S'thampton  
 Ayre, F. E. L. Gartlet, Watford  
 Blyth, E. C. d. Girls' High S., Wanstead  
 Dunn, E. Wynaed H., Bowes Park  
 Fryer, M. M. C. St. Maur Coll., Chesham  
 Wells, I. E. Hanover H., Hyde  
 Hoeken, M. Stoke S. for Girls, Devonport  
 Thompson, M. R. Torrhill Coll., Hastings  
 Whalley, M. Sidcot S., Winscombe  
 Clarke, E. A. Prospect H., W. Hartlepool  
 Jewers, C. M. Oriel H., Harpenden  
 Middleton, D. Ashley H., Workop  
 Philip, M. Y. d. Park Mansions, St. Leonards  
 Robertson, N. B. Arville Coll., Rhyl  
 Thomerson, E. E. Clevedon C., S. Hackney  
 Wright, D. M. 1 Southampton Terr., S. Farnborough  
 Zillessen, E. A. g. e. Mecklenburg H., Putney  
 Binns, R. E. Hoghton Terrace S., Southport

Foulstone, F. N. High S., Warren Grove, Barnsley  
 Groves, E. M. s. Reading High S.  
 Henderson, E. B. Ellesmere H., Whitechurch  
 Hopwood, E. A. Ebley H., E. Putney  
 Pettitt, E. K. Southolme High S., Whalley Range  
 Ray, M. E. d. Brownhill's H., Southampton  
 Roberts, J. St. Winifred's S., Southampton  
 Winstanley, F. J. St. Winifred's S., Southampton  
 Bullock, W. Ladies' Coll., Wellington, Salop  
 Cleave, A. L. High S., Pontefract  
 Day, G. E. Windsor Hr. Grade S.  
 Nicolle, E. M. f. Six Roads S., St. Lawrence, Jersey  
 Taylor, L. Convent of Loreto, Hulme  
 Wright, A. g. Ladies' Coll., Wellington, Salop  
 Clement, A. E. Girls' Coll. S., Aldershot  
 Court, N. V. Beechome Coll., Belper  
 Croall, M. I. Girls' High S., Wanstead  
 Hadwen, L. d. Friends' S., Penketh  
 Harris, C. L. Harley H., Hereford  
 Moore, G. V. Ystrad H., Newport, Mon.  
 Rice, M. S. Wynaed H., Bowes Park  
 Watts, K. J. St. Olave's S., Taunton  
 Anderson, M. St. Andrew's Hall, Southport  
 Buckridge, M. G. J. College H., Newbury  
 Gardner, F. Ellerker C., Richmond Hill  
 Gray, M. M. m. Russell H., Grimsby  
 Jarrett, B. M. Carleton Queen's Coll., Tufnell Pk., N.  
 Skelton, D. A. Oxford H., Leatherhead  
 Smith, E. Lithend Ladies' S., Bishops Waltham  
 Bates, H. A. Spalding Coll. S.  
 Chapman, M. B. Prospect H., St. Neots, Hunts  
 Dobbs, E. A. St. Maur Coll., Chesham  
 Evans, M. W. Summerfield Hall, Maescywnmer  
 Greenwood, H. M. Slepe Hall, St. Ives, Hunts  
 Harding, E. E. M. Down End, Clifton  
 Hart, B. M. Collingwood Coll., Lee, S. E.  
 Linton, V. f. Fairlight, Croydon  
 Martin, M. Sunfield H., Wellington, Salop  
 Mingay, B. J. M. Fulham Park Coll.  
 Nash, B. M. E. Waketield H., Norwich  
 Newstead, D. E. s. Abbey H., Abbey Rd., N. W.  
 Oswald, L. Mayfield Coll., Marlborough  
 Sams, A. F. Roan Girls' S., Greenwich  
 Hollidge, K. Llandaff H., Norwich  
 Maxton, M. s. Eldon H., Stoke Newington  
 May, M. E. Westview, Grosvenor, Margate  
 Parsons, S. J. Hoe Park S., Plymouth  
 Sawyer, L. D. Clarence Coll., Wood Green  
 Willats, F. J. Wynaed H., Bowes Park  
 Wolverson, M. E. Park H., Blackburn  
 Bockett, E. M. f. Private tuition  
 Carter, G. M. Vale View H., Devizes  
 Cook, N. Spalding Coll. S.  
 Fidler, J. College H., Newbury  
 Hall, C. E. The Briers, Hagley Rd., Edgbast'n  
 Hawes, E. Anglo-French Coll., Hornsey  
 Newport, E. M. Oriel H., Harpenden  
 Pibworth, E. L. Oakley High S., Southsea  
 Potter, I. F. Ellerker Coll., Richmond Hill  
 'Soltan, L. Clough S., Reigate  
 Bellamy, R. Clarence Coll., Wood Green  
 Cranch, M. L. Stapleton Hall S., Stroud G.  
 Graham, J. N. Raleigh S., Stoke Newington  
 Gresley, E. s. Craigholm, Buxton  
 Stern, M. f. Eldon H., Stoke Newington  
 Garratt, E. Daisy Bank S., Roehdale  
 Hobson, M. Highfield S., Addiscombe  
 Holt, V. M. Gartlet, Watford  
 Le Cornu, E. f. Six Roads S., St. Lawrence, Jersey  
 Marchbank, J. N. 115 Elswick Rd., Newcastle-on-T.  
 McBurney, A. S. Avondale, Liverpool  
 Monday, K. M. Holmcroft Coll., Loughton  
 Robinson, A. E. St. George's H., Doncaster  
 Aldis, D. St. Augustine's, Norwich  
 Bays, E. A. Colville H., Swindon  
 Bowles, A. M. Clark's Coll. High S., Fitzroy Sq., W.  
 Deane, M. Collingwood Coll., Lee, N. E.  
 Drew, T. A. 'Jura,' Charing Cross, Birkenh'd  
 Fairweather, I. Ashley H., Workop  
 Palmer, I. M. Leybourne H., Aylesbury  
 Pulling, E. R. Salway Coll., Leytonstone  
 Williams, F. E. Brooklyn H., Wellington  
 Bray, C. P. Wellington Coll., Hastings  
 Dowse, L. M. Welland Hall Coll., Spalding  
 Greg, E. A. St. Margeret's, Cardiff  
 Holder, E. G. Cavendish High S., Redhill  
 Hunt, N. D. Oxford Lodge, Wolverhampton  
 Morison, G. A. 4 Jesmond Rd., Newcastle-on-T.  
 Taylor, N. E. V. Rougemont, Blackpool  
 Thompson, W. Clough S., Reigate  
 Bard, M. M. St. Mary's Day S., Highgate  
 Brunston, C. M. High S., Clungford  
 Salter, N. M. Torrhill Coll., Hastings  
 Squier, E. M. Coll. S., Stanford-le-Hope  
 Wilson, M. M. Ellerker Coll., Richmond Hill  
 Elliott, E. High S., Waltham Cross

GIRLS, 2ND CLASS, 3RD DIV.—Continued.  
 Markwell, K.M. Guelph Coll., Clevedon  
 Ross, H. 51 Ditchling Rise, Brighton  
 Searby, C. Spalding Coll. S.  
 Bhoze, M. George Green S., Poplar  
 Flecknoe, M.H. Licensed Victuallers' S., S.E.  
 Hamer, M.A. Henry St. S., Bolton  
 Heddy, J.M. St. Mildred's, Eastbourne  
 Searby, J.M. Spalding Coll. S.  
 Simpson, M. Beech H., Holmes Chapel, Crewe  
 Worswick, J. Saxonholme, Whalley Range  
 Cocksell, D. Gordon Square S., W.C.  
 Collins, L. Friends' S., Wigton  
 Cox, I.M. Larchmount Hall, Yatton  
 King, G.M. Welland Hall Coll., Spalding  
 Neal, M.B. 61 Pevensey Rd., St. Leonards  
 West, M.I. Coborn S., Bow  
 Wilkins, M. Cavendish High S., Redhill  
 Chambers, S.A. Moseley High S. for Girls  
 Crompton, C.S. St. Andrew's Hall, Southport  
 Fowler, B. Sidcot S., Winscombe  
 Garside, A. St. Andrew's Hall, Southport  
 Jones, M.W. Hazellhurst, Penarth  
 Tibbs, J.M. The Limes, Buckhurst Hill  
 Robson, V. Minerva Coll., Dover  
 Savage, C.M. Mecklenburg H., Putney  
 Shaw, W.H. Woodford S., Southsea  
 Bawden, D.M. St. Mildred's, Southsea  
 Grant, E. Gram. S., Goole  
 Williams, B.R.S. Brean Down H., Burnham, Som.  
 Cooper, C.C. Church H., Beckley, Sussex  
 Hammond, S.E. Ladies' Coll., Retford  
 Meggy, E. "Luttengate," Stoke Newington  
 Bell, L.A. Avondale, Liverpool  
 Bones, B. 40 Stockwell Park Rd., S.W.  
 Burningham, K. Grey Coat Hospital, Westminster  
 Heath, E. Milton Mount Coll., Gravesend  
 Lee, M.E. Montrose H., Margate  
 Patterson, E.A. Elvaston, Thurlow Park Rd., S.E.  
 Payne, H.S. 3 Plaisance Terrace, Jersey  
 Stewart, A. St. Catherine's S., Southampton  
 Bromley, M.A. Private tuition  
 Palmer, L.B. Pembroke H., Norwich  
 Ashby, D. Holmeroff Coll., Loughton  
 Cohen, A.M. Avondale, Liverpool  
 Davis, F. Clifton H., Knutsford  
 Frisdon, B.A. Duppas H., Herne Hill  
 Graham, V.R. Brondesbury High S. for Girls  
 Hirst, A. St. Andrew's Hall, Southport  
 Lewis, M.A. Windsor High S., L'pool  
 Louis, E.A. Hampton H., Redland, Bristol  
 Marks, E.M. Licensed Victuallers' S., S.E.  
 Sanderson, M. City of Durham S. for Girls  
 Thomas, W.M. Private tuition  
 Thompson, M.A.A. Licensed Victuallers' S., S.E.  
 Baldwin, M.O.G. 18 South St., Greenwich  
 Beal, D.E. Holmeroff Coll., Loughton  
 Rodway, C.G. The Hollies, Hagley Rd., Edgbaston  
 Treble, L.M. Grey Coat Hosp., Westminster  
 Barnes, L. Ashley H., Worksp  
 Cooper, E.M. d. Wellington Coll., Hastings  
 Lancaster, K. f. Wellington Coll., Hastings  
 Oxley, A.E. Gartlet, Watford  
 Scott, K.M. College H., Newbury  
 Thompson, R. Sidcot S., Winscombe  
 Gleave, E. Friends' S., Penketh  
 Goodban, W. Mornington H., W. Kensington  
 Jeffery, F.M. Private tuition  
 Robbins, H. Wilton H., Reading  
 Wigg, G.N.M. Private tuition

Third Class.—1st Division.

10nslow, G.F.M. s.h.f.t. Private tuition  
 2Crazer, H. Cambridge H., York  
 3Sharpe, A.M. Church H., Beckley, Sussex  
 4Goode, M.L. Mecklenburg H., Putney  
 5Davies, G.E. Longford S., Cotham, Bristol  
 6Friend, K.B. mu. High S., Chingford  
 7Rosset, J. s.c.h.g.f.g.e.d. Y. Garn, Bromley, Kent  
 8Moss, G. St. Olave's S., Taunton  
 9Tootell, O. s.f.g.e. Barton Hill, Marlborough  
 10Charles, D.S. L. Private tuition  
 11Gent, M. E. Langley H., Ashbourne  
 12Smith, C.G. Bedford Hill Coll., Batham  
 13Ford, A.E. Burlington S., W.  
 14Lorch, D. G. Clifton Lodge S., Lee  
 15Rogers, N. G. e.h.g.ph. People's Coll., Nottingham  
 16Sykes, E.H. s.e.h.g.a.g.e. Abbey H., Selby  
 17Livesey, E.D. Crossley & Porter S., Halifax  
 18Fittion, G.F. Church Mid. Cl. S., Leeds  
 19Gernon, J. ph. N. Hackney High S.  
 20Hartley, E.L. Burnley Hr. Grade S.  
 21Hutchinson, H. f. Valley Bridge H., Scarborough  
 22Whitehead, E.E. f.g.e. Clarence H., Fifey  
 23Yendon, J. Burnley Hr. Grade S.  
 24Bartlett, K.C. Private tuition

\*Martin, R. d. Clough S., Reigate  
 2Sinclair, E. mu. St. Hilda's, Exeter  
 3Frost, E.E. e.g.a.d. Langley H., Ashbourne  
 4Jones, G.M. s.h.f. Harborne Ladies' Coll.  
 5Wilson, E.M. f.d. High S., King Sq., Bridgwater  
 6Austin, E. Milton Mount C., Gravesend  
 7Cape, M. E. z. Private tuition  
 8Kippax, A.I. ch. Burnley Hr. Grade S.  
 9Livesley, L. e.g.a.d.e.u.d. Spalding Central Classes  
 10Richardson, K.L. St. Hilda's, Littlehampton  
 11Rowley, E. de la M. a. Modern High S., Penge  
 12Bascombe, N.W. a. Oakley High S., Southsea  
 13Jowett, H.M. Crossley & Porter S., Halifax  
 14Sargent, J.F. Vercoft, Devises  
 15Shearsmith, E.A. Abbey H., Selby  
 16Hopkins, C. St. Monica's S., Edgbaston  
 17Cadney, H.D. z. Brook Green Coll., W.  
 18Davey, F.M. f. Clark's C. High S., Fitzroy Sq., W.  
 19Appleton, E.E. e.a. Burlington School, W.  
 20Bonford, H.G. s.d. Dresden H., Evesham  
 21Stanley, C.W. The Manse, Little Baddon  
 22Vinnicombe, M. s.m.u. St. Hilda's, Exeter  
 23Young, G.M. s. Lonsdale H., Norwich  
 24Etherington, F.E. Langley H., Ashbourne  
 25Lammun, E.S. f. Mecklenburg H., Putney  
 26Lawford, A. s.e.a.g.e. Private tuition  
 27Mess, F.M. s.e. Luttengate, Stoke Newington  
 28Saville, G. Crossley & Porter S., Halifax  
 29Butler, F.S. Fortescue Coll., Radstock, Bath  
 30Gregson, E. s.h. Crossley & Porter S., Halifax  
 31Thackara, G.C. St. Bernard's, Southsea  
 32Davies, E.M. C. a.f.g.e. The Hollies, Malvern  
 33Upward, R.E. de L.E. f. St. Hilda's, Littlehampton  
 34Bate, M.S. g.a.e.u.f.g.e. Devonport High S.  
 35Newbery, G.A. s.g.a. Towcester S.  
 36Turner, C.M. s.e.a.f. Ladies' Coll., Wellington, Salop  
 37Tykora, H.A. s.f.d. St. André, St. Heliers  
 38Whitelaw, A.M. s.c.h.a.f. Hyde H., Tollington Park, N.  
 39Beach, A.C. s.g.a. Dresden H., Evesham  
 40Fintuane, M.H. G. Langley H., Ashbourne  
 41Halewood, A. e.g.a.f.h. St. Andrew's Hall, Southport  
 42Messiter, N. s.a. Witney S. of Science, Oxon  
 43Miles, G. s. Elmhurst S., Burgess Hill  
 44Schofield, E. Burnley Hr. Grade S.  
 45Alabone, E.M. s.h.d. Raleigh S., Stoke Newington  
 46Hunt, A. St. Bernard's, Southsea  
 47Johnson, E.E. mu. Ashleigh H., Tisbury  
 48Midgley, M.S. Friends' S., Saffron Walden  
 49Richardson, L. Brompton Science S., S.W.  
 50Cooke, S.I.V. Wintersdorf, Birkdale  
 51Davies, L.A. Southolme High S., Whalley Range  
 52Golden, M. f.d. Ashley High S., Long Sutton  
 53Parish, J.M. e.h.g. Rockville S., Chorlton-cum-Hardy  
 54Richardson, E. e.a. St. Andrew's Hall, Southport  
 55Tykora, E.M. s.a.f.d. St. André, St. Helier's  
 56Christmas, F.E. s.h.a.f. High S., Haslemere  
 57Fowles, E. Frinley Rd. S., Camberley  
 58Gorringe, E.M. South Croydon Coll.  
 59Hoddmott, M.C. Hazellhurst, Penarth  
 60Lodge, F.K. s. Millbridge S., Lr. Edmonton  
 61Viner, M.K. mu. Leybourne H., Aylesbury  
 62Watkins, L.L. s.c.h.a.f.d. Westbridge H., Herne Hill  
 63Wilson, E.M. mu. Oxford Lodge, Wolverhampton  
 64Chapman, E. Church Mid. Cl. S., Leeds  
 65Clark, F.M. Lonsdale H., Norwich  
 66Ventham, J. Oxford H., Leatherhead  
 67Davies, G.S. s.e.a. Millburn S., Forest Hill  
 68Lyons, A.G. e.a.d. Crossbeck H., Ilkley  
 69Steele, E.M. Milton H., Atherstone  
 70Whittaker, C.E. High S., Farnworth, Bolton  
 71Broadbent, G.A. s.a. Glengarry, Birkdale  
 72Carr, C. Oxford Lodge, Wolverhampton  
 73Halket, H. W. George Green S., Poplar  
 74Jones, G.A. d. Lulworth H. Caerleon, Mon.  
 75Wilcocks, M.A. g.a. Seaton H., Plymouth  
 76Anderson, D.B. s.e.a. Home Pk. C., Stoke  
 77Hart, A.J. Claremont, Margate  
 78House, N.M. Alexandra Coll., S'hampton  
 79Lomer, J.K.R. a. Roy. Masonic Inst., S.W.  
 80Thomas, E.M. f.d. Hendon Coll.  
 81Waller, N. St. Catherine's S., S'hampton  
 82Bennett, E.M. Girls' Coll. S., Aldershot  
 83Cavell, M.E. 6 Orchard Gdns., Teignm  
 84Cook, M. Friends' S., Saffron Walden  
 85Downey, G. d. St. Joseph's Conv., W. Hartlepool  
 86Jolly, J. a. d. The Hollies, Hagley Rd., Edgbaston

1Parry, M.E. Harley H., Hereford  
 2Tasman, D.K. Froebel H., Sandown  
 3Wallis, N. Fairholme, Rhyll  
 4Borton, M.E. Trafalgar Sq. S., Scarborough  
 5Britton, K. Wynaud H., Bowes Park  
 6Bunning, M.W. d. Lulworth H., Caerleon, Mon.  
 7Day, C.C. a.f.d. Royal Masonic Inst., S.W.  
 8Essex, M.M. Blendon H., Lewisham  
 9Frisby, I.D. Spalding Coll. S.  
 10Golden, E. a. 35 Dulwich Rd., Herne Hill  
 11Hunter, E. e.a.d. St. Andrew's Hall, Southport  
 12Marsland, M. a.d. Goodrich Rd. S., Dulwich  
 13Moffat, D.E. Camden H., Biggleswade  
 14Sellers, A.G. Private tuition  
 15Starkey, A. Girton H., Yeovil  
 16Wainwright, E. a.d. Convent of Loreto, Hulme  
 17Weyman, E.E. Southolme High S., Whalley Range  
 18Wheeler, M.B. s.f.g.e.d. Clarence H., Fifey  
 19Baynton, E.W. d. Bury H., Aylesbury  
 20Delacour, M. Girls' High S., Sudbury, Suffolk  
 21Faulkner, K.F. Henden H., Caversham  
 22Harding, M. Guelph Coll., Clevedon  
 23Jones, M.V. s.a. Ashburne H., Chestow  
 24Orbell, K. West Holme S., Clacton-on-Sea  
 25Swinhoe, E.R. St. Mildred's, Eastbourne  
 26Barlow, W.L. Westbourne H., Cowes  
 27Barnes, A.C. Somerville H., Northampton  
 28Davies, B.M. f. The Hollies, Malvern  
 29Davies, M.R. f. Minshull H., Beckenham  
 30Duckhouse, M.A. Stafford St. S., Breewood, Staffs.  
 31Ellerbeck, E.B. Highbury H., Lavender Hill  
 32Foster, G. e.a.f. Clough S., Reigate  
 33Holmes, W.R. e.a. Regent St. Higher Grade S., Plymouth  
 34Howard, C. s.e.a. Academy, Crewe  
 35Jevous, W.A. e.a. Ladies' Coll., Wellington, Salop  
 36Nairne, M. e.f. Convent of Loreto, Hulme  
 37Bolam, R. 4 Jesmond Rd., Newcastle-on-Tyne  
 38Bradley, D.P. Lindum H., Louth, Lincs.  
 39Carver, J.A. Private tuition  
 40Colden, N.F. a.f. St. André, St. Heliers  
 41Cove, P. F. The Crescent S., Norwich  
 42Crazer, E. a. Cambridge H., York  
 43Evans, E.D. K. e. Denehurst, Church Stretton, Salop  
 44Hulse, M. e.g. St. Augustine's S., Longton  
 45Loa, E. Grey Coat Hospital, Westminster  
 46Wallace, K. a. d. Priory Farm S., Earls Colne  
 47Ballard, H.M. e.a.f. Harley H., Hereford  
 48Bryant, O. a. Russell H., Grimsby  
 49Bunting, S.M. f. Friends' S., Saffron Walden  
 50Frape, B.L. Burgess Hill High S., Sussex  
 51Frape, D.F. s.m.u. Burgess Hill High S., Sussex  
 52Haddon, M.K. e.f.g.e. The Hollies, Malvern  
 53Jamison, M.W. e.a.f.g.e. Harlesden Coll.  
 54Lammun, F.L. f.s.p. Mecklenburg H., Putney  
 55Luckin, E.M. s.d. Highfield, Highbury Place, N.  
 56Morris, P. Comm. S., Ludlow  
 57Wilson, L.A. Crescent Coll., York  
 58Windle, W. e.a. d. Hall Gate, Doncaster  
 59Wright, W.M. f. The Hollies, Malvern  
 60Colley, M.E. Lansdowne Coll., Nottingham  
 61Heygate, G.M. a. Girls' Coll. S., Aldershot  
 62Hill, O.M. s.d. Lynwood, Trowbridge  
 63Lewis, J. s.e.h. Ladies' C., Wellington, Salop  
 64Mason, C.E. z. 5 Clapton Square, N.E.  
 65Peniston, E.M. e.a. Regent St. Hr. Grade S., Plymouth  
 66Pinder, N. Oxford Coll., Clacton-on-Sea  
 67Slater, G. E. s.h. d. Claremont Coll. S., Forest Gate  
 68Taylor, L. a. Convent of Loreto, Hulme  
 69Watton, W.M. Ladies' Coll., Wellington, Salop  
 70Bennett, M.A.S. s.e.a. d. Camden S. for Girls, N.W.  
 71Boss, B.C. d. Fitzroy Coll. S., W.  
 72Buck, E.G. d. Norfolk H., Gosport  
 73Carter, H.K. Private tuition  
 74Evans, C.H. The Briars, Hagley Rd., Edgbaston  
 75Frazier, O.B. a.f.d. Ladies' Coll., Wellington, Salop  
 76Freeman, D.J. h.a.f.d. West Ham High S.  
 77Frowd, M. Highbury H., Lavender Hill  
 78Gooderham, E. Waveney H., Harleston  
 79Jackson, C.M. P. a.f.g.e. Pembroke H., Lee, S.E.  
 80Langendorf, M.M. g.e. George Green S., Poplar  
 81Lawrence, A.K. Clark's Coll. High S., Fitzroy Sq., W.  
 82Macnaghten, A. a.f.g.e. 26 Ashley Rd., Hornsey Rise  
 83Robinson, J. g.e. Minerva Coll., Dover  
 84Wall, C. Stoke S., Devonport  
 85Wallis, E.E. A. South End Girls' S., Castle Cary  
 86Williams, F. Milton Mount C., Gravesend

Wright, C.L. e. St. Mildred's, Eastbourne  
 1Alcott, E. e.a. The Brook High S.  
 2Brown, E.H. f. Royal Masonic Inst., S.W.  
 3Cardwell, S.A. g.d. Girls' S., Promenade, Blackpool  
 4Davison, M. s.e.d. Glengarry, Birkdale  
 5Davies, E.W. e.a. Muswell Hill High S., N.  
 6Grogan, H.M. Convent S., Queen St., Scarborough  
 7Halsall, D. St. Andrew's Hall, Southport  
 8Hatherell, L.E. Stainsbridge Coll., Malmesbury  
 9Jenkins, M.J. s. Lytham & Fairhaven Coll.  
 10Jones, G.M. A. Pengwern, Cheltenham  
 11Tiffin, R.E.F. h.a.d. Camden S. for Girls, N.W.  
 12Whitwam, R. St. Mildred's, Eastbourne  
 13Williams, A. a. St. Andrew's Hall, Southp't  
 14Wilson, L.M. Henry St. S., Bolton  
 15Cardall, H.M. e.a. d. Ladies' Coll., Wellington, Salop  
 16Dalton, L. z. Milton Mount C., Gravesend  
 17Derriman, F.E. J. f. Avonbank H., Bath  
 18Drake, N. J. Coll. S., Lapford, Devon  
 19Elliot, M.O. Arundel H., Scarborough  
 20Forrer, H.A. A. e.f.g.e. Avondale, Liverpool  
 21Godard, M.R. s. Burgess Hill High S., Sussex  
 22Grey, M.M. Cliffe H., Gravesend  
 23Hatwood, C. Fairholme, Rhyll  
 24Hatwood, G. Fairholme, Rhyll  
 25Hardman, B. e.a. St. Andrew's Hall, Southport  
 26Koop, H.M. L. f.g.e. d. Westcombe, Dyke Rd., Brighton  
 27Mitchell, I. e. Collingwood C., Lee, S.E.  
 28Neate, M. e.f. College H., Newbury  
 29Page, K.E. Bute H., Deal  
 30Tawins, A. Vercoft, Devises  
 31Kundell, H.H.M.C. George Green S., Poplar  
 32Scott, D. d. Alexandra Coll., S'hampton  
 33Taylor, J.M. 4, Jesmond Rd., Newcastle-on-Tyne  
 34Wright, C. g. Milton H., Atherstone  
 35Armour, J. d. 4, Jesmond Rd., Newcastle-on-Tyne  
 36Blomfield, M.E. d. Friends' S., Saffron Walden  
 37Claxton, M. f. Dennington C., Hampstead  
 38Cotter, P.K. Royal S., Bath  
 39Frost, G.N. e.a. Bridge H., Royston, Herts  
 40Hiley, M.E. e.a. d. St. Maur Coll., Chestow  
 41Holland, E. s.a.f.d. 6, Chandos Rd., Buckingham  
 42McQuown, C.M. a.f.d. Camden S. for Girls, N.W.  
 43Mitchell, H.L. a.f. Regent St. Hr. Grade S., Plymouth  
 44Potts, K. a. Lime Tree H., York  
 45Smith, E. St. Winifred's, Southampton  
 46Sowery, M.G. St. George's C., Hamstead  
 47Stephenson, E. h.d. St. Joseph's Conv., W. Hartlepool  
 48Tuff, W.G. a.d. Burlington School, W.  
 49Wilcox, G. a.d. St. Andrew's Hall, S'port  
 50Andrew, E.A. Crescent Coll., York  
 51Ballantine, M.A. Cleveland C., S. Hackney  
 52Barritt, E.M. a.d. Friends' S., Saffron Walden  
 53Beghin, M. a.f. St. André, St. Heliers  
 54Birdsall, G. e.a. Abbey H., Selby  
 55Brown, N. E. Park H., Conington  
 56Carpenter, M.W. Burton H., Weston-s.-Mare  
 57Chubb, E.M. f. North Park Coll., Croydon  
 58Clark, D. a. Bridge H., Royston, Herts  
 59Cohen, A.R. a.g.e.d. Minerva Coll., Dover  
 60Cundell, M. a. Crossbeck H., Ilkley  
 61Daulman, G.E. d. College H., Holyhead Rd., Coventry  
 62Duxfield, M. a. St. Andrew's Hall, S'port  
 63Eisey, K.S. d. Mecklenburg H., Putney  
 64Fletcher, L.H. St. André, St. Heliers  
 65Forrest, E. a. Burnham H., E. Bridgford  
 66Gowen, E.D. Grosvenor S., Wokingham  
 67Jones, M. St. Joseph's Conv., W. Hartlepool  
 68Knight, G. s. Western H., Nottingham  
 69Longland, K.A. Girls' High S., Swindon  
 70Medd, M. d. Valley Bridge H., Scarborough  
 71Merrington, F.M.M. The Laurels, Herne Bay  
 72Rider, E.C. Oakley High S., Southsea  
 73Robertson, M. Waveney H., Harleston  
 74Simpson, L.N. 14 Cliff Pk. Villas, Southend  
 75Stokes, H.G. a. Orchard Lodge, Malvern  
 76Swann, M. d. Breakspoor Coll., Brockley  
 77Walker, E.B. s.a.f. Avonbank H., Bath  
 78Webster, D.F. a. d. Highfield, Highbury Pl., N.  
 79Williamson, A. e.f. Private tuition  
 80Young, G. a. d. Raleigh S., Stoke Newington  
 81Barber, C.A. West Ham High S.  
 82Billingham, W.M. Milford H., Newport, Mon.  
 83Caws, M.H. Westbourne H., Cowes  
 84Ceill, E. e. Wharnciffe H., Sandown  
 85Dearnally, A.E. s. The Grange S., Marple  
 86Dell, N. Friends' S., Saffron Walden  
 87Dobell, W.A. St. Mildred's, Eastbourne  
 88Dyer, E.K. d. Claremont Coll. S., Forest Gate  
 89Frecker, H. s.e.a. d. Camden S. for Girls, N.W.

GIRLS, 3RD CLASS, 1ST DIV.—Continued.  
 \*Gillingham, M.C. Private tuition  
 \*Hadden, E. Licensed Victuallers' S., S.E.  
 \*Hutton, F. s. Cornwallis High S., Hastings  
 \*Hayzen, H.M. West H., Forest Hill  
 \*Lang, G.L. Gariet, Watford  
 \*Mallett, A.C. Licensed Victuallers' S., S.E.  
 \*Pidge, S.R. Clifton H., Knutsford  
 \*Padgett, S. Regent St. Hr. Grade S., Plymth  
 \*Verinder, F. Eldon H., Stoke Newington  
 \*Wood, C.M.L. Grattan H., Malvern  
 \*Arnold, G. Holloway Coll., N.  
 \*Beck, H. Gate Burton S., Lincoln  
 \*Brewster, K. Milton Mount C., Gravesend  
 \*Carr, M.J. Private tuition  
 \*Davies, H.M. Modern Coll. S., Rhyl  
 \*Downey, C. St. Joseph's Conv., W. Hartlepool  
 \*Funnell, B.L. Llanreath, Boscombe  
 \*Hopper, E.H. s. Devonshire H., Bridlington  
 \*Looker, M.E.A. Girls' S., Promenade, Blackpool  
 \*Moon, G.M. Fortescue C., Radstock, Bath  
 \*Salter, A. a. Southernhay S., Exeter  
 \*Scott, E.M. Burlington S., W.  
 \*Simpson, M.W. a. a. 14 Wilson St., Derby  
 \*Taylor, D.O. a. Russell H., Grimsby  
 \*Tee, E.M. e. a. Gwyrfai, East Cowes  
 \*Turner, J. People's Coll., Nottingham  
 \*Washington, J. f. d. Warren Grove, Barnsley  
 \*Whitman, K. St. Mildred's, Eastbourne  
 \*Williams, E. Abbey H., Abbey Rd., N.W.  
 \*Atrill, M.I. Westwing Coll., Ryde  
 \*Beard, B.E. Dore and Totley High S., Yorks.  
 \*Bran, H.M. a. George Green S., Poplar  
 \*Buchanan, J. R. a. 26 Trinity Rd., Bootle  
 \*Dunlop, M.E. e. Moorlands, Harrogate  
 \*Fletcher, M.E. St. Mary's S., Bungay  
 \*Fowler, C.O. Churchill H., Alcester  
 \*Headington, I.W. Vernon, Pembroke Villas, Bayswater  
 \*Howells, E. Towercester S.  
 \*Kent, E.M. Crossley & Porter S., Halifax  
 \*Lees, G. Convent of Loreto, Hulme  
 \*Moore, G.L. e. d. Private tuition  
 \*Nash, E.A. e. Kingsgate St., Winchester  
 \*Rayner, E. Private tuition  
 \*Reeve, E.S. E. Girls' High S., Sudbury, Suffolk  
 \*Sawyer, A. Brompton Science S., S.W.  
 \*Seabry, K. a. Goodrich Rd. S., E. Dulwich  
 \*Batts, L.G. Alexandra Coll., S'hampton  
 \*Cosford, I. a. Goodrich Rd. S., E. Dulwich  
 \*Crawford, E.M. a. Eton H., Sheff. Id  
 \*Dale, M. Parkfield Ladies' C., High Barnet  
 \*Daynes, N.L. Private tuition  
 \*Denison, M. s. Wintersdorf, Birkdale  
 \*Goldney, O.H.M. Dorchester H., Clacton-on-Sea  
 \*Hill, D.M. f. St. Hilary s., Scarborough  
 \*Holder, L.A. Stainsbridge C., Malmesbury  
 \*Jackson, H.G. Ellerker C., Richmond Hill  
 \*Kay, E.M. Crossley & Porter, S. Halifax  
 \*Kelland, R.A. d. Girton H., Yeovil  
 \*Kitts, E.M. Woodward H., Sunderland  
 \*McCall, V.M. Stainsbridge C., Malmesbury  
 \*Mould, M.G. s. People's C., Nottingham  
 \*Pirrie, M. ge. Brook Green Coll., W.  
 \*Saunderson, M.D. a. Wilber H., Biggleswade  
 \*Scott, M.J. s. Burlington S., W.  
 \*Sherratt, H.L. Lutworth Lodge, Birkdale  
 \*Straehan, E.A. a. d. Parkfield Ladies' Coll., High Barnet  
 \*White, A. Leybourne H., Aylesbury  
 \*Bardney, R.M. Langley H., Ashbourne  
 \*Boadella, F.L. s. e. Clark's Coll. High S., Fitzroy Sq., W.  
 \*Chapman, B. Stoke S., Devonport  
 \*Chapman, O.M. a. Russell H., Grimsby  
 \*Dimond, E.A. Parkfield Ladies' Coll., High Barnet  
 \*Foster, A.M.C. a. Kendrick Girls' S., Reading  
 \*Gibson, M. e. Haddo & Westwood Coll. S., Scarboro  
 \*Harding, W.L. e. h. a. Larchmount Hall, Yatton  
 \*Holton, H.W. a. 2 Chandos Rd., Buckingham  
 \*Hooper, L. Hanover H., Ryde  
 \*James, M.J. Ronton Vicarage, Eccleshall  
 \*Pogson, E.M. d. Wellington C., Hastings  
 \*Porter, A. e. a. Melbourne Coll., Thornton Heath  
 \*Pritchard, E. Grey Coat Hospital, Westminster  
 \*Ruddin, N. Convent of Loreto, Hulme  
 \*Shakeshaft, E.M. s. Camden H., Biggleswade  
 \*Tarbet, M.H. Dixfield S., Exeter  
 \*Withycombe, B.M. West View, Highbridge, Som.  
 \*Beech, M. The Hollies, Hagley Rd., Edgbaston  
 \*Bowden, L.S. Albert Villas S., Manchester  
 \*Carter, W.F. e. Normanton, Preston Pk., Brighton  
 \*Coles, M. e. g. Health Cottage S., Blaenavon, Mon.  
 \*Dunk, W. E. Modern High S., Penze  
 \*Dyer, B.G. 61 Penveney Rd., St. Leonards  
 \*Enion, S. h. a. f. S7 Shakespear St., M'chester

Green, M.E. Llanreath, Boscombe  
 \*Harris, M. 37 Victoria St., Norwich  
 \*Holiday, F. e. a. Reading High S.  
 \*Holman, N. s. e. 3 Brunswick Sq., Exmouth  
 \*James, E.R. Southernhay S., Exeter  
 \*Jones, L. a. e. Sleppe Hall, St. Ives, Hunts  
 \*Morr, J.A. C. Clarence H., Filey  
 \*Murphy, L.G. Coborn S., Bow  
 \*Pearce, C.G. Gram. S. for Girls, Worcester  
 \*Pedley, M.E. s. h. Ladies' Coll., Wellington, Salop  
 \*Powell, K. a. d. Royal Masonic Inst., S.W.  
 \*Reeve, L.E. s. e. a. S. Croydon S. for Girls  
 \*Simmons, E. Thornbeck H., Darlington  
 \*St. Barbe, O. St. B. Grattan H., Malvern  
 \*Taylor, M.L. Coll. S., Brentford  
 \*Turnham, E.M. Leybourne H., Aylesbury  
 \*Webb, I.M. Wm. Gibbs' S., Faversham  
 \*Willmott, V. Gresham Coll., Brixton  
 \*Yorwerth, F. m. u. Hazelhurst, Penarth  
 \*Bailey, M.J. Royal Masonic Inst., S.W.  
 \*Clapman, E. a. d. St. Andrew's Hall, Southport  
 \*Coates, M.A. Southbrooke, Middlesbrough  
 \*Griffin, G.A. s. Avonbank H., Bath  
 \*Grundy, E. d. Enville H., Ashton-under-Lyne  
 \*Hayward, E.M. College H., Newbury  
 \*Hobbs, G. Evering High S., S. Newington  
 \*Howard, H.O. e. Fairlawn S., Newmarket  
 \*Hughes, G.G. Arville Coll., Rhyl  
 \*Jessup, K.H. Wm. Gibbs' S., Faversham  
 \*Lucking, R. e. f. Westwood, Maldon, Essex  
 \*McKenna, G. Convent of Loreto, Hulme  
 \*Prince, F.B. 14 Wilson St., Derby  
 \*Sankey, C.E. e. Albert Parks, W. Disbury  
 \*Sears, M.A. Leybourne H., Aylesbury  
 \*Staddon, H.M. St. Winifred's S., Torquay  
 \*Taylor, S. Burnley Hr. Grade S.  
 \*Tebbit, D. Oxford Coll., Clacton-on-Sea  
 \*Wainwright, A. d. St. Andrew's Hall, Southport  
 \*Warnes, M. Devonshire H., Bridlington  
 \*Wood, M.A. f. Lansdowne H., Llandudno  
 \*Wyse, O. d. St. Andrew's Hall, Southport  
 \*Baines, D.G. a. d. Ellesmere H., Whitechurch  
 \*Bottle, B. York H., Stony Stratford  
 \*Brown, B.T.M. St. George's C., Hampstead  
 \*Butler, M.E. d. Sidcot S., Winscombe  
 \*Cant, G. s. e. Wintersdorf, Birkdale  
 \*Cavander, V. I. s. Parkfield Ladies' Coll., High Barnet  
 \*Copey, M.F. a. f. Camden S. for Girls, N.W.  
 \*Denton, M.L. Pembroke H., Norwich  
 \*Fairclough, M. Convent of Loreto, Hulme  
 \*Forrest, V.R. Private tuition  
 \*Forster, M. Southbrooke, Middlesbrough  
 \*Grant, W. Carlton Road S., Burnley  
 \*Goldsmith, B.J. Llandaf H., Norwich  
 \*Griffiths, F. a. Hill House C., Haverfordwest  
 \*Harris, E. Tivoli H., Gravesend  
 \*Hutchinson, M.E. St. Maur C., Chestport  
 \*Jacob, K. a. Brightbe Coll., Southend  
 \*Lord, G.M. Church H., Beckley, Sussex  
 \*Olson, E.G. High S., Chingford  
 \*Procter, N. a. d. Milton Mt. C., Gravesend  
 \*Rochnann, E.O. e. a. e. Westbourne S., Westbourne Park, W.  
 \*Rowell, M. a. d. 4 Jesmond Rd., Newcastle-on-Tyne  
 \*Stephens, G. Milton Mt. Coll., Gravesend  
 \*Summers, L.A. a. Cotswold H., Dursley, Glos.  
 \*Webber, M. The Private S., S. Monitun  
 \*Willmott, G. Gresham Coll., Brixton  
 \*Wilson, H. Henry St. S., Bolton  
 \*Wood, R. a. 18 Railway St., Beverley  
 \*Barber, C.A. Parkfield Ladies' Coll., High Barnet  
 \*Bennett, A.M. Girls' Coll. S., Aldershot  
 \*Bown, G.S. d. Rosshorne High S., Weston-s. Mare  
 \*Bragger, E.R. a. f. Langley H., Friern Rd., Dulwich  
 \*Bray, I.E. d. Wellington Coll., Hastings  
 \*Bray, M. Valley Bridge H., Scarborough  
 \*Burt, M.E. 9 King's Avenue, Ealing  
 \*Cross, E. F. Beech H., Eccles  
 \*Dugdale, G.L. Cambridge H., Chichester  
 \*Ellen, E.M. a. d. Camden S. for Girls, N.W.  
 \*Farmer, R.C. d. Private tuition  
 \*Haddan, M.C. 2 Alieyn Crescent, W. Dulwich  
 \*Harris, A. Totnes Girls' S.  
 \*Hill, R.A. G.M. s. Dagmar H., Hatfield  
 \*Hunt, E.A. e. d. West Ham High S.  
 \*Kidgell, E.A. Summerbrook, Reading  
 \*King, E.M. Down End, Clifton  
 \*McCurdy, N. a. Fulford Field H., York  
 \*Morley, M.C. Lanceland S., Southend  
 \*Morley, E.O. d. 2 Alieyn Crescent, W. Dulwich  
 \*Nicholas, C.E. e. d. Longford S., Cotham, Bristol  
 \*Northwood, E.M. s. e. Lansdowne H., Llandudno  
 \*Rice, E.N. Alexandra C., Southampton  
 \*Speak, J. Coll. S., Bishop Auckland  
 \*Spencer, M. d. St. Joseph's High S., Bracknell  
 \*Stallybras, E. Milton Mt. C., Gravesend  
 \*Stocks, A.B. e. Burleigh H., Aylesford

\*Watts, I.N.S. Grey Coat Hosp., Westminster  
 \*Wightman, G.M. a. d. 3 Brunswick Sq., Exmouth  
 \*Willis, M.M. Wm. Gibbs' S., Faversham  
 \*Alexandre, A.C. a. 48 David Place, Jersey  
 \*Barnett, D. e. d. Balham S.  
 \*Birtwhistle, J.M. Private tuition  
 \*Chantry, E.A. Onsegate S., Selby  
 \*Close, E.S. Southbrooke, Middlesbrough  
 \*Cowen, E.R. d. Oakfield, Booth St., Handsworth  
 \*Couch, I.M. e. Rockvale, Brixham  
 \*Daintry, E. e. a. Bridge H., Royston, Herts.  
 \*De Robert, K.E.M. Modern High S., Penze  
 \*Denham, L.I. Licensed Victuallers' S., S.E.  
 \*Evans, S.M. e. Harley H., Hereford  
 \*Foskett, T.E. e. Camden S. for Girls, N.W.  
 \*Gant, L.M. Collingwood Coll., Lee, S.E.  
 \*Glendon, E.A. m. u. Aston H., Hammersmith  
 \*Griffin, E. Orchard Lodge, Malvern  
 \*Heaton, A.M. Warbreck C., Aintree, L. pool  
 \*Hobday, R.M. Eastfield S., Walthamstow  
 \*Hopkins, L. a. St. Andrew's Hall, S' thport  
 \*Hughes, M.A. a. Grosvenor S., Wokingham  
 \*Lewis, B. St. Maur Coll., Chestport  
 \*Lupton, N.L. People's Coll., Nottingham  
 \*Moorhouse, A. St. Andrew's Hall, S' thport  
 \*Oughton, M.G. d. Coll. S., Bp. Auckland  
 \*Parry, C.M. e. d. Harley H., Hereford  
 \*Payze, M. e. Thanet Hall, Margate  
 \*Sharp, J.O. a. Thorsey C., Kings Lynn  
 \*Sowter, B.A. e. g. a. f. Conv. S., Queen St., Scarborough  
 \*West, M.F. f. Camperdown, W. Norwood  
 \*Withell, G. Stoke S., Devonport  
 \*Wourne, C.E. Hartington H., Beckenham  
 \*Young, P. d. Benwell Delaval S., N. castle  
 \*Bray, M. Cornwallis High S., Hastings  
 \*Buckthrought, E.L.M. Seaton H., Plymth  
 \*Cetti, B. a. Brooklyn H., Wellington, Salop  
 \*Childs, L.C. Private tuition  
 \*Clarke, H.L. Coll. S., Lappford, Devon  
 \*Clarke, K.A. s. West St. S., Buckingham  
 \*Craig, J. a. d. Coll. S., Stanford-le-Hope  
 \*Davies, G.J. Fulford Field H., York  
 \*Davies, L.L. The Queen's S., Chester  
 \*Easterbrook, C.B. e. a. Modern S., Torquay  
 \*Franklin, E. Ellerker C., Richmond Hill  
 \*Franklin, E. Twickenham Coll.  
 \*Garlick, E. a. Cumberland C., Acoek's Green  
 \*Haigh, J.M. St. George's Coll., Barnsley  
 \*Hayes, E.H. Grey Coat Hospital, Westminster  
 \*Hill, M. Cornwallis High S., Hastings  
 \*Hindle, J.L. Glangarry, Birkdale  
 \*Hurluck, E.W. Camden S. for Girls, N.W.  
 \*Kelley, F. s. Lytham & Fairhaven Coll.  
 \*Leaman, E.A.R. Coryth H., Mutley, Plymouth  
 \*Lundberg, E. Gresham Coll., Brixton  
 \*Mawson, D. Arlington H., Newport, Mon.  
 \*Morey, D.G. a. 3 Brunswick Sq., Exmouth  
 \*Roberts, M.H. Girls' High S., Swindon  
 \*Saies, E.M. Friends' S., Saffron Walden  
 \*Quire, D.B. Parkfield Ladies' Coll., High Barnet  
 \*Strip, B. a. Licensed Victuallers' S., S.E.  
 \*Thomas, M.B. St. Margaret's, Cardiff  
 \*Thurston, I. Collingwood Coll., Lee, S.E.  
 \*Verdin, M.E. Licensed Victuallers' S., S.E.  
 \*Wade, G.M. Girls' High S., Sudbury, Suffolk  
 \*Wallace, E. Milton Mount C., Gravesend  
 \*Blurton, F.I. St. Cecilia's Coll., Margate  
 \*Bonner, C. Royal Masonic Inst., S.W.  
 \*Box, K.M.C. a. d. St. Maur Coll., Chestport  
 \*Cameron, U.C. e. f. Dixfield S., Exeter  
 \*Collicutt, F.B. s. Alexandra C., S'hampton  
 \*Colebrook, G. Malvern H., Birkdale  
 \*Glandfield, L.L. s. St. Margaret's, Cardiff  
 \*Goodman, M.E. do. Queen's C., Hampstead  
 \*Gunner, E.A. Whitgift H., Croydon  
 \*Jones, K. a. St. Lawrence's, Long Buckley  
 \*Kasner, F.L. e. a. Private tuition  
 \*Luscombe, B.A. Camborne H., Torquay  
 \*Mather, A.E. Blendon H., Lewisham  
 \*McCaif, C.M. Royal Masonic Inst., S.W.  
 \*Miles, D.E. Clark's Coll. High S., Fitzroy Sq., W.  
 \*Munden, A.S. Westbourne S., Westbourne Pk., W.  
 \*Philpott, D. e. 4 Jesmond Rd., Newcastle-on-Tyne  
 \*Pigg, W.I. Private tuition  
 \*Prestige, C.J. Hill House C., Haverfordwest  
 \*Rantzen, R. Mansfield H., Maide Vale, W.  
 \*Richardson, M. The Halve, Trowbridge  
 \*Talents, L.H. d. Warren Grove, Barnsley  
 \*Thomas, L. Hoghton Ter. S., Southport  
 \*Williams, A.L. a. Girls' Coll. S., Aldershot  
 \*Woods, N. a. d. Ellerker C., Richmond Hill  
 \*Baker, M.B. d. Coll. S., Brentford  
 \*Barratt, M.E. Glebe Pl. S., Clissold Pk., N.  
 \*Bassett, E.M. a. d. Roy. Masonic Inst., S.W.  
 \*Beresford, L.A. a. 14 Wilson St., Derby  
 \*Bhekwell, D. d. Wakefield H., Norwich  
 \*Canfor, J.L. Westbourne S., Westbourne Pk. W.  
 \*Clements, E.M. St. Winifred's, Hastings  
 \*Edwards, W.C. Abercromby S., Liverpool  
 \*Etheridge, B.M. George Green S., Poplar  
 \*Franklyn, H.A. e. Private tuition

Goldthorpe, M. Hall Gate, Doncaster  
 \*Green, I. d. South Villa S., Rotherham  
 \*Grove, B.H.M. Ystrad H., Newport, Mon.  
 \*Hayes, O.E. Battersea Polytechnic  
 \*Holley, D. a. St. Bernard's, Southsea  
 \*Jones, L.A. Sunfield H., Wellington, Salop  
 \*Kidson, E.D. Ladies' C., Wellington, Salop  
 \*Lempriere, M.M. Glebe Pl. S., Clissold Pk., N.  
 \*Matthews, M. s. Lansdowne H., Llandudno  
 \*Newbery, E. s. Church H., Beckley, Sussex  
 \*Smallbridge, M.A. R. Adhiscombe S., Barnstaple  
 \*Smith, B.B. f. Friends' S., Saffron Walden  
 \*Springer, M.E. f. g. e. Minerva Coll., Dover  
 \*Tamlyn, M.L. e. a. Hill House C., Haverfordwest  
 \*Tanner, W.E. a. Woodstock Rd. S., Finsbury Park  
 \*Taylor, N. a. Licensed Victuallers' S., S.E.  
 \*Tucker, P.E. s. e. Totnes Girls' S.  
 \*Turnbull, H.I. Thornbeck H., Darlington  
 \*Waddington, B. s. Devonshire H., Bridlington  
 \*Warren, M.M.A. a. Ashley High S., Long Satton  
 \*Wilkinson, C.M. g. Conv. S., Queen St., Scarborough  
 \*Wilkinson, V.A.M. 14 Vernon St., Derby  
 \*Willmott, O.M. s. i. Private tuition  
 \*Yeo, F.L. g. Colville H., Swindon  
 \*Bowhill, E.M. Pembroke H., Norwich  
 \*Burslem, M. a. Newton H., Tunb. Wells  
 \*Cremer, S. Wm. Gibbs' S., Faversham  
 \*Davies, L.D. Normanton, Preston Pk., Brighton  
 \*Ellett, E. George Green S., Poplar  
 \*Gambler, H.F. 51 Ditching Rise, Brighton  
 \*Harper, L. Coll. S., Brentford  
 \*Harris, E. Collingwood Coll., Lee, S.E.  
 \*Heath, E. e. h. g. St. Margaret's High S., Lee, S.E.  
 \*Holman, W. Eton H., Cheltenham  
 \*Horman, J. S. a. f. Six Roads S., St. Lawrence, Jersey  
 \*Humphries, D. St. George's Coll., Barnsley  
 \*Knight, A. St. Mary's S., Bungay  
 \*Langton, A.M. Private tuition  
 \*Linton, K. Crossley & Porter S., Halifax  
 \*Lowry, W. Claville H., Stoke Newington  
 \*Luther, M.A. d. Shrewsbury Coll.  
 \*Page, C. G. Ebrington H., Exeter  
 \*Peace, E.A. Tue Brook High S., L'pool  
 \*Pearcey, G.E. Grey Coat Hospital, Westminster  
 \*Penwarden, I. St. Hilda's, Exeter  
 \*Powell, G.M. a. People's C., Nottingham  
 \*Rogers, E.A. Red Maid's S., Bristol  
 \*Sidwell, G.A. Harborne Ladies' Coll.  
 \*Simpkins, M.A. Gyanern, Caine  
 \*Stokes, M.T. Winsley, St. Mildred's Rd., Lee, S.E.  
 \*Taylor, A. H. Calthorpe H., Banbury  
 \*Thompson, E.G. s. d. High S., Poplar Avenue, Edgbaston  
 \*Tidey, M. s. Oxford H., St. Leonards  
 \*Verinder, A. Eldon H., Stoke Newington  
 \*Woodroffe, F. d. Camden S. for Girls, N.W.  
 \*Beall, M.F. 1, Childebert Rd., Balham  
 \*Bchn, A. Private tuition  
 \*Belsham, F.A. a. Sussex H., Willesden Lane  
 \*Berestord, N.C. a. Coll. S., Stanford-le-Hope  
 \*Bullen, W.E. Seaton H., Plymouth  
 \*Catchpole, B.A. Fairlawn S., Newmarket  
 \*Cattord, D. s. d. Friends' S., Saffron Walden  
 \*Connor, E.M. ge. Private tuition  
 \*Dorshyshire, M. e. Clifton H., Knutsford  
 \*Dickson, V.L. s. Wintersdorf, Birkdale  
 \*Fearon, L. d. Clough S., Reigate  
 \*Foster, F.M. St. Margaret's, Cardiff  
 \*Furze, D. d. Clough S., Reigate  
 \*Garbett, F.M. Brooklyn H., Wellington, Salop  
 \*Greenwood, E. Burnley Hr. Grade S.  
 \*Hayman, A.M. 3 Brunswick Sq., Exmouth  
 \*Henderson, I. a. Westoe High S., S. Shields  
 \*Hensman, J.E. Queen's Coll., Acton  
 \*Hobbs, E. Vernon, Pembroke Villas, Bayswater  
 \*Hopkinson, F.A. Ashley H., Worksp  
 \*How, E. Stoke S., Devonport  
 \*Howarth, G.M. s. Wintersdorf, Birkdale  
 \*Irwin, M.G. Private tuition  
 \*Jermyn, I. s. d. Milton Mount C., Gravesend  
 \*King, M.A. a. Vale View H., Devizes  
 \*Lancaster, M.E. a. Western H., Nottingham  
 \*Lyon, E.M. s. h. f. Crossback H., Hkley  
 \*Mallan, J.R.T. Tivoli H., Gravesend  
 \*Mann, J.M. Priory Farm S., Earls Colne  
 \*Morris, G. Royal Masonic Inst., S.W.  
 \*North, E.A. Henden H., Caversham  
 \*Putt, H.I.E. a. Holloway Coll., N.  
 \*Teld, M.I. Whitgift H., Croydon  
 \*Simpkins, A.M. Gyanern, Caine  
 \*Smith, A.B. Licensed Victuallers' S., S.E.  
 \*Thomas, D.B. Private tuition  
 \*Towle, E. a. Milton Mount Coll., Gravesend  
 \*Underhill, H.M. Ladies' Coll., Wellington, Salop  
 \*Wenden, A.S. Coborn S., Bow  
 \*Williams, E.C. d. Brooklyn H., Wellington, Salop

GIRLS, 3RD CLASS, 1ST DIV.—Continued.  
 Young, B. s.d. Claville H., S. Newington  
 Anderson, A.G. s.  
 Brownhill's H., Southampton  
 Bayne, K.W. d.  
 4 Jesmond Rd., Newcastle-on-Tyne  
 Brinnie, K.A.T. Camden S. for Girls, N.W.  
 \*Capstick, E.M. Avondale, Liverpool  
 Cole, E.V. Milton Mount Coll., Gravesend  
 Cottle, G. a. Seaton H., Plymouth  
 Dickie, B. Gresham Coll., Brixton  
 Evans, P.J. a. Brentwood, Southampton  
 Freeman, R.H. People's Coll., Nottingham  
 Hornburn, E.W. s.d. Spalding Coll. S.  
 Hornblow, M.E. s.  
 Friends' S., Saffron Walden  
 Howarth, G.M. a. Eton H., Sheffield  
 Jenkins, S. a. Clark's Coll. High S., Brixton  
 Jordan, E.M. Addiscombe S., Barnstable  
 Kent, W.M. Torrhill Coll., Hastings  
 Kenyon, A. Burnley Hr. Grade S.  
 Le Gresley, A.M.G.  
 Ashton H., St. Clement's, Jersey  
 \*Linington, A.J. Roan Girls' S., Greenwich  
 Lovelless, M. Royal Masonic Inst., S.W.  
 \*Mills, J.C. 14 Wilson St., Derby  
 Milne, M.M. a. George Green S., Poplar  
 Moore, K.M. Prospect H., St. Neots, Hunts  
 \*Pollott, W. South Croxton Coll.  
 Radford, E. a. Beechholme Coll., Belper  
 \*Rawlins, E. Summerbrook, Reading  
 Stringer, H.M. e.  
 The Limes, Buckhurst Hill  
 Taplin, E.M. Camden S. for Girls, N.W.  
 Timms, W.C. a.d. S. Hornsey Board S., N.  
 \*Tuck, A. St. Olave's S., Taunton  
 Webb, E.M.J. a. St. Kilda's Coll. S., Bristol  
 Williams, V.M. f. Camden S. for Girls, N.W.

Third Class.—2nd Division.

Adams, L. Collingwood C., Lee, S.E.  
 Alexander, M.C. s. Mayfield C., Marlboro'  
 Bonham, M.A. Prospect H., St Neots, Hunts  
 Bulleyn, E.M. d. Abbey H., Abbey Rd., N.W.  
 Cole, F.M. a. Guelph C., Clevedon  
 Darby, V.G. Lancelfield S., Southend  
 Ellam, C.G.  
 Parkfield Ladies' C., High Barnet  
 \*Fisher, E.K. Upland S., Newbury  
 \*Ford, J.R. St. Maur C., Chestport  
 Gazel, L. Zelzah H., St. Heliers  
 Goddard, E. Clough S., Reigate  
 Grummitt, A. Spalding Coll. S.  
 Hall, M.B. a. Girls' Coll. S., Whitechurch  
 Hallowell, D.  
 Westview, Grosvenor, Margate  
 \*Haughton, A.E. Ladies' Coll., Rotherford  
 Hiscock, M.L. Lynwood, Trowbridge  
 Hiscock, R.E. a. Alexandra C., S'ampton  
 Irwin, A.E. Shrewsbury Coll.  
 Jackson, M.C. 3 Brunswick Sq., Exmouth  
 Johnson, L.M. a. Rockvale, Brixham  
 Northam, D.K. Larchmont Hall, Yatton  
 \*Poppleton, M. Spring Bank, Manchester  
 Richardson, H.E. Wakelield H., Norwich  
 \*Riddick, E.E. Stainsbridge C., Malmesbury  
 Roberts, M.A. Totnes Girls' S.  
 Rowley, C.O. Private tuition  
 Sarril, R.E. Slepe Hall, St. Ives, Hunts  
 Simpson, I.B. Enville H., Ashton-u.-Lyne  
 \*Stephens, E.M.  
 Brean Down H., Burnham, Som.  
 \*Stott, M. St. George's H., Doncaster  
 Sullivan, S.M. Calthorpe H., Banbury  
 Todd, R. People's Coll., Nottingham  
 Vincent, J. Girtton H., Yeovil  
 Walker, D.M. Orchard Lodge, Malvern  
 \*Wheatley, M. Mount Pleasant S., Derby  
 Wilkinson, F.M. a.  
 High S., South Shore, Blackpool  
 Williams, H.M. d. St. Winifred's, Southampton  
 Alexander, C.J. Towcester S.  
 Allen, M.L. a. Burnley Hr. Gr. S.  
 Ball, M.E. Park H., Congleton  
 Bower, D. e. Holly Rd. S., Fairfield, L'pool  
 Broad, D. a.  
 Clark's Coll. High S., Fitzroy Sq., W.  
 Bruce, E.M. d. Durham H., Uckfield  
 Cowell, D.K. Durham H., Uckfield  
 Doyle, M. a. d. Collingwood Coll., Lee, S. E.  
 \*Foden, H. Craigholm, Buxton  
 \*Green, C.E. Warwick H., Roade  
 \*Hagbold, G. Malvern H., Reading  
 Haines, M. e. a.  
 Girls' High S., Sudbury, Suffolk  
 \*Hall, H.G. Clifton H., Leyton  
 Hassall, L.E. s. Camden H., Biggleswade  
 Hening, G.E. e. d.  
 Brooklyn H., Wellington, Salop  
 Hopcroft, B. F. E.  
 Alexandra Coll., Southampton  
 Horrocks, L. Comm. S., Astley Bridge  
 Keith-Murray, C. E.  
 St. Winifred's, Southampton  
 Kitts, M.L. Headland Coll., Plymouth  
 Locke, O. a. Harley H., Hereford  
 \*Mackrook, F.M. Private tuition  
 Matthews, F.L. Acad., Crewe  
 Oetiker, R.M. e. a. Saffronholm, Lincoln  
 Olliff, A. E. Crossley H., Newcastle-on-Tyne  
 Peacock, C.E. a. Camborne H., Torquay  
 Pentlow, E. Prospect H., St. Neots, Hunts

Rainforth, Z.J. f. Private tuition  
 \*Salway, M.B. Upland S., Newbury  
 Scott, N.M. Westoe High S., S. Shields  
 Shrubsole, E.G. ge. Reading High S.  
 Tapscott, B. High S., King Sq., Bridgewater  
 Taylor, E. E.  
 Winsley, St. Mildred's Rd., Lee, S. E.  
 Thurston, F.M. Margate Ladies' Coll.  
 Tozer, M. Modern S., Torquay  
 Beauchamp, E.M. a. Grey Coat Hospital, Westminster  
 Blenkarne, E.C. g.  
 The Old Grange, Hampton-on-Thames  
 \*Boulton, E.M. Ladies' C., Wellington, Salop  
 \*Christie, L. Elgin Coll., Bayswater  
 \*Clare, I.K. The Hawthorns, Ealing Comm.  
 \*Davidson, F.M. Private tuition  
 Kirkin, G. D. Royal Masonic Inst., S.W.  
 Fisk, D.S. Avondale, Liverpool  
 \*Gilbert, H.M. Grey Coat Hosp., Westminster  
 Foster, K. e. St. Andrew's C., Chichester  
 Gold, A.P. a. Orton Coll., Water Orton  
 Good, V.A. Mecklenburg H., Putney  
 Hall, F.P. a. 43 David Place, Jersey  
 Harrison, E. s. Brook Green Coll., W.  
 Henderson, J. South Villa S., Rotherham  
 Hornblow, E.H.  
 Merton H., Charlbury, Oxon  
 Hudson, E. B. d. Camden S. for Girls, N.W.  
 \*Jenkins, L. Bute H., Deal  
 \*Lane, B. E. Roan Girls' S., Greenwich  
 \*Lee, E. Harley H., Hereford  
 \*Llewellyn, C.E. Bren Holly, Newport, Mon.  
 McCready, F.E.  
 Coryton H., Mutley, Plymouth  
 Metz, F.E. E. Great Coat Hosp., Westminster  
 \*Routh, G.H. Reading High S.  
 Ruddle, M.G.E.M. George Green S., Poplar  
 Scott, G. e. a. Crossbeck H., Ilkley  
 Sutley, S.D. e.  
 Girls' High S., Sudbury, Suffolk  
 \*Thompson, D.S.  
 Parkfield Ladies' Coll., High Barnet  
 Ward, E.M. Welland Hall Coll., Spalding  
 Watson, E.M. Wintersdorf, Birkdale  
 Widger, E.K. d. Headland C., Plymouth  
 Wilson, D.M. Thanet Hall, Margate  
 Wilson, E. Arundel H., Scarborough  
 \*Belcher, W.R. Grosvenor S., Wokingham  
 Bizley, K.W. d. Kendrick Girls' S., Reading  
 Boll, M.W.  
 The Hollies, Hagley Rd., Edgbaston  
 Brightwell, M.J. Lancelfield S., Southend  
 Burgoyne, C. St. Andrew's Hall, Southampton  
 Chovil, E. Harborne Ladies' Coll.  
 English, E.K. Royal Masonic Inst., S.W.  
 \*Fisher, M. Rougemont, Blackpool  
 Fry, B.D. Petersfield H., Midhurst  
 Gamage, G.M. Licensed Victuallers' S., S.E.  
 Harrington, J.M. a. d.  
 South Hornsey Bd. S., N.  
 Hearn, H.C. e. Goldielands S., Settle  
 Hitchcock, H. South Croxton S. for Girls  
 Longley, A.M. Howard Coll., Bedford  
 Loomes, E.B. Camden S. for Girls, N.W.  
 Lowenthal, E.F. d.  
 Royal Masonic Inst., S.W.  
 Masom, N. Twecester S.  
 \*North, D.D. Collingwood C., Lee, S.E.  
 Pape, M.A. 18 Railway St., Beverley  
 Parsons, E. Brighton Coll., Southend  
 Puttick, E.A. Private tuition  
 Simmons, M. Mansfield H., Maida Vale, W.  
 Vigness, M.K. Modern S., Torquay  
 \*Wallis, U.E. Guelph Coll., Clevedon  
 \*Walmsley, J. s. Glengarry, Birkdale  
 \*Westron, M. High St. S., Burnham, Bucks  
 Andrews, F.R. Royal Masonic Inst., S.W.  
 \*Barker, M. Warren Grove, Barnsley  
 Bolderston, M.O. d.  
 2 Portland Place, Newbury  
 Boulting, L.E.  
 Grey Coat Hospital, Westminster  
 Chevasus, S.M.E. f. West H., Forest Hill  
 Doecking, M. North Park Coll., Croxton  
 Gardiner, M.A. e.  
 Girls' High S., Sudbury, Suffolk  
 Green, G.R. Rose Bank S., Brentwood  
 Hartland, M. e. Larchmont Hall, Yatton  
 \*Lalor, M.E. Mayfield Coll., Marlborough  
 Lawson, A.R. Brunswick H., Gravesend  
 Leeming, G.E. Comm. S., Astley Bridge  
 Manley, M. Royal Masonic Inst., S.W.  
 \*Meigh, B. d. St. Augustine's S., Longton  
 Murch, G.A. a. d. Private tuition  
 Nix, D.P. St. Mildred's, Eastbourne  
 Provis, D.U. Clarendon Coll., Clifton  
 \*Pryer, H.J. 26 Ashley Rd., Hornsey Rise  
 \*Ribbands, D.M. Froebel H., Sandown  
 Richardson, G. Torrhill Coll., Hastings  
 Rutherford, N. a. 26 Trinity Road, Bootle  
 Simeox, G.E. Kempston H., Malvern Link  
 Walley, P.M. St. Mary's S., Whitechurch  
 White, E. Ashleigh H., Tutbury  
 Wiley, S.F. a. High S., Pontefract  
 Woodward, A.M. a. Woodford S., Southsea  
 \*Allin, R. Clark's Coll. High S., Brixton  
 Bagnall, H.M. Blendon H., Lewisham  
 Boswell, A.L. Lulworth H., Carleion, Mon.  
 Caddick, F.J. Oxford Lodge, Wolverhampton  
 Charley, M.D. 2 Oxford Park, Ilfracombe  
 Clark, N. Benwell Delaval S., Newcastle

Doble, E. a. Rockvale, Brixham  
 Frerichs, N. Torrhill Coll., Hastings  
 Gover, M.E. Longford S., Cotham, Bristol  
 Hamlett, E.A. Queen's Avenue, Muswell Hill  
 11 Allen  
 Heaton, M.H. a. Eton H., Sheffield  
 Heyman, F.W. E.E.  
 South Bristol Girls' High S.  
 Hitchcock, C.L. Newland S., Tombridge  
 Isaacs, C. a. Camden S. for Girls, N.W.  
 \*Moat, E. London Coll., Stratford  
 Mordin, D. d. Claville H., Stoke Newington  
 Ness, E.R. s. a. Highfield, Highbury Pl., N.  
 Norman, B.M.  
 Woolston Ladies' Coll., Southampton  
 Ollivan, M.A. Welland Hall Coll., Spalding  
 Olswang, L. g. Gloucester H., Kew  
 Plant, L. Oxford Lodge, Wolverhampton  
 Polley, N.T. Fonthill Coll., Gt. Malvern  
 Precious, F. a. Lime Tree H., York  
 Pursey, A.E.  
 St. Augustine's Up. Grade S., Kilburn  
 Relph, H.M. Bp. Fox's High S., Taunton  
 \*Shewring, I.C.  
 North End High S., Portsmouth  
 Snape, D. L. Lytham & Fairhaven Coll.  
 \*Sparks, M.L. Glencoil, Deal  
 \*Stonham, J.W.G.D. The Hollies, Yatton  
 \*Swain, M.C. Red Maids' S., Bristol  
 Thurlby, J. d. Welland Hall C., Spalding  
 \*Toghill, E.L. Licensed Victuallers' S., S.E.  
 \*Twist, M. Private tuition  
 \*Walker, A. Melbourne C., Thornton Heath  
 Wilson, A. St. Andrew's Hall, Southampton  
 Windle, A. g. St. Andrew's Hall, Southampton  
 Aitchison, M.J. a. Westmorland Rd. High S., Newcastle  
 Bennett, C.T. d.  
 West Holme S., Clacton-on-Sea  
 Beveridge, A. s. e.  
 St. Andrew's Hall, Southampton  
 Brereton, M.E. Royal Masonic Inst., S.W.  
 Budds, A. e. 34 Park Rd., Sittingbourne  
 Carr-Jackson, R. d. Hendon Coll.  
 Caswell, E.M. Eastrop H., Chichester  
 Date, I. Brean Down H., Burnham, Som.  
 Dixon, E. Mowbray S., Sunderland  
 Farrance, A.M. d.  
 High S., King Square, Bridgewater  
 \*Fraser, J.C. St. Mary's S., Bungay  
 Gesson, E. Slepe Hall, St. Ives, Hunts  
 Hall, E.G.  
 Haddo & Westwood Coll. S., Scarborough  
 Hasluck, D.M. e. f. Private tuition  
 \*Heaverman, M.E.  
 Licensed Victuallers' S., S.E.  
 \*Hedley, B. Anglo-French Coll., Hornsey  
 \*Helme, E.M. Wintersdorf, Birkdale  
 Hutchinson, M.B. Coll. H., Barbourne, Worcester  
 \*Lee, E. Harley H., Hereford  
 Marchment, L.E.  
 Licensed Victuallers' S., S.E.  
 Middleton, D.E.  
 High S., Poplar Avenue, Edgbaston  
 Mitchell, E. Henry St. S., Bolton  
 Onions, E.M.C.  
 Sunfield H., Wellington, Salop  
 Raw, J.C. a. Coll. S., Bishop Auckland  
 Roy, M.C. Private tuition  
 \*Saunders, E.A. George Green S., Poplar  
 Sims, D. Coll. S., Brunswick Pl., S'ampton  
 Smalley, V.E. Radcliffe, Manchester  
 Spencer, W.J. a. d. Spring Bank, Manchester  
 Stovell, D. Waverley Coll., Sydenham  
 Twymann, G. Claville H., Stoke Newington  
 \*Williams, F.E. The Manse, Little Baddow  
 \*Wood, M.P. Ellerker Coll., Richmond Hill  
 \*Adams, F. St. Hilda's, Exeter  
 Bennett, G. s. d. Summerbrook, Reading  
 Bree, I.G. Ashton H., St. Clement's, Jersey  
 Brookfield, E.B. e. f. Bayswater High S.  
 Curling, M. a. The Laurels, Herne Bay  
 Ellis, M.W. Camden S. for Girls, N.W.  
 \*Gray, E. Mecklenburg H., Putney  
 \*Harwood, K.D. Gartlet, Watford  
 Hill, W.H. a. Orchard Lodge, Malvern  
 Horrocks, G. d. St. Editha's S., Tamworth  
 Hudson, K.M.L. Private tuition  
 Kemp, A.M. a. Witney S. of Science, Oxon.  
 King, J. M. Clarendon H., Wimborne  
 Lear, E.M. Norfolk H., Gosport  
 Lipscombe, E.E. St. Mildred's, Eastbourne  
 McClymont, J.A.  
 87 Shakspeare St., Manchester  
 Miller, E.M. St. Mildred's, Eastbourne  
 Milton, A.F. Grosvenor Coll., Ilford  
 \*Pace, E. Fairlawn S., Newmarket  
 Pearce, G.V.  
 Kenilworth, Lower Weston, Bath  
 \*Row, E.B. Girls' High S., Sudbury, Suffolk  
 Stringer, E.A.,  
 Summerfield Hall, Maesyewmmer  
 \*Tait, E.M. 61 Pevensey Rd., St. Leonards  
 Thorne, L.R. Coll. H., Barborne, Worcester  
 Turner, A.K. Howard Coll., Bedford  
 \*Wynne, E. Spring Bank, Manchester  
 Barfoot, A.M. Strauser S., Fareham  
 Corney, B. d. Newland S., Tonbridge  
 \*Cox, A.E. Colville H., Swindon  
 Edmundson, E.F. Royal Masonic Inst. S.W.  
 Edwards, A.F. Wallasey Girls' Coll. S.

Goodfellow, G.K. Howard Coll., Bedford  
 Goodridge, E. Glebe Places, Clissold Pk., N.  
 Herridge, E.E. Devonshire H., Wincanton  
 \*Hicks, E. Malvern H., Reading  
 Hogg, G.M. Royal Masonic Inst., S.W.  
 Hulks, N.E. Dagnur H., Hatfield  
 Hunt, V. St. Maur Coll., Chestport  
 Kittow, D.M. Headland Coll., Plymouth  
 Leak, F.M. Bow Modern S., Bow Road  
 \*Loves, L.M. Woodward H., Sunderland  
 Miskin, W.A. Wm. Gibbs' S., Faversham  
 Noake, K. Milford H., Shrewsbury  
 Pullen, M.B. Wandsworth High S.  
 Roof, D.M. d. Royal Masonic Inst., S.W.  
 Smith, C.A. Stella H., Cathcart Hill, N.  
 \*Sparrow, H.L. Kendrick Girls' S., Reading  
 Stewart, E.M. a. Brentwood, Southport  
 \*Sykes, R.L. Gram. S., Goole  
 \*Tubbs, M.A. Royal Masonic Inst., S.W.  
 Webb, D.M. Rose Bank S., Brentwood  
 Williams, M.S. George Green S., Poplar  
 Alderton, E.M. f. West H., Forest Hill  
 Apperly, E. Wintersdorf, Birkdale  
 Ball, L. B. Mecklenburg H., Putney  
 \*Barton, E. College H., Newbury  
 \*Bayless, Maud Windycroft, Brondesbury  
 Beattie, F.M. Calthorpe H., Banbury  
 Benjamin, V. Elgin Coll., Bayswater  
 Booth, A.E. 49 Nicoll Rd., Willesden  
 Bowker, M. St. Andrew's Hall, Southport  
 Clement, N.S. a. d. St. Winifred's, S'ampton  
 Clark, F. L. Stainsbridge C., Malmesbury  
 Clarke, F.M. George Green S., Poplar  
 Cotching, M. e.  
 St. Joseph's Conv., W. Hartlepool  
 \*Deacon, B.L. Larchmont Hall, Yatton  
 Draper, L.G. Oldfield Park S., Bath  
 Fisher, J.R. Royal Masonic Inst., S.W.  
 Fuller, E.M. Arcville Coll., Rhyll  
 Garner, M.L. Orchard Lodge, Malvern  
 Gordon, O.M. Camden S. for Girls, N.W.  
 Harbor, J.E. e. f. York H., Farnham  
 Harling, G.M. Royal Masonic Inst., S.W.  
 Harding, W. Down End, Clifton  
 Helme, E.M. d. Wintersdorf, Birkdale  
 \*Holme, D.W. The Hollies, Malvern  
 Howe, G.A. a. Gram. S., Goole  
 \*Joyes, E. Raleigh S., Stoke Newington  
 Luscombe, A. Seaton H., Plymouth  
 Maxwell, N. Western H., Nottingham  
 Morris, B. Raleigh S., Stoke Newington  
 O'Loughlin, A. a. Vale Park S., Liscard  
 Potts, E. 26 Ashley Rd., Hornsey Rise  
 Read, C.L. a. d. High S. for Girls, Gravesend  
 Rendell, J.E. L.L.  
 Chisholm Coll. S., Weston-s.-Mare  
 Rickell, G.M. Crescent Coll., York  
 Rist, M.N. Burlington S., W.  
 Sanders, R.A. Bridge H., Royston, Herts.  
 Smith, K.M. Girls' High S., Wanstead  
 Squirell, F.A. St. Wilfrid's, Hastings  
 Stanton, N.G. Welland Hall C., Spalding  
 Stubbs, M.  
 Westbourne High S., Bournemouth  
 Atkin, N.D. g. 26 Ashley Rd., Hornsey Rise  
 Bard, D. St. Mary's Day S., Hightgate  
 Baughan, M.E. L.  
 Kendrick Girls' S., Reading  
 Benton, G. Royal Masonic Inst., S.W.  
 Boorman, I. d. Coll. S., Stanford-le-Hope  
 Brooker, E. Milton Mt. Coll., Gravesend  
 Carley, M.A. e. Valley Bridge H., Scarborough  
 Clarke, A. Lea Holm, Waterloo, L'pool  
 \*Corke, W.F.A. Balham S.  
 Dring, L. Modena H., W. Ealing  
 Edwards, B.M.  
 Stapleton Hall S., Stroud Green  
 Fairhurst, D.H. S. Hornsey High S.  
 Fisher, M.A. Hemdean H., Caversham  
 Giles, M. Verecroft, Devizes  
 Hawson, I.M. a.  
 Longford S., Cotham, Bristol  
 Hunt, M.F. Priory Farm S., Earls Colne  
 Jones, E.J. Brentwood, Southport  
 Kingcome, S. Gunnerside S., Plymouth  
 Kynaston, G.E.  
 Sunfield H., Wellington, Salop  
 Lamb, G.F. Cairnbrook Coll., Woodford  
 Le-Boutillier, M.A. a. Vauxhall S., Jersey  
 Monks, H. Broomfield High S., Manchester  
 Noel-Bell, F.H.M. g. Private tuition  
 Oliver, I. Girls' S., Brough  
 Porter, M.M. The Halve, Trowbridge  
 \*Robinson, I.L.  
 Broad Green S., Wellingboro'  
 Sharman, A. Ramsey H., Wisbech  
 Shaw, E.E. a.  
 Carleton Queen's Coll., Tufnell Pk., N.  
 Smith, A.M. George Green S., Poplar  
 Stubbs, I.E. Longford S., Cotham, Bristol  
 Tompson, C.E. Mayfield Coll., Marlboro'  
 Vassall, D.M. g.  
 Convent S., Queen St., Scarborough  
 Williams, M. Abbey H., Abbey Rd., N.W.  
 \*Wynne, A.I. Licensed Victuallers' S., S.E.  
 \*Young, J. Wakefield H., Norwich  
 Ash, M.G. St. Bernard's, Southsea  
 Cocking, M.L. Howard Coll., Bedford  
 Eden, A. 5 Clapton Square, N.E.  
 Fryer, P.E. a. St. Maur Coll., Chestport  
 Fisher, V. a. Holloway Coll., N.Y.  
 Foster, L.R. d. 4 The Crescent, Selby



GIRLS, 3RD CLASS, 2ND DIV.—Continued.  
 Griffith, E.L.K. Fairhaven, Bexhill-on-Sea  
 Hangbury, F.H. Private tuition  
 Hangreaves, A. Bagley Masonic Inst., Southport  
 Holloway, M. Royal Masonic Inst., S.W.  
 Holt, A.M. z. Wintersdorf, Birkdale  
 Jones, F.M. z. George Green S., Poplar  
 Jenner, E.H.E.  
 Colonnade Gardens S., Eastbourne

Jennings, G.M. d.  
 Normanton, Preston Pk., Brighton  
 Kent, M.E. z. Ashley H., Worksp  
 Laidlaw, J.M. Clark's C. High S., Brixton  
 Leeming, D. Convent of Loreto, Hulme  
 Little, J.G. Arlington H., Newport, Mon.  
 McMahon, G.A. Camden S. for Girls, N.W.  
 Meldrum, H. Lenwood S., Altrincham  
 Mounfield, H. Girls' Coll. S., Whitechurch  
 Owles, S.F.E. Ladies' C., Wellington, Salop  
 Pearce, M.L. Seaton H., Plymouth  
 Peasland, F.M. Warwick H., Roade  
 Pinder, C. Balham S.  
 Robathan, G. Arlington H., Newport, Mon.  
 Russell, C.M. Hemdean H., Caversham  
 Salt, N. Hollygirt, Nottingham  
 Seargeant, A.B. The Hollies, Malvern  
 Shirley, M.A. z.

Ellerslie Ladies' S., Bromsgrove  
 Simmons, M. Mansfield H., Maida Vale, W.  
 Tibbitt, P.E. St. Lawrence's, Long Buckley  
 Veale, F. St. Hilda's, Exeter

Atkin, M.G. Glenarm S., Moseley  
 Bird, M.E. The Queen's S., Chester  
 Brooks, A.H.F. a. Howard Coll., Bedford  
 Chandler, M.L. 3 Brunswick Sq., Exmouth  
 Churchouse, D.L. 13 Richmond Rd., Ilford  
 Clayton, J. Eton H., Richmond  
 Cole, F.L. Seymour H., Richmond  
 Coope, R. Gainsboro' S., Plymouth  
 Crawshaw, A.M. Clarendon H., Wimborne  
 Culverwell, M.E. St. Olave's S., Taunton  
 Delauney, B.E. Private tuition  
 Field, E. Stoneycroft Coll., Liverpool  
 Foxton, K. Lime Tree H., York  
 Hall, F.E. The Larches, Wrethampton  
 Holbeck, E. St. Catherine's S., Hampton  
 Jameson, E. Modena H., West Edling  
 Jeffery, E.L. Private tuition  
 Langdon, F.M. Hanover H., Ryde  
 Law, E.I. High S., Chingford  
 Mattock, E.H. Stamford St. S., S.E.  
 Morgan, M.E. Guelph Coll., Clevedon  
 Payne, H.F. Licensed Victuallers' S., S.E.  
 Stanier, L.D. Girls' High S., Swindon  
 Steart, E.H. Duke St. Girls' S., Bath  
 Sutton, S.J. The Ferns, Hasokos  
 Syrett, F.M. 88 Beckenham Rd., Penze  
 Tyers, L.B. d. Bartholomew H., Newbury

St. Bernard's, Southsea  
 Boldero, M.A. Langton H., Bury St. Ed's  
 Davidson, J.H. W. Camden S. for Girls, N.W.  
 Dee, N.E. Parnella H., Devizes  
 Dyke, N. Devonshire H., Wincanton  
 Eastwood, B.E. Oak Hill S., Edzerton  
 Hilton, M. z. St. Andrew's Hall, Southport  
 Johnson, W.M. d. Wm. Gibbs S., Faversham  
 Keyzor, M. Mansfield H., Maida Vale, W.  
 Lee, D.L. g. Gloucester H., Kew  
 Longman, F. Devonshire H., Wincanton  
 Love, W.E. Wilber H., Biggleswade  
 Mundy, E. Beechholme Coll., Bolper  
 Nicolle, M. Six Roads S., St. Lawrence, Jersey  
 Peake, D. St. Andrew's Hall, Southport  
 Peck, O.H. Coolhurst S., Crouch End  
 Ferrin, A.J.

Langley H., Friern Rd., Dulwich  
 Reeve, D.M. North Park Coll., Croydon  
 Richmond, C.E. Kendrick H., Brighton  
 Saines, E.J. a. Horndene, Epping  
 Scarlett, H.M. Wandsworth High S.  
 Slinn, D. Linwood S., Altrincham  
 Smith, A. High S., Farnworth, Bolton  
 Stepple, D. Westbridge H., Herne Hill  
 Stevens, E.T. z.  
 Brean Down H., Burnham, Som.  
 Sutcliffe, E.M. Wintersdorf, Birkdale  
 Tebbitt, D. St. Lawrence's, Long Buckley  
 Thomas, G.M. s. Colville H., Swindon  
 von Stralendorf, G.A. W. A.  
 Wintersdorf, Birkdale

Whiteley, A.L.  
 Rockville S., Chorlton-cum-Hardy  
 Williams, C.A. Parnella H., Devizes  
 Williams, E. Hill House C., Haverfordwest  
 Williams, J.A.M.  
 Normanton, Preston Park, Brighton

Bradley, B. Royal Masonic Inst., S.W.  
 Bulton, M.N.  
 Grey Coat Hospital, Westminster  
 Burgess, P. St. Margaret's High S., Lee, S.E.  
 Case, L.A. Wilton H., Reading  
 Creighton, E.  
 Grey Coat Hospital, Westminster  
 Coad, H.M. z. Gunnerside S., Plymouth  
 Collier, M.L. Teddington Coll.  
 Dunkerley, T. g.

The Hawthorns, Ealing Common  
 Eyre, G.E. Western H., Nottingham  
 Fagin, A. Anfield Coll., Liverpool  
 Finlay, N. Brentwood, Southport  
 Hawkins, G.I.  
 Parkfield Ladies' Coll., High Barnet

Horton, N. Girls' Coll. S., Whitechurch  
 Jones, A. Harley H., Hereford  
 Lambert, E.G. f. Dayswater High S.  
 Lambert, M.M. d. Newland St., Tonbridge  
 Lewis, M.M. Kendrick Girls' S., Reading  
 Mallinson, M. Wintersdorf, Birkdale  
 McKee, D. J. Lansdowne C., Notting Hill  
 \*Mendum, G. St. Mary's S., Bunkey  
 Owen, C. Linwood S., Altrincham  
 Sanken, M. z. The Larches, Wolverhampton  
 Small, R. Orchard Lodge, Malvern  
 Turtle, E. Hanover H., Ryde  
 Velati, L.T. Bartholomew H., Newbury  
 Weaver, L.E. South Croydon Coll.  
 Webley, S.C.G.  
 Ellerslie Ladies' S., Bromsgrove  
 Wiseman, I.V. Brighten C., Southend

Aspin, K.O.  
 Prep. S., Queen Parade, Harrogate  
 Bunyan, E.M. S. Hornsey Board S., N.  
 Burke, L. St. Margaret's High S., Lee, S.E.  
 Clarke, M.E. Grey Coat Hosp., Westminster  
 Deans, R. Abbey H., Selby  
 \*Diddell, G.M.  
 Holmwood H., South Hill Pk., N.  
 Duncan, E.M. 36 Glangary Rd., E. Dulwich  
 Emberly, L.A. Spalding Coll. S.  
 Gardner, P. I. Grey Coat Hosp., Westminster  
 \*Glaspool, F. Clark's C. High S., Brixton  
 Greenslade, A. S. Hilda's, Exeter  
 Heater, D. College H., Newbury  
 \*Humphreys, V. Hollygirt, Nottingham  
 Hunt, D. Down End, Clifton  
 Jameson, E.A. Girls' High S., Wanstead  
 Martin, M. Oxford Coll., Clacton-on-Sea  
 Mimmack, R. Devonshire H., Orpington  
 Mitchell, N. Storms Hall, Ingleton  
 Moore, A. Breakspear Coll., Brockley  
 Newman, N. a.

Ladies' S., The Close, Brighton  
 Penson, M.E. Howard Coll., Bedford  
 Rayner, M. Private tuition  
 Sampson, E.M. Western H., Nottingham  
 Sanderson, R. St. Hilary's, Scarborough  
 Snowden, O.K.M. Clifton Mount, Dartford  
 Squire, A.M. Bp. Fox's High S., Taunton  
 \*Stent, K. Whitgift H., Croydon  
 Stevenson, I. Hildesheim H., Tamworth  
 Taylor, E.Y. Stanmore Coll., Balham  
 Tonks, D.E. Oxford Lodge, Wolverhampton  
 Waller, H.M. Malvern H., Reading  
 Woods, E. Breck Coll., Poulton-le-Fylde

Banks, W.M. Surrey H., Arundel  
 Blake, S. Goodrich Rd. S., E. Dulwich  
 Brook, M.H. The College, Totnes  
 Burbidge, M.F. Hemdean H., Caversham  
 Brown, A.E.M.  
 Claremont Villa, Sutton-on-Hull  
 \*Clark, G.M.M. Girls' High S., Wanstead  
 Graves, S.J. Clifton H., Leyton  
 Harper, M.M. Western H., Nottingham  
 Heath, L.A. College H., Newbury  
 Hopkins, R.M.F. Witeyns of Science, Oxon  
 Lynch, N. St. Joseph's Conv., W. Hartlepool  
 \*McRae, E.M. Lansdowne C., Notting Hill  
 Moore, M. z.  
 Beech H., Holmes Chapel, Crewe  
 Ortnor, B.L. Seymour H., Richmond  
 Pickup, M.J.E. Valley Bridge H., Scarborough  
 Radburn, F.E. d. Wandsworth High S.  
 Roach, M. St. Hilda's, Exeter  
 Rogers, E.A. Brandon H., S. Croydon  
 Thomas, E. s. Milton Mount C., Gravesend  
 Thompson, G.A. Ystrad H., Newport, Mon.  
 Ward, E.L. Westbourne H., Cowes  
 Wells, S.P. Private tuition  
 Wendon, A.M. Totnes Girls' S.

Allen, B.L. Coolhurst S., Crouch End  
 Arthur, R. Clanville H., Stoke Newington  
 Ashcroft, F.A.  
 High S., South Shore, Blackpool  
 Barr, M.B. Queen's Coll., Acton  
 Bartlett, M.J. St. Winifred's, Southampton  
 Beddy, M.L. The Elms, Sutton-on-Trent  
 Carter, E.G. a. Westholme Maidenhead  
 Cartwright, C.B.M. Guilford High S., W.C.  
 Chisman, E.M. Malvern H., Reading  
 Clarke, E. Elgin Coll., Bayswater  
 Clarke, E. Lulworth Lodge, Birkdale  
 Copping, E.W.  
 Grey Coat Hospital, Westminster  
 Cray, O.I. Stella H., Cathcart Hill, N.  
 Darby, M. d. Milton Mount C., Gravesend  
 Dowton, E.M. Carden High S., Peckham Rye  
 Eds, F.M. Burlington S., W.  
 Elliott, F.G. St. Mary's S., Bunkey  
 Goodwin, E. St. Kilda's Coll. S., Bristol  
 Jones, H.H.G.  
 Brooklyn H., Wellington, Salop  
 Lane, E. Elgin Coll., Bayswater  
 Lennard, W.G.  
 Grey Coat Hospital, Westminster  
 MacCarthy, E.B. Private tuition  
 Mathias, S.N. Hill House C., Haverfordwest  
 \*Millington, E. The Halve, Trowbridge  
 Peacock, A.M. St. Marg't. High S., Lee, S.E.  
 Pitman, M.C. Grosvenor S., Wokingham  
 Roberts, B.J. Prospect H., St. Neots, Hunts  
 Sabin, M.K. Camden S. for Girls, N.W.  
 \*Shatlock, A.M. Hemdean H., Caversham  
 Smith, M.M. Colville H., Swindon  
 Thomas, M.B. Private tuition

Tucker, G.M. Clifton Mount, Dartford  
 Tuckwell, M. Southoe H., Richmond  
 \*Wade, F. Sheffield Mid. Cl. S.

Angell, D.M.  
 Parkfield Ladies' C., High Barnet  
 Burton, F. Ousegate S., Selby  
 Cheney, M.S. The Limes, Buckhurst Hill  
 \*Farley, F.B. The Limes, Buckhurst Hill  
 \*Hayzen, E.M. West H., Forest Hill  
 Hutton, E.M. Brookville, Filey  
 Kiddle, O. St. Andrew's Hall, Southport  
 Marten, H.M.  
 Girls' High S., Sudbury, Suffolk  
 Neave, C.M. a. Pembroke H., Norwich  
 Ripley, L. d. St. Andrew's Coll., Chichester  
 Stail, M.E. Raleigh S., Stoke Newington  
 Whatley, D.N. d. Summerbrook, Reading  
 Wheatley, A. Goodrich Rd. S., E. Dulwich  
 Whitecombe, M. Royal Masonic Inst., S.W.  
 Whiteley, L.C. z.  
 Haddo & Westwood Coll. S., Scarborough  
 Whitmore, E. Cavendish High S., Redhill  
 Wintle, F.L. d. College H., Newbury  
 Woolf, A.G. Private tuition

Aland, M.G. High S., Frome  
 Bellini, E. Clark's Coll. High S., Brixton  
 Busbell, E.M. Royal Masonic Inst., S.W.  
 Day, A.M. Pembroke H., Norwich  
 Goodfellow, M.A. Howard Coll., Bedford  
 Hallam, M. 40 Haughton Rd., Handsworth  
 Halsall, E. St. Andrew's Hall, Southport  
 Heasley, M.I. 26 Trinity Road, Bootle  
 Horton, E.F. The Laurels, Horne Bay  
 Ingram, K. Harley H., Hereford  
 Jones, A.S. 49 Nicoll Rd., Willemsden  
 Jones, D. a. Clark's Coll. High S., Brixton  
 Lovelock, G.E. Holm Vale S., Nottingham  
 Morley, M.I. d.

2 Allyn Crescent, W. Dulwich  
 Naughten, A.E.  
 Grey Coat Hospital, Westminster  
 Newhouse, E. Friends' S., Penkith  
 \*Palmer, M.E. Hemdean H., Caversham  
 \*Pennington, M.M. Collingwood C., Lee, S.E.  
 \*Rushworth, G.  
 Melbourne Coll., Thornton Heath  
 Scannell, G. Lansdowne H., Llandudno  
 Shanks, G.G.  
 Battlehurst Coll. S., Hexham-on-Tyne  
 Tautz, E.E. Hurst Dene, Bexhill  
 Webb, J.G. Woking High S.

Archer, E.T. Royal Masonic Inst., S.W.  
 Best, M.C. 14 Wilson St., Derby  
 Bird, M.P. 63 Tyrwhitt Rd., St. John's, S.E.  
 Bruckhaus, V.G.  
 The Old Grange, Hampton-on-T.  
 Carter, J. J.  
 Rockville S., Chorlton-cum-Hardy  
 Casley, F. a. Bp. Fox's High S., Taunton  
 Chasty, E.F. Prospect H., St. Neots, Hunts  
 Cornish, R.F. Bp. Fox's High S., Taunton  
 Diggle, M. a. Ramsey H., Wisbech  
 Dooking, R. North Park Coll., Croydon  
 \*Earnshaw, E.A. Girls' High S., Cheddar  
 \*Eastbrook, L.  
 Longford S., Cotham, Bristol  
 Fisher, E.J. a. Westlife Coll., Southend  
 Gardner, D.  
 Devonshire Rd. S., Honor Oak Park, S.E.  
 Gearing, E.V. Grey Coat Hosp., Westminster  
 Goman, E.F. Minerva Coll., Dover  
 Green, A.M. Kempington H., Malvern Link  
 Hanwell, M.C. 51 Ditchling Rise, Brighton  
 Horne, E.M. Newton H., Tunbridge Wells  
 Howarth, S.A. Malvern H., Birkdale  
 Hyde, D. A. a.  
 Clark's Coll. High S., Fitzroy Sq., W.  
 Lemon, E.I. Roden H., Onkar  
 Mansfield, A.K. Harley H., Hereford  
 Neville-Rolfe, L.  
 Vernon, Pembroke Villas, Bayswater  
 Oram, D.S. a. Devonport High S.  
 \*Osgood, B. Upland S., Newbury  
 Precious, A.E. George Green S., Poplar  
 Preston, A. a. Devonport High S.  
 Price, E. Lansdowne H., Llandudno  
 Rancecroft, E.H.  
 Highleigh H., St. John's, S.E.  
 Rebbeck, I.R. Bartholomew H., Newbury  
 Roebuck, L. St. Kilda's Coll. S., Bristol  
 \*Schofield, A.A. Ashley H., Worksp  
 Smith, D.M. g.  
 Girls' S., Promenade, Blackpool  
 Tidman, L.C. Stamford St. S., S.E.  
 Webb, H.I. Wm. Gibbs S., Faversham  
 \*Williams, C.G. Windsor High S., L'pool  
 Wyatt, L.M. Ellersmere H., Whitechurch

Bennett, H.M. Lansdowne H., Llandudno  
 Bevington, N.E. Ashley H., Worksp  
 \*Bridgland, N. Elm Lodge, Petersham  
 Brown, E.B. Tuffell Park Coll., N.  
 Burbage, F.T. High S., Haslemere  
 Clare, J. Clark's Coll. High S., Brixton  
 Crampton, E. St. Andrew's Hall, Southp't  
 Crane, C.M. South Hornsey Board S., N.  
 Cullen, E.V. Girls' Coll. S., Aldershot  
 Jenkin, A.G. g.  
 25 Coinage Hall St., Helston  
 Lover, G. Craigholm, Buxton  
 Nickell, F.G. Seaton H., Plymouth  
 Sharp, F.B. Prospect H., St. Neots, Hunts  
 Short, E.B. Oldfield Park S., Bath  
 \*Spedding, M. Stoke S., Devonport  
 Stug, C.M. Warbreck C., Aintree, L'pool  
 \*Taylor, L. Cumberland C., Acock's Green  
 Woodward, G. Gresham Coll., Brixton  
 Wootton, W. Addiscombe H., Margate

Adams, O.M. S. Bristol Girls' High S.  
 Anderton, R. Storr's Hall, Ingleton  
 \*Blackman, I.L. Wellington C., Hastings  
 Bottrell, L.M.  
 High S., Poplar Avenue, Edgbaston  
 Bray, M.S. Wellington Coll., Hastings  
 Brinjes, M.E. Royal Masonic Inst., S.W.  
 Broughton, M. South Croydon S. for Girls  
 Collins, A.T. High S., Haslemere  
 Durow, E. a. Lonsdale H., Derby  
 Eliot, M.C.  
 Convent S., The Avenue, Southampton  
 Elstone, M.G. Granville H., Southampton  
 Jelly, G.W. Duke St. Girls' S., Bath  
 Kitson, M. Anfield Coll., Liverpool  
 Potter, G. Lonsdale H., Dorby  
 Terson, I. St. Mildred's, Eastbourne  
 White, K.F. West H., Forest Hill  
 Wilson, I.B. 385 Glossop Rd., Sheffield

Eyles, E. Ladies' S., The Close, Brighton  
 Haigh, M.F. Private tuition  
 Hamlin, F.B. Hollybank, Bridgewater  
 Henderson, M.A. Abbey H., Selby  
 Hope, E.M. Grosvenor Coll., Ilford  
 Hunter, A.M. Milford H., Newport, Mon.  
 Jackson, H.E. Sherwood S., Woolwich Com.  
 Lancaster, R.E.M.  
 Brean Down H., Burnham, Som.  
 Ledbrook, M.E. Leik Bank C., Leamington  
 Palmer, E.M. Hemdean H., Caversham  
 Park, O. Ashbourne H., Nottingham  
 Shacklady, M.G. a.  
 Warbreck Coll., Aintree, Liverpool  
 Shawyer, O. St. Hilary's, Scarborough  
 Wilson, M. Grey Coat Hospital, Westminster  
 Woodhouse, N. Private tuition

Davison, A.C. Weston S., Bath  
 Ferris, C. 73 Kennington Park Rd., S.E.  
 Fieldwick, E.W.M.  
 Moeklenburg H., Putney  
 Heppell, E. Deauraw, Langley-on-T.  
 Hockley, A.F. 51 Ditching Rise, Brighton  
 Hyde, G.A. St. Winifred's, Southampton  
 Johnson, E.M. West H., Forest Hill  
 Jones, G. Wintersdorf, Birkdale  
 Morgan, D. York H., Farnham  
 Norris, M.A. Kendrick Girls' S., Reading  
 Oliver, E.M.K. Stranner S., Farnham  
 \*Simmons, E.M. Gran. S., E. Finchley

Boden, A.M.  
 Convent S., The Avenue, Southampton  
 Chambers, D. St. Andrew's Hall, Southp't  
 Cutlack, I.M. Prospect H., St. Neots, Hunts.  
 Dutch, L.E. Friends' S., Salford Warden  
 Fox, V., St. George's H., Doncaster  
 \*Hill, E.B. Girls' High S., Swindon  
 Irwin, M.M. g.  
 Conv. S., Queen St., Scarborough  
 Millen, G.E. d. Cavendish High S., Redhill  
 Morten, F. Abbeyfield Mount, Sheffield  
 Postlethwaite, E. a. Aintree High S., L'pool

Reay, M. St. George's Coll., Barnsley  
 Stewart, D.L. Guelph Coll., Clevedon  
 Thompson, N.M. Royal Masonic Inst., S.W.

Brownlow, M. Ramsey H., Wisbech  
 Caiger, E.M. Devonshire H., Wincanton  
 Coe, A. z. Bridge H., Royston, Herts  
 Dodsworth, F. St. Hilda's, Gosforth-on-T.  
 Farrer, B. z. Storms Hall, Ingleton  
 Gardner, A.M. Ashley H., Worksp  
 Gowing, M.E. Private tuition  
 Greening, K.S. a. Chestnut H., Lincoln  
 Henry, I.E. 36 Glangary Rd., E. Dulwich  
 Hopkinson, E.O. Ashley H., Worksp  
 Mauroe, H.B. Hazelhurst, Penarth  
 Ollis, W.L. Wellington Coll., Hastings  
 Pennefather, E.M. Seymour H., Richmond  
 Puckridge, M.I. Upland S., Newbury  
 \*Rayment, F.I. Ashley H., Worksp  
 Reburn, F.B. Gainsboro' S., Plymouth  
 Robinson, B. Henry St. S., Bolton  
 Rosenthal, R. Minerva Coll., Dover  
 Rowbottom, F.S. Lonsdale H., Norwich  
 Scott, C.E. Milford H., Newport, Mon.  
 Skelton, M. Dunkirk H., Clacton-on-Sea  
 Uridge, V. Highleigh H., St. John's, S.E.  
 Webb, M. Addiscombe H., Margate

\*Buckland, C.  
 Clark's Coll. High S., Fitzroy Sq., W.  
 Chavanna, E.R.  
 Grey Coat Hospital, Westminster  
 \*Copleston, M.L.  
 Melbourne Coll., Thornton Heath  
 Farmer, B.M. Collingwood C., Lee, S.E.  
 Hutchin, E.M. George Green S., Poplar  
 \*James, A. Cumberland C., Acock's Green  
 Leyman, F. Ousegate S., Selby  
 Lawson, E. Devonshire H., Bridlington  
 \*Rogers, E.M.  
 Stapleton Hall S., Stroud Green  
 Sharpe, A. a. St. George's Coll., Barnsley  
 Smoritt, C.E. Fonthill S., Barnsley

Bennett, H.M. Lansdowne H., Llandudno  
 Bevington, N.E. Ashley H., Worksp  
 \*Bridgland, N. Elm Lodge, Petersham  
 Brown, E.B. Tuffell Park Coll., N.  
 Burbage, F.T. High S., Haslemere  
 Clare, J. Clark's Coll. High S., Brixton  
 Crampton, E. St. Andrew's Hall, Southp't  
 Crane, C.M. South Hornsey Board S., N.  
 Cullen, E.V. Girls' Coll. S., Aldershot  
 Jenkin, A.G. g.  
 25 Coinage Hall St., Helston  
 Lover, G. Craigholm, Buxton  
 Nickell, F.G. Seaton H., Plymouth  
 Sharp, F.B. Prospect H., St. Neots, Hunts  
 Short, E.B. Oldfield Park S., Bath  
 \*Spedding, M. Stoke S., Devonport  
 Stug, C.M. Warbreck C., Aintree, L'pool  
 \*Taylor, L. Cumberland C., Acock's Green  
 Woodward, G. Gresham Coll., Brixton  
 Wootton, W. Addiscombe H., Margate

**GIRLS, 3RD CLASS, 3RD DIV.—Continued.**  
 Slocombe, M.L. St. Mildred's Eastbourne  
 Southern, K.E. Beechholme Coll., Belper  
 Thiebaud, R.A.  
 Clark's Coll. High S., Fitzroy Sq., W.  
 Thomas, B.E. a. St. Winifred's S., Torquay  
 Wilde, M. Clifton H., Knutsford  
 Woodward, A. a.  
 Goodrich Rd. S., E. Dulwich

Abey, F. The Poplars, Wolverhampton  
 Baer, A. 62 Albert Rd., Longsight  
 Bayliss, May  
 Windycroft Coll., Brondesbury  
 Bloom, R. Storrs Hall, Ingletton  
 Chidwick, N. Private tuition  
 Dadds, F.I.

Westmorland Rd. High S., Newcastle  
 Haines, H. Summerbrook, Reading  
 Hallett, M.H. George Green S., Poplar  
 Haynes, J. Abbey H., Selby  
 Jones, W. Woking High S.  
 Lamont, G. Anfield Coll., Liverpool  
 Lanham, B.E. 9 Kingsgate St., Winchester  
 Oldham, N. St. Andrew's Hall, Southampton  
 Redfearn, H.M.  
 High S., South Shore, Blackpool  
 Rogers, E. Dunkirk H., Clacton-on-Sea  
 Simmonds, C. West Central Coll. S., W.C.

Barnes, D. St. Catherine's S., S'hampton  
 Boyce, E.H.  
 Haddo & Westwood C. S., Scarborough  
 Bromley, A.M. Private tuition  
 Crabtree, M. St. George's H., Doncaster  
 Ede, A.L. Grey Coat Hospital, W'minster  
 Hardman, E.E.F.  
 Braeside Coll., Fortis Green, N.  
 Harris, M.R. Seaton H., Plymouth  
 Henry, M. Richmond H., Brock Rd., L'pool  
 House, F.M. Conv. S., Queen St., Scarborough

Inglis, A.M. Larchmount Hall, Yatton  
 Kidd, I.R. Clifton H., Leyton  
 Lines, W. The Halve, Trowbridge  
 Morton, M.E. s. St. Winifred's, S'hampton  
 Mountain, C.L. Ellerker C., Richmond Hill  
 Phillips, A.E.A. 9 Kingsgate St., W'chester  
 Pope, E.L.A. Oldfield Park S., Bath  
 Pyser, A. Heathfield H., Cardiff  
 Sharpe, D.A.  
 Grey Coat Hospital, Westminster  
 Summers, D.M. Lancelfield S., Southend  
 Ware, F.C.  
 Grey Coat Hospital, Westminster

Camello, T.  
 Girls' S., Mechanics' Inst., Pudsey  
 Capell, M.B. Milton S., nr. Northampton  
 Double, A. Oxford Coll., Clacton-on-Sea  
 Ellis, A.L.A. Devonport High S.  
 Filshie, I.S. Roden H., Ongar  
 Gale, E.E. Gyanern, Calne  
 Manhire, L. Milford H., Newport, Mon.  
 Musgrave, E.L. 9 Victoria Rd., Barnsley  
 Parby, A. Collingwood Coll., Lee, S.E.  
 Parton, M.L. Mountfield, Shrewsbury  
 Smythe, E.G. Highleigh H., St. John's, S.E.  
 Springfield, A.L. Vale View H., Devizes  
 Thomas, E.I.M.

Turner, E. 26 Ashley Rd., Hornsey Rise  
 Gram. S., Goole  
 Weddell, E.M.  
 Grey Coat Hospital, Westminster

Kelly, E.M. Heathfield H., Cardiff  
 Pencock, M. Royal Masonic Inst., S.W.  
 Ruff, E. Twickenham Coll.  
 Summers, G.E.  
 Grey Coat Hospital, Westminster  
 Woodford, M. The Hollies, Yatton

Abbott, H.E. Storrs Hall, Ingletton

Atkinson, M. Verecroft, Devizes  
 Bremner, B.M. Anfield Coll., Liverpool  
 Brewer, C. Lansdowne Coll., Notting Hill  
 Bright, E. Gresham Coll., Brixton  
 Chambers, E.M.  
 Sherwood S., Woolwich Comm.  
 Hancock, M. 14 Wilson St. Derby  
 Heale, H.E. Sussex H., Willeddan Lane  
 Legge, D. Milton Mount Coll., Gravesend  
 Penney, J.F.E. a.  
 High S. for Girls, Gravesend  
 Prentice, A. Dagnar H., Hatfield  
 Rapson, D. Addiscombe H., Margate  
 Whitlock, D. St. Catherine's S., S'hampton  
 Whitton, K.M.  
 Holmwood H., South Hill Pk., N.

Blower, E.M. Shrewsbury Coll.  
 Hoddinott, P.M. Hazelhurst, Penarth  
 Ledger, M.E. The Limes, Buckhurst Hill  
 Macey, I. Stoke S., Devonport  
 Pinder, L. Balham S.  
 Richards, C.A. Tutorial S., Penarth  
 Thompson, M.A.  
 Buckleigh Lodge, Streatham  
 Vince, G.E. Colville H., Swindon  
 Warrington, E.E.I.  
 Highleigh H., St. John's, S.E.

Biddle, D. 14 Wilson St., Derby  
 Burgham, F.a. Clark's C. High S., Brixton  
 Elcomb, A.H. South Croydon Coll.  
 Lamb, D. Storrs Hall, Ingletton  
 Marston, G. Margate Ladies' Coll.  
 Poole, E.F. Melbourne C., Thornton Heath  
 Stubbs, F. Beech H., Holmes Chapel, Crewe  
 Tootell, G. Barton Hill, Marlborough  
 Waters, M. Heathfield H., Cardiff  
 Williams, E.B. g.  
 Sherwood S., Woolwich Common  
 Wood, L.M. Devonport High S.

Barson, G.V. Reginald Terrace S., Leeds  
 Box, J.M. 11 Queen's Avenue, Muswell Hill  
 Braybon, E.F. Surrey H., Arundel  
 Caudwell, E. Royal Masonic Inst., S.W.  
 Chandler, E.W.  
 Grey Coat Hospital, Westminster  
 Cook, E.L. Coolhurst S., Crouch End  
 Coxford, G.L.  
 St. Margeret's High S., Lee, S.E.  
 Greening, B.M. Eton H., Sheffield  
 Manchester, M.C. Balham S.  
 Sanbrook, N. Castle H., Great Malvern  
 Webb, M.C. Fairlawn S., Newmarket

Cox, F. Manor H., Havant  
 Fox, N. 211 Kings Rd., Reading  
 Hayley, M. Storrs Hall, Ingletton  
 Hayer, E.L. Westb'n High S., Bonnem'th  
 Johnson, N.E. St. Winifred's, Southampton

Andrews, M. e.  
 Buckleigh Lodge S., Streatham  
 Leeks, H.L. Grey Coat Hospital W'minster  
 Scott, H. Huntcliffe H., Harrogate  
 Tanner, J.V. St. Mary's Day S., Highgate  
 Wool, M.I.K.  
 Summerfield Hall, Maesywanner

Campbell, E.A. Brompton Science S., S.W.  
 Crook, L.E. St. Winifred's, Southampton  
 Henderson, M. Balham S.  
 Ledger, E. The Limes, Buckhurst Hill

Carter, R. 36 Glengarry Rd., E. Dulwich  
 Jopling, E.S.  
 Woolston Ladies' C., Southampton  
 Miners, M.J. Guilford High S., W.C.  
 Row, K.D.E. Devonport High S.  
 Thacker, M. Powerscroft, S. Woodford  
 Trevitt, M.G. Windsor High S., Liverpool

NAMES OF CANDIDATES IN THE ABOVE LISTS WHO HAVE PASSED THE ORAL EXAMINATIONS IN FRENCH AND GERMAN.

f = French. g = German.

BOYS.

Arthur, J.D. f. Oxenford H., Jersey  
 Bailey, J.B. f. Oakes Inst., Walton, Liverpool  
 Barber, E.H. f. Stoke Newington Gram. S.  
 Bartholomew, E.E. f.  
 Holme Wood Coll., Up. Tulse Hill  
 Benn, P.E. f. Private tuition  
 Blampied, S. f. St. James' Coll. S., Jersey  
 Cabot, T.A. f. Oxenford H., Jersey  
 Cahen, L. f. St. John's Coll., Green Lanes, N.  
 Charles, L.S. f. g. High S. for Boys, Croydon  
 Davies, A.L. f. g. High S. for Boys, Croydon  
 Davies, G.M.D. f. High S. for Boys, Croydon  
 Dezoustre, A. f. g. Catford Coll. S., S.E.  
 Duncan, N.A. g. Stoke Newington Gram.S.

Evans, R.H.B. f. Oakes Inst., Walton, L'pool  
 Faulkner, P.L. f. The Cusack Inst., Moorfields  
 Gill, G.H. f. Private tuition  
 Goldberg, J. f. Tivoli H., Gravesend  
 Guzel, A. f. Battersea Polytechnic S.  
 Hamilton, G.W. f. Oakes Inst., Walton, L'pool  
 Hedley, J.S. f. Newcastle Modern S.  
 Hillman, H.A.M. f. High S. for Boys, Croydon  
 Horman, F. f. Oxenford H., Jersey  
 Inkster, R.L. f. Oakes Inst., Walton, L'pool  
 Jenne, H.H. f. High S. for Boys, Jersey  
 LeBrun, J.R. f. St. James' Coll. S., Jersey  
 LeCornu, J.F. f. Oxenford H., Jersey  
 Lucas, J. f. Oxenford H., Jersey

Luce, G.P. f. Oxenford H., Jersey  
 Malzard, F.J. f. Salvandy Ter. S., Jersey  
 Manger, P.V. f. Oxenford H., Jersey  
 Merton, H.M. g. Univ. S., Herne Bay  
 Neill, W.A.H. f. Oxenford H., Jersey  
 Nicholls, G.H. f. g. Stoke Newington Gram. S.  
 Nicolle, C.B. f. St. James' Coll. S., Jersey  
 Oakes, C. f. Oakes Inst., Walton, Liverpool  
 Parkinson, G.S. f. Bath Coll.  
 Patterson, W. f. Newcastle Modern S.  
 Piquet, C.J. f. Oxenford H., Jersey  
 Piroquet, A.N. f. Oxenford H., Jersey  
 Potter, A.J. f. g. Stoke Newington Gram. S.

Richards, A.H. f. g. Stoke Newington Gram.S.  
 Samuel, W.S. f. Maida Vale S., W.  
 Smith, C.E.H. f. Wellington Terr. S., Taunton  
 Smith, G. f. Oakes Inst., Walton, Liverpool  
 Tropewski, G. f. Tivoli H., Gravesend  
 Turpin, J.A. f. St. James' Coll. S., Jersey  
 Watson, W.R. f. Oakes Inst., Walton, L'pool  
 Welham, J.B. f. Private tuition  
 Weller, C. f. Bath Coll.  
 Wilenski, R.H. g. Private tuition  
 Maida Vale S., W.  
 Williams, A.E. f. g. Stoke Newington Gram.S.  
 Williams, S. f. High S. for Boys, Croydon  
 Woodrow, C. f. Private tuition

GIRLS.

Alcock, E.M. f. g.  
 Haddo & Westwood Coll. S., Scarborough  
 Bartlett, K.C. f. Private tuition  
 Brane, D.P. f. Harborne Ladies' Coll.  
 Brooks, K. f. Milton Mount Coll., Gravesend  
 Carouge, J.H. f. Private tuition  
 Cole, D.F. f. g. Coolhurst S., Crouch End  
 Cox, C. f. Milton Mount Coll., Gravesend  
 Craig, I.Y. f. g. Manchester High S. for Girls  
 Davies, L.A. f. g.  
 Southolme High S., Whalley Range

Dixon, F. f. Brookville, Filey  
 Dodd, C.H.M. f. Ellerslie Ladies' S., Bromsgrove  
 Gazel, L. f. Zelzah H., St. Heliers  
 Gordon-Cranmer, E.A. f. g.  
 George Green S., Poplar  
 Arundel H., Scarborough  
 Fry, B. f. Bristol  
 George Green S., Poplar  
 Hohl, M.E. g. Private tuition  
 Lorch, D. f. Clifton Lodge S., Lee

Marples, W.E. J. Treverbyn, Hornsey Lane, N.  
 Mayo, I.G.R. f. Lancelfield S., Southend  
 Moon, W. f. Milton Mount Coll., Gravesend  
 Murray, J.M. f. Private tuition  
 Mutton, C.M. f. 26 Ashley Rd., Hornsey Rise  
 Onslow, G.F.M. f. Private tuition  
 Pither, K. f. Milton Mount Coll., Gravesend  
 Porter, E.A. f. 26 Ashley Road, Hornsey Rise  
 Pulling, G.E. f. Salway Coll., Leytonstone

Reynolds, C.D. f. Guelph Coll., Clevedon  
 Robinson, C. f. g.  
 Haddo & Westwood C., Scarborough  
 Ruffell, F. f. Milton Mount Coll., Gravesend  
 Simpson, E.W. f. Arundel H., Scarborough  
 Southwell, A.B. f. g.  
 Trafalgar Sq. S., Scarborough  
 Taff, E.E. f. g. George Green S., Poplar  
 Vergette, N.F. f. 26 Ashley Road, Hornsey Rise  
 Weedon, L.A. f. George Green S., Poplar



JUNIOR FORMS EXAMINATION.—PASS LIST, CHRISTMAS, 1899.

BOYS.

Table listing names of boys and their respective schools, organized in three columns. Includes names like Abraham, E.S., Adams, A.E., and schools like Devizes Gram. S., Great Ealing S., Highfield S., etc.

BOYS, JUNIOR FORMS—Continued.

- Knowles, F.H. The College, Weston-s.-Mare  
 Knowles, J.W. Lancaster Coll., Morecambe  
 Lacey, L.H. Oxenford H., Jersey  
 Lang, F.H. Allerton H., Watford  
 Langlois, P. High S. for Boys, Jersey  
 Langstone, H. Westfield H., Reading  
 Larke, A.J. Stoke Newington Gram. S.  
 Lathbury, C.L. Highfield S., Chertsey  
 Latter, R. Crompton S., Southend  
 Lawrence, H.C. Highfield S., Chertsey  
 Lawry, T. St. Austell S.  
 Learmonth, A. Kilgrimol S., St. Annes-on-Sea  
 LeBrocq, J.W. High S. for Boys, Jersey  
 LeBrocq, S.E. Harleston H., St. Lawrence, Jersey  
 LeBrocq, W.E. High S. for Boys, Jersey  
 LeCappell, T.G. Belvoir H., St. Peter's, Jersey  
 LeCornu, P. Harleston H., St. Lawrence, Jersey  
 Lee, R.S.N. Sudbury Gram. S.  
 LeFeuvre, G.C. Oxenford H., Jersey  
 Legg, T.E. St. Aubyn's, Woodford Green  
 LeGresley, E.T. Harleston H., St. Lawrence, Jersey  
 LeGresley, H.T. Harleston H., St. Lawrence, Jersey  
 Leighton, F. Norwood Central High S.  
 LeMasurier, C.F. Ashton Coll., St. Heliers  
 LeMasurier, J.P. High S. for Boys, Jersey  
 LeSueur, J. High S. for Boys, Jersey  
 Levene, L.L. Tivoli H., Gravesend  
 Levett, P. New Coll., Margate  
 Lidin, M.I. Great Ealing S.  
 Lidtadt, A.W. Clacton Gram. S.  
 Limb, A. Elm Bank S., Nottingham  
 Linden, J.F. Clacton Gram. S.  
 Lindsay, G.M. Raleigh Coll., Brixton  
 Line, T. Apsley H., Margate  
 Ling, H.E. King's Coll., Wimbledon  
 Lingford, K.G. Highfield S., Rock Ferry  
 Lippa, A. Sudbury Gram. S.  
 Little, H.L. Ashted S., Birmingham  
 Littlewood, L.E. St. John's Royal Latin S., Buckingham  
 Littlewood, R.A.F. St. John's Royal Latin S., Buckingham  
 Livmore, H. Raleigh Coll., Brixton  
 Llewellyn, W.M. Kingsholme S., Weston-s.-Mare  
 Lloyd, F.J. Greenway H., Tiverton  
 Lomas-Smith, E.V. Southdown C., Eastbourne  
 Lones, A. Allerton H., Watford  
 Long, E.C. Private tuition  
 Longrigg, J.H. Portland St. S., Leamington  
 Longrigg, J.H. Highfield S., Rock Ferry  
 Looker, A.G. Grafton H., Manchester  
 Lovede, W.H. Leamington Coll. S.  
 Lowish, W.E. Rutland S., Filey  
 Luckock, P.J. Stoke Newington Gram. S.  
 Lyon, H.P. Monk Bridge S., York  
 Macaulay, C. Newhaven Coll.  
 Mace, E.R. Hythe S.  
 Maddison, S.P. Acton Comm. S.  
 Maiden, A.E. Southport Modern S.  
 Makin, G. Kilgrimol S., St. Annes-on-Sea  
 Maliphant, A.V. Barton S., Wisbech  
 Malzard, J.P. Charing Cross S., St. Heliers  
 Malzard, D. Belvoir H., St. Peter's, Jersey  
 Mann, D. St. Winifred's S., Torquay  
 Mann, T.H. Earls Colne Gram. S.  
 Mansfield, A.M. Catford Coll. S., S.E.  
 Marchant, S.H.S. Greenway Prep. S., South S., S.E.  
 Marchant, W.B. Earls Colne Gram. S.  
 Marrett, T.J. High S. for Boys, Jersey  
 Marriott, G.L. Private tuition  
 Marsh, J.D. Boys' Coll. S., Aldershot  
 Martin, A.W. West Cliff S., Reading  
 Martin, L.C. Gravesend Modern S.  
 Maskell, J.W. Brunswick H., Maidstone  
 Mathews, J.R. New Cross Coll.  
 Matthews, C.L. St. John's Coll., Southend  
 Maundrell, F. Devezes Gram. S.  
 Mawson, S.A. Comm. S., Ludlow  
 Maxed, V. Brunswick H., Maidstone  
 Maycock, R.A. High S. for Boys, Jersey  
 Mayers, B. Richmond H., High S., Egremont  
 McEchan, D. Elm Bank S., Nottingham  
 Meckrel, F. Winchester H., Redland, Bristol  
 Mecklenburg, A.P. Hounslow Coll., Bristol  
 Medlin, L.T. St. Blazey Gate Gram. S.  
 Messervy, K. Northgate S., Winchester  
 Michell, J.B. Comm. S., Penzance  
 Millen, E.L. Brockley H., Peckham Rye Comm.  
 Mitchell, W.H.V. Clacton Gram. S.  
 Monk, H.G. Northgate S., Winchester  
 Monkman, R.G. Croad's S., King's Lynn  
 Morgan, M. Farnworth Gram. S., Bolton  
 Morrissey, T.H. Marlborough Coll., Tue Brook  
 Morley, G.C. The College, Weston-s.-Mare  
 Morris, P. Sudbury Gram. S.  
 Morrison, J.C. Great Ealing S.  
 Mortimer, G. Gram. S., Spalding  
 Moss, A. Torquay Public Coll.  
 Moxham, W.E. Great Ealing S.  
 Moy, Thomas, C. Tynemouth H., Tynemouth  
 Muller, P. Southdown C., Eastbourne  
 Munsey, W.F. High S., South Shore, Blackpool  
 Nancollas, G.T. The College, Heaton Moor  
 Nason, C.W. St. Blazey Gate Gram. S.  
 Naylor, J. University S., Hastings  
 Needham, R.L. Blackpool Gram. S.  
 Neesam, H. Archbp. Elogate's Gram. S., York  
 Newton, J. Allenby Coll., Derby  
 Nickson, F. Kilgrimol S., St. Annes-on-Sea  
 Niedermayer, R.A. Southdown Coll., Eastbourne  
 Norris, H.A. Raleigh Coll., Brixton  
 Oakley, R.W. Wilton Grove S., Taunton  
 Oates, R.H. Mile End H., Newport, Mon.  
 Okey, T. Gram. S., Romford  
 Oliff, T.M. Brunswick H., Maidstone  
 Orviss, H.G. Salvandy Terrace S., Jersey  
 Oswald, W.J. Old Elvet S., Durham  
 Owen, P. Comm. & Civil Serv. C., Forest Gate  
 Owers, S.A.V. Glenwood Coll., Newmarket  
 Palliser, T.A. Elm Park S., Newcastle-on-T.  
 Palmer, G.E. Southdown Coll., Eastbourne  
 Parker, R. Supton Mallet Gram. S.  
 Parkes, C.G.S. Comm. & Civil Serv. C., Forest Gate  
 Parry-Jones, D.R. Leamington Coll. S.  
 Pascoe, F.E. St. Austell S.  
 Pearce, W.J. St. Austell S.  
 Pelling, R.E. Ivel Bury S., Biggleswade  
 Penny, G. Hart H., Burnham, Som.  
 Pentecost, F.G. Comm. & Civil Serv. C., Forest Gate  
 Penty, F. Archbp. Holgate's Gram. S., York  
 Perceval, J.L. Surrey H., Anerley  
 Percival, C. Thanet Coll., Margate  
 Perkin, E.A.O. Greenway H., Tiverton  
 Picot, H.S. High S. for Boys, Jersey  
 Picot, J. High S. for Boys, Jersey  
 Pinks, S.H. New Cross Coll.  
 Piper, A.H. Leamington Coll. S.  
 Plank, H. Stoke Newington Gram. S.  
 Poock, P. Hart H., Burnham, Som.  
 Poingdestre, C.E. Charing Cross S., St. Heliers  
 Polkinghorne, W.G. St. John's C., Brixton  
 Pollard, H. Comm. S., Penzance  
 Pollexfen, F.J. St. John's Royal Latin S., Buckingham  
 Ponting, R.H. The College, Weston-s.-Mare  
 Pope, E.B. Grosvenor Prep. S., Bath  
 Poppy, G.K. Gleewood Coll., Newmarket  
 Pottie, G. Comm. & Civil Serv. C., Forest Gate  
 Powell, A.L. Aysgarth, Wolverhampton  
 Powell, C.A. Paragon H., Bracondale, Norwich  
 Prangwell, C.R. Wyncott H., Thornton Heath  
 Preller, H.W.G. Northgate S., Winchester  
 Prew, L. Belgrave Villa S., Lee, S.E.  
 Price, K.E. Hart H., Burnham, Som.  
 Prince, P.H. St. Bede's Coll., Hornsea  
 Prinkiss, F. Norwood Central High S.  
 Pye, W.G. Acton Comm. S.  
 Quorn, L.G. 116 St. Owen St., Hereford  
 Comm. & Civil Serv. C., Forest Gate  
 Rainer, G.M. Belgrave Villa S., Lee, S.E.  
 Rait, R. Northgate S., Winchester  
 Ralli, T.C. Private tuition  
 Ramsden, L. Langley H., Ashbourne  
 Randall, H.B. Waltham C., Waltham Cross  
 Rawlins, H.G. Devezes Gram. S.  
 Ray, R.R. St. Austell S.  
 Rayner, G.F. Clacton Gram. S.  
 Read, W.G. Pierremont Coll., Broadstairs  
 Redford, F. Marlborough Coll., Tue Brook  
 Reed, E. Earls Colne Gram. S.  
 Reid, C.F. University S., Hastings  
 Reynolds, G. Highfield S., Chertsey  
 Rice, R.K. Oxford H., Brighton  
 Richards, R.A. Winchester H., Redland, Bristol  
 Richards, R.S.H. Stoke Newington Gram. S.  
 Richardson, C.E. Univ. S., Hastings  
 Richardson, D.S. St. Aubyn's, Woodford Green  
 Rigby, L. Woodford Green  
 Rimington, H. Clarendon Coll., Blackpool  
 Rand S., Oswald Rectory, Wragby  
 Ritchie, F.S. Thanet Coll., Margate  
 Ritchie, H.P. Thanet Coll., Margate  
 Robbins, C. St. John's Coll., Brixton  
 Roberts, W.H.S. The College, Weston-s.-Mare  
 Robertson, A.V. Comm. & Civil Serv. C., Forest Gate  
 Robins, E.T. Southport Mod. S.  
 Robins, A.J. Edgbaston Acad., B'ham  
 Robins, W.A. Oxenford H., Jersey  
 Robinson, D. Kilgrimol S., St. Annes-on-Sea  
 Robinson, F. Gram. S., Spalding  
 Robinson, H.T. Barton S., Wisbech  
 Robinson, J.D. Univ. S., Hastings  
 Robinson, S.G. Marlborough C., Tue Brook  
 Robson, S. St. Bede's Coll., Hornsea  
 Robson, S.D. St. Bede's Coll., Hornsea  
 Robson, S. Coll. S., Bowes Park, N.  
 Rockett, A.V. St. John's Coll., Southend  
 Roe, B.J. Ashton Coll., St. Heliers  
 Roit, G.E. King's Coll., Wimbledon  
 Roper, F.W. Hounslow Comm. Coll.  
 Russell, N.P. Highbury Pk. S., N.  
 Sale, R.F. Ifracombe Coll.  
 Sampson, L. Tivoli H., Gravesend  
 Sanders, H. Comm. S., Ludlow  
 Sanderson, W.M. Christ Ch. Hr. Grade S., Southport  
 Sara, R.V. St. Austell S.  
 Sargeant, R.A. Lancaster Coll., Morecambe  
 Satchell, C. High S., Whitley Bay  
 Saunders, W. St. Patrick's, Bradford  
 Savill, C. High S., Romford  
 Seward, T.W. Loughton S.  
 Sayers, W.H. Brunswick H., Maidstone  
 Scammell, E. Hart H., Burnham, Som.  
 Scannell, H.G. Raleigh Coll., Brixton  
 Scott, E.C. Great Ealing S.  
 Scott, H.F. Lancaster Coll., W. Norwood  
 Scott, L.E. University S., Hastings  
 Scott, W.E. Southport Modern S.  
 Scutcheon, A. Hart H., Burnham, Somerset  
 Scully, A.J. Private tuition  
 Searby, H. Gram. S., Spalding  
 Sellar, G.W.R. Blackpool Gram. S.  
 Comm. & Civil Serv. C., Forest Gate  
 Seyfried, J.F. High S., Romford  
 Sharland, R.H. St. John's Coll., Southend  
 Sharp, T.S. Ascham Coll., Clacton-on-Sea  
 Sharples, W. Clarendon Coll., Blackpool  
 Shenton, C.F.G. Northgate S., Winchester  
 Shephard, W.E. Edgbaston Acad., B'ham  
 Sheriff, B. Northgate S., Winchester  
 Silverlock, H. Oxford H., Brighton  
 Simon, A. Leamington Coll. S.  
 Simpson, J. Leamington Coll. S.  
 Simpson, O.G.E. Brunswick H., Maidstone  
 Slater, A. Cowes Gram. S.  
 Sloper, E.M. Boys' Coll., Devezes  
 Smallbones, C.E. Devezes Gram. S.  
 Smallwood, G.R. Bowood H., Folkestone  
 Smith, C.B. St. Austell S.  
 Smith, C.W.S. Parkdene & Poyntington S.  
 Smith, F.A. Leamington Coll. S.  
 Smith, F.J. Barton S., Wisbech  
 Smith, W.J. The College, Weston-s.-Mare  
 Smyth, R. Univ. S., Hastings  
 Snell, J. Stanford H., Lydney, Glos.  
 Solomon, V.D. Boys' Coll. S., Aldershot  
 Southwood, E. Comm. & Civil Serv. C., Forest Gate  
 Sowerby, F.A. Mutley Gram. S., Plymouth  
 Sporing, B. Comm. & Civil Serv. C., Forest Gate  
 Sponse, G.M. Norwood Central High S.  
 Sprott, N.A. Private tuition  
 Spurgeon, S.E. Comm. & Civil Serv. C., Forest Gate  
 Spurrell, H.P. St. John's Coll., Brixton  
 Stainton, J.H. Highfield S., Chertsey  
 Stansfield, G.H. Tynemouth H., Tynemouth  
 Statham, W. Norwood Central High S.  
 Stedman, S.B. Knowsley, Torquay  
 Steedman, E.W. Brunswick H., Maidstone  
 Stepple, E.C. Herne Bay Coll.  
 Stevens, H.H. Marlborough C., Tue Brook  
 Stevens, L.B. St. John's Royal Latin S., Buckingham  
 Stewart, W.G. Edgbaston Acad., Birmingham  
 Stocker, W.M. Coll. S., Bowes Park, N.  
 Stokes, J.W. Castle Coll., Guildford  
 Strange, A.G. Gravesend Modern S.  
 Strange, A.R.B. Gram. S., Shoreham  
 Strange, D.T.F. University S., Hastings  
 Strickland, J.G. The College, Weston-s.-Mare  
 Sutcliffe, T. Kilgrimol S., St. Annes-on-Sea  
 Sutton, F.W. Raleigh Coll., Brixton  
 Swan, K.T. Park S., Wood Green  
 Syvret, R.L. High S. for Boys, Jersey  
 Taberner, W.H. Farnworth Gram. S., Bolton  
 Talbot, S. Brunswick H., Maidstone  
 Tallis, C.J. St. James' Coll. S., Jersey  
 Tatham, H.H. Leamington Coll. S.  
 Tattersfield, H.W. St. Winifred's S., Torquay  
 Taylor, A.B. Portland St. S., Leamington  
 Taylor, C.H. Edgbaston Acad., Birmingham  
 Taylor, C.W. St. Winifred's S., Torquay  
 Tobbs, J.M. Barton S., Wisbech  
 Thane, W.R. Leamington Coll. S.  
 Thomas, A.E. Redland Grove Coll., Bristol  
 Thompson, F.D. Oxford H., Brighton  
 Thompson, H.C. Oxford H., Brighton  
 Thornber, W.H. Blackpool Gram. S.  
 Tinney, R.H.L. Carlton Rd. S., Burnley  
 Kingsgate Comm. Coll., Broadstairs  
 Titjen, M.G. University S., Hastings  
 Todd, A. Comm. & Civil Serv. C., Forest Gate  
 Todd, J. Brunswick H., Maidstone  
 Todd, R.J.K. Greenway H., Tiverton  
 Tombs, W.D.R. Holwood H., South Hill Park, N.W.  
 Toogood, E.H. St. Bede's Coll., Hornsea  
 Trachy, S.J. Belvoir H., St. Peter's, Jersey  
 Tregaskis, W.G. Torquay Public Coll.  
 Trehan, F.J. Charing Cross S., St. Heliers  
 Treveal, J.G. The College, Weston-s.-Mare  
 Turner, A. St. Austell S.  
 Turner, E.G. Herne Bay Coll.  
 Turner, R.H. Southport Modern S.  
 Archbp. Holgate's Gram. S., York  
 Tyler, P. Waltham Coll., Waltham Cross  
 Tyndall, W. De Gresley Lodge, Southsea  
 Tyrer, C. Brunswick H., Maidstone  
 Tyrer, R.L. Brunswick H., Maidstone  
 Tyson, L.A. Apsley H., Margate  
 Unwin, R.H. Earls Colne Gram. S.  
 Vallois, F.J. Harleston H., St. Lawrence, Jersey  
 Venn, H.J. Mt. Radford S., Exeter  
 Vergeth, G. Barton S., Wisbech  
 Villar, G. The College, Weston-s.-Mare  
 Waite, B.A.E. Spalding Central Classes  
 Wakeman, A.R. Cliff House Coll., Hove  
 Walden, H.E. High S. for Boys, Jersey  
 Walker, H.A. Highfield S., Rock Ferry  
 Walker, W. Blackpool Gram. S.  
 Wall, M.C. Mary St. H., Taunton  
 Wall, R.M. Comm. S., Ludlow  
 Wallace, R.C. Seven Kings Gram. S.  
 Wallis, H.G. St. John's Coll., Southend  
 Wallis, O.P. St. John's Coll., Southend  
 Walmsley, J. Comm. S., Astley Bridge  
 Walter, H. Central Hill Coll., Norwood  
 Wanstall, N.P. Cliftonville Coll., Margate  
 Ware, A. Norwood Central High S.  
 Warren, A.E. Wilton Grove S., Taunton  
 Warren, P.E. Wilton Grove S., Taunton  
 Welch, A.H. Clarendon Coll., Blackpool  
 Welford, G.N. Greenway H., Tiverton  
 Whalen, F.J. Thanet Coll., Margate  
 Whipple, J.R. Redland Grove Coll., Bristol  
 White, D.R. Southport Mod. S.  
 White, J.B. High S., Sutton, Surrey  
 Whyte, H.S. Clarendon Coll., Blackpool  
 Comm. & Civil Serv. C., Forest Gate  
 Wigg, S.H. Glenwood Coll., Newmarket  
 Wigmore, J.R. Towcester S.  
 Williamson, E. 46 Avenham Lane, Preston  
 Wilson, C. Sudbury Gram. S.  
 Wilson, C.J. Highbury Pk. S., N.  
 Wittshire, H.J. Devezes Gram. S.  
 Witt, C.W. Clacton Gram. S.  
 Wood, C.B. Northgate S., Winchester  
 Wood, C.B. Sandwich S.  
 Wood, G.W. Fern Bank, Harpurhey  
 Wood, H. Kilgrimol S., St. Annes-on-Sea  
 Woodbridge, P.H. Hounslow Comm. Coll.  
 Wright, P. Elm Pk. S., Newcastle-on-Tyne  
 Yelland, W.F. St. Austell S.  
 Ziman, A. Tivoli H., Gravesend

GIRLS.

- Achfeld, F.E. St. Winifred's, Southampton  
 Adams, Y.C.M. North Park Coll., Croydon  
 Adey, R.E. College H., Newbury  
 Adkin, A.M. Winsley St. Mildred's Rd., Lee, S.E.  
 Aldwinckle, H.M. Summerbrook, Reading  
 Alexander, W.A.R. Private tuition  
 Amsden, A.I. Private tuition  
 Anderson, M. Collingwood Coll., Lee, S.E.  
 Andrews, C.M. Queen's Coll., Acton  
 Arch, M.G. Spalding Coll. S.  
 Armstrong, H.N. St. Hilda's, Gosforth-o.-T.  
 Askew, C. Castle Hall S., Northampton  
 Atkinson, G. City of Durham S. for Girls  
 Atwell, E.O.P. St. Wilfrid's, Hastings  
 Averbil, G.A. Clifton H., Leyton  
 Averbil, F.V. Dresden H., Evesham  
 Axtens, G.M. Dresden H., Evesham  
 Bailey, E. Private tuition  
 St. Bernard's, Southsea  
 Bailey, I.D. The Larches, Wolverhampton  
 Ball, E.L. 78 Kennington Park Rd., S.E.  
 Balsbury, S.A. Comm. S., Astley Bridge  
 Banbury, A. Southernhay S., Exeter  
 Barclay, I.M. 28 Ashley Rd., Hornsey Rise  
 Barham, M. Tentercroft S., Lincoln  
 Barker, E. St. Mary's Cony., Middlesbrough  
 Barlow, A.E. Westbourne H., Cowes  
 Barnes, A. Ystrad H., Newport, Mon.  
 Barnes, L. Saffronholme, Lincoln  
 Baroni, E. Mowbray S., Sunderland  
 Barrett, K. Clark's Coll. High S., Fitzroy Sq., W.  
 Barrow, M.I. Raleigh Memorial S., Stoke Newington  
 Bartrum, I. Private tuition  
 Baty, I.V. The Laurels, Herne Bay  
 Baxter, G.M. Springfield, Corbridge-on-Tyne  
 Bayfield, C.A. George Green S., Foular  
 Newnham H., Wimbledon

GIRLS, JUNIOR FORMS—Continued.

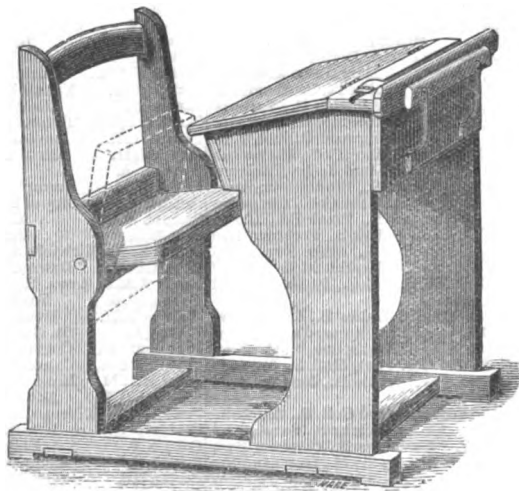
- Bayfield, I.R. Newnham H., Wimbledon  
 Baylis, G.P. Brompton Science S., S.W.  
 Baylis, L.M. Dresden H., Evesham  
 Bayly, D. 6 Orchard Gardens, Teignmouth  
 Bazley, M.L. The Halve, Trowbridge  
 Beaumont, G.V. Passmore, New Malden  
 Bedford, E.R. Somerville H., Northampton  
 Bedford, M. Somerville H., Northampton  
 Beer, E.L. St. Winifred's, Southampton  
 Bell, D. Brompton Science S., S.W.  
 Bennett, M.C. 6 Chandos Rd., Buckingham  
 Benson, E. 14 Wilson St., Derby  
 Bibby, A. St. Mary's Conv., Middlesbrough  
 Bingley, M. Heathfield H., Cardiff  
 Birkenfeld, A. Royal Masonic Inst., S.W.  
 Bishop, D.E. Twickenham Coll.  
 Bishop, E. Brunswick H., Gravesend  
 Bradford, A. The Beeches, Sutton, Surrey  
 Bluck, E.Y. Dresden H., Evesham  
 Blyton, F.I. Spalding Coll. S.  
 Bodington, R.A. The Gables, Harrogate  
 Bolt, N. Towcester S.  
 Bond, E.S. 2 Alveyn Crescent, W. Dulwich  
 Bond, H.B. 2 Alveyn Crescent, W. Dulwich  
 Bone, L.H. Crossbeck H., Ilkley  
 Bonner, D.A. 6 Chandos Rd., Buckingham  
 Bonner, D.J. Alexandra Coll., Southampton  
 Booth, A.C. 49 Nicoll Rd., Willesden  
 Borrett, D. Waveney H., Harleston  
 Bowdler, A.M.V. Mountfields, Shrewsbury  
 Bowes, D. 51 Ditching Rise, Brighton  
 Bows, M. Sittingbourne Coll.  
 Bowler, E. Clark's C. Highs, Fitzroy Sq., W.  
 Bowyer, M.E. Granville H., Southampton  
 Boyd, A.M. Private tuition  
 Boyd, L.F. George Green S., Poplar  
 Bradley, R. Elm Lodge, Petersham  
 Bradley, R. Royal Masonic Inst., S.W.  
 Brem, M.I. St. Wilfrid's, Hastings  
 Breslau, V. Brompton Science S., S.W.  
 Brewer, M.A. Ellerker Coll., Richmond Hill  
 Bridger, M.A. High S., Haslemere  
 Brine, C.M. Royal Masonic Inst., S.W.  
 Brodie, E. Langleigh, Bath  
 Brooker, B. Claremont Coll., Liverpool  
 Brooks, E.G. College H., Newbury  
 Brown, C.E. Norma S., Waterloo, Liverpool  
 Brown, G. Obelisk H., Barnsley  
 Brown, R.F. St. George's Coll., Barnsley  
 Brownhill, G.S. Wynford H., Belvedere  
 Buck, E.C. Priory Farm S., Earls Colne  
 Buck, M. Parkholme, Netherwood Rd., W.  
 Buckley, E.M. High S., South Shore, Blackpool  
 Bull, H.P. The Mount, Banbury  
 Bull, P.E. Portland St. S., Leamington  
 Bullen, K.E. Glenwood Coll., Newmarket  
 Bundy, A.L. Coll. S., Brunswick Place, Southampton  
 Farmer, K.M. Private tuition  
 Burden, N.V. Mill Hill Coll., Eden Bridge  
 Burkinshaw, E. 171 Bedford St., Liverpool  
 Burstall, E. 171 Bedford St., Liverpool  
 Burton, E.E. Westoe High S., S. Shields  
 Bush, E.E. Norfolk Coll., Leyton  
 Buswell, M. St. George's Coll., Barnsley  
 Cacey, K. St. André, St. Heliers  
 Callender, M. Royal Masonic Inst., S.W.  
 Canova, T.K. Royal Masonic Inst., S.W.  
 Cant, M.H. George Green S., Poplar  
 Caporn, E.R. Haslemere S., Clapham Pk.  
 Cardin, E.M. Carden High S., Peckham Rye  
 Carpenter, E. Clough S., Reigate  
 Carter, L.M. 9 Kingsgate St., Winchester  
 Carter, M.F. 5 Clapton St., N.E.  
 Carter, S.E. The Mount, Banbury  
 Casswell, M.R. Welland Hall Coll., Spalding  
 Castle, B.M. George Green S., Poplar  
 Chambers, E.M. Newnham H., Wimbledon  
 Charles, F.M. Summerfield Hall, Maesywimmer  
 Christie, E. Elgin Coll., Bayswater  
 Church, E.A. Girls' High S., Sudbury  
 Clark, F.A. Farnborough Parochial S., Bath  
 Clark, E.M.E. St. Winifred's, Southampton  
 Clarke, C. Private tuition  
 Clay, M.G. Sunny Bank Coll., Wilmshus  
 Clewerly, M.E. Marlborough H., Swindon  
 Clifton, E. Collingwood Coll., Lee, S.E.  
 Coaker, J. The College, Totnes  
 Coker, M.E. St. Michael's Avenue S., Northampton  
 Coldman, N.L. Langley H., Friern Rd., Dulwich  
 Cole, A.R. Convent S., The Avenue, Southampton  
 Coleman, E. Lynwood, Trowbridge  
 Collier, E. Camden S., Hull  
 Collins, F.M. Orchard Lodge, Malvern  
 Collins, K.M. Brompton Science S., S.W.  
 Congdon, J. Claremont Coll., Liverpool  
 Connell, K. Haslemere S., Clapham Pk.  
 Connell, M. Haslemere S., Clapham Pk.  
 Cook, G.F. Queen's Coll., Acton  
 Cooke, A. High S., Farnworth, Bolton  
 Cooke, N. St. Joseph's Conv., W. Hartlepool  
 Coope, A. High S., Farnworth, Bolton  
 Cornelius, E.R. 6 Orchard G'dns, Teignm'th  
 Cottell, M.F. Normanton, Preston Pk., Brighton  
 Coughlan, E. 21 Home Park Villas, Stoke  
 Cowley, J. Richmond H., Breck Rd., L'pool  
 Cowling, M. Girls' Coll. S., Morley  
 Cox, M. St. George's H., Doncaster  
 Cranfield, W. Slepe Hall, St. Ives, Haunts
- Creber, B.E.L. Valletort Rd., Stoke, Devonport  
 Crockett, D.F. St. Michael's Avenue S., Northampton  
 Crouch, C.E. Clifton H., Leyton  
 Cuff, D. Priory Farm S., Earls Colne  
 Cuppage, A.D.G. The College, Totnes  
 Curtis, M. 228 Gt. Clowes St., Manchester  
 Dale, M.H. Alexandra Coll., Southampton  
 Dancy, E.M. Private tuition  
 Darby, N. Crescent H., Gravesend  
 Darby, N. Lime Tree H., York  
 Davigde, E. Frimley Road S., Camberley  
 Donham, A.M. Clifton H., Ramsgate  
 Denny, E. Wilber H., Biggleswade  
 Diggle, L.W. Allerton H., Watford  
 Diggle, M.F. Allerton H., Watford  
 Dinwoodie, E. Richmond H., Egremont  
 Dixon, A.G. Romford H., Forest Gate  
 Dixon, E.D. Belle Vue, Herne Bay  
 Dixon, K.M. Highfield S., Harrogate  
 Dixon, Z. Mowbray S., Sunderland  
 Dobson, I. Clough S., Reigate  
 Donkyn, M. Clough S., Reigate  
 Donovan, E. Convent of Loreto, Hulme  
 Dorrell, C. Royal Masonic Inst., S.W.  
 Dornes, F. Westbourne H., Cowes  
 Dransfield, A. 9 Victoria Rd., Barnsley  
 Drew, N.B. Duke Street Girls' S., Bath  
 Driscoll, N.E. Ashton H., St. Clement's, Jersey  
 Duffield, M. Dresden H., Evesham  
 Duplock, M.C. Cavendish High S., Redhill  
 Durant, G. Milton Mount Coll., Gravesend  
 Durn, R.M.H. Normanton, Preston Pk., Brighton  
 Dyer, W.M. Harley H., Hereford  
 Eastaugh, F. Waveney H., Harleston  
 Eastwood, M. Royal Masonic Inst., S.W.  
 Edgar, A. Clanville H., Stoke Newington  
 Edmund, D. Pendennis S., Streatham  
 Edsall, M.E. Langley H., Friern Rd., Dulwich  
 Edwards, M.C. St. Frideswyde's S., Penarth  
 Edwards, N.C. Wallasey Girls' Coll. S., Liscard  
 Elsom, K.I.R. St. Bele's Coll., Hornsea  
 Emily, I.M. Helvetia H., Jersey  
 Etheredge, G.J. George Green S., Poplar  
 Etheridge, N.G. St. Winifred's, Shampton  
 Evans, A. Claremont Coll., Liverpool  
 Evans, A.E. St. David's S., Carnarvon  
 Evans, D. Manor Rd. Coll., Twickenham  
 Evans, I.G. Milton Mount Coll., Gravesend  
 Evans, I.G. Harley H., Hereford  
 Everatt, M.E. Pendennis S., Streatham  
 Everitt, M.E. Acton Comm. S.  
 Evtell, L.A. Wilton H., Reading  
 Exton, V.M. Forest View H., Chingford  
 Fairweather, G. Coll. S., Brunswick Place, Southampton  
 Farmer, K.M. Private tuition  
 Farmer, L.M. Brentwood, Southport  
 Fenwick, A. Haslemere S., Clapham Pk.  
 Field, E.L. Hazelwood, Hawkhurst  
 Fielding, M. Convent of Loreto, Hulme  
 Fincken, I. Royal Masonic Inst., S.W.  
 Fisher, B.M. The Ladies' Coll., Halifax  
 Fisher, F. Milton Mount Coll., Gravesend  
 Foll, K. 99 Manor St., Clapham  
 Ford, M.A. Westbourne H., Cowes  
 Foster, R.G. Brooklyn Highs., Leytonstone  
 Foster, M.E. Albert H., Harrogate  
 Fowler, F.M. George Green S., Poplar  
 Fowler, A.M. St. Maur Coll., Chestow  
 Fox, R.M. Dudley H., Stamford Hill  
 Fox, F. Clifton H., Ramsgate  
 Francis, B.E. St. Maur Coll., Chestow  
 Frankland, N.M. Hemdcan H., Caversham  
 Freeman, E.S. Private tuition  
 Freeman, K.M. Private tuition  
 Freeman, S.M. Devonshire H., Wincanton  
 Frith, A. Convent of Loreto, Hulme  
 Frost, E.M. Somerville H., Northampton  
 Fry, A.E.E. Somerset H., Redcliffe, Bristol  
 Furlonger, G. High S., Haslemere  
 Furneux, E.H. Olive H., Brockley  
 Gadd, E.B. Pestalozzian S., Southampton  
 Gallagher, K. St. Joseph's Conv., W. Hartlepool  
 Galliford, E.I. Brompton Science S., S.W.  
 Gardiner, D.G. Fairhaven, Bathaston, Bath  
 Gardiner, K.M. Fairhaven, Bathaston, Bath  
 Gardiner, M.P. Girls' High S., Sudbury  
 Gardner, M. Lynwood, Trowbridge  
 Garlick, F.C. Girls' S., Promenade, Blackp'l  
 Gascoigne, D. St. Mary's Conv., Middlesb'ro'  
 Gates, G.J. The Laurels, Herne Bay  
 Gauntlett, A.E. Verecroft, Devizes  
 Gent, S. Langley H., Ashbourne  
 Gillard, A.M. Fairhaven, Bathaston, Bath  
 Girton, A. Brompton Science S., S.W.  
 Glanfield, O.E. St. Margaret's, Cardiff  
 Gledhill, E.E. Beech H., Holmes Chapel, Crewe  
 Glover, E.E.V. Private tuition  
 Glover, F.G. Coll. H., Barbourne, Worcester  
 Gloyne, M. St. George's H., Doncaster  
 Godbold, G. Waveney H., Harleston  
 Godfrey, F.M. 14 Wilson St., Derby  
 Goodla, N. Waveney H., Harleston  
 Goodall, S.M. Portway Coll., Reading  
 Gooderham, E. Waveney H., Harleston  
 Gostelow, L.M. Spalding Coll. S.  
 Grant, E. Lea Holm, Waterloo, Liverpool  
 Grason, M. St. George's Coll., Barnsley  
 Grassam, E.H. Spalding Coll. S.
- Green, K. Waveney H., Harleston  
 Green, N.L. Rose Bank S., Brentwood  
 Greenlee, E.M. Park C., Northumberland Pk., Tottenham  
 Gregory, F.E. "Camperdown," W. Norwood  
 Griffiths, M.S. Harley H., Hereford  
 Griffiths, V. Royal Masonic Inst., S.W.  
 Grimshaw, B.B. Girls' Gram. S., Levenshulme  
 Gutting, W.M. Park C., Northumberland Pk., Tottenham  
 Hackford, E. Spalding Coll. S.  
 Hale, A.M. St. Winifred's, Southampton  
 Hall, M.C. The Ladies' Coll., Halifax  
 Hambly, A.D. Wintorsdorf, Birkdale  
 Hanson, N. The Ladies' Coll., Halifax  
 Hargreaves, M. Eagle Bank, Southport  
 Harper, M. Norma S., Waterloo, Liverpool  
 Harris, E.R. Romford H., Forest Gate  
 Harris, M.G. 51 Ditching Rise, Brighton  
 Harris, O.K. Longford Girls' S., Cotham, Bristol  
 Harrison, M. 9 Victoria Rd., Barnsley  
 Hartley, V. 12 Seafield Rd., Hove  
 Hatch, L. Summerbrook, Reading  
 Hattell, L.B. Somerset H., Redcliff, Bristol  
 Hauser, L.M. Wm. Gibbs' S., Faversham  
 Hawker, E.R. Westholme, Maidenhead  
 Hawkeswood, G.M. Dresden H., Evesham  
 Hawkins, A. Coll. S., Stanford-le-Hope  
 Hawkins, M.A. Brompton Science S., S.W.  
 Hawthorn, E.M. Houghton Ter. S., Southport  
 Haywood, W. Glenwood Coll., Newmarket  
 Hayward, B. Collingwood Coll., Lee, S.E.  
 Hearson, E. Langleigh, Batham  
 Hedley, E. St. Maur Coll., Chestow  
 Heller, F.M. Brompton Science S., S.W.  
 Herbinson, E. Heathfield H., Cardiff  
 Hexter, H. Clanville H., Stoke Newington  
 Heywood, E. Brompton Science S., S.W.  
 Hickley, E.M. Sullivan Coll., Southampton  
 Hicks, E. Orchard Lodge, Malvern  
 Hills, M. Queen's Coll., Twickenham  
 Hilton, E.M. Wintorsdorf, Birkdale  
 Hirschberg, E.J. Wintorsdorf, Birkdale  
 Holbourn, D.W. Spalding Coll., S.  
 Holt, C. Somerville H., Northampton  
 Holt, F. Brentwood, Southport  
 Holthusen, G.M. Claremont Coll., Forest Gate  
 Hood, R.G. Langley H., Ashbourne  
 Hopps, M. St. Joseph's Conv., W. Hartlepool  
 Horsburgh, H.H. Norma S., Waterloo, L'pool  
 Howard, A.E.A. Ripley H., High Barnet  
 Howard, M.E. Mile End H., Newport, Mon.  
 Howe, S.G. St. Maur Coll., Chestow  
 Howell, R. Devonshire H., Wincanton  
 Hoyle, S. The Ladies' Coll., Halifax  
 Hughes, S. St. Joseph's Conv., W. Hartlepool  
 Hunt, D.J. Langley H., Friern Rd., Dulwich  
 Hunter, G.M. Somerville H., Northampton  
 Hurst, B.M. Romford H., Forest Gate  
 Ibb, M.T. Coll. S., Stanford-le-Hope  
 Ievers, C. Brentwood, Southport  
 Illingworth, L.H. Abbey H., Selby  
 Isaacs, I.V. Queen's Coll., Twickenham  
 Isaacs, M.E. Queen's Coll., Twickenham  
 Isley, M. Richmond H., Breck Rd., L'pool  
 Jack, H.M. Norma S., Waterloo, L'pool  
 Jackson, D. Fonhill S., Barnsley  
 Jackson, E. Marlborough H., Swindon  
 Jackson, G.L. Private tuition  
 Jarman, O. Royal Masonic Inst., S.W.  
 Jay, E. Collingwood Coll., Lee, S.E.  
 Jeffrey, A.M. Castle Hall S., Northampton  
 Jeffrey, E.C. Castle Hall S., Northampton  
 Jennings, E. Milford H., Newport, Mon.  
 Johnson, B.I. Westoe High S., S. Shields  
 Johnson, E.E. Margate Ladies' Coll.  
 Johnson, I.E.H. St. Winifred's, Southampton  
 Johnson, M.L. Ashleigh H., Tutbury  
 Jones, C. Woodford S., Southsea  
 Jones, E.M. Collingwood C., Lee, S.E.  
 Jones, M.A. St. David's S., Carnarvon  
 Jones, M.A. Orchard Lodge, Malvern  
 Jones, M.A. Avon H., Bradford-on-Avon  
 Jones, N. St. Maur Coll., Chestow  
 Jones, N. Richmond H., Breck Rd., L'pool  
 Jonson, C.F. Carden High S., Peckham Rye  
 Kearsey, N. Clanville H., Stoke Newington  
 Kelly, G. Heathfield H., Cardiff  
 Kent, M.E. Ellerker Coll., Richmond Hill  
 Kerlake, S.B. Elleslie Ladies' S., Bromsgrove  
 Kerwood, J. St. Bernard's, Southsea  
 Keyte, L.F. Westholme, Maidenhead  
 Kidner, M.W. Bp. Fox's High S., Taunton  
 Kirby, F.K. Somerville H., Northampton  
 Kirby, M. Haddo & Westwood Coll. S., Scarborough  
 Kloe, E. Mowbray S., Sunderland  
 Knight, D.F. Haslemere S., Clapham Park  
 Knight, E. Somerville H., Northampton  
 Knott, C.A. St. Maur Coll., Chestow  
 Lacey, H.E. George Green S., Poplar  
 Laing, F.G. Wintorsdorf, Birkdale  
 Lansdell, C. Milton Mount Coll., Gravesend  
 Lansdowne, D. Passmore, New Malden  
 Lawrence, E.M. Brompton Science S., S.W.  
 Lawrence, A.B. Brentwood, Southport  
 Lee, P. Milton Mount Coll., Gravesend  
 Levine, M. Queen's Coll., Twickenham  
 Leslie, L.V. George Green S., Poplar  
 Lewer, B.M. Spalding Coll. S.  
 Lewis, E.L. Private tuition
- Lewis, G. Milford H., Newport, Mon.  
 Lewis, J. Wintorsdorf, Birkdale  
 Lewis, J.F. Alexandra Coll., Southampton  
 Liebes, L. Tivoli H., Gravesend  
 Little, I. Springfield, Colbridge-on-Fyne  
 Lloyd, G.M. South Hornsey High S.  
 Lockett, A.L. Howard Coll., Bedford  
 Loxton, E.M.L. Wilton H., Reading  
 Lubbock, M.W. Brompton Science S., S.W.  
 Ludlow, E.M. Albert Pk. Girls' S., Didsbury  
 Lyford, N.B. The Larches, Wolverhampton  
 Lyle, A.M. Ystrad H., Newport, Mon.  
 Lyon, S.D. Tivoli H., Gravesend  
 Malzard, R.P. 43 David Pl., Jersey  
 Mace, A. Thanet H., Hounslow  
 Macgregor, D.K. Private tuition  
 Maguire, A.M. St. Andre, St. Heliers  
 Manger, J. Helvetia H., Jersey  
 Mann, F. Dennington Coll., W. Hampstead  
 Marriott, D.F. Private tuition  
 Marshall, L.M. Dresden H., Evesham  
 Martin, E.G. Northumberland H., Tottenham  
 Martin, G. St. Mary's Conv., Middlesbrough  
 Martin, K.M. Areville Coll., Rhyll  
 Martin, K.S. Bishop Fox's High S., Taunton  
 Masters, L. The Pebbles, Tenterden  
 Mathew, K.M. North Pk. Coll., Croydon  
 Matthews, D. Milton Mount Coll., Gravesend  
 Matson, F.A. City of Durham S. for Girls  
 McAdam, M.C. Dudley H., Stamford Hill  
 McConnell, E.M. Wintorsdorf, Birkdale  
 McIntosh, E.E. Brompton Science S., S.W.  
 McLaren, K. Richmond H., Breck Rd., L'pool  
 Meeklenburgh, E.C. Norfolk Coll., Leyton  
 Mellor, E.M. High S., Poplar Avenue, Edgbaston  
 Merry, E.M. Parkside, Harrogate  
 Metson, C.F. Priory Farm S., Earls Colne  
 Nichols, N. 171 Bedford St., Liverpool  
 Middleton, I.N.K. Breaun Down H., Barnham, Som.  
 Millard, F. City of Durham S. for Girls  
 Miller, A.J. Sunnyside S., Fleetwood  
 Miller, C.A. Sullivan Coll., Southampton  
 Minty, C.M. Clifton H., Leyton  
 Morgan, S. Summerfield Hall, Maesywimmer  
 Morley, M. Milton Mount Coll., Gravesend  
 Morris, D.L. Wintorsdorf, Birkdale  
 Morris, S.A. Ystrad H., Newport, Mon.  
 Mostyn, M. Royal Masonic Inst., S.W.  
 Moulton, L. Broomfield High S., M'chester  
 Muirhead, C.E. Dudley H., Stamford Hill  
 Mundle, K. Milton Mount Coll., Gravesend  
 Munro, M.B. Parkfield Ladies' C., High Barnet  
 Murley, H. George Green S., Poplar  
 Musker, M.E. 26 Trinity Rd., Bootle  
 Nairne, M. Convent of Loreto, Hulme  
 Napier, M. 6 Orchard Gardens, Teignmouth  
 Neale, V.G. Belle Vue, Herne Bay  
 Neels, I. Woking High S.  
 Newby, F. Brentwood, Southport  
 Newsome, M. Girls' Coll. S., Morley  
 Nichols, D. Wilber H., Biggleswade  
 Nicoll, M. Brentwood, Southport  
 Norris, L.M. Bp. Fox's High S., Taunton  
 Nott, A. Priory Farm S., Earls Colne  
 O'Connor, E.K. Mornington H., Portsmouth  
 Oreham, M. Addiscombe H., Margate  
 Orme, B.M. Clifton H., Leyton  
 Orsborn, E.M. Portland St. S., Leamington  
 Owen, N. Richmond H., Breck Rd., L'pool  
 Owen, W.E. 26 Ashley Rd., Hornsey Rise  
 Pace, E. Fairlaw S., Newmarket  
 Paine, O.F. Glenwood Coll., Newmarket  
 Palmer, E.F. Belle Vue, Herne Bay  
 Parker, L.E. Licensed Victuallers' S., S.E.  
 Parker, M.E.G. Richmond H., Egremont  
 Parkin, V. Ystrad H., Newport, Mon.  
 Parkinson, E.M. High S. for Girls, Gravesend  
 Parrott, L.E. Leybourne H., Aylesbury  
 Parry, W.H. Girls' Coll. S., Aldershot  
 Partis, A. Camden S., Hull  
 Paul, H.E. Brompton Science S., S.W.  
 Paul, H.E. City of Durham S. for Girls  
 Pearson, B.M. Harley H., Hereford  
 Peel, E.L. Harley H., Hereford  
 Pell, E.K. St. Michael's Av. S., Northampton  
 Piffard, D.M. Dawson Sq. S., Tynemouth  
 Pircival, A.M. Avon H., Bradford-on-Avon  
 Pottentill, G. Torrhill Coll., Hastings  
 Phillips, E.M. Mountfields, Shrewsbury  
 Pickup, E. St. George's H., Doncaster  
 PintoLeite, G. Convent of Loreto, Hulme  
 PintoLeite, M. Convent of Loreto, Hulme  
 Piper, H.E.M. Brompton Science S., S.W.  
 Pleydell, M.B. Addiscombe H., Margate  
 Pool, I.R. Licensed Victuallers' S., S.E.  
 Pooley, L.H. St. Winifred's, Southampton  
 Pope, N.T. Elgin Coll., Bayswater  
 Portch, B.L. Brompton Science S., S.W.  
 Porter, L.S. Ystrad H., Newport, Mon.  
 Porter, M. Waveney H., Harleston  
 Postans, M.H. Sullivan Coll., Southampton  
 Poyer, F. Wm. Gibbs' S., Faversham  
 Powicke, G. Milton Mount Coll., Gravesend  
 Price, E.M. Convent S., The Avenue, Southampton  
 Price, M.M. Girls' High S., Sudbury  
 Pritchard, L.E. Private tuition  
 Proctor, M.M. Welland Hall Coll., Spalding  
 Radcliff, B.M. Girls' High S., Sudbury  
 Radcliff, M. Wm. Gibbs' S., Faversham

<p><b>GIRLS, JUNIOR FORMS—Continued.</b>                  Ragg, L. K. Millbridge S., Lower Edmington                  Railton, H. M.                  Brean Down H., Burnham, Som.                  Rainsbottom, M. Brentwood, Southport                  Randall, A. E. Mile End H., Newport, Mon.                  Rankin, M. M. Sunnyside S., Fleetwood                  Rapson, E. M. Highwood H., Liskeard                  Rawlins, M. Verecroft, Devizes                  Rayment, M. B. Heidean H., Caversham                  Rayner, L. 41 Park View Rd., Manningham                  Reakes, E. M. Grosvenor S., Wokingham                  Ream, A. B. High S., Pontefract                  Reed, M. E. Gwyrfai, East Cowes                  Rees, L. A. Langley H., Friern Rd., Dulwich                  Reinohl, L. A. Brompton Science S., S. W.                  Reitz, L. George Green S., Poplar                  Rendell, L. St. Winifred's, Sharnham                  Reynolds, B. A. Sunnyside S., Fleetwood                  Richardson, E. M. Passmore, New Malden                  Richardson, M. The Elms, Sutton-on-Trent                  Ridd, L. E. Hazelhurst, Penarth                  Riley, L. E. Dresden H., Evesham                  Robb, H. L. Thoresby Coll., King's Lynn                  Roberts, G. A. Orchard Lodge, Malvern                  Robins, A. F. S. Private tuition                  Robinson, D. Clough S., Reigate                  Robinson, E. A. Crossbeck H., Ilkley                  Robinson, H. P. Girls' Gram. S., Levenshulme                  Roe, G. E. 14 Wilson St., Derby                  Rogers, R. E. Chorlton H., Leamington                  Roney, N. Convent of Loreto, Hulme                  Rowell, F. S. Broadfield S., Rochdale                  Rudden, N. Convent of Loreto, Hulme                  Runting, W. L. Salisbury H., Littlehampton                  Russell, E. F. Girls' High S., Wanstead                  Russell, E. F. Dudley H., Stamford Hill                  Sackett, E. F. Girls' High S., Wanstead                  Saunders, G. M. Ystrad H., Newport, Mon.                  Saul, C. W. Welland Hall Coll., Spalding                  Saunders, I. Minerva Coll., Dover                  Scaulon, M. Heathfield H., Cardiff                  Schofield, I. M. A. Broadfield S., Rochdale                  Schroder, E. K. M. Queen's Coll., Acton                  Scott, A. Milford H., Newport, Mon.                  Scriven, G. M. Brompton Science S., S. W.                  Selgwick, M. Prep. S., Byfield, Northants                  Sharpe, H. J. Hughenden, Boxhill                  Shepherd, D. F. Harley H., Hereford                  Shepherd, H. St. Joseph's Convent, W. Hartlepool                  Shepherd, M. Albert H., Harrogate                  Sheppard, W. M. Girls' High S., Wanstead                  Sheppard, A. I. Lynwood H., Jersey</p>	<p>Sherwin, L.                  Sibthorpe, E.                  Siddons, H. M.                  Siddons, W. A.                  Simmonds, B.                  Smith, A.                  Smith, A. F.                  Smith, B. E. H.                  Smith, C.                  Smith, D. D. St. Michael's Av. S., Northampton                  Smith, F. K.                  Smith, G. E.                  Smith, J. M.                  Smith, L.                  Smith, N. K.                  Smith, J. K. L.                  Snowdon, R.                  Spanton, E.                  Spott, C. M. A.                  Standley, V.                  Stanley, V.                  Starkey, L.                  Starling, E. E.                  Start, E. A.                  Stephens, H. L.                  Stephens, M. E.                  Stephenson, D.                  Stevens, D. S.                  Stewart, W. A.                  Stiles, H. M.                  Stokey, E. M.                  Stone, W.                  Stones, H. L.                  Strange, A. C.                  Stuckey, D. E. C.                  Sutcliffe, F.                  Sutton, C. M.                  Sutton, E. M.                  Swales, E.                  Sweetman, N. E.                  Swindell, M. D.                  Syer, K. L.                  Tallis, E. M. P.                  Taylor, E. M. B.                  Taylor, M. I.                  Taylor, S. A.                  Taylor, W. M.                  Terrill, E.                  Thomas, A. B.                  Thomas, C.                  Thomas, E. J.                  Thomas, G. L.                  Thomas, J.                  Thompson, M. L.</p>	<p>St. Bernard's, Southsea                  Salisbury H., Littlehampton                  Castle Hill S., Northampton                  Castle Hall S., Northampton                  Wm. Gibbs' S., Faversham                  Rougemont Coll., Blackpool                  Mill Hill Coll., Eden Bridge                  Harley H., Hereford                  Parnella H., Devizes                  Michael's Av. S., Northampton                  Licensed Victuallers' S., S. E.                  Girls' High S., Wanstead                  Wavency H., Harleston                  Monk Bridge S., York                  Hemdean H., Caversham                  Highfield S., Harrogate                  Bloomfield H., Bagdale, Whitby                  Private tuition                  The Crescent S., Norwich                  The Halve, Trowbridge                  Monk Bridge S., York                  Priory Farm S., Earls Colne                  Highfield S., Harrogate                  Mile End H., Newport, Mon.                  Mile End H., Newport, Mon.                  St. George's Coll., Barnsley                  Fonthill Coll., Gt. Malvern                  Harley H., Hereford                  Queen's Coll., Acton                  The Mount, Banbury                  Parnella H., Devizes                  Abbey H., Selby                  St. Mildred's, Eastbourne                  Haslemere S., Clapham Pk.                  Royal Masonic Inst., S. W.                  Highleigh H., St. John's, S. E.                  Highleigh H., St. John's, S. E.                  Sunnyside S., Fleetwood                  Westwing Coll., Ryde                  Aysgarth, Wolverhampton                  Girls' High S., Sudbury                  St. Maur Coll., Chesham                  Dresden H., Evesham                  Castle Gate H., Grade S., York                  Summerfield Hall, Maesycwmmr                  Brooklyn Highs, Leytonstone                  21 Home Park Villas, Stoke                  Crossbeck H., Ilkley                  Comm. S., Ludlow                  St. Margaret's, Cardiff                  St. Maur Coll., Chesham                  Houghton Terrace S., Southport                  Camden S., Hull</p>	<p>Thomson, A. H. Castle Hill S., Maldenhead                  Thorburn, M. J. Portland St. S., Leamington                  Thoren, O. St. Joseph's Cony., W. Hartlepool                  Thoumaian, F. L. Howard Coll., Bedford                  Thurlby, E. Welland Hall Coll., Spalding                  Tickle, A. E. 171 Bedford St., Liverpool                  Tildesley, G. I. The Larches, Wolverhampton                  Tindall, E. K. Fairlawn S., Newmarket                  Tompson, M. Langton H., Bury St. Ed's                  Toulmin-Smith, L. L. J.                  "Camperdown," W. Norwood                  Valley Bridge H., Scarboro'                  St. Mary's Cony., Middlesbro'                  Truscott, F. M. Castle Hill S., Maidenhead                  Turner, E. E. St. Winifred's, Southampton                  Turner, G. M. K. Crossbeck H., Ilkley                  Turney, H. J. Prep. S., Byfield, Northants                  Turney, L. Guelph H., Margate                  Venton, M. I. T. Haldon View, S. Exeter                  Vigers, J. Clough S., Reigate                  Viney, L. E. C. Glebe Place S., Clissold Pk., N.                  Waite, D. Milton Mount Coll., Gravesend                  Wakeford, M. High S., Haslemere                  Brompton Science S., S. W.                  Waldvogel, A. F. Haslemere S., Clapham Pk.                  Wales, A. W. Brean Down H., Burnham, Som.                  Walker, A. Monk Bridge S., York                  Walker, A. C. Castle Hill S., Northampton                  Walker, B. A. Hildesheim H., Tamworth                  Walker, D. St. George's H., Doncaster                  Walker, D. S. Longford Girls' S., Cotham, Bristol                  Walker, H. M. Aysgarth, Wolverhampton                  Walker, L. V. Aysgarth, Wolverhampton                  Walker, W. A. 211 King's Rd., Reading                  Walden, E. S. Salisbury H., Littlehampton                  Wallis, I. Private tuition                  Walmsley, G. M. Wintersdorf, Birkdale                  Wardle, W. H. Westholme, Maidenhead                  Warren, E. Brompton Science S., S. W.                  Dresden H., Evesham                  Wasley, D. P. Dresden H., Evesham                  Wasley, M. E. Harley H., Hereford                  Watkins, A. E. Crossbeck H., Ilkley                  Watkinson, E. W. Royal Masonic Inst., S. W.                  Watson, D. Warwick H., Roade                  Watts, B. Salisbury H., Littlehampton                  Watts, I. K. Orchard Lodge, Malvern                  Wayman, N. The Ladies' Coll., Halifax                  Webb, A. M. Ripley H., High Barnet                  Webb, M. E. Private tuition                  Wenham, K. Woking High S.                  Westerby, H. Milton Mount Coll., Gravesend                  Weston, M. E. Mile End H., Newport, Mon.</p>	<p>Wheatley, F. E. Westoe High S., S. Shields                  Whibley, E. Sittingbourne Coll.                  White, E. R. George Green S., Poplar                  White, H. 9 Kingsgate Street, Winchester                  White, I. M. Summerbrook, Reading                  Whitehouse, K. D. 40 Houghton Road, Handsworth                  Whitfield, E. G. Harley H., Hereford                  Whiting, G. M. William Gibbs' S., Faversham                  Whybrow, R. Salisbury H., Littlehampton                  Wiggs, M. E. Millbridge S., Lower Edmington                  Wilby, I. Belle Mont H., Ossett                  Wildash, D. K. Eastfield S., Walthamstow                  Wilding, M. E. Orchard Lodge, Malvern                  Wileman, L. R. St. George's Coll., W. Hampstead                  Wilkins, B. 9 Victoria Road, Barnsley                  Willett, H. Daisy Bank S., Rochdale                  Williams, E. A. Summerfield Hall, Maesycwmmr                  Williams, G. St. David's S., Carnarvon                  Williams, L. M. P. 9 King's Avenue, Ealing                  Williams, M. L. Old Sodbury H., Old Sodbury                  Willis, M. College H., Newbury                  Willows, E. Welland Hall Coll., Spalding                  South Croydon Coll.                  Private tuition                  Private tuition                  Wilson, A. M. Minerva Coll., Dover                  Wilson, F. M. Ellesmere H., Whitechurch                  Wilson, G. Sunnyside S., Fleetwood                  Wilson, R. M. St. Margaret's, Cardiff                  Wiltshire, B. R. St. Winifred's, Southampton                  Winship, M. P. St. Winifred's, Southampton                  Winstenholme, M. H. Rougemont Coll., Blackpool                  Wood, C. L. Summerfield Hall, Maesycwmmr                  Wood, E. Girls' S., Promenade, Blackpool                  Wood, F. L. Orton College, Water Orton                  Wood, M. M. Private tuition                  Wood, O. Fair View H., Coleshill                  Woodroffe, D. M. Passmore, New Malden                  Woodward, C. Royal Masonic Inst., S. W.                  Worthington, W. E. Portland St. S., Leamington                  Brompton Science S., S. W.                  Olive H., Brockley                  Brook Green Coll., W.                  Wright, N. Richmond H., Egrement                  Wright, N. L. Dresden H., Evesham                  Young, E. C. Brompton Science S., S. W.                  The Beeches, Sutton, Surrey</p>
--	---	---	---	--

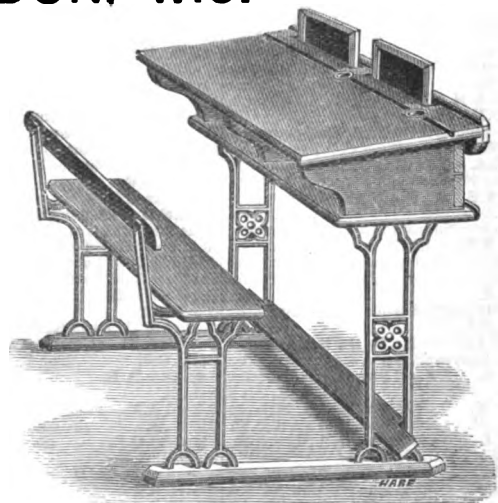
ESTABLISHED 1858.

# GEO. M. HAMMER & CO., LTD.,

Manufacturers of School, College, and Church Furniture,  
 370 STRAND, LONDON, W.C.



THE ALBANY SINGLE DESK.



No. 25, DUAL DESK.

Proprietors of "Premier" Patent Sliding and Folding Partition for Dividing Schoolrooms.

CATALOGUE OF SCHOOL OR CHURCH FURNITURE FORWARDED ON APPLICATION.

MANUFACTORIES: BERMONDSEY, S.E., AND GUILDFORD, SURREY.

Estimates given for completely Furnishing Schools.

# CHARLES GRIFFIN & CO.'S PUBLICATIONS.

## SCIENTIFIC.

**THE FLOWERING PLANT:** First Principles of Botany. By Prof. J. R. AINSWORTH DAVIS, M.A., F.Z.S., University College, Aberystwyth. Very fully Illustrated. Third Edition, Revised and Enlarged. With an additional chapter on FERNS and MOSSES. 3s. 6d.

"It would be hard to find a text-book which would better guide the student to an accurate knowledge of modern discoveries in botany."—*Journal of Botany*.

**THE MAKING OF A DAISY; "WHEAT OUT OF LILIES":** and other Studies in Plant Life and Evolution. A Popular Introduction to Botany. By ELEANOR HUGHES-GIBB. With Illustrations. Crown 8vo, gilt, 2s. 6d., post free.

"A bright little introduction to the study of flowers."—*Journal of Botany*.

**HOW PLANTS LIVE AND WORK.** A Simple Introduction to Real Life in the Plant World, based on Lessons originally given to Country Children. By ELEANOR HUGHES-GIBB. With Illustrations. Crown 8vo, cloth, 2s. 6d.

"Well calculated to make the study of botany attractive."—*Scotsman*.

**OPEN-AIR STUDIES IN BOTANY:** Sketches of British Wild Flowers in their Homes. By R. LLOYD PRAEGER, B.A., M.R.I.A. Illustrated by Drawings from Nature, and Photographs. Handsome cloth, 7s. 6d.; gilt, 8s. 6d., post free.

"A fresh and stimulating book."—*Times*.

**OPEN-AIR STUDIES IN GEOLOGY:** An Introduction to Geology Out of Doors. By GRENVILLE A. J. COLE, M.R.I.A., F.G.S. With 12 Full-page Plates after Photographs, and Illustrations. Handsome cloth, 8s. 6d., post free.

"A charming book . . . beautifully illustrated."—*Athenaeum*.

**PRACTICAL GEOLOGY, AIDS IN.** By Prof. GRENVILLE COLE, F.G.S., Royal College of Science for Ireland. With numerous Illustrations. Third Edition, Revised. Crown 8vo, 10s. 6d.

"Prof. Cole treats of the examination of minerals and rocks in a way that has never been attempted before."—*Athenaeum*.

**SOUND.** Forming an instalment of an important work entitled *A Text-book of Physics*. By J. H. POYNTING, Sc.D., F.R.S., and J. J. THOMSON, M.A., F.R.S., Hon. Sc.D. Dublin, Hon. D.L. Princeton. With Illustrations. Handsome cloth, 8s. 6d.

"Will serve as an introduction to the most abstruse treatises."—*Scotsman*.

**METALLURGY (An Elementary Text-book).** By Prof. HUMBOLDT SEXTON, F.I.C., Professor of Metallurgy in Glasgow and West of Scotland Technical College. With numerous Illustrations. Second Edition, Revised, 6s.

"Possesses the great advantage of giving a course of practical work."—*Mining Journal*.

## CLASSICAL AND LITERARY.

**GREEK ANTIQUITIES, A MANUAL OF.** For Students and General Readers. By PERCY GARDNER, M.A., D.Litt., Professor of Classical Archaeology and Art, Oxford University; and F. B. JEVONS, M.A., Litt.D., Principal of Bishop Hatfield's Hall, Durham University. Second Edition. Handsome cloth, 16s.

"Fresh, thoughtful, and cleverly arranged."—*Academy*.

**ROMAN ANTIQUITIES, A MANUAL OF.** By WILLIAM RAMSAY, M.A., late Professor of Humanity, Glasgow University. Revised and Edited by RODOLFO LANCIANI, D.C.L. Oxon., LL.D., &c., Professor of Classical Topography in the University of Rome. Sixteenth Edition. 10s. 6d.

"It is the best and handiest guide yet produced."—*Athenaeum*.

**ROMAN ANTIQUITIES (Elementary).** By Prof. RAMSAY. With numerous Illustrations. Ninth Edition. 4s.

**A HISTORY OF GREEK LITERATURE.** From the Earliest Period to the Death of Demosthenes. By FRANK B. JEVONS, M.A., D.Litt., Principal of Bishop Hatfield's Hall, in the University of Durham. Second Edition. Cloth, 8s. 6d.

"The best history of Greek literature hitherto published."—*Spectator*.

**A HISTORY OF ROMAN LITERATURE.** By the Rev. C. T. CRUTTWELL, M.A., Hon. Canon of Peterborough Cathedral. From the Earliest Period to the Times of the Antonines. Sixth Edition. 8s. 6d.

"Full of good scholarship and good criticism."—*Athenaeum*.

**SPECIMENS OF ROMAN LITERATURE FROM THE EARLIEST PERIOD TO THE TIMES OF THE ANTONINES.** Third Edition. Edited by C. T. CRUTTWELL, M.A., and PEAKE BANTON, M.A. Part I.—ROMAN THOUGHT: Religion, Philosophy and Science, Art and Letters. 6s.

Part II.—ROMAN STYLE: Descriptive, Rhetorical, and Humorous Passages. 5s. Or, in one Vol., with Synopsis and Indices, complete, 10s. 6d.

"A work not only useful, but necessary."—*Saturday Review*.

**A HISTORY OF ENGLISH LITERATURE AND OF THE ENGLISH LANGUAGE.** From the Norman Conquest. With numerous Excerpts and Specimens. By GEORGE LILLIE CRAIK, LL.D., late Professor of History and English Literature, Queen's College, Belfast. New Edition. In Two Vols., royal 8vo, cloth, 25s.

"A more than usually agreeable book."—*Times*.

**A MANUAL OF ENGLISH LITERATURE.** For the use of Colleges, Schools, and those preparing for Competitive Examinations. With an Appendix on Recent Literature, by Sir H. CRAIK, K.C.B., M.A., LL.D. From the larger work by Dr. CRAIK. Eleventh Edition. Crown 8vo, cloth, 7s. 6d.

"Needs no recommendation."—*The Spectator*.

LONDON: CHARLES GRIFFIN & CO., LTD., EXETER STREET, STRAND.

*Small crown 8vo, bound in cloth, price 2s. 6d.*

## A MANUAL OF ESSAY WRITING.

For Colleges, Schools, and Private Students.

By J. H. FOWLER, M.A.,

Assistant-Master at Clifton College.

"Schoolboys will be the wiser and the better for reading Mr. J. H. Fowler's little manual on 'Essay Writing.'"—*Literature*.

"The book, altogether, is one of conspicuous merit, and cannot fail to be warmly welcomed by those engaged in the teaching of such dilligently as this is universally acknowledged to be."—*Educational News*.

"The directions he gives are admirable, and the notes in Part II. possess the great merit of suggestiveness."—*Public School Magazine*.

"This is a distinctly helpful book. . . . We heartily commend the book to the notice of students preparing for all higher standard examinations at which an essay is required."—*University Correspondent*.

"This is the best handbook of the sort for advanced pupils that we remember to have seen. . . . Under such guidance the essay becomes in its measure an exercise in the art of literature."—*Educational Record*.

"The best book of its kind which has fallen into our hands yet. It is practical and lucid, and contains useful appendices of notes and subjects for essays."—*Educational Review*.

"Mr. J. H. Fowler's 'Essay Writing' may be unreservedly recommended for the higher forms in public schools, and for teachers of composition of all grades. The author's aims are high, his method of handling his subject is dignified as well as practical, and his book offers in itself an excellent example of that clearness of thought, sobriety of judgment, and purity of style which he wishes to aid his readers to attain. The duties of a composition master are not—according to Mr. Fowler's conception of them—limited to the development in his pupils of a certain facility for spinning out a meagre stock of ideas in language grammatically correct, and possessing a certain shallow fluency and sparkle; his aim should be to make the writing of an essay an occasion for the acquisition of ideas, the widening of knowledge, the cultivation of habits of research, and the exercise of individual thought and critical judgment. The earnestness and skill with which Mr. Fowler develops this idea constitute the chief claim of his work to consideration, and raise it head and shoulders above any other text-book on composition which we have seen."—*Guardian*.

A. & C. BLACK, SOHO SQUARE, W.

## ELEMENTARY PHYSIOGRAPHY. SECTION I.

BY E. YOUNG.

*Published Price One Shilling and Sixpence.*

With numerous Outline Illustrations.

The Book satisfies the requirements of the following Examinations, viz.:—

Science and Art Department in Physiography, Section I.

Oxford Preliminary Local Examination in Elementary Science.

Cambridge Preliminary Local Examination in Elementary Science.

Pupil Teachers' Examination in Elementary Science.

This book is the **Simplest**, the **Cheapest**, and the only **Uncrowded** book in the market.

THE EDUCATIONAL SUPPLY ASSOCIATION,

42 Holborn Viaduct, London, E.C.



# EDUCATIONAL WORKS BY A. K. ISBISTER, M.A., LL.B.

(LATE DEAN OF THE COLLEGE OF PRECEPTORS.)

## LATIN AND GREEK.

Sixteenth Edition, with Map. 12mo.

### **CÆSAR'S COMMENTARIES on the GALLIC WAR.**

BOOKS I.-V. With Notes Critical and Explanatory,  
a Vocabulary of all the Words in the Text, and  
*Easy Reading Lessons for Beginners* ..... price 3s. 6d.

BOOKS I.-VII. do. do. 4s. 6d.  
Do. (without the Reading Lessons) ..... 4s. 6d.

Twenty-fifth Edition.

BOOK I. (with Vocabulary, Reading Lessons, &c.) ..... 1s. 6d.

Fourteenth Edition. 12mo, price 3s. 6d.

**XENOPHON'S ANABASIS, Books I. to III.** With  
Notes, Vocabulary of all the Words in the Text, and a *Series of*  
*Easy Reading Lessons for Beginners*. Designed as a First Greek  
Reading Book in Schools.

## ELOCUTION.

Tenth Edition. 12mo, price 3s. 6d.

### **THE ILLUSTRATED PUBLIC SCHOOL SPEAKER**

**AND READER**, based on Grammatical Analysis, comprising a  
choice Selection of pieces for Reading and Recitation, annotated for  
Expression, Emphasis, and Pauses, and illustrated by Diagrams and  
Figures exhibiting to the eye the appropriate gestures and positions;  
to which is added a selection of Greek, Latin, French, and German  
Extracts, suitable for "Speech Days" at Public Schools.

New Edition. 12mo, price 1s. 6d.

### **LESSONS IN ELOCUTION AND EXPRESSIVE**

**READING FOR BOYS**, based on Grammatical Analysis; with  
a choice selection of Extracts for Reading and Repetition, classified,  
of Goldsmith's "Deserted Village," set out into Principal and Sub-  
ordinate Sentences, illustrating the theory of Emphasis and Pauses.

New Edition. 12mo, price 1s. 6d.

### **LESSONS IN ELOCUTION AND EXPRESSIVE**

**READING FOR GIRLS**, based on Grammatical Analysis; with  
a choice selection of Extracts for Reading and Repetition, classified,  
under heads for practice in various styles of Reading, and annotated  
for Expression, Emphasis, and Pauses, and the Analysis of Sentences,  
with the figure [of a *Girl*] showing the proper attitude in Reading.

## ENGLISH GRAMMAR.

Nineteenth Edition. 16mo, 1s. 6d.; or in Two Parts, price 9d. each.

**THE ELEMENTS OF ENGLISH GRAMMAR AND**  
**COMPOSITION**, including the Analysis of Sentences, simplified  
for Beginners.

Tenth Edition. 12mo, price 6d.

**A FIRST BOOK OF ENGLISH GRAMMAR, GEO-**  
**GRAPHY, AND ENGLISH HISTORY.** With Arithmetical  
Tables, Dates, &c.

Eleventh Edition. 12mo, price 1s. 6d.

### **FIRST STEPS IN READING AND LEARNING:**

a Reading-Book for Beginners, designed to utilize the time of those  
learning to read, by presenting, in a series of Easy Reading and  
Writing Lessons, a First Course of Scripture and English History,  
Geography, English Grammar, Spelling, and Arithmetic, interspersed  
with Moral Lessons and Simple Poetry for Repetition.

## GEOMETRY.

Sixth Edition. 12mo, price 3s. 6d.

**THE COLLEGE EUCLID:** Comprising the First Six and  
portions of the Eleventh and Twelfth Books read at the Universities.  
Chiefly from the Text of Dr. SIMSON. With a new arrangement of  
the Figures and Demonstrations; the Enunciations of the Propositions  
separately for Self-Examination, apart from the Text; Notes and  
Questions on each Book; and a Series of Geometrical Problems for  
Solution, from the most recent University Examination Papers.

Fifteenth Edition. 12mo, price 2s. 6d.

**THE SCHOOL EUCLID:** Comprising the First Four Books.

With Questions, Geometrical Exercises, &c.

THE SCHOOL EUCLID, Books I. & II. With Questions,  
Exercises, &c. 12mo, price 1s. 6d.

THE SCHOOL EUCLID, Book I. With Questions, &c.  
12mo, price 1s.

New Edition. 12mo, price 9d.

### **THE COLLEGE AND SCHOOL EXAMINER IN**

**EUCLID**, containing the Enunciations of all the Propositions in  
the College and School Editions, Questions on the Definitions,  
Arithmetical and Algebraical Demonstrations of the Propositions in  
Books II. and V., and a large collection of Geometrical Problems  
for Solution. Designed for Class and Self-Examination, and adapted  
to all Editions of Euclid.

Third Edition. 12mo, price 1s. 6d.

**FIRST STEPS TO EUCLID:** Comprising the Propositions  
of Book I., prepared for writing out, with a recapitulation of the steps  
of the Demonstration appended to each; Forming a Text-book for  
the above.

Fifth Edition. Two Quarto Copy Books, price 6d. each.

**THE GEOMETRICAL COPY-BOOK.** Arranged for  
writing out the Propositions of Euclid in the Abbreviated and  
Symbolical Form adopted in the Universities and Public Schools.

## ARITHMETIC.

Ninth Edition. 12mo, price 1s.; or, with Answers, 1s. 6d.

**UNITARY ARITHMETIC.** Embodying the First Book  
of Arithmetic of the Irish National Board. With numerous addi-  
tional Examples, and selections from recent Examination Papers;  
and a full exposition of the "Unitary" System, or Method of  
Working Arithmetic *without rules*.

\*\* In this Edition, Questions in Proportion, Practice, Interest,  
Stocks, Partnership, Profit and Loss, &c., are, by the "Unitary"  
Method, solved by a single rule.

## BOOK-KEEPING.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-KEEPING**, by SINGLE  
and DOUBLE ENTRY; with Practical Explanations and Exercises  
on the most useful Forms for Business.

4to, 1s. each.

**ENGRAVED ACCOUNT BOOKS.** Ruled and Interleaved  
for Copying, adapted to the above.

No. I. Business Forms. 1. Bills of Parcels and Book Debts.  
2. Invoices. 3. Account Sales. 4. Receipts. 5. Pro-  
missory Notes and Drafts. 6. Bills of Exchange.

No. II. Day-Book and Cash-Book.

No. III. Ledger, Index, and Balance Sheet.



## COLLEGE OF PRECEPTORS.

## Lectures for Teachers

ON THE

SCIENCE, ART, AND HISTORY OF EDUCATION.

## INTELLECTUAL EDUCATION.

To be delivered by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic at University College, London.

## SYLLABUS.

I.—Education in its relation to Natural Development—Historical Evolution of the Idea of Education—Different Aspects of Educational End: Fullness of Individual Development, Fitness for Life, Readiness for the Social State and the Duties of Citizenship—Respective Functions of Parent, State, and Teacher, in Education—Claims of the Home, of the Child's World, and of the Child's Inner Self—Relation of Education to Social Conditions, to the Spirit of the Age, and to Progress.

II.—Intellectual Education in its relation to Education as a Whole—General Value of the Intellectual Side of Man—Gradual Evolution of the End of Intellectual Education: from Practical Skill (the End of Savage Training) to Intelligence—Conflict of Ideas of different stages of Culture in Contemporary Discussions: Useful Knowledge *versus* Culture—The True Standard of "Knowledge-Values"—What a Cultivated Intelligence includes—In what sense Intelligence can exist in a Child.

III.—The Process of Mental Development—Growth of Intelligence or Gradual Storage and Assimilation of Material—The Part of Feeling and of Effort in Intellectual Development—The Organic Base of Intellectual Progress: the Efficiency of Sense-Organs, Muscles, and Brain—First Movements of Intelligence in the Child's own World (Play), and in the Search for Facts and Explanations—The Problem of the Young Child's Curiosity—The Too Much and the Too Little in the way of the Growth-up's Stimulation of the Growing Intelligence.

IV.—(1) Intellectual Education begins by a Primary Presentation of Sense Material—The Wakefulness of the Early Senses—Animal and Human Senses compared—The Importance of the Finer Exercises of Eye, Ear, and Hand—Interest of Children in the Report of the Senses—Interest and Value of a Testing of the Senses—Over-training of the Senses.

V.—A Child's Interest is in Things rather than in Sensations—The Attitudes of Child and Animal towards the World of Objects—The Charm of the Ever Unfolding New—The Gradual Evolution of Interests and their Effect on Attention and Inquiry—The Teacher's Function in relation to young half-formed Interests—What Awakening an Interest means—The Place of Sturdy Effort in the Growth of Interests.

VI.—The Progressive Examination of Things by the Child—First, "General" Impressions, and, later, Full and Concrete ones—The Minds that "stick" at General Impressions—What Education can do to take the Young Mind beyond these—Methodical Analysis of Presentations and its Difficulties—Error of plunging Child into the Abstractions of "Qualities" and "Relations"—Illustrations from the Teaching of Form and of Drawing.

VII.—The Relation of Observation to Assimilation of Sense-Presentations—Interest in Objects includes Impulse to Assimilate—The Lower Kind of Animal Assimilation: Recognition—Assimilation as Expansive, and as Mastering the New through its relation to the Old—True and False Conception of Apperception—The Apperceptive Attitude and its relation to the Store of Impressions—The Aim of Object Teaching as the Development of right Apperceptive Attitudes.

VIII.—The Way in which the Inner Store of Ideas grows into an ordered Multiplicity—Observation and Memory—The Child who Sees and Forgets—Associative Grouping of Ideas—Apperceptive Systems as the Beginning of Organized Knowledge—Types of Associative Grouping: the Mind for Particulars and Details, and the Mind for Generalities and Relations—The Exercise of the Memory as Training in Exactness—Errors of Childish Reproduction, Single and Recurring, and the way to deal with them.

IX.—The Psychology of Language as affecting Processes of Instruction—General Function of Names and of Articulated Language in the Growth of Intelligence—The Seer and the Namer of Things—Language as fixing the Results of Methodical Observation—The Need of Language in carrying out an orderly Arrangement of Ideas—The Teacher's Problem of selecting Fitting Language, and of insisting on its Accurate Reproduction—Language as a Fetish and as an Object of Contempt in Teaching.

X.—(2) Secondary Presentation of Intellectual Material through the medium of Language—The Aim and Process of Verbal Instruction, pure and simple—Words as Abstract Symbols, and as contributing to the Formation of Images—The Apperceptive Process in following Verbal Instruction—The Teacher must excite the Learner at once to a Reproduction of Ideas and to a further Elaboration of these—Different ways in which a Child's Mind may go wrong here—How a Child thinks of the Desert—How the Skilled Teacher keeps in touch with the Imaginative Movement of his Pupils' Minds.

XI.—The Name as Instrument of Thought—Transition from Image to General Idea—How a Child represents a Class of Things and their Qualities and Relations—The Problem of Thought-Training—The Child to rise above the Particular and yet to hold fast to Particulars—The Value of Judicious Presentation of Examples—When and how Definitions are to be reached.

XII.—Thought as an Articulated setting forth of Relations—Comparison of Primitive and Cultured Forms of Language—Grown-up Language as the Child's Burden—Meaning of the Rule "From the Indefinite to the Definite"—Early Exercises in Reasoning—The Stimulation and Restraint of Thought—How to deal with the Backward and the too Forward Reasoner.

The Fee for the Course of Twelve Lectures is Half-a-Guinea.

\* \* \* The Lectures will be delivered on THURSDAY EVENINGS at 7 o'clock, at the College, Bloomsbury Square, W.C.—Members of the College have free admission to the Course.

## Oliver &amp; Boyd's Educational Books.

## LECTURES ON LANGUAGE AND LINGUISTIC METHOD IN THE SCHOOL.

Delivered in the University of Cambridge, Easter Term, 1889, by S. S. LAURIE, A.M. Ed., LL.D. St. Andrews, Professor of the Institutes and History of Education in the University of Edinburgh. Third Edition. 4s.

By the same Author. Second Edition, Revised. Price 6s. 6d.

## INSTITUTES OF EDUCATION.

Comprising an Introduction to National Psychology.

Just published. Price 3s. 6d.

## ELEMENTARY TRIGONOMETRY.

By A. J. PRESSLAND, M.A., F.R.S.E., sometime Scholar of St. John's College, Cambridge, Mathematical Master at the Edinburgh Academy; and CHARLES TWEDDIE, M.A., B.Sc., F.R.S.E., Mathematical Lecturer and Assistant Professor, University of Edinburgh.

"It is a pleasure to read a book so well planned and so thoughtfully written as this. It differs widely from most English manuals of the subject."—*Journal of Education*.

## PRACTICAL PLANE &amp; SOLID GEOMETRY.

By JAMES RIDDEL, Headmaster of the Art School, Heriot-Watt College, Edinburgh. With numerous Exercises and Examination Questions. 2s.

Specially adapted for Science and Art Classes and the Elementary Stage of Practical Plane and Solid Geometry, Science Subject No. 1.; also for Government Examinations and the Elementary Stage of Geometrical Drawing.

"A very reliable and thorough manual."—*School Guardian*.

## THE PRINCIPLES OF FRENCH GRAMMAR.

With numerous Exercises. By CHARLES S. LE HARIVEL, ancien Professeur de la Ville de Paris, Lecturer on French at the Moray House Training College, Edinburgh, &c. 2s. 6d.

"A simple and well-graded exposition of French grammar, illustrated at every step by practical exercises, and supplemented by a vocabulary, which makes the book self-contained and suitable for study without recourse to a dictionary."—*Scotsman*.

\* \* \* KEY to the GRAMMAR for Teachers only, 2s. 6d.

By the same Author.

## ELEMENTARY FRENCH GRAMMAR. 1s.

## THE CHILD'S FRENCH GRAMMAR.

By CLARA A. FAIRGRIEVE (Diplômée), Teacher of French in George Watson's Ladies' College, Edinburgh. Price 8d.

974 pages, reduced to 3s. 6d., bound.

## SURENNE'S PRONOUNCING FRENCH AND ENGLISH DICTIONARY.

A special feature is that the Pronunciation is shown by a different spelling.

Attention is requested to this extremely cheap issue.

## SURENNE'S FRENCH AND ENGLISH DICTIONARY.

Without Pronunciation. Reduced to 1s. 6d.

## OLIVER &amp; BOYD'S OBJECT-LESSON CARDS.

With Actual Objects attached.

- I. THE VEGETABLE KINGDOM. Set of 20 Cards in Box. 21s.
- II. THE ANIMAL KINGDOM. Set of 14 Cards in Box. 21s.
- III. THE MINERAL KINGDOM. Set of 14 Cards in Box. 21s.

OLIVER & BOYD, Edinburgh.

SIMPKIN, MARSHALL, HAMPTON, & Co., Limited, London.

# THE WARWICK SHAKESPEARE.

General Editor—Professor C. H. HERFORD, Litt.D.,

Trinity College, Cambridge; Professor of English at University College, Aberystwyth.

THE WARWICK SHAKESPEARE is now so generally known and widely used that a detailed description of the series is superfluous. It is acknowledged to be “*infinitely superior to any other school edition.*” Of the latest volume (“Henry VIII.”), *THE ATHENÆUM* says:—“Compiled with extreme care and pains and with that fullness of annotation and attention to ‘æsthetic’ comment to which we are accustomed in the ‘Warwick Shakespeare.’”

To the whole series may be applied the verdict of *THE ACADEMY* upon “A Midsummer Night’s Dream”: “In brief, here is an edition to be unreservedly recommended.”

*The Publishers will be pleased to entertain applications for Specimen Copies.*

## VOLUMES SET FOR EXAMINATIONS, 1900, 1901.

**AS YOU LIKE IT.** Edited by J. C. SMITH, M.A. (Edin.), B.A. (Oxon.), formerly Exhibitor of Trinity College, Oxford; late Rector, Stirling High School. 1s. 6d.

COLLEGE OF PRECEPTORS, 1900.  
OXFORD LOCALS (JUNIOR AND SENIOR), 1900.  
CAMBRIDGE LOCALS (JUNIOR AND SENIOR), 1900.

**CORIOLANUS.** Edited by EDMUND K. CHAMBERS, B.A., formerly Scholar of Corpus Christi College, Oxford; Chancellor’s English Essayist, 1891. 1s. 6d.

CAMBRIDGE HIGHER LOCALS, 1901.

**HAMLET.** Edited by EDMUND K. CHAMBERS, B.A., Editor of “Coriolanus,” &c. 1s. 6d.

CAMBRIDGE HIGHER LOCALS, 1900.  
LONDON UNIVERSITY B.A. (HONOURS), 1900.  
ST. ANDREWS UNIVERSITY M.A., 1900.

**A MIDSUMMER NIGHT’S DREAM.** Edited by EDMUND K. CHAMBERS, B.A., Editor of “Coriolanus,” &c. 1s. 6d.

OXFORD AND CAMBRIDGE SCHOOLS (HIGHER CERTIFICATE), 1900.  
LONDON UNIVERSITY INTERMEDIATE (PASS), 1900.

**RICHARD THE SECOND.** Edited by C. H. HERFORD, Litt.D., Trinity College, Cambridge; Professor of English at University College, Aberystwyth. 1s. 6d.

OXFORD AND CAMBRIDGE SCHOOLS (HIGHER AND LOWER CERTIFICATES), 1900.

**HENRY THE EIGHTH.** Edited by D. NICHOL SMITH, M.A. 1s. 6d.

TEACHER’S CERTIFICATE (SECOND YEAR), 1900.

**JULIUS CÆSAR.** Edited by ARTHUR D. INNES, M.A., formerly Scholar of Oriol College, Oxford. 1s.

ABERDEEN UNIVERSITY LOCALS, 1900.  
QUEEN’S SCHOLARSHIP, 1900.  
QUEEN’S CERTIFICATE (SCOT.), 1901.

**THE TEMPEST.** Edited by F. S. BOAS, M.A., formerly Exhibitor of Balliol College, Oxford; Lecturer, Oxford Society for the Extension of University Teaching. 1s. 6d.

TEACHER’S CERTIFICATE (SECOND YEAR), 1900.  
EDINBURGH UNIVERSITY M.A. (PASS), 1900.

**THE MERCHANT OF VENICE.** Edited by H. L. WITHERS, B.A., Principal of Isleworth Training College, London. 1s. 6d.

ABERDEEN UNIVERSITY JUNIOR LOCALS, 1900.

**TWELFTH NIGHT.** Edited by ARTHUR D. INNES, M.A., formerly Scholar of Oriol College, Oxford. 1s. 6d.

ST. ANDREWS UNIVERSITY M.A., 1900.

### REMAINING VOLUMES OF THE SERIES—

**CYMBELINE.** Edited by A. J. WYATT, M.A. Cantab. et Lond. 1s. 6d.

**HENRY THE FIFTH.** Edited by G. C. MOORE SMITH, M.A., formerly Scholar of St. John’s College, Cambridge; Professor of English at the Fifth College, Sheffield. 1s. 6d.

**KING JOHN.** Edited by G. C. MOORE SMITH, M.A., Editor of “Henry the Fifth.” (In preparation.) 1s. 6d.

**MACBETH.** Edited by EDMUND K. CHAMBERS, B.A., formerly Scholar of Corpus Christi College, Oxford; Chancellor’s English Essayist, 1891. 1s.

**RICHARD THE THIRD.** Edited by GEORGE MACDONALD, M.A., Balliol College, Oxford; former Classical Examiner in the University of Edinburgh. 1s. 6d.

*Other Volumes in Preparation.*

### OPINIONS OF THE PRESS.

**A MIDSUMMER NIGHT’S DREAM.**—“It is wonderfully rich in illustrative matter, and no aspect or interest of the play is neglected. In his treatment of chronological and historical questions, Mr. Chambers is modestly convincing and delightfully sane; two rare praises for Shakesperian scholars. In brief, here is an edition to be unreservedly recommended.”—*Academy*.

“One of the best of the ‘Warwick Shakespeare’ series, and contains a thorough and satisfactory exposition of the play.”—*Athenæum*.

**CORIOLANUS.**—“The most complete edition of ‘Coriolanus’ with which we are acquainted. Mr. Chambers’ essay on Shakesperian metre is not only painstaking and scholarly, but made unusually attractive by absence of pedantry and the sound sense of its arguments.”—*Guardian*.

**AS YOU LIKE IT.**—“Edited with great care and skill.”

—*Journal of Education*.

“The introductory matter and appendices are admirable.”—

—*University Correspondent*.

**HAMLET.**—“In an excellent series, this play seems to be specially well edited. Its appendices will give an intelligent student more than an inkling of what literature, literary history, and literary criticism mean.”—*Bookman*.

**RICHARD THE SECOND.**—“Professor Herford’s excellent edition.”—*Athenæum*.  
“Furnished with a glossary, many admirable historical and literary notes, and an introduction which leaves little on the score of lucid exposition and intelligent criticism to be desired. We have encountered few better works of the kind, and we heartily commend it on the score of common sense as well as of scholarship.”—*Speaker*.

**THE TEMPEST.**—“The editor shows considerable powers of delicate analysis and fine criticism. His introduction is a very subtle and sympathetic piece of work, and admirably written, to boot. The notes and similar apparatus are very accurate and sufficiently full. Mr. Boas keeps a judicious balance throughout between the respective claims of scholarship and of literary criticism proper.”—*Academy*.

“Of the good quality to which we are accustomed in the series.”—*Spectator*.

**HENRY THE FIFTH.**—“We have nothing but praise for the section on the Elizabethan theatre, or for the scholarship and critical ability displayed in the treatment of the play as a whole. No better edition could be found either for the class teacher or for the solitary student.”—*Athenæum*.

“The notes which are appended are unusually full and grapple with the real difficulties.”—*Speaker*.

**THE MERCHANT OF VENICE.**—“The introduction and notes alike are models of interpretation by suggestion as well as by clear, pointed exposition. We have seldom met with a school Shakespearian in which the writer has so completely succeeded in placing himself in the position of the intelligent student his book is designed to guide.”—*Educational Times*.

“One of the best small editions that we have seen. . . . What is not given in the introduction is given in the excellent notes, throughout which our attention is kept fixed on the play, its plot, and the persons who are concerned in it. The glossary is good and useful. We heartily recommend this edition.”—*Journal of Education*.

**RICHARD THE THIRD.**—“A very careful piece of work, done with special attention to the needs of students as practical experience has revealed them. There is a good appendix on the prosody of the play.”—*Academy*.

### A FEW OPINIONS AS TO THE SERIES IN GENERAL.

(1) “THE WARWICK SHAKESPEARE, the general scheme of which is now too well known to need any description from us.”—*Guardian*.

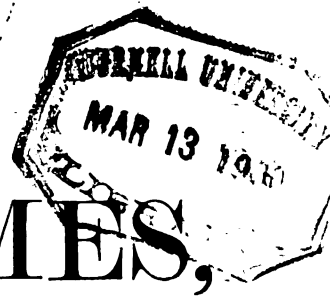
(2) “THE WARWICK SHAKESPEARE is one of the most desirable of annotated editions.”—*Academy*.

(3) “The series will be of exemplary value for purposes of tuition or study.”

—*Notes and Queries*.

(4) “This useful and comprehensive series.”—*University Correspondent*.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY, E.C.



# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 467.

MARCH 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 6th of March, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—In addition to the Doreck Scholarship of £20, the following Prizes will be competed for:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, JULY AND DECEMBER, 1900.

Notice is hereby given that at the above Examinations the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book VI., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

## PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.

—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 6th, 7th, and 8th of March, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— (Bloomsbury Square, W.C.)

The next Monthly Evening Meeting of the Members will take place on Friday, the 16th of March, when H. O. ARNOLD-FORSTER, Esq., M.P., will open a discussion on "School Maps: what they are and what they ought to be."

The Chair will be taken at 7.30 p.m. by J. SCOTT KELTIE, Esq., LL.D., Secretary of the Royal Geographical Society.

Members have the privilege of introducing their friends.  
C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS.

The First Course of Lectures (Twenty-eighth Annual Series), by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic in University College, London, on "Intellectual Education," commenced on Thursday, February 22nd, at 7 p.m.

For Syllabus, see p. 120.

\* \* \* A Doreck Scholarship, of the value of £20, will be awarded at the Diploma Examination at Christmas next, to the candidate who, having attended two courses of the Training Class Lectures during the preceding twelve months, and having passed the full examination for a College Diploma, stands first in the examination in Theory and Practice of Education.

The Fee for the Course is Half-a-guinea. The Lectures will be delivered on Thursday Evenings at 7 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.  
C. R. HODGSON, B.A., Secretary.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.  
Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS.

SALUSBURY ROAD, BRONDSBURY, LONDON, N.W.

Principal—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FOR MUSICAL EDUCATION, AND EXAMINATIONS: IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARY, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in April next, when certificates will be granted to all successful candidates. Last day for entry, March 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

The NEW SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), is now ready and may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## LONDON MATRICULATION.

AT THE JANUARY EXAMINATION, 1900.

118

University Correspondence  
College Students

PASSED.

FOR THOSE WHO HAVE FAILED

A Short Course for June, 1900, is provided.

Fee for all subjects, 4s. 13s. 6d.

Prospectus and full particulars of Classes may be had, post free, from

THE SECRETARY,

(Univ. Corr. Coll. London Office),

32 Red Lion Square, Holborn, W.C.



## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

The Session began October, 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

## Diploma Correspondence College.

The ONLY College that coaches SOLELY for

# A.C.P.,

# L.C.P., AND F.C.P.

SUCCESSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

Dr. KNIFE, Dip. Corr. Coll., Fishponds, Bristol.

## SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

No extras. Resident Governesses.

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

## COUNTY INTERMEDIATE

SCHOOL, PRESTEIGN, RADNORSHIRE.—An ASSISTANT-MASTER is required for next term. Woodwork essential; ability to teach Vocal and Instrumental Music desirable. Salary £90. Apply to A. HOWARD SMITH, M.A., B.Sc., Headmaster.

MR. H. A. NESBITT (joint-author of "The Science and Art of Arithmetic," by A. SONNENSCHNIG and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.

FOR TEACHERS.—DEUTSCHER GERMANIST bietet sich zur ausführlichen sprachlichen und stilistischen Korrektur deutscher Aufsätze, Mässiges Honorar. Näheres—Dr. Phil. PETSCH, Würzburg (Bayern).

ARMY SCHOOLMASTERS.—There are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Committee of Council on Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

HIGH SCHOOL, STAMFORD, NORTHANTS.

BOARDERS are received by the Headmistress, Miss L. M. MONRO. Separate cubicles. Music excellent. Terms on application.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

ENTRANCE SCHOLARSHIPS.

One Reid Scholarship in Arts, annual value £31. 10s., tenable for three years; one Pfeiffer Scholarship in Science, annual value £48, tenable for three years, will be awarded on the results of the Examination to be held in the College on June 26th and 27th.

Students are prepared for all the University of London Examinations in Arts and Science. Lectures are given in all branches of General and Higher Education. Six Laboratories are open for Practical Work.

STUDENTS CAN RESIDE IN THE COLLEGE.

Prospectus and all particulars on application to the PRINCIPAL.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—MR. W. MATHER.

Treasurer—MR. C. G. MONTEFIORE.

Secretary—MR. ARTHUR G. SYMONDS, M.A.

TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

—This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University, Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Four Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## ROYAL INDIAN ENGINEERING

COLLEGE, COOPERS HILL, STAINES.—The Course of Study is arranged to fit an Engineer for employment in Europe, India, and the Colonies. About 40 Students will be admitted in September, 1900; the Secretary of State will offer them for competition Twelve Appointments as Assistant Engineers in the Public Works Department, and Three Appointments as Assistant Superintendents in the Telegraphs Department, and One in the Accounts Branch P.W.D. For particulars apply to SECRETARY at College.

## CORRESPONDENCE TUITION,

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

MATRON.—Re-engagement in high-class Boys' School. Highest references. Good experience in Public School. Address—F., "Educational Times" Office, 89 Farringdon Street, London, E.C.

## A COMPLETE FRENCH CLASS

BOOK.—HALL'S FIRST FRENCH COURSE and FRANCE AND THE FRENCH. 1s. 6d.; Key, 1s. 8d. New and Revised Edition. Contains nearly 200 Exercises, English and French Grammar, Questionnaire, Interesting and Easy Reading Lessons, Vocabulary, Maps, &c.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., Ltd.; and of all Publishers.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## THE JOINT AGENCY FOR MEN TEACHERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Agencies for Assistant-Masters and Tutors hitherto conducted by the College of Preceptors, the Teachers' Guild, and the Assistant-Masters' Association, have been amalgamated and placed under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.  
Incorporated Association of Headmasters.  
College of Preceptors.  
Teachers' Guild.  
Welsh County Schools' Association.  
Private Schools' Association.  
Association of Headmasters of Preparatory Schools.  
Association of Headmasters of Roman Catholic Schools.  
Assistant-Masters' Association.  
Association of Technical Institutions.  
&c. &c.

The rates of Commission charged to Assistant-Masters are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

## OXFORD LOCAL EXAMINATIONS. LONDON COMMITTEE (BOYS).

The Regulations for the Senior, Junior, and Preliminary Examinations for 1900 can be obtained from the Secretary,

E. LAYMAN, Esq.,

1 Garden Court, Temple, E.C.

Just published. SECOND EDITION. With numerous Illustrations and Additional Chapters. Crown 8vo, 5s. net.

## MENTALLY DEFICIENT

CHILDREN: their Treatment and Training. By G. E. SHUTTLEWORTH, B.A., M.D., &c., Medical Examiner, Defective Children, School Board for London; late Medical Superintendent, Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster; formerly Assistant Medical Officer, Earlswood Asylum.

"The book is an admirable manual on the subject of which it treats, and calls for careful study by all dealing with the education and training of feeble-minded children."—School Board Gazette.

LONDON: H. K. LEWIS, 136 GOWER STREET, W.C.

## EPPS'S COCOA.

GRATEFUL.

COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in ½-lb. and ¼-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homeopathic Chemists, London.

BREAKFAST.

SUPPER.

## EPPS'S COCOA.



London University Examinations.



UNIVERSITY TUTORIAL COLLEGE,

Red Lion Square, Holborn.

INTRODUCTORY SCIENCE AND ART CLASSES

FOR THE JULY, 1901, EXAMINATIONS

AND

Matric. and Prelim. Sci. Classes

are just commencing.

At the January, 1900, Examinations the following successes were gained by students of University Tutorial College:—

**Inter. Laws and LL.B.**—4 students passed, one with First Class Honours.

**Matriculation**—31 students passed.

**Prelim. Sci. (M.B.)**—17 students passed, being one-third of the whole list.

Full particulars of Classes may be had from

**THE VICE-PRINCIPAL,**

University Tutorial College,

32 Red Lion Square, Holborn.

CARLYON COLLEGE.

KERIN & LYNAM,

55 AND 56 CHANCERY LANE.

LONDON UNIVERSITY CLASSES.

MATRICULATION CLASSES, INTER. ARTS and SCIENCE, PREL. SCI., B.A. and B.Sc. CLASSES. Classes starting.

Classes and Tuition for **Legal and Medical Preliminaries, University and Hospital Scholarships, Civil Service Examinations, A.C.P., L.C.P., F.C.P., Higher Local, Ox. and Camb., First M.B.; Royal Univ., Ireland, L.L.A.**

CLASSES FOR LADIES. PRACTICAL CLASSES in PHYSICS, CHEMISTRY and BIOLOGY.

Papers Corrected for Schools.

Private tuition for all Examinations.

Inter. Sc. Hons. and B.Sc. Botany Class, B.A. Classical Honours Class.

The Principal may be seen between 11.15 and 1 any day, and 2.30 and p.m. any day (except Saturday), or by appointment at any other time.

For Prospectus and list of lecturers apply to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Pro Plancio" and "Phaedo," Author of "London Matriculation Course."

SUCCESSSES.

1892-1899.—London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; Science Scholarships, 5; Arts Scholarships, 4; R.U.L., 50; Indian Civil, Oxford and Cambridge, and many other Successes.

**M.A. LONDON (Classics), 1898 and 1899, 2. MATRIC., 1900, 6.**

**B.A. LONDON, 1899, 12 successful**

(11 on Official List; more than any other London Institution).

THE BURLINGTON CLASSES.

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.).

TUTORs.

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

Preparation by Correspondence

FOR

MATRICULATION, B.A., & B.Sc.,

(London Univ., Royal Univ., Dublin Univ.).

L.L.A.

(Degree for Ladies—St Andrews).

A.C.P., L.C.P., F.C.P.

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,

BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

Blackie's Illustrated Latin Series.

Edited by Prof. R. Y. TYRRELL, Litt.D., D.C.L.,

Examiner to the Universities of London and Glasgow, &c.

Each Volume is furnished with interesting Introduction, Explanatory Notes, and full Vocabularies, and is illustrated with numerous Maps, Plans, and authentic Drawings from Coins, Gems, Statues, and other objects of ancient art. With or without Vocabularies. Crown 8vo, cloth.

**EUTROPIUS. Books I. and II.** Edited by W. CECIL LAMING, M.A. 1s. 6d.

**VIRGIL.—GEORGICS I.** Edited by S. E. WINBOLT, M.A. 1s. 6d.

**LIVY. Book V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.

**VIRGIL.—AENEID III.** Edited by P. SANDFORD, M.A. 1s. 6d.

**TACITUS.—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS, M.A. 1s. 6d.

**HORACE.—ODES. Books I.-IV.** Edited by STEPHEN GWYNN. 1s. 6d. each.

**CICERO.—THE CATILINE ORATIONS (Complete).**

Edited by Prof. C. HAINES KERSE, M.A., Queen's College, Cork. 2s. 6d. (The First Oration separately, 1s. 6d.)

Other Volumes in preparation.

Specimen Copies or Illustrated Prospectus will be sent on application.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

Just Published. Crown 8vo, 2s. 6d. net.

TRAINING OF THE YOUNG IN LAWS OF SEX.

By the Rev. Hon. EDWARD LYTTTELTON, M.A.,

Headmaster of Haileybury College; Author of "Mothers and Sons," &c.

LONDON: LONGMANS, GREEN, & CO.

CASEY'S EUCLID.

THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.

By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.

Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin.

Second Edition. Small 8vo, price 6s.

A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."

Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

A TREATISE ON THE

ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.

Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

A TREATISE ON

ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, price 3s.

KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions. Second Edition. Price 3s.

A TREATISE ON

PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples.

Crown 8vo. Second Edition.

Crown 8vo, price 5s.

A TREATISE ON

SPHERICAL TRIGONOMETRY,

AND ITS APPLICATION TO GODESY AND ASTRONOMY.

With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN. LONDON: LONGMANS & CO.

FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

NEW EDITION (70 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.,

275 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to the June, 1899, Examination, 55 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.


## HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

 *Headmasters should apply for*

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

## DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens,  
Drawing Boards, Set-squares, T-squares, Drawing  
Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons,  
&c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## EXAMINATION PAPER

AS USED BY THE

## COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets... .. per Ream, 2s. 6d.  
" " 960 " " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.  
*Remittance should accompany Order.*

HEWARO & SHELBOURNE, Wholesale and Retail Stationers,  
63 HIGH HOLBORN, LONDON, W.C.

**JOSEPH GILLOTT'S** Gold Medals,  
Paris, 1878,  
1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing);  
and (for Vertical Writing) 1045, 1046.

STEEL PENS.

## COLLEGE OF PRECEPTORS.

### Lectures for Teachers

ON THE

SCIENCE, ART, AND HISTORY OF EDUCATION.

### INTELLECTUAL EDUCATION.

To be delivered by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic at University College, London.

#### SYLLABUS.

I.—Education in its relation to Natural Development—Historical Evolution of the Idea of Education—Different Aspects of Educational End: Fullness of Individual Development, Fitness for Life: Readiness for the Social State and the Duties of Citizenship—Respective Functions of Parent, State, and Teacher, in Education—Claims of the Home, of the Child's World, and of the Child's Inner Self—Relation of Education to Social Conditions, to the Spirit of the Age, and to Progress.

II.—Intellectual Education in its relation to Education as a Whole—General Value of the Intellectual Side of Man—Gradual Evolution of the End of Intellectual Education: from Practical Skill (the End of Savage Training) to Intelligence—Conflict of Ideas of different stages of Culture in Contemporary Discussions: Useful Knowledge *versus* Culture—The True Standard of "Knowledge-Values"—What a Cultivated Intelligence includes—In what sense Intelligence can exist in a Child.

III.—The Process of Mental Development—Growth of Intelligence or Gradual Storage and Assimilation of Material—The Part of Feeling and of Effort in Intellectual Development—The Organic Base of Intellectual Progress: the Efficiency of Sense-Organs, Muscles, and Brain—First Movements of Intelligence in the Child's own World (Play), and in the Search for Facts and Explanations—The Problem of the Young Child's Curiosity—The Too Much and the Too Little in the way of the Grown-Up's Stimulation of the Growing Intelligence.

IV.—(1) Intellectual Education begins by a Primary Presentation of Sense Material—The Wakefulness of the Early Senses—Animal and Human Senses compared—The Importance of the Finer Exercises of Eye, Ear, and Hand—Interest of Children in the Report of the Senses—Interest and Value of a Testing of the Senses—Over-training of the Senses.

V.—A Child's Interest is in Things rather than in Sensations—The Attitudes of Child and Animal towards the World of Objects—The Charm of the Ever Unfolding New—The Gradual Evolution of Interests and their Effect on Attention and Inquiry—The Teacher's Function in relation to young half-formed Interests—What Awakening an Interest means—The Place of Sturdy Effort in the Growth of Interests.

VI.—The Progressive Examination of Things by the Child—First, "General" Impressions, and, later, Full and Concrete ones—The Minds that "stick" at General Impressions—What Education can do to take the Young Mind beyond these—Methodical Analysis of Presentations and its Difficulties—Error of plunging Child into the Abstractions of "Qualities" and "Relations"—Illustrations from the Teaching of Form and of Drawing.

VII.—The Relation of Observation to Assimilation of Sense-Presentations—Interest in Objects includes Impulse to Assimilate—The Lower Kind of Animal Assimilation: Recognition—Assimilation as Expansive, and as Mastering the New through its relation to the Old—True and False Conception of Apperception—The Apperceptive Attitude and its relation to the Store of Impressions—The Aim of Object Teaching as the Development of right Apperceptive Attitudes.

VIII.—The Way in which the Inner Store of Ideas grows into an ordered Multiplicity—Observation and Memory—The Child who Sees and Forgets—Associative Grouping of Ideas—Apperceptive Systems as the Beginning of Organized Knowledge—Types of Associative Grouping: the Mind for Particulars and Details, and the Mind for Generalities and Relations—The Exercise of the Memory as Training in Exactness—Errors of Childish Reproduction, Single and Recurring, and the way to deal with them.

IX.—The Psychology of Language as affecting Processes of Instruction—General Function of Names and of Articulated Language in the Growth of Intelligence—The Seer and the Namer of Things—Language as fixing the Results of Methodical Observation—The Need of Language in carrying out an orderly Arrangement of Ideas—The Teacher's Problem of selecting Fitting Language, and of insisting on its Accurate Reproduction—Language as a Fetish and as an Object of Contempt in Teaching.

X.—(2) Secondary Presentation of Intellectual Material through the medium of Language—The Aim and Process of Verbal Instruction, pure and simple—Words as Abstract Symbols, and as contributing to the Formation of Images—The Apperceptive Process in following Verbal Instruction—The Teacher must excite the Learner at once to a Reproduction of Ideas and to a further Elaboration of these—Different ways in which a Child's Mind may go wrong here—How a Child thinks of the Desert—How the Skilled Teacher keeps in touch with the Imaginative Movement of his Pupils' Minds.

XI.—The Name as Instrument of Thought—Transition from Image to General Idea—How a Child represents a Class of Things and their Qualities and Relations—The Problem of Thought-Training—The Child to rise above the Particular and yet to hold fast to Particulars—The Value of Judicious Presentation of Examples—When and how Definitions are to be reached.

XII.—Thought as an Articulated setting forth of Relations—Comparison of Primitive and Cultured Forms of Language—Grown-up Language as the Child's Burden—Meaning of the Rule "From the Indefinite to the Definite"—Early Exercises in Reasoning—The Stimulation and Restraint of Thought—How to deal with the Backward and the too Forward Reasoner.

The Fee for the Course of Twelve Lectures is Half-a-Guinea.

\* \* \* The Lectures will be delivered on THURSDAY EVENINGS at 7 o'clock, at the College, Bloomsbury Square, W.C.—Members of the College have free admission to the Course.



**New.**

**GILL'S**

**New.**

**"CARTOGRAPHIC"**

**WALL MAPS**

**FOR SECONDARY SCHOOLS.**

*Edited by GEORGE GILL, F.R.G.S.*

**Size,**  
80 x 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

**Price 16s.**

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

\*ENGLAND AND WALES.

\*IRELAND.

INDIA.

ASIA.

\*SCOTLAND.

EUROPE.

\*AFRICA.

\*N. AMERICA.

\* The Set Geography for the Local Examinations.

**Class Text-Books for the 1900 Examinations.**

<b>RELIGIOUS KNOWLEDGE.</b>		<i>s. d.</i>	<b>ENGLISH AND ENGLISH GRAMMAR.</b>		<i>s. d.</i>
Marshall's St. Luke. Edited by the Rev. F. MARSHALL, M.A.	...	1 6	Shakespeare's As You Like It. (Second Edition in the press). Edited by the Rev. F. MARSHALL, M.A. Most suitable for Junior Students	...	1 6
Marshall's Exodus (Nearly ready)	...	1 6	Macaulay's Lays of Ancient Rome. By the Rev. G. PRESTON, M.A.	...	1 6
Marshall's Acts of the Apostles (complete)	...	2 6	Scott's Marmion. Edited by the Rev. F. MARSHALL, M.A., and similar to the above. Containing Introduction, Text, Appendix, Notes, and Maps. In the press, ready in February	...	2 6
Marshall's Acts of the Apostles. Part II.: Chapters XIII.-end	...	1 6	The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A.	...	1 0
Church Catechism. With Notes. By the same Author	...	1 6	Preparation Papers in English Grammar. By the Rev. G. PRESTON, M.A. Per packet	...	0 8
The O. and C. Genesis	...	1 0	Exercises in Composition, Dictation, and Letter Writing	...	1 0
The Preparation Papers on St. Luke and the Acts of the Apostles now ready. Per packet	...	0 8	The O. and C. Spelling Book	...	1 0
			2,345 Words	...	0 2
<b>GEOGRAPHY.</b>			<b>BOOK-KEEPING.</b>		
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition	...	4 6	Sarll's Practical Book-keeping. 128 pp., cloth	...	1 0
Physical, Descriptive, Political, Industrial, Commercial, Social.	...		An Elementary Text-Book, illustrating the arrangement of the Bought, Sales, Cash, Bill Books and Ledger; consisting of Graduated Exercises, followed by Examination Papers set by the College of Preceptors, accompanied by full-worked and outline keys.	...	1 0
<i>Also published in Sections as follows:—</i>			Sarll's Double Entry Book-keeping. 256 pp., cloth	...	2 0
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.A. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.	...		Sarll's Exercises in Double Entry Book-keeping. 128 pp., cloth	...	1 0
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes	...	2 6	The above with all introductory matter, full explanations, outline keys, &c.	...	
The O. and C. Geography (Revised Edition). By GEORGE GILL. With numerous Coloured Maps	...	1 0	Manuscript Books published to accompany the above.	...	
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms)	...	1 0	For Practical:—Cash Book ... 5d. Ledger ... 0 7	...	
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies	...	2 6	Ledger (100 Accounts) ... 7d.	...	
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps	...	1 0	For Double Entry:—Journal ... 5d. Ledger ... 0 7	...	
			Short and Introductory Exercises ... 1d.	...	
<b>MATHEMATICS AND ARITHMETIC.</b>			Key to Double Entry Book-keeping	...	3 0
Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A.	...	2 0	Key to Practical Book-keeping	...	2 0
Marshall's Examination Euclid. Books I.-IV.	...	1 0	<b>LATIN AND FRENCH. s. d.</b>		
The O. and C. Algebra	...	1 6	The O. and C. Latin, Part I. (Accidence)	...	1 0
Preparation Papers in Algebra. By A. CUDWORTH, M.A.	...	0 8	The O. and C. Latin, Part II. (Exercises)	...	1 0
The O. and C. "Practical Arithmetic," 176 pp., crown 8vo (New Edition), cloth, enlarged (with Answers, 1s. 6d.)	...	1 0	The O. and C. Latin, Part III. (Translations)	...	1 0
The O. and C. "Tests in Arithmetic" (with Answers, 1s. 6d.)	...	1 0	Commercial French Correspondence	...	1 0
A Graduated Examination Arithmetic, 160 pp., cloth	...	1 0	The O. and C. French, Part I.	...	1 0
The Metric System, Practical Guide to, containing Appendix, &c.	...	0 2	The O. and C. French, Part II.	...	1 0
The Metric Chart (60 by 40), in 4 tints, mounted and varnished	...	10 6	Phœdrus, Books I. and II.	...	1 0
The Long Tot Book, by the Rev. CHARLES BROOKE, M.A.	...	0 3	Eutropius, Books I. and II.	...	1 0
The Cross Tot Book, by the Rev. CHARLES BROOKE, M.A.	...	0 3	Cæsar, Book VI.	...	1 0
Cambridge Local Papers in Arithmetic, by C. CUDWORTH, M.A., per packet	...	0 8	Vergil—Æneid, Book VI.	...	1 0
			Cicero de Senectute	...	1 0
			Preparation Papers in French	...	0 8
			Preparation Papers in Latin	...	0 8
			<b>MUSIC.</b>		
			Theory of Music, Part I.	...	1 0
			Theory of Music, Part II.	...	1 0
			Imperial Theory of Music	...	2 6
			<b>NATURAL SCIENCE.</b>		
			Physical Measurements	...	2 6
			or in Three Parts	...	0 9
			Elementary Physics	...	2 6
			Applied Mechanics	...	2 6
			Mechanics of Solids	...	2 0
			Mechanics of Fluids	...	2 0
			Magnetism and Electricity	...	2 6
			Physiological Charts, Set of Three	...	21 0
			Elementary Chemistry	...	2 6
			Chemical Laws and Problems	...	2 6
			Chemistry of Common Objects	...	2 6
			Chemistry Notes	...	1 0
			<b>DRAWING.</b>		
			Science and Art Geometry, Part I.	...	1 4
			Science and Art Geometry, Part II.	...	1 4
			The School of Art Geometry	...	1 0
			New Government Drawing Copies	...	
			per packet	...	1 4
			South Kensington Demonstration Sheets	...	15 0

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases. Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

## SUITABLE BOOKS IN THE University Tutorial and Preceptors' Series.

### Latin and Greek Classics.

- CAESAR.—GALLIC WAR, BOOKS V., VI.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. **1s. 6d.** each. Vocabulary. **1s.** each.
- CICERO.—DE SENEOTUTE.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- HOMER.—ODYSSEY, BOOKS XI., XII.** By J. H. HAYDON, M.A. Lond. and Camb., and F. G. PLAISTOWE, M.A. Text and Notes. **2s. 6d.**
- HORACE.—ODES, BOOK III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- VERGIL.—ÆNEID, BOOK VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- VERGIL.—ÆNEID, BOOK IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.**

### English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond. [In the press.]
- THE ENGLISH LANGUAGE: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. *Fifth Edition.* **3s. 6d.**
- HISTORY OF ENGLAND, THE MATRICULATION. (To 1702.)** By C. S. FEARENSIDE, M.A. Oxon. **3s. 6d.**
- SHAKESPEARE.—AS YOU LIKE IT.** Edited, with Introduction and Notes, by Prof. W. J. ROFFE, D.Litt. **2s.**

### Latin and Greek.

- GREEK READER.—THE TUTORIAL.** By A. WAUGH YOUNG, M.A. Lond., Gold Medalist in Classics. *Second Edition.* **2s. 6d.**
- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. [In the press.]
- LATIN DICTIONARY, THE TUTORIAL.** By F. G. PLAISTOWE, M.A. Lond. and Camb., Gold Medalist in Classics. **6s. 6d.**
- LATIN GRAMMAR, THE TUTORIAL.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Third Edition.* **3s. 6d.** EXERCISES AND TEST QUESTIONS ON. **1s. 6d.**
- LATIN COMPOSITION AND SYNTAX.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fourth Edition.* **2s. 6d.**
- LATIN READER, THE TUTORIAL.** With Vocabulary. **2s. 6d.**
- LATIN READER, THE PRECEPTORS'.** [In preparation.]

### Book-keeping.

- BOOK-KEEPING, PRACTICAL LESSONS IN.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. **3s. 6d.** EXERCISE BOOK, RULED LEDGER, JOURNAL, or CASH. **3d.**
- BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [In preparation.]

### Mathematics and Science.

- CHEMICAL ANALYSIS, QUALITATIVE AND QUANTITATIVE.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and R. W. STEWART, D.Sc. Lond. **3s. 6d.**
- CHEMISTRY, THE TUTORIAL.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WM. BRIGGS, M.A., F.C.S. Part I.: Non-Metals. **3s. 6d.** Part II.: Metals. **3s. 6d.**
- CHEMISTRY, SYNOPSIS OF NON-METALLIC.** With an Appendix on Calculations. By WM. BRIGGS, M.A., F.C.S., F.R.A.S. Interleaved. **1s. 6d.**
- EUCLID.—BOOKS I-IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. **2s. 6d.** BOOKS I-II. **1s.**
- HYDROSTATIC, AN ELEMENTARY TEXT-BOOK OF.** By WM. BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. *Second Edition.* **2s.**
- MAGNETISM AND ELECTRICITY, TEXT-BOOK OF.** By R. W. STEWART, D.Sc. *Fourth Edition.* **3s. 6d.**
- MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A. Camb., B.Sc. Lond. **2s. 6d.**
- MENSURATION OF THE SIMPLER FIGURES.** By WM. BRIGGS, M.A., and T. W. EDMONDSON, M.A. *Second Edition.* **2s. 6d.**
- SOUND, LIGHT, AND HEAT, FIRST STAGE.** By JOHN DON, M.A., B.Sc. Lond. **2s.**
- TRIGONOMETRY, THE TUTORIAL.** By WILLIAM BRIGGS, M.A., LL.B., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. **3s. 6d.**
- TRIGONOMETRY, THE PRECEPTORS'.** Edited by WILLIAM BRIGGS, M.A., LL.B., F.C.S., F.R.A.S. **2s. 6d.**

### French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. **2s. 6d.**
- FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. es Sc., Univ. Gull., Examiner in French to the College of Preceptors. **1s. 6d.**
- FRENCH PROSE COMPOSITION.** By ERNEST WEEKLEY, M.A. Lond. **3s. 6d.**
- FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. **1s. 6d.**
- FRENCH PROSE READER.** Edited by S. BARLET, B. es Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. *Third Edition.* **2s. 6d.**

# SCIENCE AND ART DEPARTMENT EXAMINATIONS.

## Suitable Books in the Organized Science Series.

### For the Elementary Stage. 2s. each Volume.

- FIRST STAGE MECHANICS (SOLIDS).** By F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- FIRST STAGE MECHANICS OF FLUIDS.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- FIRST STAGE SOUND, LIGHT, AND HEAT.** By JOHN DON, M.A., B.Sc.
- FIRST STAGE MAGNETISM AND ELECTRICITY.** By R. H. JUDE, M.A. Cantab., D.Sc. Lond. *Second Edition.*
- FIRST STAGE INORGANIC CHEMISTRY (THEORETICAL).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WILLIAM BRIGGS, M.A., F.C.S.
- FIRST STAGE BOTANY.** By A. J. EWART, D.Sc. Lond. **2s.** [In preparation.]
- FIRST STAGE HYGIENE.** By R. A. LYNTER, B.Sc. **2s.** [In preparation.]
- FIRST STAGE PHYSIOGRAPHY.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.
- FIRST STAGE INORGANIC CHEMISTRY (PRACTICAL).** By F. BRDOW, Ph.D., D.Sc. **1s.** *Second Edition.*
- PRACTICAL ORGANIC CHEMISTRY.** By GEORGE GEORGE, F.C.S. **1s. 6d.**

### For the Advanced Stage. 3s. 6d. each Volume.

- SECOND STAGE MATHEMATICS.** Being the Additional Algebra and Euclid with the Trigonometry required for the Second Stage. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*
- ADVANCED MECHANICS.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. I. DYNAMICS. Vol. II. STATICS. *Second Edition.*
- ADVANCED HEAT.** By R. WALLACE STEWART, D.Sc. (Lond.). *Second Edition.*
- ADVANCED MAGNETISM AND ELECTRICITY.** By E. WALLACE STEWART, D.Sc. Lond.
- ADVANCED INORGANIC CHEMISTRY.** By G. H. BAILEY, D.Sc. Lond. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*
- ADVANCED INORGANIC CHEMISTRY.** **2s.**
- PRACTICAL ORGANIC CHEMISTRY.** By GEORGE GEORGE, F.C.S. **1s. 6d.**

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', Cambridge and Oxford Local, London University, Science and Art Department, and other Examinations, free on application.

LONDON: THE UNIVERSITY TUTORIAL PRESS

(University Correspondence College Press),

W. B. CLIVE, 13 BOOKSELLERS Row, STRAND, W.C.2

Digitized by Google

# MESSRS. LONGMANS & CO.'S LIST.

By **CYRIL RANSOME, M.A.**

## A SHORT HISTORY OF ENGLAND.

FROM THE EARLIEST TIMES TO THE PRESENT DAY (1895).

ELEVENTH EDITION. Crown 8vo, 3s. 6d. Or in Two Parts, 2s. each. PART I.—To the Death of Elizabeth, A.D. 1603. PART II.—A.D. 1603 to 1895. With Tables, Plans, Maps, Index, &c.

### A SUMMARY OF RANSOME'S SHORT HISTORY OF ENGLAND.

With 22 Maps and Plans and 34 Genealogical Tables. Crown 8vo, 1s.

[Just Published.]

By **SAMUEL RAWSON GARDINER, M.A., LL.D.**

## A STUDENT'S HISTORY OF ENGLAND.

FROM THE EARLIEST TIMES TO 1885.

Vol. I.—B.C. 55—A.D. 1509. With 173 Illustrations. Crown 8vo, 4s. Vol. II.—1509—1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.—1689—1885. With 109 Illustrations. Crown 8vo, 4s.

COMPLETE IN ONE VOLUME, with 378 Illustrations. Crown 8vo, 12s.

### PREPARATORY QUESTIONS ON THE ABOVE.

By R. SOMERVELL, M.A., Assistant-Master at Harrow School. Crown 8vo, 1s.

## A SCHOOL ATLAS OF ENGLISH HISTORY.

With 66 Maps and 22 Plans of Battles, &c. Fcap. 4to, 5s.

## OUTLINE OF ENGLISH HISTORY, B.C. 55 to A.D. 1895.

With 98 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By **C. W. C. OMAN, M.A., F.S.A.**

**A History of Greece.** From the Earliest Times to the Macedonian Conquest. With Maps and Plans. Crown 8vo, 4s. 6d.

By **ARTHUR SIDGWICK, M.A.**

**A First Greek Writer.** Crown 8vo, 3s. 6d.  
A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.**  
With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus.

**Euripides.**—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alcestis. Bacchae. Hecuba. Medea.

**An Introduction to Greek Verse Composition.** By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A. With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By **T. K. ARNOLD, M.A.**

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

By **Dr. B. H. KENNEDY.**

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. and J. E. KENNEDY, and H. WILKINSON, M.A. Cr. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 2s. 9d. net, post free.

By **ALEXANDER BAIN, LL.D.**

**A First or Introductory English Grammar.** 18mo, 1s. 4d.

KEY, with additional Exercises. 18mo, 1s. 9d.

**A Higher English Grammar.** Fcap. 8vo, 2s. 6d.

**A Companion to the Higher English Grammar.** Being intended as a help to the thorough mastery of English. Crown 8vo, 3s. 6d.

**English Composition and Rhetoric.** Original Edition. Crown 8vo, 4s.

**English Composition and Rhetoric.** Enlarged Edition. (Two Parts.) Part I.: The Intellectual Elements of Style. Crown 8vo, 3s. 6d. Part II.: The Emotional Qualities of Style. Crown 8vo, 3s. 6d.

**On Teaching English,** with Detailed Examples and the Definition of Poetry. Crown 8vo, 2s. 6d.

By **A. A. SOMERVILLE, M.A.**

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

By **LÉON CONTANSEAU, M.A.**

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

By **JAMES SULLY, M.A.**

**Outlines of Psychology.** Crown 8vo, 9s.

**The Teacher's Handbook of Psychology.** Crown 8vo, 6s. 6d.

**Studies of Childhood.** 8vo, 10s. 6d.

**Children's Ways:** being Selections from the Author's "Studies of Childhood," with some additional matter. With 25 Figures in the Text. Crown 8vo, 4s. 6d.

## CAMBRIDGE UNIVERSITY PRESS.

NEW WORK BY SIR JOSHUA FITCH.

**Educational Aims and Methods.** Lectures and Addresses by Sir JOSHUA FITCH, M.A., LL.D., late Her Majesty's Inspector of Training Colleges, and author of "Lectures on Teaching," "The Arnolds and their Influence on English Education." [Nearly ready.]

The forthcoming volume consists of lectures and addresses given in Cambridge, or before the Teachers' Guild and other bodies of Teachers in England and in America. Its general aim is to direct attention to various aspects of educational theory and of practical work; and it includes several monographs on the lives of distinguished and representative teachers.

## PITT PRESS SERIES.—NEW VOLUMES.

A NEW FRENCH VERSE READER.

**A Primer of French Verse for Upper Forms.** Edited by FREDERIC SPENCER, Professor of the French Language and Literature in the University College of North Wales; formerly Chief Master of the Modern Side in the Leys School, Cambridge. 3s.

*Guardian*.—"A really valuable contribution to the list of French school books." *School World*.—"A very good book."

*Educational Times*.—"The rules are well expressed, and it may confidently be said that a pupil who has read this book with care will acquire an insight into French prosody such as no other 'primer' could give him, and will feel that this is a book to which he can always turn again with pleasure."

**Hauff.—Der Scheik von Alessandria und seine Sklaven.** Edited, with Notes and Vocabulary, by W. RIPPMAAN, M.A., Professor of German at Queen's College, London. [Immediately.]

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

*Subject for Cambridge Local Examinations, December, 1900; Oxford Local Examinations, July, 1900; and College of Preceptors Examinations, 1900.*

**As You Like It.** 1s. 6d. With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge.

*Guardian*.—"Mr. Verity, the editor, has provided material for all sorts of students. For the beginner we have the notes and a reprint of Charles Lamb's outline of the story. For older readers we have copious extracts from Lodge's 'Rosalinde.' For the examiner, the etymologist, and the curious student, we have the glossary, the index of the important words and phrases, and the notes on metre and on the date and sources of the play. All of these aids evince patient research, accurate scholarship, and thoughtful judgment."

**Cicero.—Pro lege Manilia.** Edited, with Introduction and Notes, by J. C. NICOL, M.A., Trinity Hall, Master of Portsmouth Grammar School. 1s. 6d.

*Subjects for Cambridge Local Examination, December, 1900.*

**Homer.—The Odyssey, Book XI.** Edited, with Introduction and Notes, by J. A. NAIRN, M.A., Fellow of Trinity College. 2s.

**Malot.—Remi on Angleterre.** Edited, with Notes and Vocabulary, by M. DE G. VERRALL, of Newnham College. 2s.

**Racine.—Athalie.** Edited, with Introduction and Notes, by H. W. EVE, M.A., late Fellow of Trinity College. 2s.

*Literature*.—"Admirably edited. . . . The introduction is a model of its kind—lucid in style, full of facts. . . . It is almost an ideal edition for use in higher forms." *Scotsman*.—"There could be no better edition of the play for English students."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford, Principal of University (Day) Training College, Liverpool, and Lecturer on Education in Victoria University.

*Adapted for Use of Candidates for Certificate Examinations of Education Department.*

**The Making of Character: some Educational Aspects of Ethics.** By JOHN MACCUNY, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo. [Nearly ready.]

*Specially suited for Candidates for Queen's Scholarship Examinations, December, 1900, and Certificate Examinations, July, 1900.*

**A Short History of the Expansion of the British Empire, 1500-1870.** By WILLIAM H. WOODWARD. With Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenæum*.—"Thoroughly to be recommended."

*Educational Times*.—"Mr. Woodward tells this story *in usum scholarum* in an altogether admirable manner."

*School World*.—"It is full of wisdom applicable to our own day."

**Geometrical Drawing.** With Notes and Examples. Part I. Plane and Elementary Solid. By W. H. BLYTHE, M.A., Jesus College. 2s. 6d. *Extract from Preface*.—"This book is intended for Candidates reading Geometrical Drawing for the Science and Art Department, South Kensington, Elementary Stage, for entrance to Sandhurst and Woolwich, and for the Cambridge Preliminary and Junior Local Examinations."

Part I. contains Plane Geometrical Drawing and Solid Geometry so far as it is included in the Syllabus, Geometrical Drawing (Art), Subject 1 A, page 231, Science and Art Directory, 1899."

**Geometry for Young Beginners.** An Introduction to Theoretical and Practical Geometry. By F. W. SANDERSON, Headmaster of Omuld School. 1s. 4d.

*Teachers' Monthly* (Birmingham).—"We are delighted with this book."

*Morning Post*.—"The work will commend itself to teachers and students."

**Demonstrations in Greek Iambic Verse.** By W. H. D. ROUSE, M.A., formerly Fellow of Christ's College, Cambridge; a Master at Rugby School. Crown 8vo, 6s.

*Literature*.—"In many ways an improvement on the work of predecessors in the same field. . . . The exercises are singularly exhaustive and lucid, and the book will be of great service to composition masters and their pupils."

*Educational Times*.—"We hope that this book will find its way into the hands of many teachers, to the certain benefit both of themselves and of their pupils."

*School World*.—"This is a good book, which should be obtained by every classical master."

*Athenæum*.—"Mr. Rouse has written with care and judgment, and his work ought to be decidedly useful to teachers."

**Graduated Passages from Greek and Latin Authors for First-Sight Translation.** Selected and supplied with short Notes for Beginners by H. BENDALL, M.A., and C. E. LAURENCE, B.A., Assistant-Master of Blackheath Proprietary School. Crown 8vo.

Part I.—EASY. 1s. 6d.

Part II.—MODERATELY EASY. 2s.

Part III.—MODERATELY DIFFICULT. 2s.

Part IV.—DIFFICULT. 2s.

\* \* \* *Cambridge Editions of Caesar, Vergil, and Xenophon.*—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the *Pitt Press Series* and the *Cambridge Series for Schools and Training Colleges*. The Editions in the *Cambridge Series for Schools and Training Colleges* have *Complete Vocabularies*. If, in ordering, the Edition required is not specified, the *Pitt Press Edition*, without vocabulary, will be sent.

The following editions have COMPLETE VOCABULARIES.

**Caesar.—Gallic War, I. (1-29), II., III., IV., V., VI.** Edited, with Introduction, Notes, and Complete Vocabulary, by E. S. SHUCKEBURGH. 1s. 6d. each.

**Vergil.—Aeneid, I., II., V., VI., IX., and XII.** Edited, with Introduction, Notes, and Complete Vocabulary, by A. SIDGWICK, Reader in Greek in the University of Oxford. 1s. 6d. each.

**Xenophon.—Anabasis, II., III., IV., and V.** Edited, with Notes and Complete Vocabulary, by G. M. EDWARDS, Fellow and Classical Lecturer of Sidney Sussex College, Cambridge. 1s. 6d. each.

**Ovid.—Selections from the "Tristia."** For the Use of Middle School Classes. Edited, with Notes and Vocabulary, by H. F. MORLAND SIMPSON, Rector of Aberdeen Grammar School, formerly Scholar of Pembroke College, Cambridge. 1s. 6d.

*School Guardian*.—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars: their names are a guarantee of their work. These text-books will find their way into numberless preparatory schools and lower forms of public schools: they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary: the student, however elementary his knowledge, needs only the book in hand and a simple grammar."

A MANUAL FOR CONFIRMATION CANDIDATES.

**The Church Catechism Explained.** By the Rev. A. W. ROBINSON, B.D., Warden of the Mission College of Allhallows Barking, E.C., and Examining Chaplain to the Bishop of Wakefield. Second Edition. Fcap. 8vo, 2s.

*Record*.—"A really useful manual."

*Church Bills*.—"A very excellent book; quite one of the best, if not the best, on the Catechism."

*Church Times*.—"An admirable work, both as to the matter and its arrangement."

Six or more copies of the two following books for class use can be supplied at Half the published prices, and may be ordered through any Bookseller.

**Gospel History of our Lord Jesus Christ** in the Language of the Revised Version, arranged in a Connected Narrative, especially for the use of Teachers and Preachers. By Rev. C. C. JAMES, M.A., Rector of Wortham, Suffolk, and late Fellow of King's College. Crown 8vo. Second Edition. 3s. 6d.

**A Harmony of the Gospels** in the Words of the Revised Version, With copious References, Tables, &c. Arranged by Rev. C. C. JAMES, M.A. Crown 8vo. 5s.

CONTENTS.

	Page		Page
A New Beginning .....	125	The Licensing of Teachers. By Prof. Foster Watson. Paper read at the Evening Meeting of the Members of the College of Preceptors .....	138
Notes .....	126	Meeting of the College Council .....	140
Summary : The Month .....	128	Reviews .....	141
Universities .....	130	A Monument of Alfred ; The Oxford Classical Texts ; Geography and War ; The New Organization ; Historical French ; A Whimsical Study.	
Some Difficulties in Discipline .....	131	General Notices .....	143
Correspondence .....	132	College of Preceptors Certificate Examination, Foreign and Colonial Centres.—Supplementary Diploma Pass List ...	146
The Frances Mary Buss Schools ; University of London Senatorial Elections ; the Battle of the Scripts.		Mathematics .....	147
Forecasts and Comments :—Fixtures .....	135		
Education Gossip .....	136		
Appointments and Vacancies.....	136		
Literary Gossip .....	137		

The Educational Times.

*A New Beginning.* Most interests of late have had to bow to the interest of war, compared with which nothing has had much chance of arresting and holding the public attention. The subject of education has suffered with the rest, yet not so much as the rest, because it has been borne in upon the mind of the country that war and education have a great deal to do with each other, and that physical strength and physical courage will not go very far without the applications of science and the guidance of a trained intelligence. War in itself is an "ugly and venomous" thing; but it carries in its head the "precious jewel" of self-revelation, stimulus, national union and effort. We do not wonder that statesmen and politicians, writers and speakers, have on many recent occasions agreed in declaring that we need nothing so much for the future as the trained intelligence and the scientific mind. Every new stimulating influence is welcome, no matter whence it flows. All is grist for our mills to grind. The people want to be better educated, not only to be drilled on their feet and made cunning with their hands, but to be trained in mind and character as well. If war has served to bring them to this point, let us be thankful for the fact.

The Board of Education will help us to make our new departure. It is now virtually constituted; we have the outlines of its new organization at the same moment with the statutes of the remodelled University of London, and the two will work together in shaping our public education according to our needs. One month from to-day the Act of last Session will come into operation, and the Government seem to be fully bent on completing the machinery by which it is to do its work. A day or two ago, the Duke of Devonshire said in the House of Lords that the Departmental Committee appointed to consider the consequent changes of staff and of organization had made two reports, which had been to a certain extent acted upon, and were being carried into effect. The Committee, he said, was now engaged in considering its third and probably final report, and it would be presented in a short time. Being asked when he hoped to introduce the Bill for constituting the Local Authorities to carry out the new system, the Lord President thought that he would probably not be in a position to bring it in until the Board of Education Act had come into operation. Well,

that is not long to wait. A Bill introduced in April might certainly be passed in July, even at our leisurely British rate of Parliamentary procedure.

Yet, as our readers are well aware, the Act, as it stands, will cover a large area of educational activity, and will become operative at once. The Permanent Secretary, a *grata persona* with all branches of the teaching profession, will know how to direct the new energy into the old channels, and he will have at his side three principal Assistant-Secretaries, specially concerned with technical, elementary, and secondary education. It is understood that Sir William Abney and Mr. Tucker have been appointed to two of these positions, but that the third is not (when these words are written) finally selected. It is very seriously to be hoped that the Assistant-Secretary for Secondary Education will be an official thoroughly in touch with the ideas on which secondary schoolmasters and the Universities have definitely expressed their opinions during the past five or six years. There was an article in last week's *Guardian*, written with much insight into the situation, which reminded the Government that they have been provided by schoolmasters themselves with a rare opportunity.

The opportunity is indeed unique. For once, all the living forces representative of secondary and higher education—the Universities, the public schools, and the other secondary schools—are united, and speak with unanimous voice in favour of reform. They ask for the training and certifying of teachers, the appointing of inspectors, for the establishing of a representative Consultative Body by which the Board of Education and schools of all kinds may be brought into organic and constant relationship. The new Act provides for all this; but, since its provisions leave registration, training, and inspection all optional, and indicate no principles on which the constitution of the Consultative Committee is to be framed, it rests absolutely with the new Minister of Education and his advisers to determine whether the promises of the Act become realities or not.

It cannot be too often pointed out that the main educational energy, zeal, and enthusiasm of the past few years, of which the Board of Education Act is in large measure the outcome, have been manifested by the Universities, by the secondary teachers, and by people concerned in secondary education. The elementary zeal came to a head in 1870; the technical zeal had its fruition twenty years later. All the friends of education are concerned in the new reforms; but, if the secondary schoolmasters had not spoken out and insisted, if there had been no Oxford and Cambridge Conferences, no Royal Commission, and no continuous activity of the secondary associations, there would at this moment have been either no Bill at all or a Bill treating national education in the secondary stage as a mere



question of higher-grade Board schools. The Board of Education Act is comprehensive, conciliatory, and impartial as regards the different branches of education, but it is stamped in particular with the secondary hall-mark. If the new organization and the new administration correspond with the ideas on which the Act is evidently framed, we may be hopeful as to the future of secondary schools. There is no reason why a great deal of useful work should not be undertaken at once—there is every reason why it should be undertaken. Inspection, registration, the definition of efficiency, the statement of conditions for grants in the case of non-technical schools—all these things require immediate attention. The fact is well brought out by Dr. R. P. Scott in his thoughtful and vigorous article in the *Fortnightly Review* for February. For the improvement of secondary education, he says,

Four things are necessary to be done. First, to find out exactly what is going on inside our existing uninspected schools. That means, as the first step, an intelligent survey by competent and experienced inspectors. And they must be men and women in sympathy with various types of educational endeavour, not pedants or mere partisans of literature or of science, or of State monopoly, but anxious to stimulate and to make use of every bit of good private effort. The next thing to be done is to rescue many of our day secondary schools from financial embarrassments, and to place the salaries and prospects of assistant masters and mistresses on a satisfactory level. The third step would follow at once—the raising of the intellectual standard of many of the schools, improvements in the professional preparation of the teachers, and the diffusion throughout the nation of a clear and inspiring idea of what a good secondary school could and should do for its pupils. But, concurrently with this, the fourth need should be grappled with—namely, the spread of the public-school spirit as far as possible throughout secondary education.

This is well and judiciously said. The new Act, rightly administered, should help us to advance in all these directions.

### NOTES.

THE Statutory Commission for the reorganization of London University has reported its conclusions to Parliament. The document which now lies on the table consists of 136 statutes and regulations, which will receive the Royal Assent before the end of the present month, provided that no motion in a contrary sense is carried in the meantime in either House. The effect of the new statutes is in accordance with what has already been made public. The Senate will consist of 54 members—4 to be appointed by the Crown; 16 by Convocation; 2 each by the Colleges of Physicians and Surgeons, University and King's Colleges, the Incorporated Law Society, and the County Council; 1 each by Lincoln's Inn, the Inner and Middle Temples and Gray's Inn, the City Corporation, and the City and Guilds Institute; and 16 by the Faculties of Arts, Science, Medicine, Theology, Laws, Music, Engineering, and Economics. The last two faculties are new creations, and they will have their schools at the Central Technical Institute and the School of Economics.

THE Senate will have three Standing Committees: an Academic Council of twenty, including the sixteen representatives of the faculties; a Council for External Students, numbering twenty-eight, and including the sixteen representatives of Convocation; and a Board for the Extension of University Teaching, which will probably take over the work of the London Society. The Academic Council and the Council for External Students will provide respectively for the Intermediate and Final ex-

aminations of internal and external students—Matriculation being identical for both classes; and they will arrange between them for “the equalization, as far as possible, of the standards of knowledge and attainments prescribed for the degrees conferred upon internal and external students.” Convocation will retain the proxy vote for the Chancellorship, the Chairmanship of Convocation, the sixteen representatives on the Senate, and the Parliamentary representative of the University.

THE schools of the University will include University and King's Colleges; Hackney, New, Regent's Park, and Cheshunt Colleges, the Richmond Wesleyan College, and St. John's Hall, Highbury; Holloway and Bedford Colleges for Women; the Royal College of Science and the Wye Agricultural College; the ten hospital schools of medicine, including the London School of Medicine for Women; the Central Technical College, and the London School of Economics and Political Science. When funds permit, the Senate will appoint professors, readers, lecturers, and “recognized teachers.” Special provision is made for the encouragement of post-graduate study and research. The Senate will have power to confer “ad eudem” and honorary degrees. These are the main provisions of the new statutes; and it is now at last reasonable to affirm that the teaching University of London is constituted on definite and durable foundations.

A CORRESPONDENT supplements as follows our notice last month of the appointment of Mr. Hobhouse as editor of the *Guardian*. The notice in question, we must admit, was a little meagre in regard to the transfer of an eminent schoolmaster to the editorial chair of our leading Church paper—a paper which is distinguished, amongst other ways, by its excellent weekly summaries of educational events. “Walter Hobhouse was a scholar of Balliol, student of Christ Church, Fellow of Hertford, tutor of Hertford and of Christ Church, winner of the Chancellor's English Essay Prize, 1885, and of the Chancellor's Latin Essay Prize, 1886. He was placed in the First Class in Classical Moderations, as well as in the First Class in Literæ Humaniores. But for the break-down of health at Durham last Easter, he was thought by good judges the fittest headmaster for Eton, should a vacancy arise. He is a man of decided, but moderate, Church views, of strong and calm judgment; a good representative of the old High Churchmen, scholarly and loyal, and by no means in sympathy with the extreme men who detest that Reformation which has probably been the greatest factor in the history of Great Britain, and has certainly developed all that is most energetic, expansive, and permanent in our national life.”

MR. ERNEST GRAY, M.P., has recently paid a visit to Wales, and delivered an address at Lampeter on “Our National System of Education.” His words were not words of comfort to the Welsh educational enthusiast. Not only is the average attendance in Welsh elementary schools much lower than in England, but the county in which he was speaking is, according to the Departmental returns, at the bottom of the scale, showing a percentage of only 72.9, as against 82 in the English counties. It also appears that the teaching is by no means satisfactory. Apparently he thought that a cold douche would have a bracing effect upon his audience. He explained that he dwelt upon the

black spots in Welsh education, and refrained from speaking of the great things Wales had done, because, if there was only one Welshman present, they might safely count upon hearing those things during the course of the discussion. This is a little hard on the Celtic Ego—although he is perhaps a little pampered. However, we are glad to see that the “facer” was taken with laughter and applause.

THE Primate's recent speech in Convocation on the Leeds and Manchester schemes for bringing voluntary schools into real connexion with the national system of elementary education showed little sympathy with either. The increasing financial burden, due to Departmental insistence on efficiency, presses heavily upon Churchmen in districts such as Lancashire and some parts of Yorkshire, where voluntary schools are the rule and Board schools the exception. By the Leeds scheme it is proposed that the Local Education Authority should be enabled to aid voluntary schools out of the rates, and that the managers of schools should be compelled to make provision for the separate religious instruction of children when required by a reasonable number of parents. The Manchester scheme, on the other hand, would provide for the transfer of the schools, neck and crop, over to the Local Authority, subject, however, to adequate representation of the religious body whose school was so transferred upon the committee of managers. The Archbishop, in effect, says: “A plague on both your schemes!” and thinks the generosity of Churchmen is not yet exhausted. Doubtless he sees much scope for skirmishing in the first scheme, and no way of retreat in the second.

WHITEHALL and South Kensington, which have winked for some time past at the running of secondary schools by the elementary School Boards, are returning to the mood of strict legality in anticipation of their new responsibilities under the Board of Education Act. At the London School Board meeting on February 15, a communication was read from the Science and Art Department, stating—

That it had been brought to their notice that, in certain science or art schools and classes under the management of School Boards, no fees are charged, and the cost of the instruction given is defrayed out of the school fund; that they are advised that this application of the school fund is illegal; that they will refuse to recognize new schools or new classes, or new subjects in existing schools or classes, if they are supported wholly or partially out of the school fund; that in Section VI., page 2 of the “Science and Art Directory” it is provided that every science or art school or class must have local support either in the form of fees and subscriptions or of rates; that no school or class will be permitted to charge abnormally low fees in order to compete with others in the same locality; and that in this section the word “rates” applies to rates levied under the Technical Instruction Acts, or any other rates which may be lawfully applied to the payment of science and art instruction, and not to the “school fund,” which is raised under the provisions of the Elementary Education Acts, and cannot, as the Department are advised, be lawfully so applied.

The Department inquired how the School Board proposed to comply with the views here expressed. The letter was referred to the School Management and the Evening Continuation Schools Committees for consideration and report. We imagine that these Committees will defer their reports until after April 1. It will remain for the Education Board to cut the Gordian knot.

THE deputation from University colleges in England and Wales which brought before Sir John Gorst the needs of the day training colleges met with little encouragement. The

old residential training colleges, which began the work of training teachers in this country, have now not nearly enough accommodation. Moreover, these colleges are limited in their scope by the fact that they are, in nearly every case, maintained by denominational funds, and impose a denominational test on their students. Furthermore, very few of them are affiliated to any University, and they are thus necessarily narrower in their influence than they would otherwise be. It was plain ten years ago that something must be done to give wider opportunities to candidates for the teaching profession. Hence the day training colleges organically connected with Universities. Of these there is now a considerable number, doing excellent work, in England and Wales. But there is not enough money to carry on the work as it should be carried on; for, though a Government grant is made, it is on a much lower scale than that given to the older residential colleges. The students have had to be admitted at reduced fees, and they suffer considerable hardship in some cases by reason of the smallness of the sum (£15) allotted to them for board and lodging. Sir John Gorst suggested that School Boards should augment the public grant from their funds; but it is evident that such a disposal of the “school funds” would be illegal. Meanwhile, the day training colleges must be content to wait, it seems, and carry on their work as best they may with the funds at their disposal.

It is often alleged that the free library movement in this country has proved a failure, and there are always those ready and eager to assist at its obsequies. It is stated, with an air of severe superiority, that four-fifths of the books borrowed are works of fiction, and that solid and improving reading is neglected. It is even affirmed that the free library is a refuge for the “unclean loafer,” and that this is one of its most heinous offences. As to that, it is conceivable that some would welcome the aforesaid loafer, as showing sparks of better things, and a desire for edification—else why should he not choose the warmth of the neighbouring public-house? That most readers read novels is probably true. At Cardiff the Libraries Committee is working, by means of lectures, &c., to train children in the schools to care for the best books. The schools and the libraries are closely connected, and many interesting experiments are now going on there. Manchester, too, is doing something in this direction. Last winter a course of lectures on “English History in Works of Fiction” was given in several branch libraries in the city, and the result was so encouraging that another course is now being held on similar lines. The subject this year is changed. “Nature in Books” is now the theme of the lecturer. “The Drama of Nature” and “The Unfolding of the Plot” are two of the subjects. Books and Nature ought never to be dissociated; but, unfortunately, town life has helped to separate them a good deal. A walker should also be a reader, and often is.

THE Agricultural Education Committee has aptly suggested that such secondary teaching work as is at present carried on under the Board of Agriculture should be transferred to the Board of Education, so that one body shall be responsible for agricultural education as a whole. While not losing sight of education as a means of mental training pure and simple, the importance of its being suited to particular work in after life must be considered, and, what is more, the possibility of almost

any science subject properly taught being made a means of all-round education. At present those who take most advantage of elementary education become fitted for clerkships and similar employment. The result is that intelligent country lads crowd into the towns and there is a dearth of farm hands. There are several important questions, economic, social, hygienic, behind all this, and any scheme which would tend to settle these must be of the greatest value to the community. It is evident that rural education will have to be made different from that of towns. A question of wages no doubt comes in—a clerk well fitted for his work may get more than an ignorant agricultural labourer; but the training which the latter at present receives is not suited to his needs.

At a recent meeting of representatives of the Chambers of Agriculture, Mr. Williams, a practical farmer, expressed his opinion that the present system aimed at discovering a possible Chancellor of the Exchequer in every school. He suggested that this was unfair to the majority of country boys, and it is interesting to note how these remarks agree with some made by Prof. Ripper at the Conference of Science Teachers with regard to more specialized education. Even out of a very large class of engineering students, only one or two, said Professor Ripper, became what the training was intended to fit them for, namely, successful engineers. The majority ended in being failures; whereas, if they had received manual instruction, they might have been successes instead. Mr. Williams pointed out that Scotland still possessed many of the best agricultural labourers, although the children had been educated time out of mind. What he wished was that subjects of direct usefulness to the boy in his life in the country should not be omitted, or left in a minority, and he had come to the conclusion that a change might be made in this direction without detracting one whit from the education now given. Little or no evidence of such a calling as agriculture is apparent in most village schools, although much instruction as to things bound up with life in the country is allowed, if not very strongly encouraged. Although the walls are often covered with pictures "of all the animals that entered the ark," one seldom sees the representation of a cow, or, if one does, as likely as not the maid is shown milking her from the wrong side. No reading book used deals with the farm. Indeed, direct discouragement may be given to a boy who might be desirous of tilling the land, for, if he prove dull at other subjects, he is told that he is only fit to drive a plough or to feed the pigs. In arithmetic, bills of parcels occupy the pupil's attention, when his brain might be just as well exercised with calculating how many bushels of turnips there would be in a certain crop, or how much land could be cultivated under given conditions in a given time.

The Agricultural Education Committee, who have taken the matter up, are, in the words of Sir William Hart Dyke, "determined to see it through." They have drawn up a careful syllabus of lessons which the Education Department is considering, and it is most probable that some such line of teaching will in time become compulsory in all village schools. In this syllabus simple but true and practical object lessons on everyday plant structures, the importance of air and water to vegetation, are first dealt with. Then elementary notions of tillage to be obtained, as far as possible, by visits to farms, and where

available from school gardens, the work of insects and birds, the needs of domestic animals, come in for attention. Lastly, some slight introduction to farm measuring, and agricultural machinery as exemplified by wheel and axle, pulley, and cog wheels, finish the course.

The action of *Eady v. Elsdon* recently tried before Mr. Justice Ridley and a special jury is a rarity in the history of English law. Of actions brought by pupils against their masters there has been, perhaps, more than enough; but it is not often that the tables have been turned, and the master has brought an action against the pupil (an infant) for damage done to the master's property. There has been some misconception as to the actual defendants, and even the *Times* in its leading article on the case assumed that the action was brought against the infant's parent, thereby adding an unnecessary terror to those which are supposed to afflict a father having boys at school. By English law an infant lacks the legal capacity to contract (except for necessities), and, therefore, no action can be brought against him for the purpose of making him liable upon any agreement he may have entered into. But an infant may commit a legal wrong provided he be over seven years of age, when the mind is considered capable of criminal intent, and he may be sued for any damage which follows from any wrong or actionable negligence committed by him.

In the above case Mr. Eady might have brought his action for the damage done by the fire to his premises; but, having recovered compensation from the insurance company in respect of such damage, he sought only to recover his collateral out-of-pocket expenses and loss of professional profits from the author of the mischief. It is satisfactory to know that the jury gave him £450, and, as the infant has expectations, there seems to be some probability that his judgment will prove effective. The case does not show that an action would lie against the parent. A child is neither the servant nor the agent of his parents, so as to make them liable for his wrongful acts. If, however, a parent concealed from the master the vicious proclivities of his boy, and damages resulted to the master therefrom, the parent would, we think, be liable, although we cannot recall any instance where such an action has been brought. A master is entitled to assume that a boy has no physical or mental abnormalities, unless they are brought to his notice; and the common-law action of deceit would lie if damage to the master resulted from non-disclosure.

## SUMMARY

### THE MONTH.

The new scheme prepared by the Charity Commissioners for the administration of the Colet Fund provides that the Mercers' Company may pay annually to St. Paul's School out of Dean Colet's Foundation two-thirds of the total income, or the sum of £14,000, whichever is the larger amount; and, in the case of the Girls' School, one-third of such income, or such smaller sum as remains after payment of the sum set apart for the purposes of St. Paul's School. The residue of the income, if any, will be allowed to accumulate, and will be dealt with under a further scheme for the promotion of secondary education in or near the County of London. The schools of the foundation are (a) a school for boys, to be called, as heretofore, St. Paul's School, and maintained in the present buildings as a classical school with a modern department, and, if the Governors think fit, other

departments, under the supervision and control of the High Master; (b) a school for 400 girls, to be called St. Paul's Girls' School, and maintained on the site in Hammersmith already acquired. The High Master's salary is fixed at £300 per annum and an annual capitation fee of £3 to £6 on each of the first 300 boys, and of £2 in respect of each scholar beyond that number; the Headmistress receiving a fixed stipend of £200 and a capitation payment of £2 to £4, and £2 respectively. The fees are as follows: "Registration, 10s.; entrance, £5; tuition, for boys, £20 to £30; ditto, for girls, £15 to £25. The High Master and Headmistress are given the power of dismissing assistant-teachers, subject, however, to an appeal to the Governors. As regards scholarships, one-third are open scholarships, and are to be competed for by candidates between twelve and fourteen years of age; and, as regards one-third of the scholarships, special weight is to be attached to subjects proper to the modern department. Greek is not to be required. In the Girls' School, provision is made for thirty scholarships, of which thirteen are open to candidates between the ages of twelve and fourteen years, whether attending the school or not. The Governors are to employ £700 a year for exhibitions for girls.

THE Corporate Property (Charities and Endowments) Committee of the London County Council submitted on February 6 and 13 a report in reference to St. Paul's School, which recommended, amongst other things, that assistant-masters in the school should be paid their salaries by the Governors direct, and that the Charity Commissioners should be asked to consider the question of the reconstitution of the governing body with a view to the reduction in the number of Governors the Mercers' Company might appoint, and to the appointment of three members at least by the Council. After several speeches objecting to the report, Mr. Organ, Chairman of the Technical Education Board, said the Council was the Secondary Education Authority for London, including the City, and therefore it had a right and a duty to deal with the matter. The representations of the Council had had weight with the Commissioners in the past. The Technical Education Board was mainly responsible for the report, and he could promise the Council that, if they sent it back, the Committee would bring it up again with fuller details. Mr. Gilbert, Chairman of the Committee, said he was willing to take the report back, and this course was agreed to.

THE National Education Association, at its meeting on February 12, received a report from its Executive Committee, stating that the main feature of the past year has been "the persistence of the Government in pursuing, by administrative actions, that policy of restricting and crippling popular education which was rejected by Parliament in 1896." It is added:—"The creation in certain districts of a spurious Local Authority for Secondary Education, which has neither the power nor the responsibility of adequately supplying schools, but which can prevent others from doing so, has been followed by the attempts to suppress higher-grade schools and by other attacks upon the progressive development of the education of the people." The Committee say that they have done all that was possible to help members of the Association and others to resist "these insidious proceedings," and they have reason to hope that the efforts to check them may be more successful "now that their effect is becoming apparent to the larger public." As to training colleges, the report states that the popular dissatisfaction with the insufficiency and the predominantly sectarian character of the provision for training elementary teachers has continued to grow. "The present inadequate and unfair system affects our whole national system of education; but influences behind the present Government will apparently prevent any reform so long as it remains in office."

ON February 14 a Gladstone memorial bust was unveiled in the Debating Hall of the Oxford University Union Society by Sir William Anson, M.P. The bust has been subscribed for by past and present members of the Society, and executed by Mr. Onslow Ford, R.A. The President, Mr. R. C. K. Ensor, of Balliol College, occupied the chair, and there was a large attendance. The bust was unveiled amid loud cheers. It is a striking likeness of Mr. Gladstone, who is represented in his D.C.L. robes. A plate upon the pedestal records the fact that Mr. Gladstone was Secretary of the Union in Easter Term, 1830, and President in Michaelmas Term of the same year. Sir William Anson said in the course of his address:

There was a deep-seated conservatism on some points discernible in Mr. Gladstone's character. When Mr. Gladstone was staying at

All Souls College in 1890 he himself (the Warden) became aware that this conservatism, as regarded all matters of University legislation, was so intense as almost to be quite reactionary. It was almost impossible to recall the Oxford of Mr. Gladstone's day; but one might wish that the literary culture which he, in common with the statesmen of his time and a hundred years before, enjoyed might not die out. One could not measure other men by Mr. Gladstone's capacity as regarded literature. His literary activity would do credit to a life devoted to nothing else but literary production.

MR. HORACE PLUNKETT, Vice-President of the Irish Board of Agriculture and Industries, stated in answer to a question in the House of Commons that it was the intention of the Lord Lieutenant to transfer to the new Board, as from April 1, the Science and Art Department's institutions in Dublin, namely—the Royal College of Science, the Museum, the School of Art, the National Library, and the Botanical Gardens; but the grants in aid of the Science and Art teaching will continue for the present to be administered as heretofore from South Kensington.

A COPY of the charter and statutes which are to govern the new University of Birmingham has been laid on the table of the House of Commons. They contain a list of honorary and other officers covered by the terms of the charter, but only three persons are mentioned who have been definitely appointed to positions in the new University. The first Chancellor will be Mr. Chamberlain. No name is associated with the office of Principal, which is to be a Crown appointment, made through the Lord President of the Council; but the Vice-Principal nominated is Dr. R. S. Heath, who has been acting Principal of Mason University College. The appointment of the first Dean of the Faculty of Medicine has been conferred on Dr. B. C. A. Windle, F.R.S.

A DINNER in aid of the funds for the new scientific laboratories at King's College, London, was held in Lincoln's Inn Hall on February 14. Mr. A. J. Balfour presided, and he was supported by the Bishop of London, Mr. Justice Byrne, Principal Robertson, Mr. W. F. D. Smith, M.P., Sir Michael Foster, M.P., and many others. Mr. Balfour said:

King's College will, without question, be one of the great teaching centres of the new London University. It requires at this moment, to enable it to carry out that great function, the assistance of the public to supply it with adequate scientific accommodation, especially, I am informed, in the matter of a bacteriological and physiological laboratory and lecture-room. The results of scientific research are not provincial, but extend their benefits to all parts of the civilized world, and, in no small degree, to this great Metropolis. Let us, therefore, who are dwellers in London, feel that we have some obligation to the world at large, corresponding to the international position which we occupy. Let us do what we can as a community to further that investigation into the secrets of Nature—that storming of the citadels of knowledge in which all civilized men are, or ought to be, co-operators. It is because we have in King's College an organization ready to hand which has already shown its capacity for prosecuting such investigation that we now appeal for generous and liberal support to enable it to carry out that work more efficiently in the future.

UNIVERSITY COLLEGE, LIVERPOOL, has obtained a new charter from the Crown, under which the Court of Governors secure various additional powers. The Council is to be reconstituted. Hitherto, in addition to the President, two Vice-Presidents, Treasurer, and Principal, who are *ex-officio* members, the Council has consisted of thirteen members, of whom two are professors chosen annually by the Senate, and eleven are persons elected for a term of three years by the Court of Governors. Under the provisions of the new charter, the Council will, in addition to the above-mentioned *ex-officio* members, consist of twenty-one members, of whom three will be professors chosen by the Senate, fifteen will be persons elected by the Court of Governors, and three will be persons to be nominated by the Liverpool City Council.

A RECENT Blue-book furnishes a return showing the extent to which, and the manner in which, Local Authorities in England, Wales, and Ireland have applied, or are applying, funds to the purposes of technical education (including science, art, technical, and manual instruction) during the years 1897-98 and 1898-99 under the Local Taxation (Customs and Excise) Act, 1890, the Technical Instruction Acts, 1889 and 1891, the Welsh Intermediate Education Act, 1889, and the Public Libraries and Museums Acts. The amount expended on technical education, exclusive of the sums allocated to intermediate and technical

education under the Welsh Intermediate Education Act, was in 1897-98 £860,104, and the estimated total expenditure during the year 1898-99 was £874,611. The amounts raised by loan on the security of the local rate under the Technical Instruction Acts were in 1897-98 £69,333, and in 1888-99 £133,583. The total amount of the residue received under the Local Taxation (Customs and Excise) Act by the Councils of counties and county boroughs in England, excepting Monmouth, in respect of the financial year 1897-98, was £834,826, of which £759,400 was appropriated to educational purposes and £75,426 to the relief of rates, the latter sum including £42,108 devoted by the London County Council to relief of the rates. Of the forty-nine counties, forty are applying the whole of the residue, and nine a part of it, to technical education. The total of the residue paid to the thirteen County Councils and the Councils of three county boroughs in Wales and Monmouth was £40,061, and these Local Authorities are devoting the whole of it to intermediate and technical education under the Welsh Intermediate Act, 1889. In the case of Ireland the residue is not applicable to technical education. Twelve Local Authorities expended on technical education during the year 1897-98 £5,649, and the estimated total expenditure by them during 1898-99 was £4,523.

SIR MICHAEL FOSTER was elected M.P. for the London University, in the week ending February 10, in succession to Sir John Lubbock, now Lord Avebury. Sir Michael polled 1,271 votes, against 863 for Dr. Collins and 586 for Mr. Busk, Chairman of Convocation. We are unable to define Sir Michael's political attitude, and must allow him to attempt the definition for himself. After the declaration of the poll, the new member said:

Even if he were the superior person he had been called by some newspapers, he could not expect to sit in an isolated chair, and he must respond to the lash of the Whips of one side or the other. He had carefully considered on which side of the House he should sit, and he had come to the conclusion that it was only consistent with the opinions which he had expressed concerning the present war, and with the feelings which he had as to the supreme importance of strengthening the bonds of our great Colonies with this little island, that he should, first of all, at all events, take his seat among the supporters of the present Government. But he took it that he might so order his ways that he did not sacrifice to party demands, or jeopardize by party action, the opportunities that he might have of forwarding in the House all interests of science, learning, and education. He was subject to tradition. As one who was born in the same town as Oliver Cromwell, who was married from the house in which he dwelt, as one whose forefathers—obeying what they thought their consciences—sheltered their friend John Bunyan when he preached outlaw sermons in the woods of Hertfordshire, he felt that tradition wrapped him so about that the war cry of civil and religious liberty always made him prick his ears.

THE Gilchrist Travelling Studentship of £70, which, in December, 1899, was in the award of the Committee of Management of St. George's Training College, Edinburgh, has just been awarded to Miss Maude E. Newbegin, M.A. Miss Newbegin—who received her professional training at St. George's Training College—is at present Lecturer on English History and Latin at Edgehill Training College, Liverpool. She intends to make the system of organization and the methods of the French *écoles normales* the special object of her study.

#### UNIVERSITIES.

(From our Correspondents.)

**Cambridge.** THE controversy regarding the Mathematical Tripos, after being waged fiercely in fly-sheet form, came to a conclusion in the Senate House on February 15. Newspaper readers have been kept fully informed of the arguments used by both sides, but it may be interesting to note the two distinct points scored by the opponents of the change. The second part of the Tripos, on the authority of Dr. Routh, has been practically a failure, and the new scheme of cutting down the first part to the level of Oxford Moderations was an attempt to force the better men to take two years for the second part, instead of, as at present, taking the first part at the end of the third year, and letting the second part take care of itself. The other point that scored in argument was this: If the first part has proved unsatisfactory, it is not the fault of the regulations, but of the examiners, who fail in their duty of properly carrying out the rules by which the examination is governed. Some examiners, it is hinted not ambiguously, are

proud of their skill in propounding mathematical conundrums, to show their own power in mental gymnastics, and not to test the training of the average man who submits himself for examination. A large number of members of the Senate, not themselves experts in mathematics, proceeded upon the common-sense ground that it was for the promoters of change to prove their case. The number of those voting was smaller than would have been expected, but the abnormal character of the weather was sufficient to account for the fact; and the graces were defeated by substantial, though not overwhelming, majorities.

A new departure has been taken by the War Office authorities in regard to the selection of University candidates for the Army. Hitherto, at every half-yearly examination, a certain number of commissions have been given to candidates from all the Universities, competition among such candidates taking place in the examination of candidates for admission to Sandhurst. The nature of the schedule of subjects for that examination makes it expedient to work at a large number of subjects simultaneously. In fact, the whole examination is designed to encourage cram instead of training. Men refuse to give up the regular course of their work for their degree to take the chances of success in the Civil Service Commissioners' Examination. The War Office authorities have grasped the situation, and boldly thrown the responsibility of selecting the candidates upon the University itself. Ten Commissions in the Artillery have been assigned by the Vice-Chancellor, acting with the advice of experts, and universal satisfaction has been expressed at the way in which a difficult task was discharged.

On February 7 a crowded and enthusiastic meeting was held in the Senate House, at which resolutions were unanimously passed, urging the necessity of making the University Volunteer Corps a nursery for the scientific training of our future officers. Mr. Roberts, of Caius, under whose command the Corps was practically galvanized into a new existence, in a most able speech dwelt upon the importance of training University men in the various departments of military science. After all, amateur soldiering is as good an amusement and quite as healthy a pursuit as the practice of that sort of athletics which consists in looking on while others play football or cricket. At the present moment lectures on tactics given in the University are well attended. One College (Magdalene) provides lectures on the same subject for its own men, through the enterprise of the revered Master, Mr. Neville, who was Vice-Chancellor when the first University Volunteers were sworn in nearly forty years ago.

Natives of Asia not of European parentage have for some considerable time been allowed to substitute for Greek in the Little-go a selected English subject, but there was no provision to enable such candidates to obtain exemption by means of passing the Senior Local Examinations unless they qualified in Greek. This anomaly is now to be removed, and, for the future, our Asiatic *confères* will be able to come to the University with all their preliminary examinations behind them, ready to start the serious work of their tripos. The Senior Wranglership last year went to a native of India, and this year the Member's Prize for an English essay has been awarded to a gentleman whose name proclaims his nationality—Mr. Rajjappaya Nazayanan.

The University Reader in Talmudic, having had an attractive offer made to him from another quarter, has been induced to remain with us on condition of receiving an additional grant of £100 per annum, thus making up the income to £450 a year, of which sum, however, £250 is provided by private munificence.

The Senate on February 15 duly ratified the proposal of the Council to abolish the present system of presenting the benefices, and the first Board of Electors was nominated at the same time. The list is a fairly representative one, and is composed exclusively of members of the Church of England. The principal grace was opposed by the redoubtable Dr. Mayo, who was, however, only able to persuade seven other members of the Senate to side with him, while seventy-seven recorded their votes in favour of the grace.

The Chancellor has been asked to interpret the statutes relating to a somewhat important point—whether University Readers are precluded from taking private pupils. The Chancellor has answered the question in the negative; so that the unofficial coaches will now find the competition keener than ever. The decision will be received with a certain amount of indifference by the well established coaches. As the readers are valuable recruits to the ranks of examiners, the new regulation, by practically closing this occupation against them, will probably do more harm than good.

Personal items of the Month.—Chancellor's Classical Medals,



(1) Ernest Harrison, B.A. Trinity, (2) Russell Kerr Gaye, Trinity; Pitt Scholarship, T. G. Johnson, Jesus; Porson Scholarship, W. Rennie, Trinity; Davies Scholarship, F. H. Marshall, Emmanuel; Seeley Medal, F. W. Head, B.A. Emmanuel; Hulsean Prize, C. J. B. Gaskoin, B.A. Jesus.

### SOME DIFFICULTIES IN DISCIPLINE.

In these days of large classes one of the most pressing problems of discipline is: How to keep a class together as an organic whole, at the same time that each individual is kept busy. Even in large schools where there is careful classification the difficulty is felt by experienced teachers. In smaller schools and less happy conditions (where the novice usually has to begin his career) the inexperienced teacher often feels he is a hopelessly poor disciplinarian; whereas it is often a mere matter of solving this single problem. After all, good discipline is of a slow and gradual growth, and very often the results of the so-called "born disciplinarian" are by no means so good or so permanent as those of a teacher who has built up rationally his own powers. A great writer on education has said that the fountain of discipline is the will of the pupil, and that obedience and attention must be active; if mechanical, they become a sort of disobedience and inattention, finally degenerating into servility, the very opposite pole to true discipline. This is probably the reason of our dissatisfaction with the results of Board-school education; it is not so much a question of this or that subject that has been taught or neglected, but it is the discontented, sulky, even idle, habits engendered by the military government of huge classes.

I. The most important point to bear in mind is the *distinction between amusing a class and interesting it*. An old teacher will often say: "Interest can be over-done; I don't believe in too much of it." Reason and experience both show that this is false. Interest can never be over-done. But amusement can be, and very often is; and it must be admitted that training colleges are responsible for a great deal of evil in this respect. One of the leading teachers in England overlooked this point in an "Essay on Stimulus" written some years ago. He advocated the use of bright and entertaining sentences for analysis or translation, in preference to the dull old exercises once in vogue. This is well; but it must be continually emphasized that an interest in the subject of an exercise is not an interest in translating it from one language to another. So subtle is this distinction at times that many brilliant teachers, who can always command the attention of their class, are surprised at the poor progress in the subject. The boys' minds have been busy and cheerful indeed, and never bored, but they have not been busy over the essential things. For this reason brilliant teachers are in some cases more harmful than the incompetent who cannot hold the class together at all; for the mischief done by the former is not so easily apparent. As a test, then, of one's work, it is always better to ask, not only: "Have my pupils been thoroughly interested and hard at work all the lesson?" but also: "In what have they been interested?" And let us measure our progress more by the quality than the quantity; and the quality is to be measured by the resultant activity of the pupils. Another point is to be noted in this connexion: Although the interest awakened in a subject can never be too great, it can be given too lavishly and too soon. Interest should rather be a gradual acquisition of the pupil than the gift of the teacher, and Arnold's rule, never to give a piece of information till the class had earned it, although often impracticable, is very sound in principle. Some teachers have a feverish desire to pick out all the most interesting parts of a subject, and in so doing they are in danger of producing a kind of mental dissipation in their class, as if one should spend his time in reading only the *Review of Reviews*. The self-restrained patient teacher will get a far more permanent interest aroused, although it may not bear full fruit until his pupils are removed from his influence. How far more permanently interesting, for instance, is it to feel the difficulty of the character of Hamlet after reading and re-reading the play than to have the opinions of many commentators served up in a bright discourse! In order to illustrate the distinction between interesting and merely amusing a class, no subject in the curriculum is more appropriate than reading—that *bête noire* of the weak disciplinarian. Teachers are always trying to discover good reading-books, and publishers trying to meet the demand by fresh departures, many of them entirely mistaken from an educational point of view. The numbers of historical and geographical readers are a striking instance of the futile attempt to do two things at once. The old idea of combining penmanship and morality only raises a smile now; but the confusion of aim in a geographical reader is no less ludicrous. It must be admitted, however, that the choice of a reader is a difficulty. If too heavy and abstruse, there is little opportunity for the pupils' exercise in intelligent expression; on the other hand, if too easy and interesting, there is a hurry to get on to see what comes next. Considering the enormous output of story-books for children in the present day, there seems no need whatever to foster the taste for mere tales during school hours. The very short time that can be devoted to the reading lesson ought to be spent in an endeavour to render as well as possible pieces of distinct literary merit. Interest in the subject of the piece

will doubtless be aroused, but only the interest in the actual rendering of it should be counted unto the teacher for righteousness. The old-fashioned book of extracts had many points to recommend it; the fault lay in the sense of unreality that always attends an extract, divorced from its context and often meaningless in consequence. On the other hand, again, the whole of a standard work would not afford sufficient variety. This difficulty could be easily solved if the fetish notion that every pupil must be provided with a copy were broken down.

The following experiment was once tried in a class of girls, and by its means an hour of boredom to the pupils and misery to the teacher was rendered one of the pleasantest in the week. Each girl was told to come to the next lesson with a book of her own choosing (from the home or the school library) prepared to read a passage of it to her fellows. The choice was to be kept a secret till the appointed hour, when one by one the girls stood up and read their pieces, while the others listened critically in order to vote on the best at the end. Pathos and fun followed one another quaintly, and all were eager to hear, so that any inaudibility or indistinctness was quickly pulled up by the class. The teacher indeed had little to do but to look on, limit the time, and jot down critical notes. It need hardly be said that the competition became so keen that the pieces were thoroughly practised beforehand in private, to the immense advantage of the pupil. The voting was managed by each pupil assigning marks to each reader in turn. These were quickly added at the end, and the order of merit was announced. After this, the teacher gave a short criticism of each reader, and a general criticism on the votes of the class, pointing out her reasons for agreement or disagreement. Thus each member of the class was busy during the whole lesson, and busy on the right points. One incidental advantage may be mentioned, that the pupils saw the real book from which the extract was read, very often in a far more attractive edition than would be possible in a school book.

II. Another general principle to bear in mind is that the *various enthusiasms lying dormant in a class of children may be utilized*. After a little observation it will be noticed that one pupil revels in excessive neatness, another in getting through a large amount of work in a given time, another in showing somebody else how to do it, another in shortening his labour by various devices. Each of these virtues is usually allied to a complementary vice—the neat one is slow, the quick one inaccurate, and so on. Instead of fighting the vices, it is often more profitable to call attention to the virtues, as opportunity arises, in order that the whole class may be leavened by them. For instance, in the up-hill work of giving a class a thorough mastery of a rule in arithmetic, certain definite ideals should be put before them, and no one should consider that he knew the rule till each ideal was fulfilled. To be quick, to use the best methods, to be neat in work, to be so clear as to the why and wherefore that you could explain it to the first man in the street, to be absolutely accurate—these are the points for a class to aim at. Certain lessons are appropriate for emphasizing certain ideals, e.g., simplification of fractions is a good opportunity for the neat pupil to shine forth as an example. The quick, inaccurate worker should be made to do his example by two, or even three, different methods. Impatient at first, he will gradually become interested in making his answers correspond, and this will prove a greater spur to accuracy than being merely told that the answer is wrong and the example must be redone. It may be objected that a second method is often clumsy, as, for instance, when an addition of decimals is to be checked by adding the vulgar fractions; but the apparent waste of time is fully compensated by the training in accuracy, for it is assumed that the boy is already quick enough, and the boy is of far more importance than the example; though, to judge by many a teacher's procedure, one would hardly suppose so.

III. *The function of competition as an aid to discipline* is another leading point to be considered. Roughly speaking, competition does no harm if used only for sheer routine work, in which it is almost impossible to awaken a rational interest. An enormous amount of *memoriter* work in language-teaching comes under this head, where it is certainly true that "repetition is the teacher's sheet-anchor." But no subject is quite exempt from this burdensome duty, so distasteful to the brilliant teacher. Marks are by no means necessary for competition; but where they are not employed the teacher's utmost ingenuity is required to keep the work alive. The Jesuits were specially clever in this direction, and their methods are well worth attention. Their class-matches, for instance, where the pupils were divided into sides and challenged one another, are not so difficult to manage as they sound by the description; for the class thoroughly enjoys it and enters heartily into the orderly arrangement of details, and a pupil will learn his lesson to save his side from defeat much more readily than to save himself from detention. The choice of leaders and sides need not take place every lesson, but may hold for half a term, and even then need not be arranged in actual school hours; so that very little loss of time is occasioned.

When the pupils are widely varied in capacity, or at widely different stages in a subject, the common refuge is a subdivision. But subdivisions are always the mark of a young teacher who is anxious to suit every one: a case has been known of a class of five pupils in French, in three divisions. An experienced teacher never makes a division in a class if he can possibly avoid it; for he knows that it

means direct loss of time, loss of the "sympathy of numbers," confusion in setting preparation work, and distraction to every one in the room owing to the varied work going on. With very rare exceptions, the class can be made to work together somehow; there will be a loss, no doubt, to a few pupils, but not the loss equal to that caused by a subdivision. In language-teaching the old fetish order of noun, adjective, pronoun, &c., can be entirely discarded. If one pupil has never done his adjectives, let him, nevertheless, plunge into the pronouns with the rest. The boy who is far ahead of the others is harder to deal with than the one who is behind. If he is obliged to work by himself for the greater part of the lesson, a pleasant change for every one can be made by putting him up to be questioned in turn by all the others; they will be glad to humble him, and he will endeavour to stand the fire with easy nonchalance. Work at a map in geography affords a good opportunity for this device. As for the inevitable group of backward pupils, repetition of verbs, &c., should often be done together by the whole class, for their benefit, the mere volume of sound being very helpful to the weak memories. A point often overlooked with regard to the backward is that they should frequently be allowed to join in the chorus, or answer single questions with their books open before them. It is far better that they should do this than give wrong or muddled answers; of course the rest of the class will see the reason of this and tolerate it easily.

## CORRESPONDENCE.

### THE FRANCES MARY BUSS SCHOOLS.

(NORTH LONDON COLLEGIATE AND CAMDEN SCHOOLS FOR GIRLS.)

To the Editor of the Educational Times.

DEAR SIR,—The fiftieth anniversary of the foundation of these schools falls on the approaching fourth of April. As the establishment of the North London Collegiate School in 1850 marks the first step in the development of the reformed system of girls' schools, which has characterized the half-century, and as the name of its founder stands in the foremost rank of the reformers, it is felt that the occasion may fitly be celebrated as a time of jubilee in the wider as well as in the narrower sense. We, therefore, invite you to take part in the proposed celebrations, and we shall have much pleasure in sending cards of invitation, with all particulars, on hearing from you of your desire to be present. A service of commemoration and thanksgiving will be held in St. Paul's Cathedral on the evening of April 3. Receptions will be held at the Schools in the afternoon and evening of the following day, which is the Day of Jubilee, in the course of which the commemoration music will be sung by the school choir in the Great Hall. We specially desire your co-operation in the Cathedral service.

WILLIAM LATHAM, Chairman of the Governors.  
ALFRED J. BUSS, Clerk to the Governors.  
SOPHIE BRYANT, Headmistress, N.L.C.S.G.  
FANNY J. LAWFORD, Headmistress, C.S.G.

Sandall Road, Camden Road, N.W.

### UNIVERSITY OF LONDON SENATORIAL ELECTIONS.

To the Editor of the Educational Times.

SIR,—The new Senate of the reconstituted University of London is to be appointed in May next, and as sixteen members, or about one-third of the whole, are assigned to Convocation for election, there is now a good opportunity for securing an improved representation of the interests of secondary education in the Governing Body of the University. A Committee has been appointed by the Incorporated Association of Headmasters, to which representatives of the various associations working for secondary education have been co-opted; and, as it will be important to have the active co-operation of all London graduates who are in sympathy with the object, you will render great service by making known that only "registered graduates"—i.e. Members of Convocation—will be able to vote. Under the new statutes, the elections will be by means of voting papers—transmissible by post—and in the several Faculties as follows:—Six Senators to be elected by Arts graduates, six by Science, two by Medicine, and one each by Law and Music. Those graduates who are not yet in Convocation are strongly urged to enrol themselves; and it should be known that all Doctors and Masters are immediately eligible, but Bachelors in Arts, Science, and Music must have graduated three years before acceptance; those in Law and Medicine two years. The fee is 5s. per annum, or a

life composition of £1. The application and fee should at once be sent to the Registrar.—I am, Sir, your obedient servant.

R. W. HINTON, Chairman of the Committee.  
Aske's Hampstead School for Boys, Cricklewood, N.W.

### THE BATTLE OF THE SCRIPTS.

To the Editor of the Educational Times.

SIR,—Mr. Joseph Deedy has done good service in collecting particulars as to the pronunciation of Latin affected at thirteen of our secondary schools. Let me offer your readers a summary. 1 means *ā* pronounced as in *father*; 2, as in *fate*. 3 means *c* and *g* before *e* and *i* as in *critic*, *gift*; 4, as in *city*, *gypsy*. 5 means *c* before *e* and *i* as in *violoncello*. Charterhouse, 2, 4; Cheltenham, 2, 3; Christ Church, Oxford, unsettled; Christ's Hospital, 1, 3; Downside College, Bath, 1, 4, 5; Dulwich, 2, 3, 4; Eton, 2, 4; Maynooth, 1, 4, modified Italian; Rugby, 1, 2, 3; Stonyhurst, 1, 4; Westminster, 2, various; Whitgift, Croydon, 2, 4; Winchester, 1, 4.

Mr. Deedy brings up what to me seem unanswerable arguments for 1 and 3. Latin has no *k*—*c* served its purpose; many words beginning with *ce* and *ci* are almost identical with the Greek from which they were taken, as *cetus*, *ketos*; *circus*, *kirkos*; *ceru*, *keros*; *coelum*, *koilos*. In the verb *dico*, *dicis*, *dicit*, the first form has the letter *h*; logically, the others would have it so, too; and, further, it must continue so to explain the perfect, *dixi* (*diksi*). Note, similarly, *virgo*, *virginis*; *rex*, *regis*; *dux*, *ducis*; *lego*, *legis*, *lexi*, *lectum*. There are many other arguments. As regards the vowels, the results of comparisons with other languages are all in favour of the "Roman values," as in *father*, *reign*, &c.

Will you let me take this opportunity of saying that I shall be happy to send, post paid, to any reader of the *Educational Times* interested in this matter, a copy of my little book of tables of "the sounds of speech," issued in connexion with "International Phonography," the current (15th) edition of "The Oxford Shorthand"?—Yours sincerely,

PERCY E. KINGSFORD.

Excelsior, Dover, January 18, 1900.

To the Editor of the Educational Times.

DEAR SIR,—The heads of secondary schools are interested to know the result of the second year's competition between the Script and Pitman systems conducted by Mr. Easterbrook in the Owen's School, Islington. I now enclose you copy of Mr. Easterbrook's report. The result of the first year's competition was the subject of editorial notice in 1898 in *Education*, the *Educational Times*, the *Journal of Education*, and other educational journals; but, as the competition was in the elementary stages, only the results in the more advanced stages have been looked forward to by those interested in the shorthand question. Mr. Easterbrook's experiment, extending over two years, is the first of the kind that has ever taken place, and we trust that you will deem it worthy of notice.—Yours faithfully,

January 16, 1900.

F. STRATFORD MALONE,  
Secretary, Script Shorthand Co., Ltd.

Owens School, Islington.

December 14, 1899.

The results of the second year's teaching of the parallel classes in shorthand are as follows:—The Pitman class consisted of nine boys and the Script class of five boys; but, for purposes of strict comparison, I ought, perhaps, to omit from the latter class one pupil who had learnt a little of the system before he joined our class, although it was very little indeed. This pupil obtained 123 marks, being at the head of the list. They were examined in reporting two passages—one read to them at sixty words a minute and the other at seventy words a minute. The marking, in order of merit, was as follows:—(Total—130 marks) Script pupil, 121 marks; ditto, 115; Pitman pupil, 110; ditto, 108; Script pupil, 103; Pitman pupil, 61; Script pupil, 29. The remaining six pupils, all from the Pitman Class, could do practically nothing with the passages.

J. EASTERBROOK, Headmaster.

To the Editor of the Educational Times.

SIR,—Your number of February, 1899, recorded a lecture on shorthand by Sir Edward Clarke, in the course of which he recommended the old "Taylor" system as being specially easy of acquisition and reliable in practice. In the recent College of Preceptors' Examination (December, 1899) my pupil, Charles Bryan, who passed in the First Division of the Second Class, scored a rather remarkable success in shorthand. He began the study of the Taylor system less than eight weeks before the date of the examination, and, in acquiring facility, had to rely largely on copying practice. Owing to the demands of other subjects, we were unable to devote more than twenty minutes a day to dictation.—Yours faithfully,

37 Gillingham Street, Eccleston Square, S.W.

January 22, 1900.

HUGH W. INNES, LL.B.

# From Mr. Murray's Educational List.

## MURRAY'S HANDY CLASSICAL MAPS.

### LIST OF MAPS NOW READY.

GALLIA	One sheet, 2s. cloth; 1s. net paper.	BRITANNIA	One sheet, 2s. cloth; 1s. net paper.
ITALIA { NORTHERN ITALY	Two sheets in one case, 3s. cloth; 1s. 6d. net paper.	HISPANIA	One sheet, 2s. cloth; 1s. net paper.
{ SOUTH AND SICILY }			

### MAPS AT PRESENT IN PREPARATION.

GRAECIA { NORTHERN GREECE	Two sheets in one case, 3s. cloth; 1s. 6d. net paper.	THE ROMAN EMPIRE (at different epochs)	Two Maps on one sheet, 2s. cloth; 1s. net paper.
{ SOUTH AND PELOPONNESUS }			
ASIA MINOR AND MARE AEGAEUM	Two Maps on one sheet, 2s. cloth; 1s. net paper.	PALESTINE, SYRIA, AND PART OF MESOPOTAMIA, AND A MAP SHOWING ST. PAUL'S VOYAGES	Three Maps on one sheet, 2s. cloth; 1s. net paper.
GHRMANIA, RHAETIA, ILLYRIA, MOESIA, &c.	One sheet, 2s. cloth; 1s. net paper.	EGYPT AND THE EASTERN EMPIRES	Two Maps on one sheet, 2s. cloth; 1s. net paper.

An Index is bound in each case.

\*. \* By cloth is meant that the map is both mounted on cloth and also bound in a cloth case. By paper is meant that the map is bound, unmounted, in a paper case. Where there are two or more maps on one sheet, there are also two or more indexes—one for each.

## AN IMPORTANT EDUCATIONAL WORK FOR CHILDREN.

**EARLY CHAPTERS IN SCIENCE.** A First Book of Knowledge of Natural History, Botany, Physiology, Physics, and Chemistry for Young People. By Mrs. W. AWDRY (Wife of the Bishop of South Tokyo, Japan). Edited by W. F. BARRETT, F.R.S., Professor of Experimental Physics in the Royal College of Science for Ireland. With nearly Two Hundred Illustrations. Crown 8vo, 6s.  
 "Deserves a warm welcome from all teachers of the young. . . . The illustrations are models of clear, careful, and unconventional work."—*Literature*.  
 "It can be confidently recommended to the young as a sound and pleasantly written introduction to science."—*Guardian*.

### SIR WILLIAM SMITH'S EDUCATIONAL SERIES.

#### Latin Course.

- The Young Beginner's Course.** 2s. each.
- I. First Latin Book.** Grammar, Easy Questions, Exercises, and Vocabulary.
- II. Second Latin Book.** An Easy Latin Reading Book, with Analysis of Sentences.
- Principia Latina.** PART I. Containing Grammar, Delectus, Exercise Book, Vocabulary, &c. Thirty-eighth Edition. 3s. 6d. APPENDIX TO PART I. Additional Exercises and Examination Papers. 2s. 6d. PART II. A First Reading Book. 3s. 6d. PART III. A First Verse Book. 3s. 6d. PART IV. Prose Composition. 3s. 6d. PART V. Short Tales and Anecdotes for Translation into Prose. 3s. 6d.
- Students' Latin Grammar.** For the Use of Colleges and the Higher Forms in Schools. Fifteenth Edition. Thoroughly Revised and partly Re-written. 6s.
- Smaller Latin Grammar.** For Middle and Lower Forms. 3s. 6d.

- III. Third Latin Book.** Exercises on the Syntax, with Vocabulary.
- IV. Fourth Latin Book.** A Latin Vocabulary for Beginners, arranged according to Subjects and Etymologies.

**Translation at Sight:** or, Aids to Facility in the Translation of Latin. Passages of Graduated Difficulty, carefully Selected from Latin Authors, with Explanations, Notes, &c. By Prof. T. D. HALL, M.A. Crown 8vo, 2s.

**A Child's First Latin Book.** Comprising Nouns, Pronouns, and Adjectives, with the Verbs. With ample and varied Practice of the easiest kind. Both Old and New Order of Cases given. By T. D. HALL, M.A. Enlarged Edition, including the Passive Verb. 16mo, 2s.

#### English Course.

- School Manual of English Grammar.** With Historical Introduction, copious Exercises, and Appendices. 3s. 6d.
- Primary English Grammar for Elementary Schools.** With numerous Exercises and carefully graduated Parsing Lessons. 1s.
- Manual of English Composition.** With Illustrations and Practical Exercises. 3s. 6d.

#### French Course.

- French Principia.** PART I. Grammar, Delectus, Exercises, Vocabulary, and Materials for Conversation. 3s. 6d. APPENDIX TO PART I. Additional Exercises and Examination Papers. 2s. 6d. PART II. A French Reading Book, with Etymological Dictionary. 4s. 6d. PART III. Prose Composition. 4s. 6d.
- Students' French Grammar.** Practical and Historical. For the Higher Forms. With an Introduction by M. LITRE. 6s.
- Smaller French Grammar.** For the Middle and Lower Forms. 3s. 6d.

**French Stumbling Blocks and English Stepping Stones.** By FRANCIS TARVER, M.A., late Senior French Master at Eton College. Feap. 8vo, 2s. 6d.

#### German Course.

- German Principia.** PART I. Grammar, Exercises, Vocabulary, and Materials for Conversation. 3s. 6d. PART II. Reading Book, with Dictionary. 3s. 6d.
- Practical German Grammar.** For Advanced Students. 3s. 6d.

#### Greek Course.

- Initia Græca.** PART I. A First Greek Course, containing Accidence, Rules of Syntax, Exercises, and Vocabulary. Edited and carefully Revised throughout by FRANCIS BROOKS, M.A., Lecturer in Classics at University College, Bristol, and formerly Classical Scholar of Balliol College, Oxford. 3s. 6d. APPENDIX TO PART I. Additional Exercises and Examination Papers. 2s. 6d. PART II. A Reading Book. 3s. 6d. PART III. Prose Composition. 3s. 6d.
- Students' Greek Grammar.** For the Higher Forms. 6s.
- Smaller Greek Grammar.** For Middle and Lower Forms. 3s. 6d.
- Greek Accidence.** 2s. 6d.

#### Italian Course.

- Italian Principia.** PART I. Grammar, Delectus, Exercises, Vocabulary, A New Edition, thoroughly Revised and in part Re-written. By C. F. CORCIA, Professor of Italian in the University of Oxford. 3s. 6d. PART II. A Reading Book. 3s. 6d.

### SIR WILLIAM SMITH'S SCHOOL DICTIONARIES.

- Smaller Latin-English Dictionary.** With a Dictionary of Proper Names. Thirty-eighth Edition. 7s. 6d.
- Smaller English-Latin Dictionary.** A companion to the foregoing. 7s. 6d.
- Concise Dictionary of Greek and Roman Antiquities.** Thoroughly revised and in the most part re-written (1898) by F. WARRE CORNISH, M.A., Vice-Provost of Eton. Profusely Illustrated from the best examples of Objects of Antiquity. Medium 8vo, 21s.
- Smaller Dictionary of Greek and Roman Antiquities.** Abridged from his larger Dictionary. With 200 Woodcuts. Crown 8vo, 7s. 6d.
- Classical Dictionary of Mythology, Biography, and Geography.** Compiled from his larger Dictionaries. With 750 Woodcuts. 8vo, 18s.
- Smaller Classical Dictionary.** Abridged from the above Work. With 200 Woodcuts. Crown 8vo, 7s. 6d.
- Concise Dictionary of the Bible.** Condensed from the larger Work. For Families and Students. With Maps and 300 Illustrations. Medium 8vo, 21s.
- Smaller Dictionary of the Bible.** Abridged from the larger Work. For Schools and Young Persons. With Maps and Illustrations. Crown 8vo, 7s. 6d.
- English-Latin Gradus or Verse Dictionary for Schools.** By A. C. AINGER, M.A., Trinity College, Cambridge, Assistant-Master at Eton College, and the late H. G. WINTLE, M.A., Christ Church, Oxford. Crown 8vo, 9s.

### SIR WILLIAM SMITH'S SMALLER MANUALS.

- A Smaller History of England.** From the Earliest Times to 1887. Revised by RICHARD LONGE, Professor of Modern History in the University of Glasgow, formerly Fellow of Brasenose College, Oxford. With 4 Coloured Maps, 14 Plans, and 68 Woodcuts. Crown 8vo, 3s. 6d.
- A Smaller History of Greece.** From the Earliest Times to the Roman Conquest. Revised by G. E. MARINDIN, M.A., sometime Assistant-Master at Eton College. With 2 Coloured Maps, 12 Plans, and 5 Illustrations. Crown 8vo, 3s. 6d.
- A Smaller History of Rome.** From the Earliest Times to the Establishment of the Empire. Revised by A. H. J. GREENIDGE, M.A., Fellow of Hertford College, Oxford. With Coloured Map, 6 Plans, and 66 Illustrations, many from Photographs of Italy at the present day. Crown 8vo, 3s. 6d.
- A Smaller Ancient History of the East.** From the Earliest Times to the Conquest of Alexander the Great, including Egypt, Assyria, Babylonia, Media, Persia, Asia Minor, and Phœnicia. By PHILIP SMITH, B.A. With 70 Woodcuts. Small crown 8vo, 3s. 6d.
- History of English Literature.** Giving a Sketch of the Lives of our Chief Writers, and an Account of their Works. By JAMES ROWLEY. Small crown 8vo, 3s. 6d.
- Short Specimens of English Literature.** Selected from the Chief Authors, and arranged Chronologically, from the earliest Saxon Chronicles to the Middle of the Nineteenth Century. With Explanatory Notes. By JAMES ROWLEY. Small crown 8vo, 3s. 6d.
- A Smaller Manual of Ancient Geography,** drawn up chiefly for the Lower Forms in Schools. By Canon BEVAN, M.A. With 30 Woodcuts. Small crown 8vo, 3s. 6d.
- A Smaller Scripture History of the Old and the New Testament.** With Coloured Maps and many new Illustrations from Photographs. Small crown 8vo, 3s. 6d.
- A Smaller Classical Mythology.** Illustrated with Translations from the Ancient Poets and Questions on the Work. By H. R. LOCKWOOD. With 90 Woodcuts. Small crown 8vo, 3s. 6d.

### MRS. MARKHAM'S CELEBRATED HISTORIES.

- A History of England.** From the First Invasion by the Romans down to the Year 1878. With Conversations at the end of each Chapter. With 100 Woodcuts. Crown 8vo, 3s. 6d.
- A History of France.** From the Conquest of Gaul by Julius Caesar down to the Year 1878. With Conversations at the end of each Chapter. With 70 Woodcuts. Crown 8vo, 3s. 6d.
- A History of Germany.** From its Invasion by Marius down to the completion of Cologne Cathedral in the year 1880. With 50 Woodcuts. Crown 8vo, 3s. 6d.

Mr. Murray's Illustrated Educational List can be obtained post free on application.

## MACMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

### MACMILLAN'S MANUALS FOR TEACHERS.

**The Logical Bases of Education.** By J. WELTON, M.A., Professor of Education in the Yorkshire College, Victoria University. Globe 8vo, 3s. 6d.  
\* \* \* This book meets the requirements of the Teachers' Certificate Examination.  
*Educational Times*.—"Mr. Welton has written distinctively well on logic, but we are inclined to think that he has never produced anything better than this succinct and lucid exposition of the application of logical method to educational purposes. The volume appears in a series of 'Manuals for Teachers.' . . . It will be an admirable series if the rest of the volumes come anywhere near the excellence of this one."

### GRADUATED SERIES OF ENGLISH GRAMMARS.

By J. C. NESFIELD, M.A. For use in Secondary Schools.

**The Uses of the Parts of Speech.** Price 6d., cloth. A general outline, with a large number of Exercises, showing the main purpose or purposes for which each part of speech is used in the construction of a sentence. For the use of students up to the age of ten or thereabouts.

**Outline of English Grammar.** Price 1s. 6d., cloth. A short and easy guide to Accidence, Parsing, Analysis of Sentences, Conversion of Sentences from one form to another, Sequence of Tenses, Analysis of Words, the Sounds, Symbols, and Spellings in present use, the origin and history of the chief inflexions and of words in common grammatical use. With copious and carefully graded Exercises throughout.

**Manual of English Grammar and Composition.** Price 2s. 6d., cloth. A guide to Parsing and Analysis, Composition, the Figures of Speech, Enlargement of the Vocabulary by Allusions and Metaphors, the main divisions of Prose Composition, the peculiarities of Poetic Diction, and an outline of the History of the Language. With copious and carefully graded Exercises.

KEY TO MANUAL OF ENGLISH GRAMMAR AND COMPOSITION. [In the press.]

**English Grammar Past and Present.** Price 4s. 6d., cloth. A full account of Modern English Grammar, some peculiarities of Idiom and Construction, the Origin and Growth of English, a History of Sounds, Symbols, Spellings, and Accents, the Growth of Accidence from Anglo-Saxon and other sources, the origin and use of Prefixes and Suffixes. With Appendices on Prosody, Synonyms, the Changed Meanings of Words, and other outlying subjects. With copious and carefully graded questions selected from the London Matriculation Examinations.

### MACMILLAN'S ENGLISH CLASSICS.—New Volume.

**Dryden.—The Hind and the Panther.** With Introduction and Notes by W. H. WILLIAMS, M.A., formerly Scholar of Trinity College, Cambridge, Professor of Classics and English Literature in the University of Tasmania. Globe 8vo, 2s. 6d.

**The Gospel according to S. Luke in Greek, after the WESTCOTT and HORT Text.** Edited, with Parallels, Illustrations, various Readings, and Notes, by the Rev. ARTHUR WRIGHT, M.A., Vice-President of Queens' College, Cambridge. Demy 4to, 7s. 6d. net.

Second Edition. Now ready.

**The Iliad.** Edited, with Apparatus Criticus, Prolegomena, Notes, and Appendices, by WALTER LEAF, Litt.D., sometime Fellow of Trinity College, Cambridge. Vol. I.: Books I. XII. 8vo, 18s. [Classical Library.]

**Introduction to Physical Chemistry.** By JAMES WALKER, D.Sc., Ph.D., Professor of Chemistry in University College, Dundee. 8vo, 10s. net.

**The Principles of Mechanics presented in a New Form.** By HEINRICH HERTZ, late Professor of Physics in the University of Bonn. With an Introduction by H. VON HELMHOLTZ. Authorized English Translation by D. E. JONES, B.Sc., District Inspector under the Department of Science and Art, &c., and J. T. WALLEY, M.A. 8vo, 10s. net.

**Text-Book of Paleontology.** By KARL A. VON ZITTEL, Professor of Geology and Paleontology in the University of Munich. Translated and Edited by CHAS. R. EASTMAN, Ph.D., Assistant in Paleontology in the Museum of Comparative Zoology at Harvard. With numerous Illustrations. Medium 8vo, 25s. net.

\* \* \* This English Edition is revised and enlarged by the Author and Editor in collaboration with numerous Specialists.

### MARCH NUMBER NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.  
PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### CONTENTS.

**The Teaching of English in Public Schools.** A Collection of Opinions by Experienced Teachers. I. By JAMES GOW, M.A., Litt.D. II. By E. W. HOWSON, M.A. III. By C. J. BATTERSBY, M.A. IV. By MISS AMY LUMBY.—**Syllabus and Time Tables.** By P. A. BARNETT, M.A.—**Experimental Chemistry.** (Illustrated.) II. The Atmosphere and its Constitution. Nitrogen and Oxygen. Moisture and Carbon Dioxide. By Prof. J. B. COLEMAN, A.R.C.S., F.I.C.—**Pioneers in Education.** III. The Significance of John Locke's Work for Education. By Prof. FOSTER WATSON, M.A.—Notes for Lantern Lectures. II. The Beginnings of English Colonization, 1492-1640. By C. S. FEARENSIDE, M.A., and A. JOHNSON EVANS, M.A.—**Play Hour Books. Object Lessons in Botany.** By Miss C. VON WYSS.—**Higher Education in Scotland.**—Items of Interest. (Illustrated.) General, from Abroad, Welsh, Scottish, Current History.—The Religious and Political Life of Rome.—Mr. Fabian Ware on Educational Reform.—Reviews of Recent School Books. (Illustrated.)—London Matriculation, June, 1900. Monthly Test Papers, No. 3.—Junior Oxford Local Examination, July, 1900. Monthly Test Papers, No. 3.—Preliminary Oxford Local Examination, July, 1900. Monthly Test Papers, No. 3.—Correspondence: The Teaching of English. By E. W. HERTZ, B.A. Proposition 15, Euclid, Book I. By SOMERSET BATEMAN, B.A. Persists for Assistant-Masters. By ALFRED THOMPSON. University of London Senatorial Election. By H. CARTER. Education in Jamaica. By an English Teacher in Jamaica. The Pronunciation of Latin. By PERCY E. KINGSFORD.

\* \* \* Also ready, Volume I., containing Nos. 1-12, January-December, 1899. 480 pp., Indec. Price 1s. 6d. net. Cases for binding Vol. I., price 1s. net.

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.

## A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd.

## ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

### THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

#### REVIEWS:—

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."  
*Daily Telegraph*.—"Julius Caesar" . . . is invaluable as an aid to the study of the play."

*South Africa*.—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."

*Athenaeum*.—"Essentially books for students."  
*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

'AS YOU LIKE IT	... ..	s. d.
COEOLANUS	... ..	2 6
HAMLET	... ..	2 6
HENRY V.	... ..	2 6
JULIUS CAESAR	... ..	2 0
KING JOHN	... ..	2 0
KING LEAR	... ..	2 0
MACBETH	... ..	1 6
MERCHANT OF VENICE	... ..	1 6
MIDSUMMER NIGHT'S DREAM	... ..	2 0
RICHARD THE SECOND	... ..	1 6
TEMPEST	... ..	2 0
TWELFTH NIGHT	... ..	1 6

\* For Current Examinations.

### BACON.

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... .. 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysis Paraphrasing, Indexes, &c.

### MILTON.

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation." s. d.

PARADISE LOST. Books 1 and 2. (Just published.) 2 0

SAMSON AGONISTES ... .. 2 0

COMUS ... .. 1 6

LYCIDAS, L'ALLEGRO, and IL PENNIBROSO 1 4

\* For Current Examinations.

### SCRIPTURE.

Edited by R. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

### FRENCH.

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... 2 6

### GERMAN.

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

## MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.

Digitized by Google

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

SUITABLE BOOKS IN THE  
University Tutorial and Preceptors' Series.

## Latin and Greek Classics.

- Caesar.—Gallic War. Books V., VI.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. each. Vocabulary. 1s. each.
- Cicero.—De Senectute.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Homer.—Odyssey. Books XI., XII.** By J. H. HAYDON, M.A., and F. G. PLAISTOWE, M.A., Lond. and Camb. Text and Notes. 2s. 6d.
- Horace.—Odes. Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Lond. and Camb. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.

## English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond. [In the press.]
- The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. Fifth Edition. 3s. 6d.
- Shakespeare.—As You Like It.** By Prof. W. J. ROLFE, D.Litt. 2s.

## French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.
- FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. es Sc., Univ. Gall. 1s. 6d.
- French Prose Composition.** By E. WEEKLEY, M.A. Lond. 3s. 6d.
- FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. Second Edition. 1s. 6d.
- French Prose Reader.** Edited by S. BARLET, B. es Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. Third Edition. 2s. 6d.

## Latin Grammar, &c.

- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [In the press.]
- Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. Third Edition. 3s. 6d. Exercises and Test Questions on. 1s. 6d.
- Latin Composition and Syntax.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. Fourth Edition. 2s. 6d.
- Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.
- LATIN READER, THE PRECEPTORS'.** [In preparation.]

## Mathematics and Science.

- Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d. Exercise Books ruled Ledger, Journal, or Cash. 3d.
- BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [In preparation.]
- Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, M.A., F.C.S. Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.
- Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By WM. BRIGGS, M.A., F.C.S., F.R.A.S. Interleaved. 1s. 6d.
- Euclid. Books I.-IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.
- Hydrostatics, An Elementary Text-Book of.** By WM. BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Second Edition. 2s.
- Magnetism and Electricity, Text-Book of.** By R. W. STEWART, D.Sc. Fourth Edition. 3s. 6d.
- MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A. Camb., B.Sc. Lond. 2s. 6d.
- Mensuration of the Simpler Figures.** By WM. BRIGGS, LL.B., M.A., F.C.S., and T. W. EDMONDSON, M.A. Second Edition. 2s. 6d.
- Trigonometry, The Tutorial.** By WILLIAM BRIGGS, M.A., LL.B., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.
- TRIGONOMETRY, THE PRECEPTORS'.** Edited by WILLIAM BRIGGS, M.A., LL.B., F.C.S., F.R.A.S. 2s. 6d.

Complete Catalogue of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', London University, Science and Art Department, and other Examinations, free on application.

London: THE UNIVERSITY TUTORIAL PRESS

(University Correspondence College Press),  
W. B. CLIVE: 13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	" 2 10 0	.....	"	8 0 0
Quarter Page	" 1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—80 words or under, 2s.; each additional 10 words, 4d. (For 1s. extra. Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

March 1, 1900.

THE Professional Preliminary Examination of the Fixtures. College of Preceptors, for certificates recognized by the Education Department and various professional bodies, will be held on March 6-8.

PROF. SULLY's course of weekly lectures on "Intellectual Education"—the first course of the twenty-eighth annual series of Lectures for Teachers at the College of Preceptors—began on February 22. The second lecture will be delivered this evening at 7 p.m.

THE next Evening Meeting of members of the College of Preceptors will take place on Friday, March 16, when Mr. Arnold-Forster, M.P., will introduce a discussion on "Maps—what they are and what they ought to be." The lecture and discussion promise to be exceptionally interesting, and it is expected that a number of distinguished geographers and cartographers will be present. Dr. Scott Keltie, Secretary of the Royal Geographical Society, will take the chair.

ON March 2 and the five following Fridays, Miss F. M. Purdie, of Newnham College, will lecture (to women only), at the Home and Colonial Training College, Gray's Inn Road, on "Phonetics and their Uses in English and Foreign Language Teaching." These lectures are given by the trustees of the late Miss Soames, in pursuance of her work in English and foreign phonetics. They will deal with the methods and aims of phonetics generally, and will also describe the Soames Phonetic Method of teaching children to read. A syllabus will shortly be ready, and may be obtained from Miss Verrall, 26 Gloucester Place, Brighton (Soames Trustee). Admission to the lectures is free, and all teachers are specially invited.

AS the rooms lately occupied by the School of Art Wood-Carving in the Imperial Institute buildings have been handed over to the London University, the day classes, and a special Saturday afternoon class for pupils who cannot otherwise attend, will, after March 1, be carried on in the North Gallery of that building. The evening classes will, necessarily, for the present be closed. Some of the free studentships, maintained by means of funds granted to the school by the City and Guilds Institute and the Worshipful Company of Drapers, are vacant, and forms of application for these, and further particulars relating to the school, may be obtained from the manager, Miss Rowe.

AT the Royal Institution, on March 22, Mr. H. J. Mackinder, M.A., F.R.G.S., will deliver the first of a course of three lectures on "Equatorial East Africa and Mount Kenya," in the place of Mr. E. A. Fitzgerald, who is unable to deliver his lectures owing to his departure for South Africa.

THERE will be examinations this month for fifteen major scholarships, and for exhibitions and sizarships, at Trinity College, Cambridge, and for entrance scholarships at Magdalene and Selwyn.

A SCHOLARSHIP of £50 a year will be offered for competition on the results of an examination in classics, open to candidates



for entrance and to students in their first year, to be held at Newnham College on March 14 and two following days. The scholarship is tenable for three years from entrance. The Mathilde Blind Scholarship of £50 a year for three years will be offered for competition to candidates intending to take a three years' Honours course in literature on the results of an examination to be held at Newnham College on June 13 and two following days. Candidates will not be eligible for this scholarship unless they are qualified in mathematics for entrance to the college.

\* \* \*

THE Easter Conference of the Private Schools' Association will be held at Oxford during the week commencing April 24.

Education  
Gossip.

THE small Committee representing the Education Department and the Treasury, which was appointed on the passing of the Board of Education Act to reorganize the work hitherto carried on in Whitehall, at South Kensington, and at Gwydyr House, and to provide for the new administration which will be necessary under the above-mentioned Act, is understood to have virtually completed its task. The Committee has taken a long adjournment, and apparently little remains to be done except to make the definite appointments which will complete the new staff of the Education Department in its several subdivisions.

\* \* \*

THE Government are, doubtless, well aware of the importance which is attached by secondary schoolmasters, and by all who understand the question of English education as a whole, to the efficient organization of the Secondary Education Department of the new Board. We may also trust that they have been careful to mark the necessary distinction between such secondary education as will be based, in the main, on technical instruction—which must needs be encouraged by Departmental grants, and which may be treated on the lines of direct continuation from the elementary schools—and that other kind of secondary education, whose basis is mainly literary, which is pursued in the public schools, endowed or proprietary, and in private schools, and which could not possibly be treated on the same lines of continuation.

\* \* \*

THERE are, unfortunately, many bodies and individuals who do not, even yet, perceive this necessary distinction, or who deliberately ignore it, as though their masterful way of ignoring the laws of gravity would succeed in making water run up-hill. They talk too often as if every secondary school ought to be graded on to the Government elementary schools. It is absolutely impossible.

\* \* \*

SECONDARY education will depend for its encouragement and control on a secondary and non-technical Department of the Board, on the Under-Secretary of that Department, and on the Consultative Committee. The distinction has been partly recognized and provided for by the new Act; and the secondary profession of teachers are now looking, not without anxiety, for the appointment of the permanent Secondary Assistant-Secretary. There ought to be no question about the appointment of an official who has a thorough knowledge of the literary schools, who is in touch with the organized secondary bodies, and who would inspire confidence in the secondary profession.

\* \* \*

WHEN our next number makes its appearance, the Education Board will be constituted and at work. The first of April is the date on which the Act is to come into operation. Parliament is not trivial enough to make *poissons d'Avril* of the educational world; but it is amusing, none the less, to find that the date on which the Board of Education is to set about its administrative work is a Sunday.

\* \* \*

We fear that Sir Philip Magnus has had to pay dearly for the

vindication of his right to sit as a member of the Court of Governors of the Worshipful Company of Plumbers; but it may be supposed that the costs of the long litigation will follow the decision of Mr. Justice Farwell on February 19. May we also suppose that the Court of Governors will accept the judge's sensible advice, and avail themselves of Sir Philip's able assistance in the future?

\* \* \*

TWO exhibitions (one of the value of £50, and one of the value of £30) will be offered by Trinity College, Cambridge, to candidates selected for admission to the Civil Service of India at the open competitive examination held in August, 1900. The first of these exhibitions is open only to those whose names are placed not lower than twenty-fifth on the official list of selected candidates, and who either are members of Trinity College or are not members of any college in Cambridge or Oxford. The second of these exhibitions is open only to members of Trinity College whose names are placed on that list.

\* \* \*

PRIZES, each of the value of £10, are offered by Trinity College to those among the candidates selected at the open competitive examination held in 1900 who during each term of their year of probation have resided at the college, and who, in the "Final Examination" to be held in 1901, pass highest in Arabic, Sanscrit, or Persian, provided that they obtain at least three-fifths of the total marks given for those languages respectively.

\* \* \*

THE Mathematical Association held its annual general meeting at University College on Saturday, January 27, when papers were read by the President, Sir Robert S. Ball, Prof. R. W. Genese, and Messrs. R. F. Davis and J. A. Third. It was announced that the *Mathematical Gazette*, the second volume of which commences with the present year, would in future be issued six, instead of three, times a year. The *Gazette* will contain articles suggestive of improvements in methods of teaching, or covering ground not satisfactorily treated in text-books, reviews of mathematical books of the first importance, together with shorter notices of new text-books, elementary mathematical notes, problems, and any other matter of direct interest to mathematical teachers.

\* \* \*

A REQUEST of £20,000 has been made to the New College, Hampstead (now a constituent college of London University), under the will of the late Mr. Henry Vaughan. This is the largest amount ever bequeathed to a Congregational college. New College is the best endowed of any of the colleges of the Congregational denomination. The present Principal is the Rev. R. Vaughan Price, M.A., who succeeded Dr. Samuel Newth in 1889.

\* \* \*

IT is far better to lower the fees, when possible, than to lose pupils. It appears that the number of students at the Guildhall School of Music has during the past year or two fallen off, and the number of new pupils for the spring term is nearly 30 per cent. less than in the corresponding period of 1896. A report has been presented on the subject to the Court of Common Council, and the recommendation has been made that the entrance fees of pupils shall be lowered, and the fees of the professors slightly increased. The students even now exceed three thousand.

\* \* \*

THE Lord President of the Committee of Appointments and Vacancies. Council has appointed Sir William Richmond, K.C.B., R.A., Mr. T. G. Jackson, R.A., Mr. E. Onslow Ford, R.A., and Mr. Walter Crane as a Council to advise the Department of Science and Art on art matters relating to art schools and classes, the Art Museum, and the Royal College of Art. He has also appointed Mr. A. Spencer, Headmaster of the Municipal School of Art, Leicester, to be Headmaster of the Royal College of Art.

THE Principalship of Aberdeen University has been vacated by the sudden death of Sir William Geddes, LL.D. Sir William was formerly Professor of Greek at Aberdeen, and became Principal in 1885.

\* \* \*

MR. KAHN has been appointed Master of the Commercial Side of University College School, under the arrangement recently made between the authorities of the school and the Technical Education Board of the London County Council.

\* \* \*

DR. N. TIRARD, who has been appointed Professor of Physiology at King's College, London, has resigned his Examinership in Natural History in the College of Preceptors.—Mr. G. T. Moody, D.Sc., F.C.S., has been appointed one of the Examiners in Chemistry in the College of Preceptors, in the place of Prof. W. N. Hartley, F.R.S., who has retired.

\* \* \*

AT Oxford Mr. C. H. Firth, M.A. Balliol College, has been elected Ford Lecturer in English History for the ensuing academical year.

\* \* \*

THE Vice-Chancellor of Cambridge University announces that he has appointed Mr. Frederic Harrison, M.A., Hon. Fellow of Wadham College, and Professor of Jurisprudence to the Inns of Court, as Rede Lecturer for the present year.

\* \* \*

THE REV. F. H. CHASE, D.D. of Christ's College, Cambridge, has been elected Hulsean Lecturer for 1900-1.

\* \* \*

THE Professorship of Medicine at Edinburgh University is vacant by the death of Sir T. Grainger Stewart.

\* \* \*

MR. JAMES MAIR, M.A., has been appointed Headmaster of Banff Public School, in succession to Dr. Wilson.

\* \* \*

Literary Gossip. No two opinions would coincide as to the best twenty or fifty books on the history, theory, and practice of education. The question is one of much importance, and, if our readers—many of whom are competent to form a valuable judgment on this subject—would try their hands at a selection, the result could not fail to be interesting. We observe that the School Board for London has forwarded to the public libraries of the Metropolis a list, drawn up by experts of the Board, of books for teachers and others interested in the history or theory and practice of education, with the suggestion that the books be added to the libraries. The books recommended are fifty-eight in number, and cover a wide field, from Tylor's "Anthropology" and Mill's "System of Logic" to Froebel's "Mother-Play" and Heerwart's "Course of Paper Folding." It is satisfactory to know that in most libraries many of the books proposed are already on the shelves.

\* \* \*

CONSIDERING the eminence of St. Paul's as a first-grade classical school, it is not surprising to find that eight out of thirty-four editors of the new "Scriptorum Classicorum Bibliotheca Oxoniensis" (Clarendon Press), to which we draw attention in one of our reviews of this month, are either Old Paulines or past or present masters at St. Paul's.

\* \* \*

THE Bill permitting the optional use of the English language in the Jersey "States" was carried by a large majority. The language question in Austria (shall we add in the Transvaal?) is not to be so easily settled. Meanwhile our Celtic brethren are pushing their own language question for all it is worth. Though we have no great idea of its importance, we will quote from an Irish paper the strongest argument which we have yet seen in favour of the teaching of Irish to Irish children.

Any one who knows the language of Ireland, with its magnificent list of 60,000 townland and other place names, has opened up for him a new field of vivid interest and pleasure. These fine names will stand

for ever as a monument of the beauty and variety of our language, and the poetic and imaginative faculties of our ancestors. But to those who do not know Irish they are of course incomprehensible. It is strange for people to live in their own country and not to know the meaning of their surroundings.

\* \* \*

THE death of Mr. H. D. Traill is a loss to English letters and a loss to *Literature*, which he edited with much ability. He was an Oxford Honour-man, and began his London career by working in the Education Department.

\* \* \*

THE Oxford Delegacy for the Extension of University Teaching give some interesting particulars in their report for last year. No fewer than 1,231 lectures were delivered by thirty-four lecturers in 119 local centres. The lecturers on literary subjects were the Revs. J. G. Bailey, R. Bayne, and W. Tuckwell, and Messrs. F. S. Boas, R. W. Bond, W. G. de Burgh, E. L. S. Horsburgh, R. Ashe King, J. A. R. Marriott, W. Alison Phillips, J. C. Powys (the newest edition to the ranks), and E. de Sélin-court. The gross average attendance at lectures was 4,376; the average per centre being 104. Judged by the average attendance, the most popular lectures were the following:—Mr. Marriott's "English Novelists," at Cheltenham, evening lectures, average attendance, 315; Mr. Horsburgh's "Shakespeare," at Bolton, evening lectures, 312; Mr. King's "English Novelists," at Gloucester, evening lectures, 220, and Mr. Marriott's "English Novelists," at Redditch, evening lectures, 200.

\* \* \*

WITH regard to our notice, in January, of Prof. Schoenfeld's "Schiller's Maria Stuart" (Macmillan), we are assured by Dr. Schoenfeld that he has not used Dr. Buchheim's edition at all. There is so much common material for Schiller criticism that we can quite understand coincidences. Certainly, our reviewer had no intention whatever of implying that other editions had been unfairly used. Dr. Schoenfeld also informs us that he had very high authority for coupling the quotation "Nihil est in intellectu quod non prius fuerit in sensu" with Catholic symbolism. Possibly he is right; its most usual application is certainly to the philosophy which maintains that all knowledge comes through the senses, and that there are no such things as innate ideas.

\* \* \*

MR. W. B. CLIVE announces a new "History of Greece," by W. J. Woodhouse, M.A., Lecturer in Ancient History and Political Philosophy in the University of St. Andrews, sometime Craven Fellow in the University of Oxford, and author of "Aetolia: its Geography, Topography, and Antiquities." This book is intended primarily for those who are studying in outline the history of Greece down to the death of Alexander for examinations such as the London University Intermediate Arts and B.A. It will also be found useful in schools where Greek history is offered for the Locals or the Oxford and Cambridge Board Examination.

\* \* \*

THE same publisher will shortly produce "The Tutorial History of English Literature," by A. J. Wyatt, M.A., joint author of "The Intermediate Text-Book of English Literature." The common complaint against smaller histories of literature is that they attempt too much, and fail to preserve due proportion between the greater and lesser writers. Mr. Wyatt has only incidentally included the lesser names. The work of our great writers has been described many times: here the attempt is made not only to describe again the work of our great writers for its own sake, but through it to tell the story of our literature as a whole. Illustrative extracts form a prominent feature in the book, and will, it is believed, considerably add to its educational value.

\* \* \*

IN "The Story of the Nations" the history of Italy is divided into three separate volumes, "The Tuscan Republics," "Venice," and "Modern Italy," the last of which Mr. Fisher Unwin will

publish next week. It gives a clear account of Italy during the last hundred and fifty years. The author is Prof. Orsi, Professor of History in the Reale Liceo Foscarini, Venice, and already favourably known as the author of a short history of Italy and other scholarly work.

### THE LICENSING OF TEACHERS.

At the evening meeting of the members of the College of Preceptors, held at the College on February 14, with the Rev. J. O. Bevan in the chair, Prof. FOSTER WATSON read a valuable historical paper on "The Licensing of Teachers in England in the Past." We regret that we are unable to report this lecture in full.

Prof. Foster Watson's introduction was in the following terms:—

"Not a man in Europe," says Cardinal Newman, "who talks bravely against the Church but owes it to the Church that he can talk at all." It is only when we come to read the history of the middle ages that we realize the full import of what Newman asserts. And, whatever may be said on the subject by partisans, the impartial historian of education will always gladly recognize the glorious part played by the Church in the episcopal and early monastic schools. Not that the candid inquirer will necessarily suppose that the Church was the first or only institution which recognized the responsibility of handing on the torch of learning from one generation to another, or of spreading widecast the benefits of culture and instruction. The Holy Catholic Church had been founded on the model of the "Universal Empire," which the City of Rome had held before itself in its political vision. The military, social, political organism, which hoped to complete itself in universal dominion had, it is true, passed away. But, like the waves of the sea, as the currents of history moved onward into fresh regions the old ideals passed onwards, and moulded the new waters with the old forms of aspiration towards a universal empire, now to ecclesiastical, rather than political, ends. In attempting large and far-reaching ecclesiastical objects, it was not likely that educational ends, in some subsidiary degree, would be left out. For the institutions of Church and State, corporations as they are of the highest and most comprehensive forms, "never die," and for the continuance of the ideas for which they stood to future ages—nay to even the following generation—the culture and education of the young is too pressing and obvious a condition to escape the urgent attention of a State or religion of even a comparatively low type.

We should expect, therefore, that the care for the young in their up-bringing would not be overlooked by the builders of the old Roman Empire. Into this I cannot go further than to quote the words of Gibbon: "In all the cities of the Roman world the education of youth was entrusted to masters of grammar and rhetoric, who were elected by the magistrates, maintained at the public expense, and distinguished by many lucrative and honourable privileges." Without further inquiry on what would be an interesting question—viz., to what degree the organization in this direction was elaborated by the Romans—I only pause here to remark that the arrangements spoken of by Gibbon, however thorough, or however lacking, in their completeness, were clearly directed to the production of the citizen—probably, indeed, with that high ideal before them, as declared in detail to us by Quintilian, of the *bonus orator*.

With the words of Cardinal Newman still sounding in our ears, it is best to respectfully pass by in comparative silence the early centuries of the Christian era; for details of educational history are lacking, or, when found, are not indicative, for the most part, of the encouragement of secular learning. The Fourth Council of Carthage, for instance, disallowed the reading of secular books, even by the bishops. This was in 398 A.D.; and, although there were individual Churchmen who had more generous views as to literature, yet it would seem that learning and teaching came into prominence in the Christian Church with the foundation and development of the Benedictine Order of monks.

It was not, however, till the time of Charlemagne that education became organized as such. In 787 he addressed a letter to the abbots of the monasteries throughout his Empire. This proclamation has been called "the first general charter of education for the middle ages." In it abbots are exhorted to study "letters," to enable them to understand more clearly the contents of the Scriptures, and because, "although right doing be preferable to right speaking, yet must the knowledge of what is right precede right action." But the abbots are further expected to choose men for study who will not only be zealous and capable students, but also will be desirous of instructing others. These instructions were issued to bishops as well as to abbots. Theodulf, the Bishop of Orleans, was one who carried out the directions of the King. The spirit in which he did this is seen by the fact that he required all the clergy in his diocese to receive all children who should be sent by their parents to be taught in each parish, and that no fees were to be exacted. There is the principle of universal free

elementary education suggested. How far this was adopted in the other dioceses, or even in Theodulf's own, it is difficult to suggest. But the idea of universal education is there, and it is in the spirit of his great King, Charlemagne. I only add that Charlemagne established the great Palace Schools for the people about his Court, together with others of the laity from a distance, and that into these schools he brought the most distinguished scholars of the day, one of the greatest being obtained from England, viz., Alcuin, of the York School. . . .

After rapidly tracing the progress of the organization of education through several centuries, the lecturer quoted decretals from the Popes requiring bishops, or their officers, to license fit persons to teach, and ordering that no payment should be asked for such licences. Cases were quoted to show the qualifications required in applicants for the licence. Cases, further, were quoted to show that unlicensed teachers and schools were put down vigorously. The conclusion was that the evidence pointed to obtaining a licence as being the only mode of entrance to school teaching from the twelfth century onwards. Mr. Watson continued:—

Mr. Arthur F. Leach did an inestimable service to the history of education in showing with such a wealth of illustration the importance of the chantry schools in English education of the pre-Reformation times. "The great bulk of the chantries," he says, in England, "seem to have been founded in the fourteenth, fifteenth, and sixteenth centuries, and went on in increasing crowds with the spread of wealth, right up to the Reformation." Although the chantry priest was, in the first place, appointed to pray for the soul of an individual, his family, and friends, eventually other functions fell to his lot, one of the most common being that of teaching poor boys. As there were chantries in connexion with most, if not all, of the important churches of the country, that the teaching of children should be required of the chantry priest by the bequeather of a chantry was analogous to the institution by the Church of a prebend in the cathedral churches for the *scholasticus*.

Mr. Leach has nothing to say about licences to these chantry priests in his "English Schools at the Reformation—1546-48"; but, in his newly issued volume on "Early Yorkshire Schools,"\* he has given interesting cases in connexion with licensing of teachers in the chapter schools of York, Beverley, and Ripon.

In connexion with York, he tells us how, in 1367, Mr. Adam, of York, Precentor, complained that, "Whereas by immemorial custom the keeping school in the city of York for teaching boys singing ought to be held in a certain place belonging to the Cathedral Church, the appointment and removal of the rector or master of which was appurtenant to the Precentorship, yet divers chaplains, holy-water carriers, and many others, actually keep song school or schools in parish churches, houses, and other places in York, to the no small prejudice and grievance of the Precentor. . . ." All such masters, or keepers of schools, on the order of the Archbishop, were required to give them up within a fortnight on pain of ecclesiastical censure.

In 1375 one of the York schools had a master, John of York, who, on appeal to the Chancellor, had an unlicensed grammar-school master put down. The alternative was pain of excommunication. Mr. Leach refers to further cases of suppression of unlicensed teachers at St. Paul's, London, 1137, and at Winchester in 1180, at Canterbury, 1307-22; and states that similar rights were exercised by the Abbot of Walden, at Saffron Walden, in 1475.

The cases referred to by Mr. Leach at Beverley are given more circumstantially.

In 1304, on the motion of the rector of the school, Robert of Dalton, clerk, "who, unmindful of his salvation," had dared to teach school there, to the prejudice of the liberties of the Church, was directed by the Chapter to desist in nine days, or he would be solemnly excommunicated in Dalton Church. In the following year, Stephen of Gorton, clerk, received a similar warning for keeping an adulterine (i.e., unlicensed) school in Kelk. If he did not desist, he, too, was to be excommunicated, but, in his own school ("in scholis ipsius Stephani"). Mr. Leach's third case is at Beverley itself—an action against Geoffrey of Sancton, in 1305, for keeping an unlicensed school. He was warned to abstain from teaching, and actually fell under sentence of excommunication. "But, as with hardened mind, he despised the things of the Church, a hearing was refused him. They, therefore, asked the Official to avoid the said Geoffrey in the Consistory Court and other places whatsoever, and cause him to be avoided by others; that whilst he is shut out from common intercourse, being overwhelmed with shame, he may be more easily bent to the grace of humility and the result of reconciliation." This was effectual, for, in 1306, the Chapter directed Sir Alan of Humbleton to absolve Geoffrey of Sancton from excommunication.

The system of licensing teachers, I take it, thus remained in the hands of the Church till the time of the Reformation. As Mr. Leach has shown, the chief schools at that time were the chantry schools, and, with the dissolution of these, consequent upon the Chantry Acts

\* "Yorkshire Archaeological Society's Record Series," 1898. (1899.)

of 1546-48, in the reign of Edward VI., the system of licensing, it would seem, lost its *universality*. But it continued to exist, at least, as a *survival* from the old ecclesiastical system. As I shall show, it continued without a break to remain part of the Canon Law of the English Church.

In the reign of Mary, on the restoration of the Roman Church, there was, in 1555, an attempt to return to the practice of licensing. In the "Constitutiones Legatinarum R. Poli Cardinalis" the eleventh Decretum is in Latin: "Let no one, for the future, dare to undertake in any place the office of teaching, unless he has been examined by the Ordinary, and has been admonished as to the books which he ought to read. If it be otherwise, let him incur the pain of excommunication, and be prohibited from teaching for three years. And, amongst those who already perform the office of teaching, if any one should be found unworthy in faith, teaching, or morals, let him be ejected; but, if worthy, let him be confirmed."

Immediately after Elizabeth's accession, at the meeting of Convocation of the Province of Canterbury, it was proposed—but it does not seem clear whether it actually became an ordinance—"that no one should be admitted to teach youth, either in schools or private families, unless he has been approved by the Ordinary." This was embodied in the injunctions given by the Queen concerning the clergy and laity of this realm. And, again, in 1571, Convocation of Canterbury not only made this quite definite, but added: "That the bishop shall approve no schoolmaster as worthy of the office of teacher, unless, in his judgment, he has sufficient knowledge ["*nisi quam suo iudicio doctum invenerit*"], and unless he is recommended as worthy in life and morals by the testimony of pious men."

In Queen Elizabeth's reign there still need to be considered the notices of the Visitations of the Archbishop's province. In 1567 Archbishop Parker laid down in one of the Articles of Visitation the question: "Whether the officers and ministers, including the schoolmasters, within your church, *as without*, do either privily or openly preach or teach any unwholesome, erroneous, seditious doctrine." It is true that at the same time the inquiry is to be made: "Whether your schoolmasters be of a sincere religion, and be diligent in teaching and bringing up of youth." But it is quite clear that, with these visitations of Elizabeth's reign, the machinery of the Bishop with regard to the old ecclesiastical jurisdiction over schools is now being brought to bear for a political and religiously orthodox, rather than a pedagogical, purpose. The Privy Council, for instance, in 1581, ask Archbishop Grindall to have a good regard to the execution of the Act regarding recusant schoolmasters. Whereupon Grindall at once despatches the order for inquiry: "Whether any schoolmaster of suspected religion, or *that is not licensed to teach* by the Bishop or Ordinary, doth teach in any public or private place within this diocese." So, again, in 1583, Archbishop Whitgift directs the similar inquiry throughout his province, from all schoolmasters, "as well public as private, with order that such as be unsound may be removed, according to the statute in that behalf provided." In 1585, again, Whitgift is making inquiries in the diocese of Chichester, and in 1588 he enjoins the churchwardens and sworn men in the ordinary visitation of the diocese of Sarum to inquire "if any within your parish doth teach without licence of his Ordinary, under his seal." In 1604 the English Church Canons were adopted, and, I suppose, continue to be the Canon Law of this realm to-day. The Seventy-seventh Canon enjoins: "No man shall teach either in public school or private house, but such as shall be allowed by the Bishop of the Diocese, or Ordinary of the place, under his hand and seal, being found meet as well for his learning and dexterity in teaching as for sober and honest conversation, and also for right understanding of God's true religion; and also except he shall first subscribe to the first and third Articles"—i.e., "King's Supremacy" and "The Church of England as a true and Apostolical Church." (This Canon was supplemented, if not superseded, by the Act of Uniformity of 1662; and it was only the Act of 9 and 10 Victoria, c. 59, which repealed the section of the Act of Uniformity which imposed the sanction of punishment on those teaching without the licence. By 32 and 33 Victoria, c. 56, s. 20, the Endowed Schools Commissioners are to provide in every scheme for abolition of the necessity of having the Ordinary's licence.) The ecclesiastical jurisdiction of schoolmasters by the bishop was turned into an instrument for the punishment of heresy, rather than the promotion of education; though Bishop Gibson, in his "*Codex Juris Ecclesiastici Anglicani*," 1761, says that the licences to teach school appear without number on the records of particular sees, as also prohibitions. I may add to this the interesting fact that in the Commonwealth the power of licensing schoolmasters was exercised by the major-generals, and it is needless to add that good affection to the Council of State was a necessary condition of the licence. The ecclesiastical aspect has become political, and the pedagogical aspect over-shadowed. I have found a case in which the political side is all-prominent in Charles I.'s reign—in 1629. In that year Andrew Bird, head of the Free School at Reading, complains that the Chancellor of the diocese has granted a licence to one to teach grammar to the prejudice of the borough school. "It is," says the King's ordinance, "the King's pleasure that he cause that licence to be revoked."

To show how the question of licences could be made obnoxious to

Nonconformists, let us take the case of R. Claridge. Richard Claridge was a Quaker, who, in 1707, kept a successful school at Edmonton. Lord Coleraine and another parishioner took exception to the school on the ground that Claridge might proselytize children, and that, at any rate, the school was an eyesore to the vicar, his lecturer, and the master of the free school. Claridge was cited to appear personally at Doctors' Commons, charged with teaching boys and young men in the rudiments of the grammar and English tongue, and other school-learning, without licence in that behalf first had and obtained. This action dropped through; but, eight months afterwards, Lord Coleraine put up his footman, Edward Earl, to prosecute Claridge. Earl was a man who was no householder, nor had he any "visible estate"; but he was thought good enough for the purpose. The cause was tried at the Consistory of St. Paul's. Evidence was given tending to show that the prosecution arose from malice and ill will, and that Edward Earl was not acting of his own initiative, but at "the instance, request, and charges of Lord Coleraine." But the case proceeded, whereupon Claridge applied, through his counsel, to the Queen's Bench for a prohibition to stay proceedings in the ecclesiastical court. His counsel argued that teaching school is lawful for any person by the common law; that canons against the common law are void, and that Acts of Parliament and offences against them belong to the judgment of the temporal, and not to the ecclesiastical, courts. A prohibition was granted to stop proceedings till the next term, when the spiritual court might appear to show cause why a writ of prohibition should not be made out. The counsel on the other side did not appear, and the ecclesiastical court was tied up from any further prosecution.

Now how vexatious these proceedings were will be judged when it is pointed out that Claridge taught some of these children *gratis*; that he claimed "not to corrupt the youth, but to instruct them in the principles of truth and righteousness." But, to show conclusively that the legal action was based on difference of theological tenet, and not upon any question of educational fitness, it is enough to say that Claridge was an M.A. of the University of Oxford, where he had the reputation of being a good orator, philosopher, and Grecian. That he was a good teacher may be concluded from the size of his school, in which the boarders increased, and divers of the townspeople also sent their children to him. A clear statement of the bishops' views as to their ecclesiastical jurisdiction is to be found in a letter from Bishop Nicholson to Mr. Baron Price in 1705. He says: "Archbishop Arundel's Constitutions in Lyndwood's '*Provinciale*,' where it is stated that all manner of teachers (*quicumque docentes*, as well as *magistri*) are under the cognizance of the Canon as to licensing. 2. The gloss observes that the instructors of women and girls (which will hardly ever appear to have been the case of men in orders) are comprehended under that general title. 3. The private teachers (*in cameris et introitibus*) are then required to have licences from the Ordinary in form; and they that have them not, are to be proceeded against as sowers of schism."\*

This, however, is not the view held by the Crown Law Courts, as will be shown by the following case:—

In 1700, a schoolmaster called Cox was summoned before the Ecclesiastical Court at Exeter for teaching school without a licence from the bishop, and, on motion before the Lord Chancellor, an order was made that cause should be shown why a prohibition should not go. It was in the Court of Chancery moved to discharge the said order, alleging that before the Reformation this was certainly of ecclesiastical jurisdiction. Lord Keeper Wright gave judgment: "That both Courts may have a *concurrent* jurisdiction, and a crime may be punishable both in the one and the other. The Canons of a Convocation do not bind the laity without an Act of Parliament. But I always was, and still am, of opinion that keeping of school is, by the old laws of England, of *ecclesiastical* cognizance. Therefore, let the order for prohibition be discharged." But he held that, if it was for the teaching of any school except a grammar school, viz., writing schools, reading schools, and dancing schools, and suchlike, then the prohibition was to be granted.

As a practical illustration that, in the popular view, jurisdiction was accorded to the bishops' power of licensing, the case of the charity schools may be cited. These schools, established about 1700, by 1760 had reached the number of over 1,800. The number of scholars was about 42,500.† The great text-book for these schoolmasters was Dr. Talbot's "*Christian Schoolmaster*." It is there distinctly stated that to take the bishop's licence is required from every teacher; and it is added that any one teaching in any parish without a licence ought to be prosecuted by the churchwardens of the parish where he teacheth for the said offence.

My last instance of insistence on the necessity of obtaining the bishop's licence falls within the reign of our present Sovereign. In a book called "*Church-Clavering; or, the Schoolmaster*," by the Rev. W. Gresley, Prebendary of Lichfield,‡ we have a picture drawn as it

\* From a letter of Bishop Nicholson to Mr. Baron Price, 1705, in Sir H. Ellis's "*Letters of Eminent Literary Men*."

† "*Charity School Sermon*," by Dr. Worthington, 1768.

‡ Published in 1843.

presents itself to his mind of an ideal master of a National school. Joseph Primer just escapes becoming a Dissenting preacher and becomes instead a teacher of a National school. "I have often wished," he says, "that I had received a regular licence and commission from the bishop. I should feel more comfortable with such an authority, and do not live without the hope of receiving one some day." An interlocutor inquires: "Well, but you do not mean to say that in the present day you would prevent all persons from keeping schools unless they are licensed by the bishops?"

To which Primer replies that "those who belong to the Church should obey its rules. All Church of England schoolmasters, I conceive, would be bound to go to the bishop for a licence if he required it . . . let the bishops [continues Primer], if they think fit, revive the practice of licensing masters. Let such masters be subject to a strict examination as to their principles and qualifications, and let the Church-people send their children to masters who are so licensed. What is then more extraordinary in requiring that schoolmasters should be licensed than forbidding surgeons or lawyers to practise without authority? And is it not better to send our children to be educated by a master whose competency is guaranteed by authority than to commit them to the tender mercies of any ignorant person who may think fit to open a school?"

With Mr. Primer's last argument we all here should cordially agree. But, seeing that national education has to be organized, we wish our licensing or registration to be national also, and have it on a wide basis which may, or rather shall, include all teachers of every sect and denomination—men and women teachers, public and private teachers, University, secondary, and elementary teachers, on the common possession of the knowledge of the principles of, and skill in, the practice of teaching—without regard to either theological or political opinions held by the teacher. The National Church once was without the competition of dissenting bodies of theological thinkers. It included the nation. Now the nation includes all the churches. But the importance of education is still as great and is much more widely recognized as urgent. It behoves us therefore as a nation to assert the distinction between a qualified teacher and one not qualified with as keen an emphasis as was done by the old licence of the Church, though now on strictly professional lines.

Nor ought we to be ungrateful to the Church for the organization of the past. Modern developments have led to a differentiation of functions. The Church once provided the hospitals, almshouses, libraries, and provided our other national needs. Now voluntary secular bodies manage hospitals, Poor-laws provide for the poor, municipalities for libraries. So we now have School Boards—and we have rates levied on the people for the support of schools, instead of the old endowments of prebends and chantries for teachers. Necessarily, therefore, the differentiation of teachers from Church jurisdiction has followed that of other professions—as, for instance, doctors and lawyers. But the historical study of the old conditions strengthens the case for registration by an appeal to past experience of the ages; and, at least, one reflection will follow the study of the question of licensing, viz., that the full force of the old conviction of the need of personal piety and soundness of conversation and devotion to the teaching office, which belonged to the best ecclesiastical tradition of the teacher, should unconsciously be at work as the true and only lasting basis for a professional spirit in the future as it has been in the past; and for the rest—let us so far, in our national registration of teachers, learn from the old ecclesiastical system of licensing to follow what was good in it, and to avoid its errors and failings. So, finally, we see that registration is no new thing. It was found necessary in the middle ages, when education was, considering the difficulties, so wonderfully organized. And now that we, in this age, are beginning to organize education, we too, at last, have learned to recognize the need of licensing which was recognized and provided for so thoroughly in those ages.

Mr. THORNTON remarked that teachers used to think a great deal of registration, and he thought that the extent of the disagreement as to the way in which it should be brought about had greatly diminished. The more important question, however, was not the registration of the teacher, but the registration of the school. If that were secured, the registration of the teacher would come about indirectly.

The CHAIRMAN regretted that the lecturer had not found time to say something about the origin of the Universities. The reason of the selection of Oxford and Cambridge as the seats of learning was not clear, but it was evident that certain eminent teachers had gathered there, that their schools had gradually increased in numbers and importance; they acquired certain privileges, and became, in course of time, a close corporation; subsequently, all the different schools and colleges were constituted under one governing authority, and the supreme master was called the Chancellor, this word being presumably originally an ecclesiastical term. The mode of disputation which had been touched upon by the lecturer was extremely interesting, and it might be noted that this disputation gave rise to the term "Wrangler," now in use at Cambridge. In past times the clergy were the professors of all sciences. They were the leeches and the law-makers, and were concerned in the administration of the law. At a certain time the Pope

made a decree that ecclesiastics should not take part in legal cases as advocates; and, in order to avoid the consequences of this decree, the ecclesiastics put on wigs, which enabled the tonsure to be concealed. That was the origin of the wearing of wigs. He was glad to hear something about the licensing of girls' schools. It was well known that at the time of the Renaissance certain ladies—as, for instance, Lady Jane Grey—attained very great proficiency, even in the classics; but such exceptional cases were due to special circumstances, and the education of girls was generally very much neglected. It was interesting to note a remnant of old-time procedure in the power of conferring degrees still possessed by the Archbishop of Canterbury.

A vote of thanks to the Lecturer concluded the proceedings.

## MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held on February 10. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Barlet, Rev. J. O. Bevan, Mr. Bowen, Mr. Brown, Mr. Butler, Mr. Charles, Mr. Chettle, Mr. Eve, Rev. Dr. Hiron, Mr. Millar Inglis, Mr. Milne, Mr. Pinches, Mr. Rushbrooke, Rev. Dr. Scott, Mr. Sergeant, and Rev. J. E. Symms.

The minutes of the last meeting were read and confirmed.

The Diploma of Licentiate was granted to Mr. C. Clifford Lloyd, who had passed the required examination.

The Report of the Finance Committee was adopted.

The Report of the Examination Committee was adopted, and Mr. G. T. Moody, D.Sc., F.C.S., was appointed one of the Examiners in Chemistry.

The Moderators and Examiners for the year 1900 were appointed.

The Very Rev. the Dean of Wells was re-elected President of the Council, and Dr. Wormell, Sir Philip Magnus, and the Rev. J. Stewart were re-elected Vice-Presidents. Mr. H. W. Eve was re-elected Dean, and Mr. E. E. Pinches Treasurer of the College.

The following persons were elected members of the College:—

Miss E. A. Hargreaves, A.C.P., Hope House, Barton-on-Humber.

Miss A. B. Knight, Powerscourt, Boscombe, Bournemouth.

Miss A. Petter, A.C.P., Fairfield Road Higher-Grade School, Fishponds, Bristol.

The following books had been presented to the Library since the last meeting of the Council:—

By the BUREAU OF EDUCATION, WASHINGTON, U.S.A.—Report of the Commissioner of Education, 1897-98, Vol. I.

By E. ARNOLD.—King Alfred Readers, Books I.-VII.; Bell's German without Tears, Book I.; De Ségur's Histoire de la Princesse Rosette and La Petite Souris Grise.

By G. BELL & SONS.—Colson and Gwyther's Cæsar, Book III.; Headlam's Translation of the Supplements of Æschylus; Pencilbury's Short Course of Elementary Plane Trigonometry; Seccombe's Age of Johnson; Traves's Hannibal's First Campaign in Italy; Wainwright's Virgil's Æneid, Book II.; Warman's Virgil's Æneid, Book IV.; Wells' First Exercises in Latin Prose Composition.

By BLACKIE & SON, LTD.—Blackie's Merit Certificate Handbook of British History; Blackie's English Classics, Three Parts (Tennyson's Poems); Harrison's First Steps in Earth-Knowledge; Henderson and Parker's Introduction to Analytical Chemistry; Ninet's My First French Book; Proper's Sand's Les Ailes de Courage; Skeat's Specimens of English Prose.

By C. J. CLAY & SONS.—Cambridge Local Examination Papers, 1899; Edwards' Xenophon's Anabasis, Book V.; Eve's Racine's Athalia; Nicol's Cicero, Pro Lege Manilia; Reynolds' The Teaching of Geography in Switzerland and North Italy; Shuckburgh's Caesar's Gallic War, Book V.; Sidgwick's Virgil's Æneid, Book V.; Simpkin's Selections from Ovid's Tristia; Verity's Shakespeare's As You Like It; Verrall's Malot's Remi en Angleterre; Woodward's Expansion of the British Empire, 1500-1870.

By W. B. CLIVE.—Matriculation Directory, January, 1900; Fearenside's Matriculation History of England.

By MACMILLAN & CO., LTD.—Williams' Dryden's The Hind and the Panther. By SIR ISAAC PITMAN & SONS, LTD.—Pitman's Commercial Correspondence in English, Shorthand, French, and German.

By WHITTAKER & CO.—Cooper's Elementary Practical Chemistry; Coppock's Volumetric Analysis; Crump's Hoffman's Schiller's Jugendjahre. Calendar of the Royal Holloway College, Egham, 1899-1900. Calendar of the Pharmaceutical Society, 1900.

## COLLEGE OF PRECEPTORS CERTIFICATE AND JUNIOR FORMS EXAMINATION.

ERRATA IN CLASS LIST (CHRISTMAS, 1899).

### CERTIFICATE EXAMINATION.

#### SECOND CLASS (BOYS).

Insert in 1st Division: Ledger, A. V., Private tuition, and omit in Third Class, 1st Division.

Insert in 3rd Division: Washington, J. H., Balham S.

#### THIRD CLASS (BOYS).

Insert in 1st Division: Turpin, W. E., Nelson Coll., Blackheath.

Insert in 3rd Division: Yeomans, H., University S., Stroud Green.

#### SECOND CLASS (GIRLS).

Insert in 3rd Division: Tait, E. M., 61 Pevensey Road, St. Leonards, and omit in Third Class, 2nd Division.

#### THIRD CLASS (GIRLS).

Insert in 2nd Division: Hayes, F. J. A., h.7., Guildford Lodge S., Lee, S.E.

### JUNIOR FORMS EXAMINATION.

#### BOYS.

Insert: Lamdin, A., Castle Coll., Guildford. By Google  
Broome, J., for Whitworth S., Derby, read Allenby Coll., Derby.  
Newton, J., for Allenby Coll., Derby, read Whitworth S., Derby.



REVIEWS.

A MONUMENT OF ALFRED.

*Alfred in the Chronicles.* By Edward Conybeare, M.A.  
(Elliot Stock.)

We have here the best book which could have been written in advance of the millennium of the death of Alfred the Truth-teller—not, in the ordinary sense of the word, the most popular or easily readable, but still the most attractive and interesting for any grown-up and intelligent reader. It is, above all, an ideal book for a historical student, because Mr. Conybeare has set himself to give, in good plain English, all the notable early authorities for the life of King Alfred, extracted from the chronicles, and presented side by side, with due explanations and cross-references. The extracts number fourteen, and their sources are as follows, the original text being in Latin when not otherwise indicated:—Asser, “The Deeds of Alfred”; the Anglo-Saxon Chronicle, in Old English; the “Chronicles” of Eethelwerd; Simeon of Durham’s “Deeds of the English Kings”; William of Malmesbury’s “History of the Kings”; Henry of Huntingdon’s “Histories of the English”; Florence of Worcester’s “Chronicles”; Geoffry Gaimar’s “L’Estorie des Engles,” in Old French; Roger of Wendover’s “Flowers of Histories”; John of Wallingford’s “Chronicles of the English”; John of Brompton’s “Chronicle”; Ingulf’s (interpolated) “History of Crowland”; the Book of Hyde; and the Chronicle of St. Neot’s.

From these texts Mr. Conybeare has taken all that relates directly to Alfred, with so much more as serves to illustrate and characterize his time. To these hundred and fifty pages of authentic narrative we would send all who can read history, all who can lend themselves to the quiet and straightforward record of the Chronicles, not merely for their own entertainment, but as a training for the historical taste and instinct.

Prefixed to the documents which we have mentioned the reader will find an admirable “Introductory Sketch” of eighty pages, in which Mr. Conybeare has given us an adequate account of the Celtic and Teutonic mixture of races, laws, customs, characters, and ideals over which Alfred was born to exercise dominion, and which he did so much to combine and weld into a single nation. He shows us how our English conception of the life and work of the Anglian King has been built up on the early English histories, and he adds to the lifelike qualities of the picture by describing and quoting from Alfred’s written works, his laws, and the beautiful poem of “The Proverbs of Alfred,” of which we have only two manuscripts of uncertain date. It has never been translated; but Mr. Conybeare supplies a version, close in word and metre, of one-third or one-fourth of this legendary bequest of wisdom from “England’s darling.” We quote a few passages:—

Thus quoth Alfred,  
England’s joy:  
“Would ye, my folk,  
List now your Lord,  
Then should ye wit  
Of Wisdom’s way;  
How ye may this world’s  
Worship wield,  
And eke your soul  
To Christ may cleave.”

Wise were the words  
That Alfred spake:  
“Mildly I move you,  
Dear my friends,  
Poor and eke rich,  
People of mine,  
That all do fear  
Our Christ and Lord,  
Love Him and please Him  
Who Lord is of Life. . . .

“Behoveth the knight  
’Gainst foemen to fight,  
Lest they harry the land  
With fire-raising hand;  
That the Church have her  
peace,  
And the churl be at ease,  
His seeds for to sow,  
His meads for to mow,  
To the welfare of all.  
To the knight this I tell,  
Let him look to it well. . . .”

Thus quoth Alfred:  
“Hard is it to row  
’Gainst the tide in his flow;  
So is it to toil  
’Gainst the heart’s own tur-  
moil.

Yet he that in youth  
So to labour is fain,  
World’s wealth for to gain,  
That in eld he may rest;  
And eke ’mid his wealth,  
Aye worketh God’s will,  
His youth’s hard spell  
It hath sped him full well. . . .”

Thus quoth Alfred:  
“If thou in thine eld  
Art wasted in wealth,  
And no more canst lead thee  
With power nor with might,  
And no more hast strength  
For to steer thee aright;  
Then thank thy Lord  
Of all His love,  
And of all thine own life,  
And the light of the day  
And of all the mirth  
He maketh for man.  
And wheresou thou wendest,  
Say this at the end:  
‘Whate’er may befall me,  
God’s will be done.’”

Alfred has been commemorated as the “creator of the English Navy.” No doubt he utilized the sea-faring qualities which had always been displayed by the northern Teutons. Asser gives us an account of the famous fight in Swanage Bay.

Day by day the number of the miscreants [*perversi*] grew ever larger, so that, were thirty thousand slain in one day, others would take their place twice told. Then bade Alfred make barks [*cymbas*] throughout the realm, and keels [*gateas*], that is long ships, that he might meet the foes in sea-fight, as they came in. Therein embarked he adventurers [*piratos*] and let them keep the water-way [*vias maris*]. But himself hied he with all speed to Exeter, where the heathen were wintering, and shut them up in that city, and besieged them. On his seamen also laid he strait command that they should suffer no supplies to reach the foe by way of the Narrow Seas [*in parte freti*]. Then met there his seamen 120 ships, laden with armed warriors, coming to the help of their kinsfolk [*concivium*]. And when the King’s officers found ships thus filled with heathen war-men, then leapt they to arms, and boarded the savages like men. But the heathen, who now for nearly a month had been wave-tossed and ship-worn, vainly returned the onset. So that in a moment their line of battle was shattered [*lacerata*] and sunken in the place called Swan-wich; and they perished one and all.

Alfred’s long ships were bigger than the Norsemen’s “esks.” They were manned by sixty or more oarsmen, and were neither Frisian nor Danish in build; but “so as it seemed to the King they would best profit.” After Alfred the land had rest from the Vikings for a hundred years.

THE OXFORD CLASSICAL TEXTS.

“Scriptorum Classicorum Bibliotheca Oxoniensis.”—*Thucydidis Historiæ*, recognovit H. Stuart Jones (*Tomus Prior*); *Lucretii de Rerum Natura libri sex*, recognovit Cyrillus Bailey. (Clarendon Press.)

It is now many years since Jowett suggested that the Clarendon Press should issue a series of texts of the classical authors. The project was one into which the Master of Balliol entered very keenly, and long cherished; but the design was perforce abandoned because it was found impossible to obtain collations of the manuscripts in the Continental libraries. So engrossing are the duties generally assigned to the scholars who would be willing to undertake such work, and so entirely are we in England still wanting in those facilities with regard to leave of absence and funds for travelling students that exist in countries where the higher education is under State control, that the Englishmen who are able to range through the libraries of Europe at their leisure are exceedingly few in number.

Nor even now, it is clear, would it have been found possible to publish such a series as the present had it not been that during the last two decades an immense mass of manuscript work has been done by foreign scholars, and the text of many classical authors has thus at last been placed upon a satisfactory basis. Even now by no means all the greatest authors have been so generously dealt with. It is indeed only quite recently—long subsequent to the days of Bekker, subsequent even to the two Dindorfs—that the work of classifying manuscripts, deciding which are of importance for the text, and collating those down to the minutest details, has been thoroughly taken in hand. In many cases—as, for example, in that of Xenophon—a great quantity of manuscript work has still to be done.

It is somewhat unfortunate that, side by side with a laudable zeal to get at the manuscript readings, there has grown up on the Continent a desire to improve upon them, which we cannot help regarding as carried to great excess. What an English student desires to see before him in his text is the testimony of the best manuscript, the best class of manuscripts, or best manuscript reading available: always provided that obvious and certain corruptions are removed, so far as they can be removed. He feels quite a secondary interest in the ingenious improvements that are proposed by modern scholars at every line. Of course he does not despise the good emendation; but he cannot help feeling that so very few even of the most attractive emendations that can be offered, after obvious mistakes have been put right, are certainly what the author wrote, and he would sooner put up with an almost certain corruption than accept a wholly uncertain correction.

It seems to us that this is the view of the matter taken by the authorities of the Clarendon Press; that it is, at least for English students, the view that ought to be taken; and that consequently we have here in the first two volumes the beginnings of what promises to be a series of the utmost value to all lovers of the classics. Mr. Stuart Jones has, of course, availed himself largely

of Dr. Karl Hude's collations. Mr. Bailey depends mainly on the labours of Lachmann. But the former gives in his preface a lucid account of the best manuscripts of Thucydides and a very useful estimate of the importance of Messrs. Grenfell and Hunt's papyrus fragments. The critical apparatus—which, like the preface, is written in Latin—is cut down to the briefest possible dimensions consistent with thoroughness. Only those readings are noticed that have some real importance, either as showing an early divergence between different classes of manuscripts, or, at least, as Mr. Bailey says, as exhibiting common errors of the manuscripts. Mere blunders are excluded when the right thing is forthcoming in one or any other manuscript.

We have thus briefly indicated the general scope of the series. It may be of interest to our readers if we append the complete list of the authors so far arranged for, and the editors in charge of each:—Æschylus, A. Sidgwick; Apollonius Rhodius, R. C. Seaton; Aristophanes, W. M. Geldart, F. W. Hall; Cæsar, R. L. A. Du Pontet; Catullus, R. Ellis; Cicero, A. C. Clark, S. G. Owen, W. Y. Fausset; Cicero, Op. Rhet., A. S. Wilkins; Cicero, Op. Phil., J. S. Reid; Cicero, Epp., L. C. Purser; Demosthenes, S. H. Butcher; Euripides, G. G. Murray; Herodotus, G. C. Richards; Homer, D. B. Monro, T. W. Allen; Horatius, E. C. Wickham; Juvenalis et Persius, S. G. Owen; Lucretius, C. Bailey; Martialis, W. M. Lindsay; Ovidius, S. G. Owen; Pindarus, W. R. Hardie; Plato, J. Burnet; Plautus, W. M. Lindsay; Propertius, J. S. Phillimore; Sallustius, A. M. Cook; Sophocles, W. J. M. Starkie; Tacitus, H. Furneaux; Terentius, R. Y. Tyrrell; Thucydides, H. S. Jones; Tibullus, J. P. Postgate; Vergilius, F. A. Hirtzel; Xenophon, E. C. Marchant.

The paper, type, and binding are all that can be desired, and students and scholars alike will want to possess these books. True the price, if we mistake not, is rather higher than that asked for some of the texts issued by Continental firms; but the extra value is in the *format*; and, if the books are not remarkably cheap, they are as far as possible removed from being nasty. They will not fall to pieces; that merit alone is worth the difference. Many of the authors are to be issued in three forms, paper covers, limp cloth, and "on India paper"; but to the more severe authors, such as Thucydides, is denied the felicity of India paper. But the authors of antiquity were not troubled about such matters; and it is a far cry from Thucydides to India paper.

#### GEOGRAPHY AND WAR.

"Cambridge Geographical Series." Edited by F. H. H. Guille-mard, M.D.—*Outlines of Military Geography*. By T. Miller Maguire, LL.D. (Cambridge University Press.)

The newspapers afford a very good "post-graduate" course of geography. Nothing can teach a man the map of the world, the configuration of the land, the people, productions, and climate of particular countries half so well as the printed records of wars and expeditions. What would most of us know about the Cape Colony and Natal, the South African Republics and their borders, apart from the lessons of the past three or four months, or the corresponding lessons of an earlier date? The intelligent reader of letters and dispatches from the battlefields of a single generation should have a fair knowledge of the geography of many different portions of the world. This is not precisely what Dr. Maguire understands by "military geography"; though it is an approximation to it. Military and naval strategy is based in large measure on the knowledge of geographical detail.

Many of our international difficulties could never have arisen had the leaders of either political party been possessed of any sound knowledge of military or political geography. Our diplomacy has drifted into strange blunders, not so much through lack of skill as through lack of knowledge. Delagoa Bay, the key of South Africa, is a striking example; so are several districts on the borders of Canada. . . . A very rudimentary knowledge of the movements of armies from the valleys of the Euphrates and Oxus, and from the Khanates of Tartary towards India, from the days of the early Persians to those of Nadir Shah, would have prevented much wild talk on public platforms between the years 1876 and 1882.

No one will question that a student who is specializing for the Army or Navy at a college or University ought to make a salient feature of the study of geography, physical and political alike. "Every day," wrote General Sherman, one of the heroes of the American Civil War, "I feel more and more in need of an atlas, as the knowledge of geography in its minutest details is essential to a true military education." That was said by Sherman as a young man, twenty years in advance of the war. He devoted himself to geographical study, and it enabled him to render

invaluable services at Chattanooga, Atlanta, and Savannah. Instances are innumerable. The Boers have been able to hold the British in check for four months largely by their superior knowledge of the geographical detail of a country beyond their borders, whilst the Cape Colony and Natal had not carefully surveyed or mapped their own frontiers.

Dr. Maguire writes for students the geographical and strategical history of the chief wars of the century. He discusses the leading principles of strategy and military geography, the laws which govern the command of the sea, the significance of frontier features in military operations, the all-important question of fortification in its relations to geography, the selection of lines of march, and the influence of climate on military movements. Three chapters are devoted to the geography of European roads and defiles, and to the principal historic lines of invasion. The interest of the book is inexhaustible for one whose work and taste are concerned in military affairs. We turn to its pages at hazard for an illustration. There is an acute criticism of the fortifications of France since 1870. They are "stupendous," but "in many cases useless from a strategical point of view."

After the war Germany reduced the number of its small places to a considerable extent, while France increased its *forts d'arrêt*. In 1882 there were in France 147 places or independent forts, and 434 outworks and detached barriers. . . . The expense of construction and maintenance is a terrible drain on the resources of the State; but the waste of men in garrisons who ought to be with the armies in the field is a far more costly charge, and perchance a fatal injury to the State.

In 1880 the Commission of Defence laid it down that the various sections of the fortified frontiers and defensive positions would require garrisons to the aggregate of 518,194 men; and the number of places and forts has since been considerably increased.

If a nation will have forts and places, instead of placing them in a cordon along the frontier, a study of strategic geography would suggest that they should be placed *perpendicular* to the frontier, just as strategy suggests when possible a flank instead of a front attack. . . . The great danger of entrenched camps, as was fully evident in 1870, is that they prove a fatal attraction to field armies which pivot on them. After any check or temporary disaster the troops fall back into them, get shut up, and surrender. Thus Metz entrapped Bazaine, and even the small fortress of Sedan was injurious to MacMahon.

For soldiers, or for a boy who wants to be a soldier, this is a book of the utmost interest and utility.

#### THE NEW ORGANIZATION.

*Educational Reform: The Task of the Board of Education*. By Fabian Ware. (Methuen.)

This is a very complete review of the educational position as it is formed by the Board of Education Act. The first chapter traces the movement for the organisation of education from the Endowed Schools Act of 1869 to the recent Act of 1899. The second reviews the national resources for secondary education. The capital and talent invested in private schools are properly included. "The private day school has arisen either owing to the inability of endowed schools to meet the requirements of a locality, or in response to the demand of certain parents for an education which satisfies definite religious or social conditions. Those which meet this demand will continue to exist, and those that are efficient will contribute no little to the moral force and stamina of the nation." "Dependence on public favour is the key to the private school problem." There is something yet to be said for private schools which is not even hinted at here. When they are assured that they are fairly safe against destruction by State-supported competition they will attract much more capital than has hitherto been possible. The following is a case of fact:—A private schoolmaster had £3,000 to spend in building a school-house. Instead of taking for his model a modern public school, he chose a plan of building which could easily be altered into two private residences. Herein he was wise, for he knew that as affairs stand at present the greater his success the more likely would be the appearance of an endowed or State-aided competitor within a few yards of him, which would kill his school. This uncertainty of tenure accounts for the fact that there are few private schools held in buildings designed and built solely for the purposes of a school. The necessity for a census of schools and a criterion of efficiency is very fairly stated at the close of this chapter. The chapter on Technical Education insists emphatically on the folly of attempting to transplant any foreign system into this country, and the still greater folly of adopting a misrepresentation of a foreign system. It is probably true that the

average middle-class German is a better educated man than the average middle-class Englishman; but this is not due to technical or commercial institutes—it is due to the perfect organization of secondary education in Germany. This chapter forms a good introduction to those which follow it, and deal with the Board of Education Act and its expected developments, including the Consultative Committee, the general inspection of schools, the establishment of Local Authorities. We specially commend to our readers the last chapter on "The Nation's Opportunity," and in particular the description in this chapter of the kind of men who should be selected to help the Board to build up the national system.

#### HISTORICAL FRENCH.

*Outlines of French Historical Grammar.* By A. T. Baker. (Dent.)

It is, perhaps, unfortunate for this book that it appears so soon after the English translation of Darmesteter's. It is, however, on a different system—on German lines, in fact, rather than on French lines—so that there is room for both. The introductory matter is clearly arranged, and includes a tabulated list of dialectic peculiarities which is likely to be useful. Its value would have been still greater if the short *chrestomathie* at the end of the book had contained short annotated specimens of the several dialects. The account of popular Latin, so interesting a feature of Prof. Darmesteter's book, is perhaps too brief; and so is the notice of the changes which took place after the Old French period. The section on vowel and consonant changes, which occupies a considerable part of the book, is clear and full, and does not omit, as is sometimes done, the Germanic element of the language. Even more attention might have been given to that element, and the student's path enlivened by an occasional reference to the representatives in Modern German of the original words. One is inclined to ask, in this connexion, whether it would be possible to treat phonetic changes more briefly. There is some danger of "not seeing the wood for trees." In discussing the accident of verbs, Mr. Baker has wisely confined himself as much as possible, to a single form for each part of the verb in Old French, which is a distinct gain to the student. We cannot but regret that he has dispensed with paradigms, and that he has not seen his way to give us an alphabetical list of strong verbs in addition to the scientific classification. We miss, by the way, the perfects of *naître* and *rire*, both interesting forms. In dealing with the syntax the book is less satisfactory. The subjunctive, for example, is inadequately treated. But it is difficult for any one, especially if he is under the fascination of phonetics, to combine in one small book a reference grammar of Old French and a history of French syntax, as well as a study of the later changes, which have produced the vocabulary.

#### A WHIMSICAL STUDY.

*The Mind and Art of Poe's Poetry.* By John Phelps Fruit, Professor of English Language and Literature in William Jewell College, Mo. (H. R. Allenson.)

There may have been many good reasons why this book was written, but we cannot discover any for its publication. Prof. Fruit in his preface says: "I have kept, whimsically, to a study of Poe's poetry and known no other poet the while; I have, therefore, no opinions to venture on questions of comparative merit." Such a self-denying ordinance would not commend itself to the catholic soul of the poet; and a tea-taster's palate in time loses its power of appreciating the flavour of richest Pekoe. Prof. Fruit has made a mistake in indulging his whim, because he has thereby diminished his power of making us partake of his enthusiasm for the subject of his admiration. Even if light were needed for the due interpretation of Poe's poetry, nothing could be more useful for this purpose than a short account of the literary atmosphere and influences which surrounded him. Whence came the poet's fine sense of tone and cadence? Was it the influence of the classical poets which

brought me home  
To the glory that was Greece  
And the grandeur that was Rome,

or of Coleridge and Keats? Such questions, however, are outside the sphere of our author's critical activity; and, instead, we are given page upon page of paraphrase in which he drives home the obvious with most unkind iteration. We think that, in spite of the pains taken to make his paraphrases read melodiously, Prof. Fruit belies his own advice "that to get the

right good of the poet is to plunge soul-forward into his works." After a plunge he sometimes rises with an ecstatic fervour redolent of a young literary professor's lecture-room, and speaks thus:—

The maiden's name, "Ligeia," begins with the liquid of liquids:  
"Ligeia! Ligeia!  
My beautiful one!"

Repeat "Ligeia" with the rising inflexion; then pause a moment for the liquid tones of the name to flow into and through your soul. After that how aptly does "My beautiful one!" flow from the lips!

There is similar appreciative comment on "The Raven" and "The Bells." Prof. Fruit has brought much enthusiasm and industry to bear upon his task, and, in no unkind spirit, we would recommend him to let his literary tastes "come out East."

## GENERAL NOTICES.

### CLASSICS.

*Vergil: Georgics, Book IV.*, edited by John Sargeant (Blackwood), is a volume in "Blackwoods' Classical Texts"—the first of the series that has come under our notice. We have recently referred in this column to two new illustrated series—those of Messrs. Bell & Sons and Messrs. Blackie. Now Messrs. Blackwood come forward with yet a third. Some of the illustrations are coloured, and the reproduction is admirable. The books are intended for more advanced students than those of Messrs. Bell, and, consequently, are without vocabulary. The editing of the specimen before us is thoroughly competent; the notes are brief and interesting, and the introduction and appendices are of more than average merit. Mr. Sargeant's remarks on the flowers of Vergil are specially pleasing. He rightly says that the *narcissus* of line 123 is "probably the *Sternbergia lutea*," but might have added that this is none other than the autumn daffodil of our gardens—figured, for example, in Robinson. The price of the book is remarkably low.

*First Exercises in Latin Prose Composition*, by E. A. Wells (Bell & Sons), is another remarkably cheap book issued by a firm that is pouring out a great number of superior elementary books. A series of vocabularies is followed by exercises on the rules of Latin grammar, the rule, in every case, being very briefly stated at the head of the exercises. This book requires no grammar or dictionary. We have noticed that the syllables are not in all cases correctly marked. The system of marking *longs* only is to be commended.

*Ovid: Metamorphoses I.*, lines 1-150, by A. H. Allcroft and B. J. Hayes (Clive), is a volume of the useful Matriculation series issued with a view to a forthcoming examination. The reason for slicing up the book is, no doubt, cogent; but, as the same price will buy a complete edition, with pictures, it is scarcely likely that this work will be adopted in our schools.

"The Cambridge Series for Schools and Training Colleges."—(1) *Ovid, Selections from the Tristia*. By H. F. Morland Simpson. (2) *Cæsar, De Bello Gallico V.* By E. S. Shuckburgh. (3) *Vergil, Æneid V.* By A. Sidgwick. (4) *Xenophon, Anabasis V.* By G. M. Edwards. (Cambridge University Press.)

Some months ago, in noticing a volume of Mr. Sidgwick's well known "Vergil," which is included in the above series, we took occasion to express our ignorance as to what special features are supposed to fit the series for "Training Colleges." We have an idea that the system of teaching Latin in those colleges differs in many respects from the system in vogue hitherto; and we believe that those responsible for the work in training colleges base their work on the teaching of the celebrated German theorists. Take up Gullett's "Latin Reader." Have you any doubt as to what features are supposed to render it specially fit for the use of those who follow the great theorists? Now we have opportunity of examining four of the "Training College" volumes together; and we have no hesitation in returning the answer to the question we propounded. A book for training colleges has a vocabulary. That is all; in other respects it differs not at all from the ordinary "Pitt Press" book. It is proper, however, to say that Mr. Morland Simpson has proceeded on a definite plan. He has excluded translation almost entirely, and has left it for the teacher to supply "the model of elegant translation" when the pupil "has done his best." As the book is intended for those who are making a first acquaintance with Latin poetry, we think this plan is rather severe on the pupil. It is easy to give too much help in translation; to give none seems to us equally wrong in theory. With another part of the editor's plan, however, we cordially agree. He has avoided as far as may be references to dictionaries, grammars, and parallel passages. The selection is designed to illustrate the life of the poet; and therefore, some of the most beautiful of the "Tristia" are necessarily omitted.

Mr. Edwards's "Xenophon" supplies a marked contrast to Mr. Simpson's book; and we cannot imagine how it is suitable for the same series. It has a very long introduction, printed in long sections

and small type, with a most forbidding look about it; and among the notes are many quotations and bits of learning that will be entirely useless to the young student. Mr. Shuckburgh's volume of "Caesar" is supplied with a map of the Gallic campaigns that will, at least, startle the principals of training colleges, for its aggressive hideousness has seldom been surpassed, even in an English school book. It is to be understood that we offer no adverse criticism of these two books, as ordinary school books; they are neither better nor worse than hundreds of others produced by men who are out of touch with the teaching of low forms, and forget what a beginner's requirements are. But we wish to emphasize our protest against the title of the series.

"Bell's Illustrated Classics."—(1) *Vergil, Æneid II.* By L. D. Wainwright. (2) *Vergil, Æneid IV.* By A. S. Warman.

Mr. Warman's notes occupy twenty-five pages; Mr. Wainwright's, eighty. Probably the ideal lies somewhere between the two extremes. Certainly Mr. Warman's comments seem to us too slight in parts; but, on the whole, his volume is well suited to its purpose, and is the work of a man who understands the needs of beginners. Mr. Wainwright's edition is quite elaborate enough for middle, or even upper, forms, as the following specimen will show. Commenting on the words *integer viri*, Mr. Wainwright remarks that "Rohy considers it [the genitive] closely connected with the locative use of *animi*, with such adjectives as *eger, ancicus, fidens, maturus, victus*, &c. Except with *animi*, the construction is only found in the poets, and later writers such as Tacitus." He shows a wide acquaintance with the work of other commentators, including Henry, and with verse translations. Altogether, this is a scholarly edition. Both books have good introductions and grammatical summaries; only it is to be understood that everything in Mr. Wainwright's volume is on a more liberal scale. The illustrations, all taken from authentic sources, form a great attraction.

*Tales of Ancient Thessaly*, by J. W. E. Pearce (Blackwood), is a new departure in elementary reading books, and, like the two volumes just noticed, is welcome as the work of an editor who understands the difficulties of beginners. Two or three pages at the beginning of the book, in which Mr. Pearce deals very intelligently with these difficulties, would form a valuable lesson to many of the editors whose work comes under our notice. The text of the book is adapted—with the requisite Bowdlerization and de-Madaurization—from the fourth book of Apuleius' "Metamorphoses." The central portion is occupied with the story of Cupid and Psyche; but we have also the robbers' cave and the transformation of Lucius. There are some exercises for re-translation, a very good index on grammar, to which references are given in the notes, and, of course, there is a vocabulary. About the notes there is an unconventionality that makes them refreshing to the reviewer who looks through so much that he knows is absolutely useless to schoolboys. "If you can't read Latin pretty easily and connectedly," says Mr. Pearce, in a somewhat lengthy, but very comforting, aside, "take this as a general rule for picking your way through a complex sentence." There is something which the poor pupil will think worth having. We think that those teachers who are tired of "cooked 'Livy'" might profitably give Mr. Pearce's "Tales" a trial. What joy it would have been to learn to read Latin in such books as Messrs. Bell and Messrs. Blackwood are now issuing!

*Homer, Odyssey XI.*, edited by J. A. Nairn (Pitt Press), is an admirable book for use with upper forms and for University students. There is much learning here in a narrow compass. The introduction gives an account of the Homeric Underworld that will be valuable even to advanced scholars. An outline of Homeric grammar follows, and several special points connected with grammar and prosody are dealt with in a series of appendices. We should have liked to see a comparison of Homer's Hell with Vergil's and Dante's. The book may be unreservedly commended as a first-rate edition.

The latest volume we have received from Messrs. Clive is a half-crown *Prometheus Vincetus*, edited by F. G. Plaistowe and T. R. Mills. The introduction contains the leading facts about the Greek drama and the theatre. The circumlocution by which the editors avoid saying whether there was a stage or not in the theatre of the fifth century is a piece of ingenious but rather low cunning, if we may say so without intending any offence. "Beyond the orchestra, and facing the audience, was the area on which the actors performed." We should like to tackle a few of the numerous examination candidates who will use this volume after they have read the introduction, and ask them whether there was a stage or not. The description of metres is rightly limited to the *senarius* and the anapestic measure. The notes are all that the candidate can require.

*Cicero pro Lege Manilia.* Edited by J. C. Nicol. (Pitt Press.)

The introductory matter includes a clear account of the long conflict with Mithridates, and a good analysis of the speech. The notes are adequate, but do not give too much help; in fact, the editor protests in his preface against the tendency to make things too easy for boys and save them the trouble of thinking. In two directions his notes are particularly valuable—the varied meanings of words like *ratio, res*, &c., are carefully collected, and short quotations to illustrate the meanings of words are freely introduced. Nothing is better calculated to fix the meaning of *contentio* or *difficilis*, for example, on a boy's

mind than to quote, as Mr. Nicol has done, *contentio quaedam et comparatio, nec difficiles nec inhumani senes*. It prepares him, too, to use a large lexicon with advantage. Nizolius ought to lie on the table of every sixth-form class-room. The index is conveniently arranged for the comparative study of constructions.

*Caesar's Gallic War, Book I.* Edited by J. W. Bartram. (Longmans.)

This edition is to be recommended for its large clear print and excellent illustrations, showing pretty well everything that is known about the Roman soldier. The maps, too, are very good. The introduction includes a life of Caesar and an account of his army, giving the impression that it is intended to reappear in succeeding volumes of the series. A short special introduction to the first book would be a useful addition. The vocabulary is carefully drawn up, the meanings of words being well classified. The notes are full and helpful. Attention is often called to quite ordinary constructions; but perhaps that is not amiss for beginners. Occasionally, but not often, a free translation is given without showing how it is led up to.

#### MODERN LANGUAGES.

*Racine: Athalie.* Edited by H. W. Eve, M.A. (Cambridge University Press.)

The excellent editions of French classical plays edited by Dr. Brauholtz for the "Pitt Press Series" are well known to English teachers, and have justly attracted attention even on the Continent. We welcome Mr. Eve's edition of Racine's masterpiece as a worthy companion to these volumes. The first part of the introduction deals with the history of French tragedy and Racine's place in it; and with the consideration of "Athalie" as a drama. In the space of some fifteen pages, Mr. Eve succeeds in giving a clear and accurate account of what is absolutely essential for the proper appreciation of the play. The second part of the introduction consists of "Notes on the French Alexandrine." It cannot be too strongly recommended that pupils should receive a knowledge of French prosody as soon as they proceed to read poetry in that language. Mr. Eve's Notes are clear and helpful; but is it well to use the terms *anapest, piron, choriamb*, &c., in dealing with French, where quantity plays practically no part? The English term "overflow" is preferable to *enjambement* (page 36). The text is printed with that scrupulous care which we expect from the Cambridge Press; and the notes are excellent alike in substance and in expression.

*Malot: Remi en Angleterre.* (A Selection from *Sans Famille.*) Edited by Margaret de G. Verrall. (Cambridge University Press.)

There can be no doubt that the well merited success of "Remi et ses Amis," by the same editor, has led to the publication of this further selection from Malot's novel. The notes and vocabulary have been prepared with the same care, and the book can, therefore, be recommended as warmly as its predecessor. We have only one suggestion for the next edition—the "classification of the uses of the French subjunctive in this book" would be far more helpful if the sentences were quoted in full, or, at any rate, in such a form as to give a meaning. It is a wearisome process to refer to the text for every quotation, and very few students will have the patience to do so.

*Madame de Ségur: Histoire de la Princesse Rosette and La Petite Souris Grise.* Edited by B. Daly Cocking. (Edward Arnold.)

Two short fairy tales, which show the usual strong and weak points of the French fairy tale. The first contains more than reminiscences of Cinderella. The faultless princess happily weds an equally faultless prince, who appears to be taken quite as much by her extremely refined manners as by the apparently boundless resources of her wardrobe. Some half-dozen costumes are described in detail. The other tale is intended to show the dangers of being inquisitive. In spite of the enmity of the fairy Détestable, the heroine Rosalie is eventually betrothed to Prince Gracieux. There is a faint, old-fashioned smell of musk about these tales which makes us sure that a healthy English boy will not read them with pleasure; and we doubt whether an English girl will be satisfied with such fare. The notes have been written with evident conscientiousness, and the vocabulary is practically complete as far as we have tested it. Such slips as are to be found in the printing are too trivial to enumerate.

*Cassell's Lessons in French.* By L. Fasquelle, Prof. De Lolme, and Prof. E. Rouband. New Edition, revised by J. Boielle. (Cassell.)

The First Part (145th thousand) and the Second Part (95th thousand) are issued in a single volume. The whole book has been reset in clear type, and each lesson, with the exercises bearing on it, has been brought within the compass of an hour's work. This book is too well known to need a detailed description. It is to be regretted that the examples of the grammar rules are not taken from modern French. The practice of using seventeenth-century passages for this purpose is, indeed, common, but still to be deprecated; it tends to obscure the very marked changes which the language has undergone in the last two centuries. Mr. Boielle has done his work with commendable thoroughness; and the book will be found useful for purposes of reference, even by teachers who do not care to introduce it into their classes.

*Select Passages from Modern French Authors (Senior and Junior Course).*  
Compiled by L. E. Kastner.

These selections are taken from authors of the seventeenth century, from Chateaubriand and Lamartine down to Heredia, Zola, and Loti. They are primarily intended to supply candidates for higher examinations with specimens of authors from whom passages are likely to be taken; but they are well enough chosen to make them an interesting anthology for general readers. To such readers, and probably to most teachers, a few notes on unfamiliar phrases and allusions would be very welcome. But few Englishmen could identify all the proper names or interpret all the numberless technical words that find their way into modern French poetry. The notices of authors prefixed to each group of extracts are often open to the reproach: "Brevis esse laboro; obscurus fio." They do not take sufficient account of the limited knowledge of the average student or sixth-form boy, to whom a phrase like "A link between the self-confession of the Romanticists and the impassibility of the Parnassians," or "There is no doubt that a good deal of his satanism is pure charlatanism," is not easily intelligible. What such students want is short estimates of authors expressed in ordinary language, and based on the extracts selected—such estimates as Mr. Kastner very likely gives in his own lectures.

*A First German Writer.* By A. A. Somerville and L. S. R. Byrne.  
(Rivingtons.)

This is not altogether a new book, but is made up from the grammar and exercises by the same authors, with certain alterations and additions. The exercises consist of short sentences of the ordinary type, interspersed with a good many continuous stories and other pieces adapted to the stage which the pupils have reached. Even Mr. Punch's "Not a fair exchange," enumerating the foreign articles to be found in an English house, has been ingeniously brought in. There is a good deal to be said for the arrangement; the verbs, including even the passive voice, come first, then the declension of adjectives, and then the declension of nouns. The order of dependent sentences comes comparatively late, so that the continuous pieces in the first half of the book are made up entirely of simple sentences. The book is practical, and evidently the result of considerable experience in teaching.

*German without Tears.* By A. H. Hutchinson. (E. Arnold.)

This is adapted from Mrs. Hugh Bell's "French without Tears." It is a collection of childish stories, with pictures, readily lending themselves to conversational exercises. The vocabulary is strictly limited, and very few idioms are introduced. It should prove a useful help for those who begin German in the nursery; it is much to be wished that more children did so; the difficulties of elementary German are less than must be encountered in the early stages of French. The book is printed in English type.

*A Compendious German Reader.* Compiled by G. B. Beak. (Blackwood.)

This book is intended for Army classes, and will be found useful either as a reader or for "unseens." It contains a number of extracts from modern historians, illustrating the history of Germany from 1640 to 1888. Many of them, but by no means all, are descriptions of battles. We have, for example, notices of Stein and his reforms, of Joseph II. and of Bismarck on Social Democracy. An appendix, to which reference is constantly made, contains a history of Germany during the same period, written in clear and readable English. The historical extracts are supplemented by a few literary ones, including passages not only from the classics, but from quite modern writers, as Paul Heyse, Spielhagen, Sudermann, and Gerhart Hauptmann. These are accompanied by short notices of the authors. The idea of the book is a good one, and it is well carried out.

*Schillers Jugendjahre, eine Erzählung.* By F. Hoffmann. Edited by F. Hamby. (Whittaker.)

Neither the vocabulary nor the notes of this edition are satisfactory; there are omissions in the vocabulary, and the notes are neither scholarly nor suggestive. Nor, indeed, are they always correct—for example, to "Kein Opfer schien ihm zu gross, das er ihnen nicht mit Freude hätte darbringen mögen" we have "the auxiliaries should follow the finite verb, but when there are two only one is inverted: 'No sacrifice to him so great that he would not willingly consent to it.'" The explanation is, at least, wanting in clearness; a single word cannot be inverted; while the translation is neither literal nor a free rendering into English; the past tense is ignored, and *darbringen* (one of the many words that do not appear in the vocabulary) is mis-translated.

#### MISCELLANEOUS.

*The Scientific Study of Scenery.* By John E. Marr, M.A., F.R.S.  
(Methuen.)

This pleasant book, with its twenty-one capital illustrations and many diagrams, is concerned with a distinctive subject, to which Mr. Marr gives the name of Geomorphology, "sprung from the union of geology and geography." It discusses the origin of scenery in the contour of the earth's surface, where it has been subjected to volcanic and other elemental agencies; and we owe the book as it stands to the conjunction in one person of the physiographer and the artist. It is a

volume which will be very welcome to the general reader, especially readers who have acquired a love of scenery by travelling; and it has a special value for students of geology and physiography.

*Historical Tales from Shakespeare.* By A. T. Quiller-Couch.  
(Edward Arnold.)

Mr. Quiller-Couch has naturally confined himself to the plays which were not used by Charles and Mary Lamb for their "Tales from Shakespeare." We have, therefore, little of the romantic interest which was the main attraction of the earlier volume, but, in its place, a somewhat stiff and archaic paraphrase of the dialogue and action of "Coriolanus," "Julius Caesar," "King John," "King Richard the Second," "King Henry the Fourth," "Fifth," and "Sixth," and "King Richard the Third." Of these eight plays we have the substance of the plots in narrative form, told by a competent hand. It is no longer Shakespeare, but the book may serve a useful purpose in more ways than one.

*A Short Story of English Literature.* By E. S. Mellows. (Methuen.)

Miss Mellows has added one to the long list of stories and histories of our national literature, and, if she does not increase the sum of knowledge, she unquestionably makes a pleasant contribution to the variety of our English handbooks. She recounts the progress of literary thought and production in England, with titles, subjects, occasional brief extracts, biographies of authors, and summaries from time to time of the historical conditions and characteristics of successive periods. The book is suitable for reading by boys and girls as a general introduction to literary annals; though even for this limited purpose it might have been possible to secure a little more precise exactitude. A touch of revision would have improved such phrases or sentences as these: "The earliest inhabitants of these islands . . . were the Ancient Britons"; "by the third century a form of writing was in use"; "Utopia, which means nowhere." On the whole, however, Miss Mellows is accurate and very readable.

*First Steps in Earth Knowledge: being an Introduction to Physiography.*  
By J. Ansted Harrison, B.Sc., and W. Jerome Harrison, F.G.S.  
(Blackie.)

The subject commonly called "Physiography" is defined by the authors as "the application of all the sciences to the study of the great globe which we inhabit." This text-book is an introduction well written, illustrated, and printed. It consists of three sections forming elementary introductions to the sciences of mechanics, physics, and chemistry.

*Plane Trigonometry for Colleges and Schools.* By Daniel A. Murray,  
B.A., Ph.D. (Longmans.)

Although there are already so many good text-books on this subject, yet this book has a *raison d'être* on account of the clear and intelligent explanations of principles, which maintain a logical consecutiveness throughout the work. The exercises are good and well graduated.

(1) *Institutes of Education, comprising an Introduction to Rational Psychology.* Second Edition. (2) *Lectures on Linguistic Method in the School.* Third Edition. By Prof. S. S. Laurie. (Edinburgh: Oliver & Boyd.)

These are revised and extended editions of two of Prof. Laurie's well known and very helpful volumes. There is much new matter in the "Institutes"; though the book remains essentially the same as when it first appeared. To the volume of "Lectures" is added an out-of-print essay on "Language versus Science" as a basis of school instruction.

*The Swan Shakespeare.* With Introductions, Notes, and Illustrations.  
(Longmans.)

The "Swan Shakespeare" is a new edition of the plays, with a separate volume for each play, and with many useful and attractive features. The edition is intended for the use of schools, and the apparatus is ample for the guidance and assistance of young students. Each volume begins with an illustrated life of Shakespeare, and in each there are ten full-page pictures. The editors of the several plays have worked studiously on a common plan, and we imagine that the series will commend itself to most of those who make its acquaintance. The plays already published are "Julius Caesar," "The Merchant of Venice," "King John," "The Tempest," "As You Like It," "Henry V.," "Richard II.," and "Macbeth."

*Macaulay's Frederic the Great.* Edited by A. T. Flux. (Macmillan.)

This edition of one of the most brilliant of Macaulay's Essays will be found useful by the general reader as well as by the student. The innumerable historical and literary allusions in Macaulay's "picture-prose" must, one would think, prove a stumbling-block to most people—to the Australian miner, for instance, or the American backwoodsman, in whose huts, it is said, the "Essays" are frequently to be found. Mr. Flux has performed his difficult task with considerable skill. His notes are plentiful, but brief and to the point. There is a map of Europe at the time of the Seven Years' War, and a sketch of Macaulay's life. In the latter we are frequently told the sums of money made by Macaulay: the author had possibly the desire to give the world in general the advice that Macaulay gave his nephew, that, "if he minded his syntax, he might eventually hope to reach a position which would give him £300 a year, a stable for his horse, six dozen of audit ale



every Christmas, a loaf and two pats of butter every morning, and a good dinner for nothing, with as many almonds and raisins as he could eat at dessert."

"University Tutorial Series."—*The Matriculation History of England.*  
By C. S. Fearenside, M.A. (Clive.)

This concise and carefully considered book is designed in the first place to meet the requirements of the London Matriculation syllabus, which is not likely to change its general character under the new order of things. It is a history of England to the end of the seventeenth century, with the geography relating thereto. Mr. Fearenside has done his best to observe due proportions in dealing with different periods, he has arranged his text in the manner most likely to assist a student who makes good use of his memory, and he has made "ample provision for problem work"—which apparently means that he has suggested topics and questions for treatment. The plan of the book is practical and helpful.

*General Intelligence Papers, with Exercises in English Composition.*  
By Gerald Blunt, M.A. (A. M. Holden.)

An excellent book of papers for practice in the reproduction of miscellaneous knowledge. The easier questions can be answered by a boy or a girl with intelligent parents who talk freely at meals; the more difficult ones by boys and girls who read and remember things; others, again, only by studious boys and girls from fourteen upwards. It is a book of which much use may be made.

*Europe: Its Physical and Political Geography.* By M. J. C. Meiklejohn. (A. M. Holden.)

A good introductory text-book of physiography, with chapters on latitude and longitude, day and night, and the seasons. This is undoubtedly a very serviceable little book, full of matter, but not overloaded. The information is clearly and simply set forth, and there are two capital maps of Europe, physical and political. From the same publisher we have a third edition of Mr. Meiklejohn's *British Colonies and Dependencies*.

Of texts with notes or glossaries we have *The Faerie Queene, Book VI.*, edited from the original editions by Kate M. Warren (Constable & Co.); *The Hind and the Panther*, with introduction and notes, by W. H. Williams, M.A. (Macmillan)—a very good school edition; *L'Allegro, Il Penseroso, Comus, and Lycidas*, with introduction and notes, by T. F. Huntington (Harvard: Ginn & Co.); *Macaulay's Essay on Horace Walpole*, with introduction and notes, by John Downie, M.A. (Blackie & Son); and from the same publishers, in "Blackie's English Classics," *Murmion, Canto III.*, and *Robert Browning, Select Poems*.

Amongst our reprints this month we have Charles Darwin's *Journal of Researches into the Natural History and Geology of the Countries visited during the Voyage of H.M.S. "Beagle" round the World.* (Ward, Lock, & Co.) This is a volume of the "Minerva Library." It is well printed, with the original illustrations, and is prefaced by a short biography. From the same publishers we have *Holmby House: a Tale of Old Northamptonshire*, by G. J. Whyte-Melville.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*The Royal Holloway College Calendar, 1899-1900* (Spottiswoode).  
*The London Matriculation Directory, No. XXVII.* (Burlington House, Cambridge).

*Mentally-Deficient Children: Their Treatment and Training*, by G. E. Shuttleworth, B.A., M.D. (H. K. Lewis)—a second edition of this well known and useful work.

*The Newton Object-Lesson Handbook, Part III.* (Blackie).

*Combined Readers in Elementary Science and Geography*, by Vincent T. Murché, F.R.G.S., Book II. (Macmillan).

*Algebra for Elementary Schools, Part I.*, by H. S. Hall, M.A., and R. J. Wood, B.A. (Macmillan)—a serviceable introduction on easy lines. "Arnold's Geographical Handbooks."—VII., *Africa*; VIII., *United States of America*; IX., *Central and South America*; X., *The World in Outline* (Edward Arnold).

*Chambers's New Recitations for Schools*, selected by R. C. H. Morrison and W. Woodburn, Books I.-V. (Chambers).

*The Arcadian Reciter, Book III.*, selected by Margaret W. Rudd (Cox & Co.).

*A Primer of Mental Science*, by the Rev. John H. MacMahon, A.M., LL.D. (Simpkin, Marshall).

*The National Vocalist*, edited by Alexander Anderson (Curwen & Sons).

N.B.—The small italic letters denote that the candidate to whose name they are attached was distinguished in the following subjects respectively:—

*a* = Arithmetic, *g* = Geography,  
*al* = Algebra, *h* = History,  
*d* = Drawing, *l* = Latin,  
*e* = English, *ph* = Physiology,  
*eu* = Euclid, *s* = Scripture,  
*f* = French. *sp* = Spanish.

The small figures <sup>1</sup> and <sup>2</sup> prefixed to names in the Second and Third Class Lists denote that the candidates were entered for the First and Second Classes respectively.

## BOYS.

## FIRST CLASS.—HONOURS DIVISION.

Richards, P. O. <sup>1</sup> Middle School, Georgetown, British Guiana.

## FIRST CLASS.—PASS DIVISION.

Hartwell, C. N. China Inland Mission School, Chefoo.

Riley, P. J. " " " " "

Williams, O. St. M. " " " " "

Chase, L. R. Private tuition.

Smart, A. B. <sup>a</sup> Church Missionary Gr. S., Freetown, Sierra Leone.

## SECOND CLASS.—1ST DIVISION.

Lancaster, P. M. China Inland Mission School, Chefoo.

Southey, W. G. <sup>d</sup> " " " " "

Power, H. E. Private tuition.

Randle, A. B. China Inland Mission School, Chefoo.

Bannerman, H. S. Wesleyan Boys' High School, Lagos.

## SECOND CLASS.—2ND DIVISION.

Clarke, S. T. China Inland Mission School, Chefoo.

Koranting, J. B. C.M.S. Grammar School, Lagos.

Rendall, G. H. China Inland Mission School, Chefoo.

Piercy, J. E. " " " " "

O'Keefe, T. A. Private tuition.

Williams, P. R. China Inland Mission School, Chefoo.

Lovatt, W. H. " " " " "

Isaacs, J. T. Middle School, Georgetown, British Guiana.

Potter, G. H. C. Private tuition.

Olumuyiwa, C. O. C.M.S. Grammar School, Lagos.

Lapite, D. J. Wesleyan Boys' High School, Lagos.

Wiles, S. C. Private tuition.

## SECOND CLASS.—3RD DIVISION.

Fishe, C. H. China Inland Mission School, Chefoo.

Boyce, T. A. Private tuition.

Cronwell, O. " " " " "

Liverpool, J. B. " " " " "

Pritchard, R. Queen's College, Nassau, Bahamas.

Hyde, J. B. Wesleyan Boys' High School, Lagos.

Waller, W. J. Private tuition.

## THIRD CLASS.—1ST DIVISION.

Southey, M. V. *s. e. a. l. eu.* China Inland Mission School, Chefoo.

Hutton, T. W. *s. e. h. g. a. eu.* " " " " "

Rohlehr, A. B. *s. a.* Middle School, Georgetown, British Guiana.

Gray-Owen, H. <sup>e.</sup> China Inland Mission School, Chefoo.

Thomas, B. L. Church Missionary Gr. S., Freetown, Sierra Leone.

Irving, S. J. <sup>h. a.</sup> C. M. S. Grammar School, Lagos.

Lawson, A. M. <sup>a. al.</sup> " " " " "

Le Provost, P. A. H. China Inland Mission School, Chefoo.

Chambersley, E. G. Wesleyan Central Institution, Batticaloa.

Davies, S. V. C. M. S. Grammar School, Lagos.

Waddilove, W. J. <sup>al.</sup> China Inland Mission School, Chefoo.

Phillips, S. C. Church Missionary Gr. S., Freetown, Sierra Leone.

Edwards, C. <sup>a.</sup> Private tuition.

Brown, H. F. Middle School, Georgetown, British Guiana.

Hunte, F. S. " " " " "

Lucas, J. G. M. <sup>a.</sup> Private tuition.

Zephyrine, M. W. <sup>a.</sup> " " " " "

## THIRD CLASS.—2ND DIVISION.

Johnson, A. Queen's College, Nassau, Bahamas.

Maclathly, C. A. Church Missionary Gr. S., Freetown, Sierra Leone.

Pritchard, W. Queen's College, Nassau, Bahamas.

Brown, E. A. <sup>a.</sup> Middle School, Georgetown, British Guiana.

Douglas, H. R. Private tuition.

Vinayagamoorti, M. <sup>a.</sup> Wesleyan Central Institution, Batticaloa.

Zandorf, J. A. C. M. S. Grammar School, Lagos.

Wilson, F. J. Private tuition.

Wilson, W. C. China Inland Mission School, Chefoo.

Dostun, A. S. Wesleyan Boys' High School, Lagos.

Madhuo, J. Vern Grammar S., Georgetown, British Guiana.

Supramaniam, M. <sup>a.</sup> Wesleyan Central Institution, Batticaloa.

Zandorf, S. I. M. <sup>al. d.</sup> Private tuition.

Dorawami, S. <sup>a.</sup> Wesleyan Central Institution, Batticaloa.

Disissette, J. C. <sup>a.</sup> Private tuition.

Sowonola, E. A. C. M. S. Grammar School, Lagos.

Edwards, L. C. Private tuition.

Perkins, F. B. " " " " "

Wey, I. T. <sup>a.</sup> C. M. S. Grammar School, Lagos.

Johnson, O' C. T. <sup>a.</sup> Private tuition.

Roberts, A. M. <sup>a.</sup> Middle School, Georgetown, British Guiana.

Roberts, E. <sup>h.</sup> Private tuition.

Wallace, D. F. A. China Inland Mission School, Chefoo.

Levine, J. S. Middle School, Georgetown, British Guiana.

Sharples, J. S. A. K. Wesleyan Central Institution, Batticaloa.

Tambi Pillai, K. Middle School, Georgetown, British Guiana.

Anderson, H. C. C. <sup>a.</sup> Middle School, Georgetown, British Guiana.

Piggott, J. N. <sup>a.</sup> Wesleyan Central Institution, Batticaloa.

Summugam, T. " " " " "

## THIRD CLASS.—3RD DIVISION.

Stewart, A. S. <sup>a.</sup> Private tuition.

Williams, C. J. A. Wesleyan Boys' High School, Lagos.

Johnson, E. L. Middle School, Georgetown, British Guiana.

Somancher, R. D. Wesleyan Central Institution, Batticaloa.

Sithamburappillai, S. " " " " "

Canagasalai, A. E. " " " " "

George, C. O. Wesleyan Boys' High School, Lagos.

Campbell, H. <sup>a.</sup> Private tuition.

Turtle, C. Queen's College, Nassau, Bahamas.

## COLLEGE OF PRECEPTORS.

## CERTIFICATE EXAMINATION.

CHRISTMAS, 1899.

List of the successful candidates at the Foreign and Colonial Centres—Batticaloa, British Guiana, Chefoo, Freetown (Sierra Leone), Grenada, Kingston (Jamaica), Lagos, Nassau (Bahamas), Stewart Town (Jamaica), and Trinidad.

GIRLS.

FIRST CLASS.—PASS DIVISION.  
*s. ph.* China Inland Mission School, Chefoo.  
 Curnall, K. F.  
 Rendall, E. K.  
 \*Hollar, O. A.  
 McLaughlin, F. A.  
 \*The Taylor-Jones Prize for Scripture History has been awarded to Miss O. A. Hollar, who was bracketed equal with another candidate.

SECOND CLASS.—1ST DIVISION.  
*g. a. al.* China Inland Mission School, Chefoo.  
 Corbett, J. L.  
 Armstrong, H. E.  
 Carrall, F. F.  
 Palazzi, A.  
 Moodie, M. M.  
 Reid, I. C.  
 Riley, N.  
*f.* St. Joseph's Convent, Port of Spain, Trinidad.  
*al.* Barbican High School, Kingston, Jamaica.  
*d.* China Inland Mission School, Chefoo.  
*f.* St. Joseph's Convent, Port of Spain, Trinidad.

SECOND CLASS.—2ND DIVISION.  
 China Inland Mission School, Chefoo.  
 Reid, E. P.  
 Scheult, C.  
*f.* St. Joseph's Convent, Port of Spain, Trinidad.

SECOND CLASS.—3RD DIVISION.  
 Westwood High School, Stewart Town, Jamaica.  
 Bernard, B.  
 Wuppermann, M. M.  
 Reynolds, J. M.  
 Kernahan, B.  
 Winter, F. A.  
 Elliott, M. A.  
 Grant, M. L.  
*f.* St. Joseph's Convent, Port of Spain, Trinidad.  
 Barbican High School, Kingston, Jamaica.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Edenholme, St. George's, Grenada.  
 Westwood High School, Stewart Town, Jamaica.  
 Barbican High School, Kingston, Jamaica.

THIRD CLASS.—1ST DIVISION.  
*s. e. a. f.* China Inland Mission School, Chefoo.  
 Watson, A.  
 Herrera, H.  
 Savary, B.  
 Collins, W.  
 Henderson, A. M.  
 James, J.  
 Lawrence, S. M.  
 Crosbie, I.  
 Boucaud, V.  
 James, F.  
 Cranston, E. M.  
 Gostick, M. G.  
 Brown, L. L.  
*e. h. g. d.* Westwood High School, Stewart Town, Jamaica.  
*a. f.* China Inland Mission School, Chefoo.  
*h. y.* Barbican High School, Kingston, Jamaica.  
*f.* St. Joseph's Convent, Port of Spain, Trinidad.  
*s. a.* China Inland Mission School, Chefoo.  
*s. d.* Queen's College, Nassau, Bahamas.  
*a.* Barbican High School, Kingston, Jamaica.

THIRD CLASS.—2ND DIVISION.  
*sp.* St. Joseph's Convent, Port of Spain, Trinidad.  
 Anduze, A.  
 Weir, E. H. C.  
 Purry, A. L.  
 Andrew, E.  
 Parkhill, G. L.  
 De Garmes, E.  
 Adamson, J. A. V.  
 Galt, E.  
 Levy, S. A.  
 Savary, E.  
 Collins, W.  
 Morrises, E.  
 Prada, V.  
 Broderick, N. L. N.  
 O'Halloran, V.  
 Sellier, C.  
*a. d.* St. Joseph's Convent, Port of Spain, Trinidad.  
 China Inland Mission School, Chefoo.  
 " " " " " "  
 " " " " " "  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 China Inland Mission School, Chefoo.  
 Westwood High School, Stewart Town, Jamaica.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 " " " " " "  
 China Inland Mission School, Chefoo. " "  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Barbican High School, Kingston, Jamaica.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 " " " " " "

THIRD CLASS.—3RD DIVISION.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Speldewinde, R. I.  
 Ulrich, F.  
 Antoine, A.  
 Hartwell, J. G.  
 Grunt, I. A.  
 \*Heighington, A. M. A.  
 Bethel, L. I.  
 Clemetson, E. E. J.  
 Wilson, R. S.  
 Bryant, E.  
 Marchalleck, B. L.  
 Franklin, K. L. M.  
 Surgeon, H. J.  
 Grant, B. L.  
 Kernahan, M.  
 Kernahan, Z.  
 Armstrong, L. A.  
*a.* Girls' High School, Batticaloa.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Private tuition.  
 China Inland Mission School, Chefoo.  
 Westwood High School, Stewart Town, Jamaica.  
 Queen's College, Nassau, Bahamas.  
 Westwood High School, Stewart Town, Jamaica.  
 Private tuition.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Westwood High School, Stewart Town, Jamaica.  
 " " " " " "  
 " " " " " "  
 " " " " " "  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Westwood High School, Stewart Town, Jamaica.

JUNIOR FORMS EXAMINATION.

BOYS.

Andrew, G. F.  
 Archer, W. H.  
 Bowman, J.  
 Clarke, C. B.  
 Cooper, W. E.  
 Denny, C. D.  
 Durham, J. A.  
 Felgate, E. R. A.  
 Fiske, E. G.  
 Grant, S. G. S.  
 Henry, J. R.  
 Hogg, T. A.  
 Hunt, H. W.  
 King, G. E.  
 Krishna Pillai, S. O.  
 Le Prevost, H. W. S. M.  
 Lloyd, C. J.  
 Lord, H. G.  
 Madhoo, J.  
 Pearse, E. H.  
 Sharples, G. C. C.  
 Tonkin, C.  
 Vanheer, A.  
 Washbrook, H. G.  
 Watson, T. A.  
 China Inland Mission School, Chefoo.  
 Middle School, Georgetown, British Guiana.  
 China Inland Mission School, Chefoo.  
 Middle School, Georgetown, British Guiana.  
 China Inland Mission School, Chefoo.  
 Middle School, Georgetown, British Guiana.  
 China Inland Mission School, Chefoo.  
 China Inland Mission School, Chefoo.  
 China Inland Mission School, Chefoo.  
 China Inland Mission School, Chefoo.  
 China Inland Mission School, Chefoo.  
 Wesleyan Central Institution, Batticaloa.  
 China Inland Mission School, Chefoo.  
 " " " " " "  
 " " " " " "  
 Middle School, Georgetown, British Guiana.  
 Vern Grammar S., Georgetown, British Guiana.  
 China Inland Mission School, Chefoo.  
 Middle School, Georgetown, British Guiana.  
 China Inland Mission School, Chefoo.  
 Wesleyan Central Institution, Batticaloa.  
 China Inland Mission School, Chefoo.  
 Middle School, Georgetown, British Guiana.

GIRLS.

Bernard, E.  
 Boucaud, M.  
 de Verteuil, A.  
 Faure, G.  
 Gostick, V.  
 Herrera, M.  
 Jordan, E. A. A.  
 Lavender, L. M.  
 Maillard, A.  
 Mann, I. B.  
 McWatt, C. N.  
 Smyth, M.  
 Sturup, E. M.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 " " " " " "  
 " " " " " "  
 Queen's College, Nassau, Bahamas.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Eastcote, Georgetown, British Guiana.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Eastcote, Georgetown, British Guiana.  
 St. Joseph's Convent, Port of Spain, Trinidad.  
 Queen's College, Nassau, Bahamas.

SUPPLEMENTARY DIPLOMA PASS LIST.

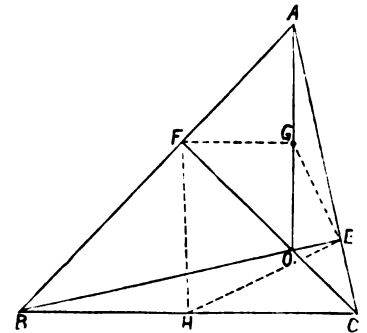
COLONIAL CENTRES.—JANUARY, 1900.

<i>Theory and Practice of Education.</i>	<i>Euclid.</i>	LICENTIATESHIP.
ASSOCIATESHIP.		Condell, C. H.
Condell, C. H.		ASSOCIATESHIP.
<i>English Language.</i>		Forrester, T. C.
Gardener, W. H.		
Hatmer, J.		<i>Trigonometry.</i>
Rudd, R. W.		LICENTIATESHIP.
		Condell, C. H.
<i>English History.</i>		
Rudd, R. W.		<i>Mechanics.</i>
		LICENTIATESHIP.
<i>Geography.</i>		Condell, C. H. (hon.).
Gardener, W. H.		
Hatmer, J.		<i>French.</i>
Rudd, R. W.		ASSOCIATESHIP.
Tanner, B. (hon.).		Hatmer, J. (hon.).
<i>Arithmetic.</i>		<i>Spanish.</i>
Condell, C. H.		ASSOCIATESHIP.
Rudd, R. W.		Rudd, R. W.
<i>Algebra.</i>		<i>Animal Physiology.</i>
LICENTIATESHIP.		LICENTIATESHIP.
Condell, C. H.		Condell, C. H.

MATHEMATICS.

To prove that, in any triangle, the perpendiculars from the vertices upon the opposite sides are concurrent. By J. W. SHARPE, M.A., late Senior Fellow of Gonville and Caius College, Cambridge.

In the triangle ABC, draw BE, CF perpendicular to CA, AB, respectively, intersecting each other at O. Join AO. Bisect AO, BC at G, H, respectively; and join EG, GF, FH, HE.



Then, since the angles AEO, AFO are right angles, and G is the middle point of AO, therefore GE, GA, GF, GO are all equal.

Similarly, HB, HF, HE, HO are all equal. Therefore  $\angle HFB = B$ ,  $\angle HEC = C$ ,  $\angle AFG = \angle FAG$ ,

and  $\angle EGF = 2A$ ; also  $\angle GEH = \angle GFH$ .

Now  $\angle HFB + \angle HEC = \angle EHF + A$ ; therefore  $\angle EHF + 2A = B + C + A = 2$  right angles;

therefore  $\angle EHF + \angle EGF = 2$  right angles;

therefore the equal angles GFH and GEH are each a right angle;

therefore  $\angle AFG + \angle BFH =$  a right angle;

therefore  $\angle OAB + B =$  a right angle;

therefore AO produced is the perpendicular from A upon BC.

Note 1.—If P be the middle point of GH, it follows, since HEG, HFG are right angles, that PE, PG, PF, PH are all equal. This establishes the fundamental property of the nine-point circle, and gives a construction for its centre P and diameter GH.

Note 2.—The above proofs depend only upon the first book of EUCLID.

14193. (Professor G. B. MATHEWS, F.R.S.)—Given the general equation of a conic referred to rectangular axes, find the locus of  $(\xi, \eta)$ , first, when  $x - \xi = 0$ ,  $y - \eta = 0$  are conjugate with respect to the conic; and, secondly, when  $x + y - \xi - \eta = 0$ ,  $x - y - \xi + \eta = 0$  are conjugate. Hence show that the equation of the axes of the conic may be written in the form

$$(a-b)\{Cry - Fx - Gy + H\} - h\{C(x^2 - y^2) + 2Fy - 2Gx + A - B\} = 0.$$

Solution by G. D. WILSON, B.A.

The condition that the lines  $lx + my + n = 0$  and  $Lx + My + N = 0$  should be conjugate with respect to the conic is

$$A/L + B/m + C/n + F(mN + nM) + G(nL + nN) + H(M + nL) = 0;$$

therefore, if the lines  $x - \xi = 0$  and  $y - \eta = 0$  are conjugate,

$$C\xi\eta - F\xi - G\eta + H = 0,$$

and, if the lines  $x + y - \xi - \eta = 0$  and  $x - y - \xi + \eta = 0$  are conjugate,

$$C(\xi^2 - \eta^2) + 2F\eta - 2G\xi + A - B = 0.$$

These define the locus of the point  $(\xi, \eta)$  in each case. Both these loci must pass through the four foci. Now the axes form a conic passing through the foci and the centre  $(G/C, F/C)$ . Hence the equation of the axes can be written

$$\lambda \{Cxy - Fx - Gy + H\} + \{C(x^2 - y^2) + 2Fy - 2Gx + A - B\} = 0$$

where  $\lambda \{CH - FG\} + \{AC - G^2 - BC + F^2\} = 0;$

so that  $\lambda = -(a-b)/h.$

**14448.** (V. SRINIVASA RANGACHARI, B.A.)—OA, OB are two straight lines fixed in direction, and P any point within or without them. It is required to draw through P a straight line so that the part of it intercepted between the given straight lines may be of given length.

Remarks by GEORGE SCOTT, M.A.

This problem has long been recognized as insoluble by elementary geometry, i.e., when only ruler and compass are allowed to be employed. The problem can be solved graphically by the use of the trammel or by tracing the conchoid of NICOMEDES and finding its intersections with one of the lines.

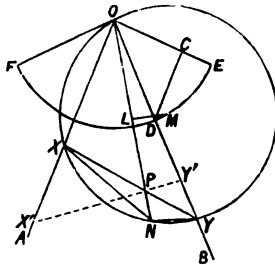


FIG. 1.

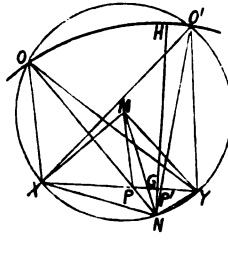


FIG. 2.

[Before consising this problem to limbo, a brief analysis of what can be determined regarding it may prove useful.

Let OC, perpendicular to OA (Fig. 1.), equal half the required line when P is between the lines (the only case we need examine). Draw CD parallel to OA, cutting OB in D. Then the circle EDF, described about O as centre, is the locus of the circumcentre of OXY (or OX'Y', for there are two lines possible in this case). Having the circum-radius given, and the length of the required line XY, take M as the centre of the circle (Fig. 2), and join MX, MY. Moreover, make  $\angle XMN = 2\angle XON$  (given by Fig. 1). Then N is a known point, and NG (perpendicular to XY) is also known; also GX, GY are known. Produce NG to H, making  $GH = OP$  (given by Fig. 1). Then the conchoid of NICOMEDES (in respect of the point N and the line XY, together with the constant  $GH = OP$ ) cuts the circle in O and O', and we obtain OX, OY or OX', OY' for application to Fig. 1. Otherwise, with N as origin and NM as axis, the loop of a limaçon can be drawn,  $\rho = a \cos \theta - b$ , where  $a = 2NM$  and  $b = OP$ . This will intersect XY in P, P'.

But, algebraically, we may take  $PN = u, XY = a, OP = b, NG = c, GX = d$ . Then

$$bu = \{d - \sqrt{(u^2 - c^2)}\} \{a - d + \sqrt{(u^2 - c^2)}\} = R^2 - MP^2,$$

whence we readily obtain a biquadratic in  $u$ . This should enable us to assign two positive values to PN. Then, bisecting ON and drawing LM at right angles to meet the locus EDF in M, we are able at once to find X, Y by describing the circle through O.

For the case in which P is external to OA, OB, similar reasoning applies, but here the solution depends on Euc. III. 36, and the value of  $u$  is negative.]

**14409.** (F. H. PEACHELL, B.A.)—In a newspaper competition, in which a prize of £ $x$  is offered, every correct coupon obtains an equal share of the prize, and a competitor may send in as many coupons as he likes. A person enters for this competition, and it is found that there are  $y$  correct coupons besides his own. What number of coupons (all correct) should he have sent in in order that his net profit may be the greatest possible, supposing each coupon to cost him  $s$  pence? Find also the amount of this profit.

Solution by H. W. CURJEL, M.A.

If  $\xi$  is the number of coupons, then  $\xi$  is the greatest integer, such that

$$240x \left( \frac{\xi}{\xi + y} - \frac{\xi - 1}{\xi + y - 1} \right) > s,$$

i.e., such that

$$(\xi + y)(\xi + y - 1) < 240xy/s,$$

i.e.,

$$(2\xi + 2y - 1)^2 < 960xy/s + 1;$$

therefore  $2\xi + 2y - 1 = \text{greatest odd integer } n \text{ } (960xy/s + 1)^{1/2}$

$$= 2k - 1, \text{ say.}$$

Then  $\xi = k - y$ , and net profit =  $\left\{ \frac{240x(k-y)}{k} - ks \right\}$  pence.

[Rev. T. ROACH, M.A., solves the first part of the question as follows:—Let A send in  $p$  coupons; then he receives  $240xp/(p+y) - ps$  pence. For a maximum  $240x/(p+y) - s + p(-240x/(p+y)^2) = 0;$

therefore  $p = (240xy/s)^{1/2} - y,$

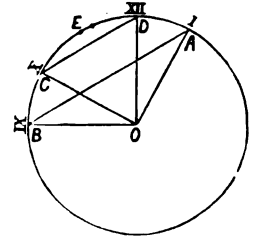
which is in virtual agreement with Mr. CURJEL's result.]

**14389.** (Rev. A. M. WILCOX, M.A.)—If a straight line be drawn from the figure X to the figure XII on a clock, and another from the figure IX to the figure I, all the figures being supposed on the circumference, prove that the area of the dial between the straight lines is one-sixth of the whole area.

Solution by Rev. T. WIGGINS, B.A.; and L. E. REAY, B.A.

Required area

$$\begin{aligned} &= AEB - DEC \\ &= (OAEB - OAB) - (ODEC - ODC) \\ &= \left( \frac{\pi r^2}{3} - \frac{r^2\sqrt{3}}{2} \right) - \left( \frac{\pi r^2}{6} - \frac{r^2\sqrt{3}}{2} \right) \\ &= \frac{\pi r^2}{6}. \end{aligned}$$



**14417.** (J. A. THIRD, D.Sc.)—The locus of the centre of a variable inconic K of a triangle is a conic having (imaginary) double contact with the maximum inscribed ellipse on the line  $\Sigma a \cos A = 0$ , if the locus of the point of concurrence of the lines joining the points of contact of K with the sides to the opposite vertices is the envelope of a system of similar circumconics.

Solution by Rev. J. CULLEN.

Let  $(x, y, z)$  be the point of concurrence; then the equation of the inconic is  $\Sigma (a/x)^2 = 0$ . Also, if  $(\alpha, \beta, \gamma)$  be its centre, we have  $1/x \equiv a(S - \alpha a)$ ,  $(2S - \Sigma a\alpha)$ . Now the condition for a system of similar circumconics which are similar to  $\Sigma/x = 0$  is

$$\Sigma (l \sin A)^2 - 2\Sigma mn \sin B \sin C = k\Sigma (l \cos A)^2.$$

Hence the equation of the envelope is

$$k\Sigma (\sin A/x)^2 - 2\Sigma [(1+k)2 \sin^2 A \sin B \sin C - k \sin B \sin C]/yz = 0.$$

Substituting for  $x, \&c.$ , we get

$$(1+k) [\Sigma (aa)^2 - 2\Sigma bc\beta\gamma] + 4R^2k\Sigma (a \cos A)^2 = 0,$$

R being the radius of the circumcircle of the triangle of reference. Therefore, &c.

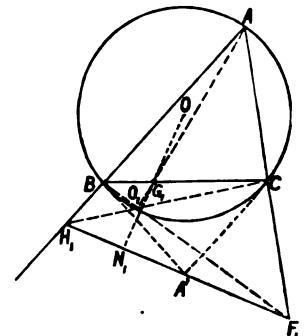
**14311.** (Professor U. C. GHOSH.)—Points  $O_1, O_2, O_3, \dots, O_n$  are taken in order on the circumference of a circle circumscribing a triangle ABC. If  $AO_1, AO_2, AO_3, \dots, AO_n, BO_1, BO_2, BO_3, \dots, BO_n, CO_1, CO_2, CO_3, \dots, CO_n$  cut BC at  $G_1, G_2, G_3, \dots, G_n, AC$  at  $F_1, F_2, F_3, \dots, F_n$ , and AB at  $H_1, H_2, H_3, \dots, H_n$ , respectively, show that (1)  $F_1H_1, F_2H_2, F_3H_3, \dots, F_nH_n$  will all pass through the same point A'; (2)  $\angle F_r A' F_{r+1} = \angle G_r O G_{r+1}$ , O being the centre of the circle; (3) if  $N_1, N_2, N_3, \dots, N_n$  be the points of intersection of  $OG_1, OG_2, OG_3, \dots, OG_n$  with  $F_1H_1, F_2H_2, F_3H_3, \dots, F_nH_n$ , they will lie on the circumference of the circle described on  $OA'$  as diameter.

Solution by Professor A. DROZ-FARNY.

Dans le quadrilatère inscriptible ABO<sub>1</sub>C, G<sub>1</sub> est le point de coupe des paires de côtés opposés.

Il en résulte que le triangle F<sub>1</sub>G<sub>1</sub>H<sub>1</sub> est autopolaire par rapport à la circonférence; G<sub>1</sub> se trouvant sur BC, sa polaire F<sub>1</sub>H<sub>1</sub> passe par le pôle A' de BC.

En outre OG<sub>1</sub> est perpendiculaire sur F<sub>1</sub>H<sub>1</sub>, ce qui démontre les deux dernières parties.



**10344.** (Professor MOREL.)—Si  $a$  est un nombre impair premier avec 3 et 5,  $(a^2 - 1)(a^4 - 16) \{a^2 - (2n + 1)^2\}^2$  est divisible par 23040.

Solution by Lt.-Col. ALLAN CUNNINGHAM, R.E.

Every odd number  $a$  is of form  $a = 4i \pm 1$ ; therefore  $a^2 = 8j + 1$ . Here  $a$  and  $(2n + 1)$  are both odd; therefore  $a^2 - 1 = 8a$  and

$$\{a^2 - (2n + 1)^2\}^2 = (8a)^2 = 64a^2.$$

Again,  $a$  being prime to 3,  $a = 3\beta \pm 1$ ; therefore  $a^2 = 3\beta^2 + 1, a^4 = 3\beta^4 + 1$ ; therefore  $(a^2 - 1)(a^4 - 16) = 3\beta^2(3\beta^2 - 15) = 9\beta^2 \cdot 2(\beta^2 - 5)$ .

Again,  $a$  being prime to 5,  $a = 5\gamma \pm 1$  or  $5\gamma \pm 2$ ,  $a^2 = 5\gamma' \pm 1$ ,  $a^4 = 5\gamma'' + 1$ ; therefore  $(a^4 - 1) = 5\gamma''$ .

Thus the complete product is divisible by  $8 \times 64 \times 9 \times 5 = 23040$ .

Cor.—Similarly it may be shown that, if  $a, b$  be odd numbers and prime to 15, then the continued product to  $n$  terms  $(a^2 - b^2)(a^4 - b^4)(a^8 - b^8) \dots$  contains  $2^{4n(n+5)} \cdot 3^n \cdot 5^{n-1}$ .

14317. (G. H. HARDY, B.A.)—Prove FRULLANI'S theorem

$$\int_0^\infty \frac{\phi(ax) - \phi(bx)}{x} dx = \{\phi(\infty) - \phi(0)\} \log a/b,$$

extending it to apply to the cases in which (1)  $\phi(x)$ , while possessing a determinate integral near any value of  $x$ , has a discrete set of infinities in the range  $(0, \infty)$ ; (2) only the principal value of the integral is determinate. Consider also the case in which  $\phi(x)$  oscillates at infinity between finite or infinite limits. As examples, evaluate

$$\int_0^\infty \log \left( \frac{1 - pe^{-ax}}{1 - pe^{-bx}} \right) \frac{dx}{x}, \quad \int_0^\infty \left( \frac{e^{-ax} - e^{-bx}}{x} \right)^2 dx,$$

$$\int_0^\infty \left( \frac{1}{\cos ax} - \frac{1}{\cos bx} \right) \frac{dx}{x}, \quad \int_0^\infty \left( \frac{1}{\cos ax} - \frac{1}{\cosh bx} \right) \frac{dx}{x}.$$

[The last two integrals are defined by their principal values.]

Solution by the PROPOSER.

The usual proof of the formula is, if  $b > a$ ,

$$\lim_{h \rightarrow 0, H \rightarrow \infty} \int_h^H \frac{\phi(ax) - \phi(bx)}{x} dx = \lim_{h \rightarrow 0, H \rightarrow \infty} \left( \int_{ah}^{bh} + \int_{aH}^{bH} \right) \phi(x) \frac{dx}{x} = \{\phi(\infty) - \phi(0)\} \log a/b.$$

Now, provided  $\phi(\infty)$ ,  $\phi(0)$  be determinate, this remains valid under the conditions (1); for we can choose  $h, H$  initially so that all the infinities of  $\phi(ax)$ ,  $\phi(bx)$  fall in  $(h, H)$ . And the same is true under conditions (2).

Thus, 
$$\int_0^\infty \log \left( \frac{1 - pe^{-ax}}{1 - pe^{-bx}} \right) \frac{dx}{x} = \log(1-p)^2 \log \frac{b}{a},$$

whether  $p$  be  $>$  or  $<$  1. And

$$P \int_0^\infty \left( \frac{1}{1-ax} - \frac{1}{1-bx} \right) \frac{dx}{x} = \log \left( \frac{b}{a} \right).$$

[The rest in Vol.]

14239. (B. N. CAMA, M.A. In continuation of *Quests.* 14177 and 14207.)—If  $OP_1P_2 \dots, OQ_1Q_2 \dots$  be two vectors including a right angle, meeting an equiangular spiral (pole  $O$ ) in the points  $P_1, P_2, \dots, Q_1, Q_2, \dots$ , show that the parabolas drawn to touch the curve at  $P_1Q_1, P_2Q_2, \dots$ , and having the chords of contact for their focal chords are in geometrical progression; further, that their axes are parallel to a fixed line.

Solution by the PROPOSER.

It is clear that  $P_1Q_1$  is parallel to  $P_2Q_2$ . Now the latus rectum of the parabola  $P_1Q_1$  is

$$(OP_1^2 + OQ_1^2)^{\frac{1}{2}} \sin^2 \phi;$$

i.e., 
$$= a(e^{2\psi \cot \alpha} + e^{2(\psi - \pi) \cot \alpha})^{\frac{1}{2}} \sin^2 \phi$$

$$= ae^{\psi \cot \alpha} (1 + e^{-\pi \cot \alpha})^{\frac{1}{2}} \sin^2 \phi.$$

For the parabola  $P_2Q_2$ , it is

$$(OP_2^2 + OQ_2^2)^{\frac{1}{2}} \sin^2 \phi';$$

i.e., 
$$= a(e^{2(\psi + \pi) \cot \alpha} + e^{2(\psi + \pi - \pi) \cot \alpha})^{\frac{1}{2}} \sin^2 \phi'$$

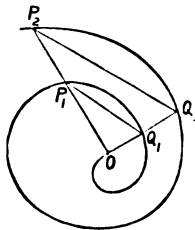
$$= ae^{(\psi + \pi) \cot \alpha} (1 + e^{-\pi \cot \alpha})^{\frac{1}{2}} \sin^2 \phi'.$$

Also  $\phi = \phi'$ , since each  $= 2(\psi - \alpha)$ .

Thus the latera recta are proportional to  $1, e^{\pi \cot \alpha}, e^{2\pi \cot \alpha}, \dots$ ;

therefore the curves are in G.P.

Also, the  $\phi$ 's being the same, and  $P_1Q_1, P_2Q_2, \dots$  being parallel, the axes are parallel.



QUESTIONS FOR SOLUTION.

14480. (Professor G. B. MATHEWS, M.A., F.R.S.)—Let the vertices  $X, Y, Z$  of an equilateral right-angled spherical triangle be denoted by 000, 010, 001; and let any point  $P$  be called rational and denoted by  $abc$  when  $\cos PX : \cos PY : \cos PZ = p_1 : p_2 : p_3$ , where  $p_1, p_2, p_3$  are positive integers. Further, let a triangle  $ABC$  whose vertices are rational be called a unit triangle when the determinant  $\Sigma \pm a_1 b_2 c_3 = \pm 1$ . It is required (1) to prove that, if  $ABC \dots L$  is a spherical polygon whose vertices are rational, it can be divided into unit triangles; (2) to find the least number of such triangles. [Example.—The triangle whose vertices are 100, 230, 503 can be decomposed into 12 unit triangles whose vertices are, respectively, (100, 110, 201), (110, 230, 311), (311, 230, 431), (431, 230, 321), (431, 321, 311), (311, 321, 522), (522, 321, 412), (622, 412, 311), (311, 412, 613), (613, 412, 503), (613, 503, 311), (311, 503, 201). Is this the simplest decomposition? If not, which is?]

14481. (H. M. TAYLOR, M.A., F.R.S. Suggested by *Quest.* 14382.)—On the sides of a triangle  $A'B'C'$ , triangles  $B'C'A, C'A'B, A'B'C$  are

constructed similar to three given triangles. Having given the triangle  $ABC$  and the three triangles, reconstruct the triangle  $A'B'C'$ .

14482. (Professor NEUBERG.)—Soient  $a, b, c, d$  les côtés  $AB, BC, CD, DA$  d'un quadrilatère sphérique  $ABCD$  circonscrit à un petit cercle. Démontrer la relation  $\sin a \sin b \cos^2 \frac{1}{2} B = \sin c \sin d \cos^2 \frac{1}{2} D$ .

14483. (Professor S. SIRCOM, M.A.)—Obtain the current function for the motion along  $OX$ , in an infinite liquid under no forces, of the cylinder whose right section is

$$\{(x+a)^2 + y^2\} \{(x-b)^2 + y^2\} = m(a+b)^2(x^2 + y^2),$$

where  $m > 1$ . [If  $m = 1$ , we have the case of two orthogonal circles.]

14484. (Professor A. DROZ-FARNY.)—On joint un point  $A$  de la directrice d'une parabole au sommet  $S$  de cette dernière.  $AS$  coupe la courbe en un second point  $B$ . La tangente en  $B$  rencontre en  $P$  le diamètre de la parabole mené par  $A$ . Tirons la deuxième tangente  $PC$ . La droite  $CB$  est normale en  $B$  à la parabole.

14485. (Professor SANJANA, M.A.)—Eliminate  $p$  and  $q$  from  $x = p(p-2), y = q(q+2)$ , and  $p^2 - q^2 = 4$ .

14486. (Professor COCHEZ.)—Courbe  $\rho^2 - 2\rho + \tan \omega - 3 = 0$ .

14487. (J. A. THIRD, D.Sc.)—In *Quest.* 14292, show that, if the locus of  $S$  is  $LMN$ , the locus of  $P$  is the conic which touches the sides of  $ABC$  at  $L', M', N'$ ; and that, if the locus of  $P$  is  $LMN$ , the locus of  $S$  is the circumconic which touches  $AL, BM, CN$ .

14488. (Professor UMES CHANDRA GHOSH.)—If the vertical angle  $A$  and base  $BC (= a)$  of a triangle  $ABC$  are given, show that the locus of its BROCARD points is

$$(x^2 + y^2)^2 - a(x^2 + y^2)(x + y \cot A) + 4R^2 y^2 = 0,$$

$R$  being the radius of the circumcircle of the triangle,  $B$  the origin, and  $BC$  the axis of  $x$ .

14489. (Professor N. BHATTACHARYYA.)—A triangle  $ABC$  is such that its circumcentre is coincident with the centre of its BROCARD ellipse. The lines  $AN, BQ, CR$  meet the opposite sides in  $D, E, F$ , respectively; and likewise the lines  $AN', BQ', CR'$  meet the opposite sides in  $D', E', F'$ , respectively. Let the lines  $EF, E'F'; FD, F'D'; DE, D'E'$  meet, produced, if necessary, in  $P, Q, R$ , respectively. Prove that (1) the lines  $AP, BQ, CR$  are concurrent; (2) the sum of the squares of the axes of the ellipse  $= 4(5R^2 - 2\Delta \cot \omega)$ , where  $R$  denotes the circumradius,  $\Delta$  the area, and  $\omega$  the BROCARD angle of the triangle.

14490. (D. BIDDLE. In continuation of *Quest.* 14457.)—Let it be known that a factor of  $N$  is  $\Delta p + 1$ , and let  $N = \Delta a + 1$ . Again, let  $a_1 = \Delta a_2 + c_2, a_2 = \Delta a_3 + c_3, \dots$ ; or, in general,  $a_n = (a_{n-1} + c_n)/\Delta$ . Prove that  $a_n - p c_n + p^2 c_{n-1} - p^3 c_{n-2} + \dots \pm p^n$  is a multiple of  $\Delta p + 1$ , for all values of  $n$  within the range. Further, supposing  $p$  to be unknown, show that, if  $a_n - n c_n + n^2 c_{n-1} - n^3 c_{n-2} + \dots \pm n^n$  be a multiple of  $\Delta n + 1$ , then  $\Delta n + 1$  is a factor of  $N$ .

14491. (R. TUCKER, M.A.)—Squares are described externally on the sides of the triangle  $ABC$ , and tangents are drawn from their centres to the incircle of the triangle. Prove that

$$2\Sigma(\text{tangents})^2 = 2\Delta(2 + 3 \cot \omega) - \Sigma(bc).$$

14492. (R. F. DAVIS, M.A.)—The tangent at any point  $P$  of the conic  $ax^2 + 2hxy + by^2 + 2fy = 0$  intersects the axis of  $x$  in  $T$ , and upon  $PT$  a point  $Q$  is taken such that the angle  $QOT = 2POT$ . Prove (without imaginaries) that the locus of  $Q$  is a straight line. Deduce FRÉCHET'S theorem.

14493. (J. H. TAYLOR, M.A.)—If  $A', B', C'$  are vertices of similar isosceles triangles described all externally, or all internally, on the sides of any plane triangle  $BCA$ , the straight lines  $AA', BB', CC'$  are equal and concurrent.

14494. (Rev. T. ROACH, M.A.)—Along the hedge of a circular field of radius  $r$  are placed  $2n$  heavy posts at equal distances. A man brings the posts together, one at a time, to one post. Show that the product of the  $2n - 1$  walks multiplied together  $= 2^{2n} \cdot r^{2n-1} \cdot n$ .

14495. (R. C. ARCHIBALD, M.A.)—The points  $p_1, p_2, p_3$ , where the three parallel tangents to a cardioid cut the double tangent perpendicular to the axis, are joined to the centre  $O$  of the fixed circle. Prove, geometrically or analytically, that the angles  $p_1Op_2, p_2Op_3$  are each equal to  $60^\circ$ .

14496. (G. H. HARDY, B.A.)—Prove that  $\Sigma \sigma^2(u) \sigma_1^2(v) \sigma_2^2(r) \sigma_3^2(r) = \{\rho(u+r) + \rho(u-r)\} \sigma^2(u+v) \sigma^2(u-v)$ ; the notation being that of WEIERSTRASS'S theory of elliptic functions, and the summation applying to the six possible divisions into pairs of the functions  $\sigma, \sigma_1, \sigma_2, \sigma_3$ .

14497. (R. P. PARANJPE, B.A.)—Show that any triangle can be projected into a triangle of given form so that the circle inscribed in the latter may have the projection of a given point as centre.

14498. (HUGH MACCOLL, B.A.)—Let  $A = \text{If } a \text{ is true, } x \text{ is true}$ ;  $B = \text{If } \beta \text{ is true, } x \text{ is true}$ ;  $C = \text{If } \alpha \text{ and } \beta \text{ are both true, } x \text{ is true}$ ;  $V = \text{If either } A \text{ or } B \text{ is true, } C \text{ is true}$ ;  $W = \text{If } C \text{ is true, either } A \text{ or } B$

B is true. Is V a formal certainty? Is W? As a particular case, suppose P and Q to be two poisons which are deadly when taken separately, but mutually counteracting and harmless when taken together, and that A = He has just taken P, B = He has just taken Q; and x = He will die (that is, from the poison or poisons).

**14499.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Prove that the continued product  $P = (a \mp b)(a^3 \mp b^3)(a^5 \mp b^5) \dots (a^{2n-1} \mp b^{2n-1})$  is divisible by  $\{(2n)! + (2^n \cdot n!)\}^{n+1}$  if  $(a \mp b)$  is divisible by  $(2n)! + (2^n \cdot n!)$ .

**14500.** (G. D. WILSON, B.A.)—Prove that, for the series 1, 3, 11, 41, ... in which  $u_{n+1} + u_{n-1} = 4u_n$ ,  
 $u_p + u_q = u_{\frac{1}{2}(p+q)} \{u_{\frac{1}{2}(p-q)} + u_{\frac{1}{2}(p+q+1)}\}$ , if  $p+q$  be even,  
 and  $u_p + u_q = u_{\frac{1}{2}(p+q+1)} \{u_{\frac{1}{2}(p+q-1)} + u_{\frac{1}{2}(p+q+1)}\}$ , if  $p+q$  be odd.

**14501.** (Rev. T. WIGGINS, B.A.)—Given a triangle ABC, find a point D within it such that  $DA^2 + DB^2 + DC^2$  is a minimum.

**14502.** (J. J. BARNVILLE, B.A.)—Having  $u_{n-1} + u_{n+1} = 7u_n$ , prove that  

$$\frac{1}{1+1} + \frac{1}{6+1} + \frac{1}{41+1} + \frac{1}{281+1} + \dots = 2\sqrt{5}$$

$$\frac{1}{1+6} + \frac{1}{6+6} + \frac{1}{41+6} + \frac{1}{281+6} + \dots = 16\sqrt{5}$$

$$\frac{1}{2+3} + \frac{1}{7+3} + \frac{1}{47+3} + \frac{1}{322+3} + \dots = \frac{\sqrt{5}+1}{10}$$

$$\frac{1}{2+7} + \frac{1}{7+7} + \frac{1}{47+7} + \frac{1}{322+7} + \dots = 18$$

$$\frac{1}{1+1} + \frac{1}{8-1} + \frac{1}{55+1} + \frac{1}{377-1} + \dots = \frac{\sqrt{5}}{6}$$

$$\frac{1}{1^2+1} + \frac{1}{2^2+1} + \frac{1}{13^2+1} + \frac{1}{89^2+1} + \dots = \frac{\sqrt{5}+2}{6}$$

**14503.** (ROBERT W. D. CHRISTIE.)—Show that the primitive roots of 331 are connected with the associated roots by the modular equations  $r^m = \omega \pmod{331}$ ,  $r_1^m = -\omega^2 \pmod{331}$ ,

where  $r$  is a primitive, and  $r_1$  an associated, root; also  $\omega$  signifies one of the roots of  $x^3 + 1 = 0$ , namely,  $\frac{1}{2}\{1 + \sqrt{-3}\}$  or  $\frac{1}{2}\{1 - \sqrt{-3}\}$ ; and generalize the result.

**14504.** (R. KNOWLES.)—The circle of curvature is drawn at a point P of a parabola; PQ is the common chord: an ordinate from P to the diameter through the focus meets the parabola in R, and a diameter through Q in O. If T be the pole of PQ with respect to the parabola, prove that TO, PQ, and the tangent at R are parallel.

**14505.** (ANON.)—A small ring P of mass  $m$  is acted on by gravity, and by a force  $\mu PA$  towards a fixed point A. It is placed on a circular wire, radius  $a$ , angle of friction  $\frac{1}{4}\pi$ , at rest in a vertical plane, with its centre C vertically below A. If  $AC = c$  and  $(\mu c - mg)\sqrt{3} = \mu a$ , find the limits between which equilibrium may exist. If the wire be slowly rotated in its plane around its centre, what will happen to the small ring when released from rest, distinguishing the different portions of the ring according to the effect produced? [Trinity College, 1895.]

**14506.** (Rev. J. CULLEN.)—Let  $H \equiv a_1, a_1, \dots, a_n \pmod{P} \equiv \beta_1, \beta_2, \dots, \beta_m \pmod{Q}$  be the possible forms of the half-sums of the factors of a given number N; P being the product of certain small primes,  $2^r, 3^s$ , and  $\Delta^2$  (the factors being of the known form  $\Delta m + 1$ ), and Q the product of two (or more) primes not contained in P. Then, if the solutions of

$$P\lambda + \alpha_1 \equiv \beta_1, \beta_2, \dots, \beta_m + \mu Q = P\lambda' + \alpha_2$$

be  $\lambda \equiv \beta'_1, \beta'_2, \dots, \beta'_m \pmod{Q}$  and  $\lambda' \equiv \beta''_1, \beta''_2, \dots, \beta''_m \pmod{Q}$ , show (1) that  $\beta'_1 - \beta'_1 = \dots = \beta''_m - \beta''_m = d$ , a constant; (2) how to draw up a strip for a prime  $p$  (not contained in P or Q) with  $n$  symbols corresponding to  $\alpha_1, \alpha_2, \dots, \alpha_n$  in each division; (3) that the same strip can be used for  $\beta_1, \beta_2, \dots$  [The tentative work for numbers like 54, 979, 718, 449, 197 (factor of  $10^{16} - 1$ ) may be much shortened in this manner, and the strips may be written down from position.]

**14507.** (EDWARD V. HUNTINGTON, A.M.)—Given  $f(x_1) + f(x_2) + \dots + f(x_n) = 0$ , where the  $x$ 's may be chosen at pleasure provided  $x_1 + x_2 + \dots + x_n = 0$ . It is evident that, if  $f(x) = Cx$ , the condition is satisfied. Prove that this is the only admissible form of the function.

**14508.** (W. H. SALMON, B.A.)—The frustum of a pyramid with quadrilateral base is such that the intersections of the opposite faces are coplanar (A); prove that (1) the diagonals of the frustum are concurrent (O); (2) each diagonal of the frustum is divided harmonically by O and its point of intersection with A; (3) the diagonals of each face are divided harmonically by their point of intersection and the plane A.

**14509.** (I. ARNOLD.)—Given two circles, one within the other, a point P can be found such that the extreme portions of any right line cutting both circles shall subtend equal angles at P.

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6405.** (The late Professor SYLVESTER, F.R.S.)—If  $p, q, r, s$  are the distances of a point in a circular cubic from the four concyclic foci A, B, C, D, prove that

$$\begin{aligned} \frac{(p-q)(q-r)(r-p)}{ABC} &= \frac{(q-r)(r-s)(s-q)}{BCD} \\ &= \frac{(r-s)(s-p)(p-r)}{CDA} = \frac{(s-p)(p-q)(q-s)}{DAB} \end{aligned}$$

**6409.** (Professor MATZ, M.A.)—A point is taken at random on each side of a regular hexagon, and these points are joined by straight lines to the centre of the hexagon. On each one of these lines a point is taken at random. If the first set of random points be joined in their respective order, find the mean area of the hexagon thus formed; also, do the same if the second set of random points be joined in their respective order.

**6419.** (J. J. WALKER, M.A.)—Three lines in space are determined each by a pair of planes

$$m_1 \equiv B_1y + C_1z + 1 = 0, \quad x + u_1 = 0, \quad (n_1 \equiv D_1y + E_1z) \dots$$

Prove that the equation to the pair of planes through the axis  $y = 0, z = 0$ , and one of the two lines meeting it and each of those three lines, is

$$\begin{vmatrix} 1 & 1 & 1 \\ m_1 & m_2 & m_3 \\ n_1 & n_2 & n_3 \end{vmatrix} = 0.$$

**6467.** (Colonel CLARKE, C.B., F.R.S.)—A given finite straight line is intersected in two points by a circle; find (1) the most probable length of the intercepted segment, and (2) the chance that it contains the middle point of the given line.

**6487.** (W. A. WHITWORTH, M.A.)—Express all the numbers from 1 to 140 by four nines. Algebraical symbols and decimal points may be used, but the expression for each number must contain the four nines and no other figure. Also express the same series of numbers by four fours. [As an example of what is required, Mr. WHITWORTH gives the number 34 thus:— $34 = (99 + \sqrt{9})/\sqrt{9} = 4 \times 4 \times \sqrt{4} + \sqrt{4}$ .]

**6495.** (W. S. B. WOOLHOUSE, F.R.A.S.)—If within a given enclosed area three points be taken at random as the apices of a triangle, show that (1) the average of the square of the area of all such triangles will be reduced to one-third the value, if one of the points be fixed at the centre; also, (2) if within a given volume of space four points be taken at random as the apices of a tetrahedron, the average of the square of the volume of all such tetrahedra will be reduced to one-fourth the value if one point be fixed at the centre; and (3) that this theorem is true when the enclosed area or volume of space is of any form whatever.

NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to

D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXII. of the "Mathematical Reprint" is nearly ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.O. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

THE LONDON MATHEMATICAL SOCIETY.

Thursday, February 8, 1900.—Professor Elliott, F.R.S., Vice-President, and subsequently Lt.-Col. Cunningham, R.E., Vice-President, in the Chair. Twelve members present.

Professor Elliott announced that the Council had passed the following resolution, viz.: "That, the objects of the London Mathematical Society requiring that it shall consist of more than 250 members, it is resolved that the number of its members may be increased by further elections to 350"; and that the same had been registered at Somerset House.

Professor Love gave a sketch of a paper by Mr. J. H. Michell, entitled "Some Elementary Distributions of Stress in Three Dimensions." Dr. J. Larmor joined in a discussion of the paper.

Major MacMahon gave an interesting account of recent work on "Combinatorial Analysis: the Foundation of a New Theory." Lt.-Col. Cunningham asked several questions on the subject of the communication.

The following papers were taken as read—

"A Formula in the Theory of the Theta Functions," by Prof. A. C. Dixon.

"The Canonical Reduction of a Pair of Bilinear Forms" and "Reduction of a Generalized Linear Substitution to a Canonical Form; with a Dynamical Application," by Mr. Bromwich.



# BELL'S ILLUSTRATED CLASSICS

Edited by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School.

THE special object of the Series is to make the editions as interesting and helpful as possible to the intelligent learner; and with this end in view, in addition to the usual apparatus of Introductions, Notes, Exercises, Grammatical Appendices, and Vocabularies, **Numerous Illustrations** have been introduced. These are gathered from the best sources, and chosen with a view to explaining the text, and making the reader more familiar with Greek and Roman life. Most of the Illustrations have been specially redrawn.

**Maps and Plans** are also inserted as required.

The Volumes are printed at the Oxford University Press, in pott 8vo size, and are issued at the uniform rate of **1s. 6d.** each (with or without Vocabularies).

The Texts and Vocabularies (without Notes), limp cloth, cut flush, **1s.** each.

## NOW READY.

- Cæsar.—De Bello Gallico. Book I.** Edited by A. C. LIDDELL, M.A., Assistant-Master at Nottingham High School. [*Shortly.*]
- Cæsar.—De Bello Gallico. Book II.** Edited by A. C. LIDDELL, M.A.
- Cæsar.—De Bello Gallico. Book III.** Edited by F. H. COLSON, M.A., Headmaster of Plymouth College, and G. M. GWYTHER, M.A., Assistant-Master.
- Cæsar.—De Bello Gallico. Book IV.** Edited by the Rev. A. W. UPCOTT, M.A., Headmaster of St. Edmund's School, Canterbury. Prescribed for London Matric. and O. and C. Schools.
- Cæsar.—De Bello Gallico. Book V.** Edited by A. REYNOLDS, M.A., Assistant-Master at Merchant Taylors' School. [*Shortly.*] Prescribed for London Matric., Oxford Local, O. and C. Schools, and College of Preceptors Certificate.
- Cæsar.—De Bello Gallico. Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. Prescribed for Cambridge Local and College of Preceptors Certificate.
- Virgil.—Æneid. Book I.** Edited by the Rev. E. H. ESCOTT, M.A., Assistant-Master at Dulwich College. [*March.*]
- Virgil.—Æneid. Book II.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School. Prescribed for London Matric., January, 1901.
- Virgil.—Æneid. Book III.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School. With a Map of the Wanderings of Æneas.
- Virgil.—Æneid. Book IV.** Edited by A. S. WARMAN, B.A., Assistant-Master at the Grammar School, Manchester.
- Virgil.—Æneid. Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. [*Preparing.*] Prescribed for Cambridge Local and College of Preceptors Certificate.
- Selections from Virgil's Æneid, Books VII.—XII.** Edited by W. G. COAST, B.A., Assistant-Master at Fettes College. [*Shortly.*]
- Eutropius. Books I. and II.** Edited by J. G. SPENCER, B.A., Assistant-Master at St. Paul's Preparatory School. Prescribed for College of Preceptors Certificate.
- Horace.—Odes. Book I.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School.
- Horace.—Odes. Book II.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School. [*Preparing.*]
- Horace.—Odes. Book III.** Edited by H. LATTER, M.A., Assistant-Master at Cheltenham College. [*Preparing.*]
- Cicero.—Speeches against Catiline, I. and II.** Edited by F. HERRING, M.A., Assistant-Master at Blundell's School, Tiverton. [*Shortly.*]
- Selections from Cicero.** Edited by J. F. CHARLES, B.A., Assistant-Master at the City of London School. [*Shortly.*]
- Xenophon.—Anabasis. Book I.** Edited by E. C. MARCHANT, M.A. [*March.*]
- Cornelius Nepos.—Epaminondas, Hannibal, Cato.** Edited by H. L. EARL, M.A., Assistant-Master at the Grammar School, Manchester.
- Livy. Book IX., chaps. i.—xxix.** Edited by W. C. FLAMSTEAD WALTERS, M.A.
- Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI., and edited by F. E. A. TRAYNE, M.A., Assistant-Master at St. Paul's School.
- Ovid.—Metamorphoses. Book I.** Edited by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School.
- Selections from Ovid's Metamorphoses.** Edited by J. W. E. PEARCE, M.A., Merton Court Preparatory School, Sidcup.
- Phædrus.—A Selection.** Edited by the Rev. R. H. CHAMBERS, M.A., Headmaster of Christ's College, Brecon. [*Shortly.*]
- Stories of Great Men.** Edited by the Rev. F. CONWAY, M.A., Assistant-Master at Merchant Taylors' School. [*Shortly.*]
- Elegiac Selections from Ovid.** Edited by F. COVERLEY SMITH, B.A., Assistant-Master at the High School, Nottingham. [*In the press.*]
- Ovid's Tristia. Book III.** Edited by H. R. WOOLRYCH, M.A., Headmaster of Blackheath School. [*In the press.*]

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the Illustrated Classics. Price One Shilling each.

**Scalæ Primæ.** Simple Stories and Fables for Translation. With Notes and Vocabulary. By J. G. SPENCER, B.A., St. Paul's Preparatory School.

**Scalæ Mediæ.** Extracts from Eutropius and Cæsar. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A.

**Scalæ Tertie.** Graduated Extracts in Prose and Verse from Cæsar, Nepos, Phædrus, and Ovid. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. [*In preparation.*]

SPECIMEN COPIES POST FREE TO HEADMASTERS ON APPLICATION.

# OXFORD UNIVERSITY PRESS.

## MILTON.

JUST ISSUED. 8vo, price 7s. 6d.

### THE POETICAL WORKS OF JOHN MILTON.

EDITED BY H. C. BEECHING, M.A.

After the Original Text, with Facsimiles.

Also published by Henry Frowde, in the following sizes:—

WITH PORTRAIT AND FACSIMILES.

1. LARGE (LONG PRIMER) TYPE, Crown 8vo, 560 pages, cloth, boards, gilt top, 3s. 6d.
2. THE SAME, printed upon Oxford India Paper, superfine cloth, gilt top, 8s.  
(In these Editions the original spelling and punctuation are reproduced.)
3. MINIATURE EDITION, In one Volume, printed on Oxford India Paper, 32mo, 4 $\frac{3}{4}$  × 2 $\frac{1}{4}$  ×  $\frac{7}{8}$  inches, superfine cloth, 3s. 6d.  
(In this case the spelling and punctuation are modern.)

All these Volumes may be had in a variety of superior leather bindings produced at the Oxford University Press Binding House.

**Milton.—Areopagitica.** With Introduction and Notes. By JOHN W. HALES, M.A. New Edition. Extra fcap. 8vo, 3s.

— **Poems.** Edited by R. C. BROWNE, M.A. In two Volumes. New Edition, Revised. Extra fcap. 8vo, 6s. 6d. Sold separately, Vol. I., 4s.; Vol. II., 3s. In paper covers:—*Lycidas*, 3d.; *Comus*, 6d. Edited with Notes, by O. ELTON, B.A.:—*Lycidas*, 6d.; *L'Allegro*, 4d.; *Il Penseroso*, 4d.; *Comus*, 1s.

— **Paradise Lost.** Book I. Edited by H. C. BEECHING, M.A. Extra fcap. 8vo, stiff covers, 1s. 6d.; in parchment, 3s. 6d.

— **Paradise Lost.** Book II. Edited by E. K. CHAMBERS, B.A. Extra fcap. 8vo, 1s. 6d. \* \* \* Books I. and II. combined, 2s. 6d.

— **Samson Agonistes.** Edited, with Introduction and Notes, by J. CHURTON COLLINS, M.A. Extra fcap. 8vo, stiff covers, 1s.

**Milton's Prosody.** By ROBERT BRIDGES. Extra fcap. 8vo, stiff covers, 1s. 6d.

**Johnson's Life of Milton.** Edited by C. H. FIRTH, M.A. Extra fcap. 8vo, cloth, 2s. 6d.; stiff covers, 1s. 6d.

**Fuller.—Wise Words and Quaint Counsels of Thomas Fuller.** Selected by AUGUSTUS JESSOPP, D.D. Crown 8vo, 6s.

**Clarendon.—History of the Rebellion.** Book VI. Edited by T. ARNOLD, M.A. Second Edition. Crown 8vo, 5s.

— **Characters and Episodes of the Great Rebellion.** Selections from Clarendon. Edited by G. BOYLE, M.A., Dean of Salisbury. Crown 8vo, gilt top, 7s. 6d.

**Chaucer.—The Prologue to the Canterbury Tales.** (School Edition.) Edited by W. W. SKEAT, Litt.D. Extra fcap. 8vo, 1s.

— **The Prologue, The Knight's Tale, The Nonne Preestes Tale;** from the *Canterbury Tales*. Edited by R. MORRIS, LL.D. A New Edition, with Collations and Additional Notes by W. W. SKEAT, Litt.D. Extra fcap. 8vo, 2s. 6d.

— **The Prioresse Tale, Sir Thopas, The Monkes Tale, The Clerkes Tale, The Squires Tale, &c.** Edited by W. W. SKEAT, Litt.D. Seventh Edition, Revised. Extra fcap. 8vo, 4s. 6d.

— **The Tale of the Man of Lawe, The Pardoner's Tale, The Second Nonnes Tale, The Chanouns Yemannes Tale.** By W. W. SKEAT, Litt.D. New Edition, Revised. Extra fcap. 8vo, 4s. 6d.

— **Minor Poems.** Edited by W. W. SKEAT, Litt.D. Second Edition, Crown 8vo, 10s. 6d.

— **The Hous of Fame.** Edited by W. W. SKEAT, Litt.D. Crown 8vo, paper boards, 2s.

— **The Legend of Good Women.** Edited by W. W. SKEAT, Litt.D. Crown 8vo, 6s.

Just Published. Crown 8vo, cloth limp, 1s. 6d.

**Glossarial Index to the Works of Geoffrey Chaucer.** By the Rev. WALTER W. SKEAT, Litt.D.

**Langland.—The Vision of William concerning Piers the Plowman.** By WILLIAM LANGLAND. Edited, with Notes, by W. W. SKEAT, Litt.D. Sixth Edition. Extra fcap. 8vo, 4s. 6d.

**Gamelyn, The Tale of.** Edited, with Notes, Glossary, &c., by W. W. SKEAT, Litt.D. Second Edition, Revised. Extra fcap. 8vo, stiff covers, 1s. 6d.

**Spenser's Faery Queene.** Books I. (New Edition) and II. Designed chiefly for the use of Schools. With Introduction and Notes by G. W. KITCHIN, D.D., and Glossary by A. L. MAYHEW, M.A. Extra fcap. 8vo, 2s. 6d. each.

**Dryden.—An Essay of Dramatic Poesy.** Edited, with Notes, by THOMAS ARNOLD, M.A. Second Edition, Extra fcap. 8vo, 3s. 6d.

**Burke.—Select Works.** Edited, with Introduction and Notes, by E. J. PAYNE, M.A.

I. *Thoughts on the Present Discontents: the Two Speeches on America.* Second Edition. Extra fcap. 8vo, 4s. 6d.

II. *Reflections on the French Revolution.* Second Edition. Extra fcap. 8vo, 5s.

III. *Four Letters on the Proposals for Peace with the Regicide Directory of France.* Second Edition. Extra fcap. 8vo, 5s.

**Johnson's Rasselas.** Edited, with Introduction and Notes, by G. BIRKBECK HILL, D.C.L. Extra fcap. 8vo, cloth flush, 2s.; in parchment, 4s. 6d.

**Johnson.—Rasselas; and Lives of Dryden and Pope.** Edited by ALFRED MILNES, M.A. Extra fcap. 8vo, 4s. 6d.

\* \* \* *Lives of Dryden and Pope only*, stiff covers, 2s. 6d.

**Vanity of Human Wishes.** With Notes, by E. J. PAYNE, M.A. Paper covers, 4d.

**Scott.—Lay of the Last Minstrel.** By W. MINO, M.A. With Map. Second Edition. Extra fcap. 8vo, 1s. 6d.; in parchment, 3s. 6d.

#### MASSON'S FRENCH CLASSICS.

Edited by GUSTAVE MASSON, B.A.

**Cornille's Cinna.** With Notes, Glossary, &c. Extra fcap. 8vo, 2s.; stiff covers, 1s. 6d.

— **Molière's Les Femmes Savantes.** With Fontenelle's *Life of Cornille*, and Notes. Extra fcap. 8vo, 2s. 6d.

**Louis XIV. and his Contemporaries.** As described in Extracts from the best Memoirs of the Seventeenth Century. With English Notes, Genealogical Tables, &c. Extra fcap. 8vo, 2s. 6d.

**Maistre, Xavier de, &c.—Voyage autour de ma Chambre.** By XAVIER DE MAISTRE. *Ouirika.* By Madame DE DURAS. *Le Vieux Tailleur.* By M. ERCKMANN-CHATRIAN. *La Veillée de Vincennes.* By ALFRED DE VIGNY. *Les Jumeaux de l'Hôtel Cornille.* By EDMOND ABOUT. *Mésaventures d'un Écolier.* By RODOLPHE TOFFER. Third Edition, Revised. Extra fcap. 8vo, 2s. 6d.

— **Voyage autour de ma Chambre.** Limp, 1s. 6d.

**Molière's Les Fourberies de Scapin.** With Voltaire's *Life of Molière.* Extra fcap. 8vo, stiff covers, 1s. 6d.

— **Les Femmes Savantes.** With Notes, Glossary, &c. Extra fcap. 8vo, cloth, 2s.; stiff covers, 1s. 6d.

**Bernard's Le Joueur, and Bruey's and Palaprat's Le Grondeur.** Extra fcap. 8vo, 2s. 6d.

**Sévigné, Madame de, and her chief Contemporaries.** Selections from their Correspondence. Extra fcap. 8vo, 3s.

#### LANGE'S GERMAN COURSE.

By HERMANN LANGE, Lecturer on French and German at the Manchester Technical School, and Lecturer on German at the Manchester Athenæum.

**I.—Germans at Home.** A Practical Introduction to German Conversation, with an Appendix containing the Essentials of German Grammar. Third Edition. 8vo, 2s. 6d.

**II.—Grammar of the German Language.** 8vo, 3s. 6d.

**III.—German Manual.** A German Grammar, Reading Book, and a Handbook of German Conversation. Second Edition. 8vo, 7s. 6d.

**IV.—German Composition.** A Theoretical and Practical Guide to the Art of Translating English Prose into German. Third Edition. 8vo, 4s. 6d.

\* \* \* *A Key to the above, price 5s. net.*

**German Spelling.** A Synopsis of the Changes which it has undergone through the Government Regulations of 1880. 6d.

**Dante.—Tutte Le Opere di Dante Alighieri,** nuovamente rivedute nel testo dal Dr. E. MOORE: Con Indice dei Nomi Propri e delle Cose Notabili, compilato da PAGET TOYNBEE, M.A. Crown 8vo, 7s. 6d.

\* \* \* Also, an India Paper Edition, cloth extra, 9s. 6d.; and Miniature Edition, 3 vols., in case, 10s. 6d.

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.

# EDUCATIONAL LIBRARY AND TIMES,

Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 468.

APRIL 2, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—In addition to the Doreck Scholarship of £20, the following Prizes will be competed for:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, JULY AND DECEMBER, 1900.

Notice is hereby given that at the above Examinations the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book VI., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

**PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.  
Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS AND ASSISTANT-MASTERS' ASSOCIATION.

A Meeting will be held at the College, Bloomsbury Square, on Wednesday, 4th April, when a Paper will be read by A. H. KAHN, Esq., M.A., on "Commercial Education in Secondary Schools."

The Chair will be taken at 7.30 p.m. by W. GARNETT, Esq., M.A., D.C.L.  
A Discussion will follow the reading of the Paper.

## COLLEGE OF PRECEPTORS.

### THE CALENDAR FOR 1900

is now ready, and may be obtained from Mr. F. HODGSON, 89 Farringdon Street, E.C. Price, free by post,

To Members of the College ... 1s. 6d.

To Non-Members ... 2s. 6d.

The Calendar contains, in addition to the Lists of Members, and of Schools sending in candidates to the Certificate Examinations, the Regulations respecting the Examinations to be held in 1900, &c., and the

### EXAMINATION PAPERS

set at the Certificate, Junior Forms, Professional Preliminary, and Diploma Examinations held in 1899.

### UNIVERSITY DIPLOMA FOR WOMEN.

**THE UNIVERSITY OF ST. ANDREWS** grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## ROYAL INDIAN ENGINEERING

COLLEGE, COOPERS HILL, STAINES.—The Course of Study is arranged to fit an Engineer for employment in Europe, India, and the Colonies. About 40 Students will be admitted in September, 1900; the Secretary of State will offer them for competition Twelve Appointments as Assistant Engineers in the Public Works Department, and Three Appointments as Assistant Superintendents in the Telegraphs Department, and One in the Accounts Branch P.W.D. For particulars apply to SECRETARY at College.

## KING'S COLLEGE, CAMBRIDGE.

—There will be a Competition for Two CHORAL SCHOLARSHIPS (one Tenor and one Bass) on Thursday, May 17; stipend £80 each for three years, with certain allowances of the value of about £25 a year. The successful candidates will be required to enter the College, as Members of the University, not later than July 5, 1900. For further information apply to the DEAN.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.  
Principal—The Rev. DAVID J. THOMAS, M.A.  
Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## MEDICAL SCHOOLS.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.  
CHARING CROSS HOSPITAL MEDICAL SCHOOL.  
DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.  
LONDON HOSPITAL MEDICAL COLLEGE.

(For particulars of the above, see next page.)

## LONDON COLLEGE OF MUSIC.

(Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FOR MUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: His GRACE THE DUKE OF LEEDS.

Dr. F. J. KAHN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in July (June for Scotland and Ireland), when certificates will be granted to all successful candidates. Last day for entry (England), June 15, (Scotland and Ireland), May 19.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Piano-forte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## University Correspondence College.

## FREE GUIDES

TO

## LONDON UNIVERSITY EXAMS.

FREE GUIDE TO MATRICULATION

(Postage 1d.),

INTER. ARTS, INTER. SCIENCE, B.A., OR

INTER. LAWS EXAMINATION.

Any one of the above Guides, Prospectus, and further particulars will be sent post free on application to

THE SECRETARY,

(Univ. Corr. Coll., London Office.)

82 Red Lion Square, London, W.C.

## ST. THOMAS'S HOSPITAL MEDICAL SCHOOL, ALBERT EMBANKMENT, S.E.

The SUMMER SESSION will commence on TUESDAY, May 1st.

Students entering in the summer are eligible to compete for the Science Scholarships of £150 and £60 awarded in October.

A Scholarship of £50, open to University students, and other prizes and scholarships of the value of £500, are offered for annual competition.

All appointments are open to students without extra payment.

Special Classes for the Examinations of the University of London are held throughout the year.

Tutorial Classes are held prior to the Second and Final Examinations of the Conjoint Board in January, April, and July.

A register of approved lodgings and of private families receiving boarders is kept in Secretary's office.

Excellent Day Club accommodation is provided in the school building, and an athletic ground at Chiswick.

Prospectuses and all particulars may be obtained from the Medical Secretary, Mr. G. RENDLE.

H. P. HAWKINS, M.A., M.D. Oxon., *Dean*.

## CHARING CROSS HOSPITAL MEDICAL SCHOOL.

The SUMMER SESSION, 1900, will commence on Tuesday, May 1st.

The Livingstone Scholarship (100 guineas), the Huxley Scholarship (55 guineas), and six other Entrance Scholarships, total value £550, are awarded annually.

Two Scholarships of the value of 60 guineas each are reserved for Students of Oxford, Cambridge, or London University.

Students who join in Summer have the same privileges, as regards Scholarships, &c., as Students joining in October of the same year.

FEES.—For the five years' curriculum of study required by the various Examining Bodies and for Hospital Practice, 110 guineas in one sum, or 121 guineas in five instalments.

The composition fee for sons of registered medical practitioners is 100 guineas, and the fee by instalments, 110 guineas in five payments.

The composition fee for Dental Students is 54 guineas, or 60 guineas payable in two instalments of 30 guineas each.

A proportionate reduction of the above Fees is made to Students who have completed part of the curriculum elsewhere.

CHARING CROSS HOSPITAL is within three minutes' walk of the Dental Hospital of London, and the hours of Lectures are arranged to suit the convenience of both General and Dental Students.

The Hospital and School are situated within two minutes of both Charing Cross Stations, and the Athletic Ground at Eltham can be reached within half an hour from Charing Cross.

**THE SCHOOL PROSPECTUS, containing full information concerning the classes, prizes, and all other arrangements connected with the Medical School, will be sent on application to the Dean, Chandos Street, Strand, W.C.**

H. MONTAGUE MURRAY, *Dean*.

## THE DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, LEICESTER SQUARE.

The SUMMER SESSION, 1900, will commence on Tuesday, May 1st.

*Dental Anatomy and Physiology* (Human and Comparative)—Charles S. Fomes, F.R.S., M.A. Oxon., F.R.C.S., L.D.S., on Tuesdays and Thursdays, at 5 p.m. (Summer). (*Demonstrator*—A. Hopewell Smith, L.R.C.P., M.R.C.S., L.D.S.)

*Dental Surgery and Pathology*—William Hern, M.R.C.S., L.D.S., on Tuesdays and Fridays, at 8 a.m. (Summer). (*Demonstrator*—R. Herschell, L.D.S.)

*Mechanical Dentistry*—E. Lloyd Williams, L.R.C.P., M.R.C.S., L.D.S., L.S.A., on Wednesdays, at 5.30 p.m. (Winter).

*Metalurgy and its application to Dental Purposes*—Dr. Forster Morley, M.A., F.I.C., F.C.S., on Thursdays, at 5 p.m. (Winter). (*Demonstrator*—Percy Richards, F.I.C., F.C.S.)

The Hospital is open both morning and afternoon. During the Sessions the Surgeons of the day will give demonstrations at stated hours.

The Medical Tutor holds classes before each Examination for the L.D.S.

The House Surgeons attend daily while the Hospital is open.

The Saunders and Walker Scholarships, of £20 per annum each, and prizes are open for competition.

Fee for two years' Hospital Practice required by the curriculum, including Lectures, £50 in one payment, or 50 guineas in two yearly instalments. The curriculum requires two years to be passed at a General Hospital. The fee for this is about £55. Both Hospitals can be attended simultaneously.

The Fee for Three Years' Tuition in Mechanical Dentistry is 150 guineas.

The Calendar may be obtained on application to the DEAN, who attends at the Hospital on Wednesday mornings from 10.30 till 12 throughout the year.

MORTON SMALE, *Dean*.

## THE MIDDLESEX HOSPITAL MEDICAL SCHOOL, MORTIMER STREET, LONDON, W.

The SUMMER SESSION, 1900, will commence on Tuesday, May 1st.

Full opportunities for study are offered to students preparing for any of the Examinations in Medicine and Surgery in the United Kingdom.

Classes will be held in the following subjects:—Midwifery, Pathology, Pathological Histology, Bacteriology, Forensic Medicine and Public Health, Anatomy, Practical Physiology and Histology, Chemistry and Practical Chemistry, Materia Medica, Therapeutics, Psychological Medicine with Clinical Demonstrations, Practical Pharmacy.

Students entering in May are eligible to compete for the Entrance Scholarships (value £100 and £60) awarded at the commencement of the ensuing Winter Session. The Brodrip Scholarships, Governor's Prize, Hetley Prize, Lyell Medal, Leopold Hudson Prize, and Freeman Scholarship, are awarded annually, the Murray Scholarship (in connexion with the University of Aberdeen) every third year. Eighteen resident appointments are open for competition annually, without fee.

The composition fee, admitting to the whole curriculum, is 135 guineas; if paid in three instalments, first instalment 60 guineas.

For University of London Students requiring Preliminary Science Instruction, 150 guineas, or by instalments. For members of Universities recognized by the General Medical Council and other Students who have completed their Anatomical and Physiological Studies the fee for admission as General Student is 70 guineas, or by instalments, 75 guineas. Students from the Universities of Oxford and Cambridge entering in May are eligible to compete for the University Scholarship of £60 awarded at the commencement of the Winter Session. Fee for Dental Students, 54 guineas.

The New Laboratories and Class-rooms for Physiology, Chemistry, Biology, Pathology, Bacteriology, with all modern improvements, as well as a new and larger Dissecting Room and Operative Surgery Room are now in regular use.

The Residential College contains accommodation for thirty Students.

For prospectus and further particulars apply to

W. PASTEUR, M.D., *Dean*.

## LONDON HOSPITAL MEDICAL COLLEGE.

The SUMMER SESSION commences on May 1. Students entering then are eligible to compete for the Entrance Scholarships in September and October. Twenty-seven Scholarships and Prizes are offered annually.

Special arrangements are made to meet the requirements of students entering in the Summer Session. A reduction of 15 guineas is allowed to the sons of members of the profession.

Engagement of the College.—The new Laboratories and Class-rooms for Bacteriology, Public Health, Operative Surgery, Chemistry, Biology, &c., are now open.

For prospectus and full particulars apply to

Mile End, E. MUNRO SCOTT, *Warden*.

## Diploma Correspondence College.

The ONLY College that coaches SOLELY for

# A.C.P., L.C.P., AND F.C.P.

SUCCESSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.

## SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

No extras. Resident Governesses.

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

**MB. H. A. NESBITT** (joint-author of "The Science and Art of Arithmetic," by A. SONNENSCHNIG and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.

## BEDFORD COLLEGE, LONDON (FOR WOMEN), YORK PLACE, BAKER STREET, W.

The Easter Term begins on Thursday, April 26th. Lectures are given in all branches of General and Higher Education.

Students are prepared for all the University of London Examinations in Arts and Science.

A single course of Lectures in any subject may be attended.

There is a Department for Professional Training in Teaching and an Art School.

Students can reside in the College.

Prospectus and all particulars on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN), YORK PLACE, BAKER STREET, W.

ENTRANCE SCHOLARSHIPS.

The Henry Tate Scholarship in Science, annual value £50; a Pfeiffer Scholarship in Science, annual value £48; a Reid Scholarship in Arts, annual value £31.10s.; all tenable for three years, will be awarded on the results of the Examination to be held at the College on June 26th and 27th. Candidates must be under 19 years of age on the first day of the examination.

For further information apply to the PRINCIPAL.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS, SALSBURY ROAD, BRONDESBURY, LONDON, N.W.

Principal—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEPIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

TRAINING COLLEGE FOR TEACHERS—

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## ST. GEORGE'S TRAINING COL- LEGE FOR WOMEN TEACHERS IN SECOND- ARY SCHOOLS AND IN FAMILIES.—This College

provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University, Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

**OXFORD.**—Vacation Course for Women Students on English Language and Literature, by University Lecturers and Tutors. For information apply to Mrs. BURCH, 11 Beechcroft Road, Oxford.

**JOINT AGENCY FOR WOMEN TEACHERS.**

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

**THE JOINT AGENCY FOR MEN TEACHERS.**

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Agencies for Assistant-Masters and Tutors hitherto conducted by the College of Preceptors, the Teachers' Guild, and the Assistant-Masters' Association, have been amalgamated and placed under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c.

The rates of Commission charged to Assistant-Masters are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

**UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.**

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

The Session began October, 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

**UNIVERSITY OF WALES.**—The SIXTH MATRICULATION EXAMINATION will commence on Monday, June 25, 1900. Particulars from the REGISTRAR, University Office, Brecon, from whom Forms of Entry can be obtained. Entries must be made not later than Monday, June 4, 1900.

**THE COLLEGE HALL OF RESIDENCE FOR WOMEN STUDENTS,**

BYNG PLACE, LONDON, W.C.

The Office of PRINCIPAL will become vacant at the end of the present session, and the Council are prepared to receive applications from intending candidates for the appointment up to the 15th of May.

For particulars apply, by letter, to the HON. SECRETARY at College Hall.

**London University Examinations.**



**UNIVERSITY TUTORIAL COLLEGE,**

Red Lion Square, Holborn, W.C.

**SECTIONS OF THE FOLLOWING DAY AND EVENING CLASSES**

ARE JUST COMMENCING:

**MATRICULATION FOR JUNE AND JANUARY,**

**PRELIM. SCI. (M.B.) FOR JULY, 1900,**

**INTER. SCI. AND INTER. ARTS, INTRODUCTORY CLASSES FOR JULY, 1901,**

**INTER. LAWS AND LL.B.**

**EASTER VACATION CLASSES**

Commence on Tuesday, April 10th, 1900.

The Chemistry Course extends over three weeks; the Physics Course is held during Easter week only, commencing on Easter Tuesday.

Prospectus and further particulars may be had from

**THE VICE-PRINCIPAL,**  
University Tutorial College,

32 Red Lion Square, Holborn, W.C.

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS, SCIENCE, and PREL. SCI., B.A., and B.Sc. EXAMINATIONS. Day and Evening Classes. New Term starts in May.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, E.U.I., &c.

Papers Corrected for Schools. Private tuition for all Examinations. Prospectus and full details on application to R. C. B. KERIS, B.A. Lond., First of First Class Classical Honours, Editor of "Phuedo," "Pro Plancio," &c.

**SUCCESSSES.**

1892-1899.—London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896 1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**  
**M.A., 2 (1898 and 1899).**

**OXFORD LOCAL EXAMINATIONS.**

**LONDON COMMITTEE (BOYS).**

Forms of Entry for the Examinations in July next at the London (Boys) Centre can be obtained from the Secretary,

E. LAYMAN, Esq.,

1 Garden Court, Temple, E.C.

**ARMY SCHOOLMASTERS.**—There

are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Committee of Council on Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,

BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

**CORRESPONDENCE TUITION.**

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORDLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

**PARTNER** wanted in an old-established middle-class Girls' School, near London.

One who can introduce Boarders or who has a good connexion.—PRINCIPAL, Gibson's Library, St. Margaret's-on-Thames.

**A COMPLETE FRENCH CLASS**

BOOK.—HALL'S FIRST FRENCH COURSE and FRANCE AND THE FRENCH. 1s. 6d.; Key, 1s. 8d. New and Revised Edition. Contains nearly 200 Exercises, English and French Grammar, Questionnaire, Interesting and Easy Reading Lessons, Vocabulary, Maps, &c.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., Ltd.; and of all Publishers.

**EPPS'S COCOA.**

GRATEFUL.

COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 4-lb. and 1-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.

BREAKFAST.

SUPPER.

**EPPS'S COCOA.**



FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

NEW EDITION (70 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

281 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1899, 56 with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P.**, **L.C.P.**, and **F.C.P.**

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.


## HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

 *Headmasters should apply for*

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

## DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## EXAMINATION PAPER

AS USED BY THE

## COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets ... .. per Ream, 2s. 6d.

" " 960 " " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

HEWARD & SHELBOURNE, Wholesale and Retail Stationers,

63 HIGH HOLBORN, LONDON, W.C.

## JOSEPH GILLOTT'S

Gold Medals,  
Paris, 1878,  
1889.

Numbers for Use in Schools—  
351, 352, 353, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing);  
and (for Vertical Writing)  
1045, 1046.

## STEEL PENS.

## COLLEGE OF PRECEPTORS.

### Lectures for Teachers

ON THE

SCIENCE, ART, AND HISTORY OF EDUCATION.

### INTELLECTUAL EDUCATION.

To be delivered by JAMES SULLY, M.A., LL.D., Grote Professor of the Philosophy of Mind and Logic at University College, London.

#### SYLLABUS.

I.—Education in its relation to Natural Development—Historical Evolution of the Idea of Education—Different Aspects of Educational End: Fullness of Individual Development, Fitness for Life; Readiness for the Social State and the Duties of Citizenship—Respective Functions of Parent, State, and Teacher, in Education—Claims of the Home, of the Child's World, and of the Child's Inner Self—Relation of Education to Social Conditions, to the Spirit of the Age, and to Progress.

II.—Intellectual Education in its relation to Education as a Whole—General Value of the Intellectual Side of Man—Gradual Evolution of the End of Intellectual Education: from Practical Skill (the End of Savage Training) to Intelligence—Conflict of Ideas of different stages of Culture in Contemporary Discussions: Useful Knowledge versus Culture—The True Standard of "Knowledge-Values"—What a Cultivated Intelligence includes—In what sense Intelligence can exist in a Child.

III.—The Process of Mental Development—Growth of Intelligence or Gradual Storage and Assimilation of Material—The Part of Feeling and of Effort in Intellectual Development—The Organic Base of Intellectual Progress; the Efficiency of Sense-Organs, Muscles, and Brain—First Movements of Intelligence in the Child's own World (Play), and in the Search for Facts and Explanations—The Problem of the Young Child's Curiosity—The Too Much and the Too Little in the way of the Growth-Up's Stimulation of the Growing Intelligence.

IV.—(1) Intellectual Education begins by a Primary Presentation of Sense Material—The Wakefulness of the Early Senses—Animal and Human Senses compared—The Importance of the Finer Exercises of Eye, Ear, and Hand—Interest of Children in the Report of the Senses—Interest and Value of a Testing of the Senses—Over-training of the Senses.

V.—A Child's Interest is in Things rather than in Sensations—The Attitudes of Child and Animal towards the World of Objects—The Charm of the Ever Unfolding New—The Gradual Evolution of Interests and their Effect on Attention and Inquiry—The Teacher's Function in relation to young half-formed Interests—What Awakening an Interest means—The Place of Sturdy Effort in the Growth of Interests.

VI.—The Progressive Examination of Things by the Child—First, "General" Impressions, and, later, Full and Concrete ones—The Minds that "stick" at General Impressions—What Education can do to take the Young Mind beyond these—Methodical Analysis of Presentations and its Difficulties—Error of plunging Child into the Abstractions of "Qualities" and "Relations"—Illustrations from the Teaching of Form and of Drawing.

VII.—The Relation of Observation to Assimilation of Sense-Presentations—Interest in Objects includes Impulse to Assimilate—The Lower Kind of Animal Assimilation; Recognition—Assimilation as Expansive, and as Mastering the New through its relation to the Old—True and False Conception of Apperception—The Apperceptive Attitude and its relation to the Store of Impressions—The Aim of Object Teaching as the Development of right Apperceptive Attitudes.

VIII.—The Way in which the Inner Store of Ideas grows into an ordered Multiplicity—Observation and Memory—The Child who Sees and Forgets—Associative Grouping of Ideas—Apperceptive Systems as the Beginning of Organized Knowledge—Types of Associative Grouping: the Mind for Particulars and Details, and the Mind for Generalities and Relations—The Exercise of the Memory as Training in Exactness—Errors of Childish Reproduction, Single and Recurring, and the way to deal with them.

IX.—The Psychology of Language as affecting Processes of Instruction—General Function of Names and of Articulated Language in the Growth of Intelligence—The Seer and the Namer of Things—Language as fixing the Results of Methodical Observation—The Need of Language in carrying out an orderly Arrangement of Ideas—The Teacher's Problem of selecting Fitting Language, and of insisting on its Accurate Reproduction—Language as a Fetish and as an Object of Contempt in Teaching.

X.—(2) Secondary Presentation of Intellectual Material through the medium of Language—The Aim and Process of Verbal Instruction, pure and simple—Words as Abstract Symbols, and as contributing to the Formation of Images—The Apperceptive Process in following Verbal Instruction—The Teacher must excite the Learner at once to a Reproduction of Ideas and to a further Elaboration of these—Different ways in which a Child's Mind may go wrong here—How a Child thinks of the Desert—How the Skilled Teacher keeps in touch with the Imaginative Movement of his Pupils' Minds.

XI.—The Name as Instrument of Thought—Transition from Image to General Idea—How a Child represents a Class of Things and their Qualities and Relations—The Problem of Thought-Training—The Child to rise above the Particular and yet to hold fast to Particulars—The Value of Judicious Presentation of Examples—When and how Definitions are to be reached.

XII.—Thought as an Articulated setting forth of Relations—Comparison of Primitive and Cultured Forms of Language—Growth-up Language as the Child's Burden—Meaning of the Rule "From the Indefinite to the Definite"—Early Exercises in Reasoning—The Stimulation and Restraint of Thought—How to deal with the Backward and the too Forward Reasoner.

The Fee for the Course of Twelve Lectures is Half-a-Guinea.

\* \* \* The Lectures will be delivered on THURSDAY EVENINGS at 7 o'clock, at the College, Bloomsbury Square, W.C.—Members of the College have free admission to the Course.

**New.**

**GILL'S**

**New.**

**"CARTOGRAPHIC"**

# WALL MAPS

**FOR SECONDARY SCHOOLS.**

*Edited by GEORGE GILL, F.R.G.S.*

**Size,**  
80 × 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

**Price 16s.**

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

\*ENGLAND AND WALES.

\*IRELAND.

INDIA.

ASIA.

\*SCOTLAND. WORLD (MERCATOR).

EUROPE.

\*AFRICA.

\*N. AMERICA.

\* The Set Geography for the Local Examinations.

## Class Text-Books for the 1900 Examinations.

<i>RELIGIOUS KNOWLEDGE.</i>		<i>s. d.</i>	<i>ENGLISH AND ENGLISH GRAMMAR.</i>		<i>s. d.</i>
Marshall's St. Luke. Edited by the Rev. F. MARSHALL, M.A.	...	1 6	Shakespeare, As You Like It. (Second Edition now ready.) Edited by the Rev. F. MARSHALL, M.A. Most suitable for Junior Students	...	1 6
Marshall's Exodus ( <i>Nearly ready</i> )	...	1 6	Macaulay, Lays of Ancient Rome. By the Rev. G. PRESTON, M.A.	...	1 6
Marshall's Acts of the Apostles (complete)	...	2 6	The O. and O. Grammar. By the Rev. CHARLES BROOKE, M.A.	...	1 0
Marshall's Acts of the Apostles. Part II.: Chapters XIII.—end	...	1 6	Preparation Papers in English Grammar. By the Rev. G. PRESTON, M.A.	...	0 8
Church Catechism. With Notes. By the same Author	...	1 6	Per packet	...	0 8
The O. and O. Genesis	...	1 0	Exercises in Composition, Dictation, and Letter Writing	...	1 0
The Preparation Papers on St. Luke and the Acts of the Apostles are now ready. Per packet	...	0 8	The O. and O. Spelling Book	...	1 0
<i>GEOGRAPHY.</i>			<i>BOOK-KEEPING.</i>		
The Student's Geography. By GEORGE GILL, F.R.G.S.	...	4 6	Sarll's Practical Book-keeping. 128 pp., cloth	...	1 0
<i>Also published in Sections as follows:—</i>			Sarll's Double Entry Book-keeping. 256 pp., cloth	...	2 0
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.A. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.	...	2 6	Sarll's Exercises in Double Entry Book-keeping	...	1 0
The Imperial Geography. 464 pages, crown 8vo, cloth	...	2 6	Manuscript Books published to accompany the above.	...	0 7
The O. and O. Geography (Revised Edition). By GEORGE GILL	...	1 0	For Practical:—Cash Book	...	5d.
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms)	...	1 0	Ledger	...	0 7
The Geography of the British Colonies. By GEORGE GILL	...	2 6	Ledger (100 Accounts)	...	7d.
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps	...	1 0	For Double Entry:—Journal	...	5d.
<i>MATHEMATICS AND ARITHMETIC.</i>			Short and Introductory Exercises	...	7d.
Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A.	...	2 6	Key to Double Entry Book-keeping	...	3 0
Marshall's Examination Euclid. Books I.—IV.	...	1 0	Key to Practical Book-keeping	...	2 0
The O. and O. Algebra	...	1 6	<i>LATIN AND FRENCH. s. d.</i>		
Preparation Papers in Algebra. By A. CUDWORTH, M.A.	...	0 8	The O. and O. Latin. Part I.,	...	2 6
The O. and O. "Practical Arithmetic," 176 pp., crown 8vo	...	1 0	Accidence, Part II., Exercises.	...	0 9
The O. and O. "Tests in Arithmetic" (with Answers, 1s. 6d.)	...	1 0	Part III., Translations. Each	...	2 6
Cambridge Local Papers in Arithmetic, by C. CUDWORTH	...	0 8	Commercial French Correspondence	...	2 6
			1 0	...	2 0
			The O. & O. French, Parts I. & II. ea.	...	2 0
			1 0	...	2 6
			Phœdrus, Books I. and II.	...	2 6
			1 0	...	2 0
			Eutropius, Books I. and II.	...	2 6
			1 0	...	2 0
			Cæsar, Book VI.	...	2 6
			1 0	...	2 0
			Vergil—Æneid, Book VI.	...	2 6
			1 0	...	2 0
			Cicero de Senectute	...	2 0
			1 0	...	2 6
			French Preparation Papers	...	2 6
			0 8	...	2 6
			Latin Preparation Papers	...	1 0
			0 8	...	1 0
				Physical Measurements	...
				or in Three Parts	...
				each	...
				Elementary Physics	...
				Applied Mechanics	...
				Mechanics of Solids	...
				Mechanics of Fluids	...
				Magnetism and Electricity	...
				Physiological Charts. Set of	...
				Three	...
				Elementary Chemistry	...
				Chemical Laws and Problems	...
				Chemistry of Common Objects	...
				Chemistry Notes	...

## MILITARY DRILL IN SECONDARY SCHOOLS.

# GILL'S MILITARY DRILL.

2/6

The movements given in this book are such that the Drill practised in the playground will not have to be unlearned when the Scholar leaves School and joins the ranks of our Citizen Army.

The movements selected can be performed by boys of all ages.

2/6

ARRANGED IN FOUR PARTS.

Part I.—Squad Drill. Part II.—Company Drill. Part III.—Physical Drill.

Part IV.—Manual Exercise for Rifle, and Bayonet Exercise.

WITH CHORAL MARCHES EASILY AND SIMPLY ARRANGED.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

A FEW OF THE PUBLICATIONS OF  
**MOFFATT & PAIGE, Ltd.**  
**ENGLISH CLASSICS.**

Edited by **THOMAS PAGE.**

In these Editions, Notes are Classified and Arranged.

*Other Works in preparation.*

**THE PLAYS OF SHAKESPEARE.**

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

**REVIEWS:—**

*Saturday Review.*—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."  
*Daily Telegraph.*—(Julius Caesar) "... is invaluable as an aid to the study of the play."

*South Africa.*—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."

*Athenæum.*—"Essentially books for students."  
*Educational News.*—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

	s.	d.
*AS YOU LIKE IT ... ..	2	0
CORIOLANUS ... ..	2	6
*HAMLET ... ..	2	6
HENRY V. ... ..	2	6
*JULIUS CÆSAR ... ..	2	0
KING JOHN ... ..	2	0
KING LEAR ... ..	2	0
MACBETH ... ..	1	6
MERCHANT OF VENICE ... ..	1	6
*MIDSUMMER NIGHT'S DREAM ... ..	2	0
*RICHARD THE SECOND ... ..	1	6
TEMPEST ... ..	2	0
TWELFTH NIGHT ... ..	1	6

\* For Current Examinations.

**BACON.**

*Schoolmaster.*—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... .. 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

**MILTON.**

*Practical Teacher.*—"Marked by those features of almost exhaustive annotation."

\*PARADISE LOST. Books 1 and 2. (Just published.) s. d. 2 0

SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENNEROSO 1 4

\* For Current Examinations.

**SCRIPTURE.**

Edited by R. J. WOOD, B.A.

*Educational Times.*—"One of the fullest and most conveniently arranged hand-books on the Gospel."

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... .. s. d. 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... .. 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

**FRENCH.**

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... s. d. 2 6

**GERMAN.**

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... s. d. 2 6

*Educational Times.*—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

**MOFFATT & PAIGE, Ltd.,**

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, *Managing Director.*

Works: Johnson's Court, Fleet Street.

**J. & A. CHURCHILL'S LIST.**

**THE NEW ALGEBRA.**

**ELEMENTARY ALGEBRA (TO QUADRATICS).** By C. H. FRENCH, M.A., and G. OSBORN, M.A., Mathematical Masters at the Leys School, Cambridge, formerly Scholars of Emmanuel College, Cambridge. Crown 8vo, 3s. 6d.; or with Answers, 4s. 6d.

"More complete, and on the whole more helpful to a beginner, than any with which we are acquainted."—*Practical Teacher.*

"Wonderfully clear and simple."—*Journal of Education.*

"Always correct."—*Academy.*

**ELEMENTARY PRACTICAL CHEMISTRY AND QUALITATIVE ANALYSIS.** By Professors CLOWES and COLEMAN. Third Edition, with 68 Engravings, post 8vo, 3s. 6d. [Now ready.]

**PRACTICAL CHEMISTRY AND QUALITATIVE ANALYSIS.** By Professor CLOWES. Seventh Edition, with 101 Engravings, post 8vo, 8s. 6d.

**A HANDBOOK OF PHYSICS AND CHEMISTRY,** adapted to the Requirements of the First Examination of the Conjoint Board of the Royal Colleges of Physicians and Surgeons, and also for General Use. By HERBERT E. CORBIN, B.Sc. Lond., and ARCHIBALD M. STEWART, B.Sc. Lond. With 120 Illustrations. Crown 8vo, 6s. 6d.

"An excellent course of physics and chemistry. . . . We can strongly recommend it."—*University Correspondent.*

**A MANUAL OF CHEMISTRY, THEORETICAL AND PRACTICAL.** By WILLIAM A. TILDEN, D.Sc., F.R.S., Professor of Chemistry in the Royal College of Science, London: Examiner in Chemistry to the Department of Science and Art. With 2 Plates and 145 Woodcuts. Crown 8vo, 10s.

**A MANUAL OF BOTANY.** By J. REYNOLDS GREEN, Sc.D., F.R.S., Professor of Botany to the Pharmaceutical Society; Examiner in Botany to the University of London and the Victoria University. In Two Vols., with nearly 1,200 Illustrations.

Vol. I. MORPHOLOGY AND ANATOMY. Second Edition. 7s. 6d.

Vol. II. CLASSIFICATION AND PHYSIOLOGY. 10s.

LONDON: J. & A. CHURCHILL, 7 GREAT MARLBOROUGH STREET.

**CASEY'S EUCLID.**

**THE ELEMENTS OF EUCLID,**

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.

By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.

Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

**A KEY TO THE EXERCISES**

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."

By JOSEPH B. CASEY, Tutor, University College, Dublin.

Second Edition. Small 8vo, price 6s.

**A SEQUEL TO THE**

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."

Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

**A TREATISE ON THE**

**ANALYTICAL GEOMETRY**

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.

Containing an account of its most recent Extensions, with numerous Examples.

New Edition. Crown 8vo.

**A TREATISE ON**

**ELEMENTARY TRIGONOMETRY.**

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, 148 pp., price 3s.

**KEY TO THE EXERCISES**

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions. Second Edition. Price 3s.

**A TREATISE ON**

**PLANE TRIGONOMETRY.**

Containing an account of Hyperbolic Functions, with numerous Examples.

Crown 8vo. Second Edition.

Crown 8vo, price 5s.

**A TREATISE ON**

**SPHERICAL TRIGONOMETRY,**

AND ITS APPLICATION TO GEODESY AND ASTRONOMY.

With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104, GRAFTON STREET, DUBLIN.  
 LONDON: LONGMANS & CO.

# MESSRS. LONGMANS & CO.'S LIST.

By **CYRIL RANSOME, M.A.**

## A SHORT HISTORY OF ENGLAND.

FROM THE EARLIEST TIMES TO THE PRESENT DAY (1895).

ELEVENTH EDITION. Crown 8vo, 3s. 6d. Or in Two Parts, 2s. each. PART I.—To the Death of Elizabeth, A.D. 1603. PART II.—A.D. 1603 to 1895. With Tables, Plans, Maps, Index, &c.

### A SUMMARY OF RANSOME'S SHORT HISTORY OF ENGLAND.

With 22 Maps and Plans and 34 Genealogical Tables. Crown 8vo, 1s.

[Just Published.]

By **SAMUEL RAWSON GARDINER, M.A., LL.D.**

## A STUDENT'S HISTORY OF ENGLAND.

FROM THE EARLIEST TIMES TO 1885.

Vol. I.—B.C. 55—A.D. 1509. With 173 Illustrations. Crown 8vo, 4s. Vol. II.—1509—1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.—1689—1885. With 109 Illustrations. Crown 8vo, 4s.

COMPLETE IN ONE VOLUME, with 378 Illustrations. Crown 8vo, 12s.

### PREPARATORY QUESTIONS ON THE ABOVE.

By R. SOMERVILLE, M.A., Assistant-Master at Harrow School. Crown 8vo, 1s.

**A School Atlas of English History.** With 66 Maps and 22 Plans of Battles, &c. Fcap. 4to. 5s. | **Outline of English History, B.C. 55 to A.D. 1895.** With 96 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By the **Rev. D. MORRIS, B.A.,**

Late Classical Master in Liverpool College, Joint-Editor of "Annotated Poems of English Authors for School Use."

NINETY-FOURTH TO ONE HUNDRED AND FIRST THOUSAND. Fcap. 8vo, pp. 568, with 4 Historical Maps, 20 Plans of Battles and 30 Illustrations, 3s. 6d.

*This Edition has received numerous additions, and brings up British History to the year 1892.*

## A CLASS-BOOK HISTORY OF ENGLAND.

Designed for the use of students preparing for the University Local Examinations, or for the London University Matriculation, and for the Higher Classes of Elementary Schools.

By **C. W. C. OMAN, M.A., F.S.A.**

**A History of Greece.** From the Earliest Times to the Macedonian Conquest. With Maps and Plans. Crown 8vo, 4s. 6d.

By **ARTHUR SIDGWICK, M.A.**

**A First Greek Writer.** Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.**

With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus.

**Euripides.**—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alcestis. Bacchae. Hecuba. Medea.

**An Introduction to Greek Verse Composition.**

By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A.

With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By **T. K. ARNOLD, M.A.**

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

By **A. A. SOMERVILLE, M.A.**

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

By **LÉON CONTANSEAU, M.A.**

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

By **BENJAMIN HALL KENNEDY, D.D.**

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. and J. E. KENNEDY, and H. WILKINSON, M.A. Cr. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 2s. 9d. net, post free.

**The Public School Latin Grammar.** Crown 8vo, 7s. 6d.

**The Public School Latin Primer.** Edited, with the sanction of the Head Masters of the Nine Public Schools included in Her Majesty's Commission. 12mo, 2s. 6d.

**Subsidia Primaria, Steps to Latin:** Companion Exercise Books, adapted to the Public School Latin Primer. By the Editor of the Primer. Part I. Accidence and Simple Construction, 2s. 6d. Part II. Syntax, &c., 3s. 6d.

A KEY, for the use of Masters only, Parts I. and II. 5s. 2d. net, post free.

**Subsidia Primaria, Part III.** Manual of the Rules of Construction in the Latin Compound Sentence; a SUPPLEMENT to the Public School Latin Primer. By the Rev. B. H. KENNEDY, D.D., late Regius Professor of Greek in the University of Cambridge. 12mo, 1s.

The Best and Cheapest Dictionary.

# THE CONCISE ENGLISH DICTIONARY.

BY

**CHARLES ANNANDALE, M.A., LL.D.,**

Editor of the "Imperial Dictionary."

New Edition, containing over 100,000 Entries.

Fcap. 4to, 864 pages, cloth, **3s. 6d.**

Also, in half-persian, **5s. 6d.**; half-morocco, **7s. 6d.**

**ANNANDALE'S CONCISE DICTIONARY** has, since its first publication, held a **pre-eminent place among One-Volume English Dictionaries**. It is now issued, in an extended form, at so low a price as to bring it within the reach of everybody.

The **CONCISE DICTIONARY** contains **more printed matter** than any Dictionary of similar price.

A computation shows that the matter in this Dictionary comprises **1,755,000 words**, while that in a rival Dictionary is only 1,000,000 words.

The **General Vocabulary** is very ample. All important **modern terms** pertaining to **Science, Technology**, and the **Arts** are clearly and accurately explained.

The **Definitions** and **Explanations** are exceptionally full and detailed, giving so much information that this Dictionary may justly claim the character of a **Concise Cyclopædia**.

The **Etymology** shows results obtained by the most recent investigators and the **correct pronunciation** of the words is given on an exceedingly simple system.

The Appendices comprise full **Pronouncing Lists** of—

Greek, Latin, Scriptural, and other Ancient Names.

Modern Geographical Names.

Modern Biographical Names.

ALSO:

Key to noted Names in Fiction, Mythology, &c.

Alphabetical List of prominent English Writers, with Dates of Birth and Death.

Words, Phrases, and Noteworthy Sayings, from the Latin, Greek, and Modern Languages, met with in Current English.

Abbreviations and Contractions used in Writing and Printing.

Forms of Address in Ceremonious Communications with Persons of Title and Official Position.

Principal Moneys of the World, and their Equivalents in English Currency.

## SOME OPINIONS OF THE PRESS.

"We can heartily recommend this neat and handy volume to all who want a copious and trustworthy English Dictionary of reasonable dimensions."—*Athenæum*.

"Stands towards other dictionaries of the smaller character in the relation of the 'Imperial' to rival lexicons—in other words, it holds the 'premier' place."—*Spectator*.

"The Concise Dictionary' stands first—and by a long interval—among all the one-volume English Dictionaries."—*Academy*.

"In clearness of type, in size, shape, and arrangement, the volume leaves nothing to be desired. Till Dr. Murray's great work is completed, it is not likely to be superseded."—*Journal of Education*.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

# PRIVATE SCHOOL REGISTERS,

SPECIALLY RULED FOR

## Attendance or Mark Registers,

To meet the Requirements of Private Schools.

**No. 250.** Size 8 × 6½ inches, oblong, 48 pages, limp nonpareil marble covers... .. each 4½d. net.

**No. 251.** Size 11¼ × 9 inches, extra superfine writing paper, 14 pages, bound in cloth ... each 1s. 3d. net.

**No. 252.** Size 11 × 8½ inches, 72 pages, bound in stiff nonpareil marble covers and leather backs ... each 1s. 6d. net.

**No. 253.** Size 13 × 8 inches, 40 pages, bound in stiff nonpareil marble covers and leather backs ... each 1s. 6d. net.

**No. 254.** Size 13 × 8 inches, ruled and printed, for three Terms, bound in stiff nonpareil marble covers and leather backs ... .. each 1s. 6d. net.

Specimen pages post free on application to

## THE EDUCATIONAL SUPPLY ASSOCIATION, LIMITED,

42 Holborn Viaduct, London.

# CASSELL'S EDUCATIONAL LIST.

READY SHORTLY.

About 300 pages, Crown 8vo. Strongly bound in cloth, price 1s. 9d.

## OUR GREAT CITY;

or, London, the Heart of the Empire.

By H. O. ARNOLD-FORSTER, M.P.,

Author of "The Citizen Reader," "This World of Ours," "Things New and Old," "The Laws of Every-day Life," &c., &c.

BY THE SAME AUTHOR.

**A HISTORY OF ENGLAND.** Third and Revised Edition. From the Landing of Julius Cæsar to the Present Day. Extra crown 8vo, 852 pages, copiously illustrated.

"No one by whom or to whom this book is read will fail to realize, if he has a normal amount of reason and imagination, the continuity of English history, the connexion with the present and the past, and the profound abiding significance of the internal and external struggles of our forefathers."—*Spectator*.

## The Best and Cheapest Dictionaries.

**CASSELL'S FRENCH DICTIONARY.** (French-English and English-French.) 555th Thousand. Revised and Corrected from the Seventh and Latest Edition of the Dictionary of the French Academy. 1,150 pages, cloth, 2s. 6d.; half-morocco, 5s.

**CASSELL'S GERMAN DICTIONARY.** (German-English and English-German.) 222nd Thousand. 1,120 pages, demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 102nd Thousand. Thoroughly Revised and Corrected and in part Re-written by J. R. V. MARCHANT, M.A. Oxford, and J. F. CHARLES, B.A. Cheap Edition, 3s. 6d.; half-morocco, 5s.

CASSELL & COMPANY, LTD., LUDGATE HILL, LONDON, E.C.



# SUITABLE BOOKS FOR COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900,

PUBLISHED AT

## The University Tutorial Press.



### Latin and Greek Classics.

- Caesar.—Gallic War, Book V.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Caesar.—Gallic War, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Cicero.—De Senectute.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Homer.—Odyssey, Books XI, XII.** By J. H. HAYDON, M.A. Lond. and Camb., and F. G. PLAISTOWE, M.A. Lond. and Camb. Text and Notes. 2s. 6d.
- Horace.—Odes, Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid, Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond., Gold Medallist in Classics. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid, Book IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary, Books IX, X. 1s.

### English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond., Professor of English in the University of New Zealand. [In the press.]
- The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. Fifth Edition. 3s. 6d.
- History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, and numerous Chronological and other Tables. By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.
- Shakespeare.—As You Like It.** Edited, with Introduction and Notes, by Prof. W. J. ROLFE, D.Litt. 2s.

### Latin and Greek.

- Greek Reader, The Tutorial.** By A. WAUGH YOUNG, M.A. Lond., Gold Medallist in Classics. Second Edition. 2s. 6d.
- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [In the press.]
- Latin Dictionary, The Tutorial.** By F. G. PLAISTOWE, M.A. Lond. and Camb., Gold Medallist in Classics, late Fellow of Queens' College, Cambridge. 6s. 6d.
- Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. Third Edition. 3s. 6d. Exercises and Test Questions on. 1s. 6d.
- Latin Composition and Syntax.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. Fourth Edition. 2s. 6d.
- Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.
- LATIN READER, THE PRECEPTORS'.** [In preparation.]

### Mathematics and Science.

- Chemical Analysis, Qualitative and Quantitative.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and R. W. STEWART, D.Sc. Lond. 3s. 6d.
- Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg, Lecturer in Chemistry in the Victoria University. Edited by WILLIAM BRIGGS, M.A., F.C.S. Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.
- Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. Interleaved. 1s. 6d.
- Euclid, Books I.—IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.
- Hydrostatics, An Elementary Text-Book of.** With Examples and Answers. By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Second Edition. 2s.
- Magnetism and Electricity, Text-Book of.** By R. W. STEWART, D.Sc. Fourth Edition. 3s. 6d.
- MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.
- Mensuration of the Simpler Figures.** By WILLIAM BRIGGS, LL.B., M.A., F.C.S., and T. W. EDMONDSON, B.A. Lond. and Camb. Second Edition. 2s. 6d.
- Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. Lond. 2s.
- Trigonometry, The Tutorial.** By WILLIAM BRIGGS, M.A., LL.B., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.
- TRIGONOMETRY, THE PRECEPTORS'.** Edited by WILLIAM BRIGGS, M.A., LL.B., F.C.S., F.R.A.S. 2s. 6d.

### Book-keeping.

- Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d. **Exercise Books, Ruled Ledger, Journal, or Cash.** 3d.
- BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [In preparation.]

### French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.
- FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. ès Sc. Univ. Gall., Examiner in French to the College of Preceptors. 1s. 6d.
- French Prose Composition.** By ERNEST WEEKLEY, M.A. Lond. 3s. 6d.
- FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. 1s. 6d.
- French Prose Reader.** Edited by S. BARLET, B. ès Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. Third Edition. 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', Cambridge Local, Science and Art Department, London University, and other Examinations, free on application.

LONDON: THE UNIVERSITY TUTORIAL PRESS

(University Correspondence College Press),

W. B. CLIVE, 13 BOOKSELLERS ROW, STRAND, W.C.

# CAMBRIDGE UNIVERSITY PRESS.

COLLEGE OF PRECEPTORS' EXAMINATIONS, JULY AND DECEMBER, 1900.

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

*Athenæum*.—"The Pitt Press Shakespeare can stand in competition with any of the numerous editions of the sort now showered upon reviewers."

*School World*.—"It would be difficult to praise this series too highly."

*Guardian*.—"Mr. Verity is an almost ideal editor of school texts."

**As You Like It.** 1s. 6d. With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge.

*Guardian*.—"Mr. Verity, the editor, has provided material for all sorts of students. For the beginner we have the notes and a reprint of Charles Lamb's outline of the story. For older readers we have copious extracts from Lodge's 'Rosalynde.' For the examinee, the etymologist, and the curious student, we have the glossary, the index of the important words and phrases, and the notes on metre and on the date and sources of the play. All of these aids evince patient research, accurate scholarship, and thoughtful judgment."

## CAMBRIDGE MILTON FOR SCHOOLS.

*Guardian*.—"This edition will, we feel sure, long continue to be the standard school text of 'Paradise Lost.'"

**Paradise Lost, Books III. and IV.** Edited, with Introduction and Notes, by A. W. VERITY, M.A. 2s.

## PITT PRESS SERIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Macaulay	Lays of Ancient Rome (with Ivory and The Armada)	J. H. Flather	s. d. 1 6
<i>School World</i> .—"In thorough keeping with the other volumes of this series, an evidence of patient labour, and no mean tribute to Macaulay himself. . . . The notes are brief and pointed, and two useful maps are appended. The introduction is brief, but exceedingly well done."			
Scott	Marmion	J. H. B. Masterman	2 6
<i>Guardian</i> .—"Far and away the best school edition of the poem we have seen; and it will be difficult, probably impossible, to improve on it."			
Scott	Lay of the Last Minstrel	J. H. Flather	2 0
<i>Guardian</i> .—"It is one of the very best edited school-texts ever placed before the public."			
Caesar	De Bello Gallico, Books IV.-V. (Subject, Book V.)	A. G. Peskett	1 6
"	De Bello Gallico, Book VI.	"	1 6
Cicero	De Senectute	J. S. Reid	3 6
Horace	Odes, Book III.	J. Gow	2 0
Livy	Book XXII.	M. S. Dimsdale	2 6
Vergil	Aeneid, Books VI. and XII.	A. Sidgwick	each 1 6
Euripides	Medea	C. E. S. Headlam	2 6
Lucian	Menippus and Timon	E. C. Mackie	3 6
Xenophon	Anabasis, Books III. and V.	A. Pretor	each 2 0

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*School Guardian*.—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars; their names are a guarantee of their work. These text-books will find their way into numberless preparatory schools and lower forms of public schools; they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary; the student, however elementary his knowledge, needs only the book in hand and a simple grammar."

The following editions have COMPLETE VOCABULARIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Caesar	De Bello Gallico, Books V. and VI.	E. S. Shuckburgh	each 1 6
Vergil	Aeneid, Books VI. and XII.	A. Sidgwick	1 6
Xenophon	Anabasis, Books III. and V.	G. M. Edwards	1 6

\*.\* Cambridge Editions of Caesar, Vergil, and Xenophon.—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the Pitt Press Series and the Cambridge Series for Schools and Training Colleges. The Editions in the Cambridge Series for Schools and Training Colleges have Complete Vocabulary. If, in ordering, the Edition required is not specified, the Pitt Press Edition, without vocabulary, will be sent.

## ENGLISH GRAMMAR.

New and Enlarged Edition (Thirty-sixth to Forty-fifth Thousand).

**The Elements of English Grammar.** By A. S. WEST, M.A., Trinity College, Cambridge. Fcap. 8vo, 2s. 6d.

*Prefatory Note to the Enlarged Edition*.—Some hundreds of additional Questions and Examples are given in the present edition, and in a few places the wording of the text has been altered. The numbers of the paragraphs remain the same.

*School World*.—"The larger work shows a master hand. It is adapted to the higher forms, and its historical survey contains just what is wanted for examination purposes. . . . Both books deserve a large sale."

**An English Grammar for Beginners.** By A. S. WEST, M.A. 1s.

*School World*.—"The smaller of these two works ought to be extensively used for the teaching of junior forms. Its matter is arranged with the greatest care, its explanations are full and easily adapted to juvenile intelligences. . . . Altogether the book is worthy of high commendation."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford, Principal of University (Day) Training College, Liverpool, and Lecturer on Education in Victoria University.

*Specially suited for Candidates for Queen's Scholarship Examinations, December, 1900, and Certificate Examinations, July, 1900.*

**A Short History of the Expansion of the British Empire, 1500-1870.** By WILLIAM H. WOODWARD. With Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenæum*.—"Thoroughly to be recommended."

*Educational Times*.—"Mr. Woodward tells this story in *usum scholarum* in an altogether admirable manner."

*School World*.—"It is full of wisdom applicable to our own day."

**The Making of Character:** some Educational Aspects of Ethics. By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, 2s. 6d. [Ready April 2.]

**The Education of the Young, from the "Republic" of Plato.** Being Book II., Ch. IX. to end of Book IV. Translated into English, with Explanatory Notes and Introduction, by B. BOBANQUET, formerly Fellow of University College, Oxford. [Nearly ready.]

## NEARLY READY. NEW WORK BY SIR JOSHUA FITCH.

**Educational Aims and Methods.** Lectures and Addresses by Sir JOSHUA FITCH, M.A., LL.D., late Her Majesty's Inspector of Training Colleges, and author of "Lectures on Teaching." "The Arnolds and their Influence on English Education." [In the press.]

The forthcoming volume consists of lectures and addresses given in Cambridge, or before the Teachers' Guild and other bodies of teachers in England and in America. Its general aim is to direct attention to various aspects of educational theory and of practical work; and it includes several monographs on the lives of distinguished and representative teachers.

**Geometrical Drawing.** With Notes and Examples. Part I. Plane and Elementary Solid. By W. H. BLYTHE, M.A., Jesus College. 2s. 6d.

*Extract from Preface*.—"This book is intended for Candidates reading Geometrical Drawing for the Science and Art Department, South Kensington, Elementary Stage, for entrance to Sandhurst and Woolwich, and for the Cambridge Preliminary and Junior Local Examinations."

"Part I. contains Plane Geometrical Drawing and Solid Geometry so far as it is included in the Syllabus, Geometrical Drawing (Art), Subject 1 A, page 231, 'Science and Art Directory,' 1899."

*Teachers' Aid*.—"We can recommend the book with every confidence, as we feel certain that its adoption will yield encouraging results."

**Geometry for Young Beginners.** An Introduction to Theoretical and Practical Geometry. By F. W. SANDERSON, Headmaster of Oundle School. 1s. 4d.

*Teachers' Monthly* (Birmingham).—"We are delighted with this book."

*Morning Post*.—"The work will commend itself to teachers and students."

## PITT PRESS SERIES.—New Volumes.

**Hanf.—Der Scheik von Alexandria und seine Sklaven.** Edited, with Notes and Vocabulary, by W. RIPPMANN, M.A., Professor of German at Queen's College, London. 2s. 6d.

**Cicero.—Pro lege Manilia.** Edited, with Introduction and Notes, by J. C. NICOL, M.A., Trinity Hall, Master of Portsmouth Grammar School. 1s. 6d.

*Glasgow Herald*.—"A very scholarly piece of work."

CONTENTS.

	Page		Page
The Education Minister.....	163	Distribution of Diplomas, Prizes, and Certificates at the College of Preceptors.....	177
Assistant-Masters .....	163	School Maps. By H. O. Arnold-Forster, M.P. Paper read at the Evening Meeting of the Members of the College of Preceptors .....	179
Notes .....	164	Reviews.....	181
Summary: The Month .....	165	Literary Handbooks; Laws of Thought; The Greatest Plantagenet; Greek Originals; Roman History Primers; <i>Æschylus</i> in English; The Voice.	
Universities.....	167	General Notices .....	183
What is Grammar? By T. Le Marchant Douse, M.A. ....	168	Meeting of the Council of the College of Preceptors .....	186
Correspondence .....	170	College of Preceptors: Professional Preliminary Pass List ...	187
The Geographical Association.		Mathematics.....	187
Forecasts and Comments:—Fixtures .....	173		
Education Gossip .....	174		
Appointments and Vacancies.....	175		
Literary Gossip.....	176		

The Educational Times.

The Education Minister.

THE Board of Education has been constituted for exactly a month past, though it is only to-day that its powers have come into operation.

The Duke of Devonshire was nominated on March 3 as President of the Board, and, by virtue of the Act, the Board was established on the same day. Our readers are sufficiently familiar with the provisions of the measure whereby England has now, for the first time in her history, a Minister in the Cabinet responsible for the whole domain of education from the kindergarten to the University. We shall not have long to wait for the initial exercise of the authority of the Board. The details of its organization are not before us as we write, but they may be published at any moment. The conditions under which the President of the Board and his permanent Secretaries will henceforth control our elementary, secondary, technical, and higher education will, in many respects, be practically the same as those which have existed under the old régime. In other respects they will be entirely new, being created for new purposes. What secondary teachers will now be most anxious to see is the nomination of the Consultative Committee, which, we must hope, will be as far as possible representative of all the interests of education, even if it does not follow the constitution set forth in the last Government Registration Bill. One of its chief and earliest duties will be to create a Register, and there are a dozen good reasons why this task should be taken in hand without delay. As the Dean of the College said at the last Distribution of Prizes, the Act is one for which public opinion was thoroughly ripe, and which, if carried out with wisdom and discretion, will produce a very marked improvement in education.

Our first Minister of Education enters on his duties as President of the Education Board with the good will and confidence of all. The Duke of Devonshire has been associated with education in its various aspects for many years past—as Lord President of the Council, as Chairman of the Association for Promoting Technical and Secondary Education, and as Chancellor of the University of Cambridge. He has shown at all times the tact, the comprehension, the foresight, the combination of enterprise and caution, which are pre-eminently necessary in dealing with a subject so complicated and all-

important as that of public education. On him, to a great extent, will depend the shaping of the course which the Education Board is to take in the coming years, especially in regard to secondary education. It is true that he is only the political and temporary head of the Department; but, in any case, it seems probable that there are years of useful work before him as President of the Board. They will be years of no little difficulty and suspense, for the lines on which the new organization is to be conducted have not yet secured the final and unanimous assent of those who are entitled to be heard on the matter. The Duke of Devonshire has a great opportunity and a great responsibility. There is ground for the hope that he will not disappoint us.

Assistant-Masters.

THE deputations from the London County Council and School Board to the Charity Commissioners, to suggest some reformation in the conditions upon which assistant-masters in secondary schools hold their posts, could not have expected to serve any immediate purpose. Mr. Alderson, the Chief Commissioner, recognizing the moribund condition of his educational jurisdiction, contented himself with expressing his sympathy with anything that would improve the position of assistant-masters as regards tenure, salary, and pension. As the grievances of assistant-masters found a place in the *nunc dimittis* of the Charity Commission on its educational side, we may perhaps hope that the matter will not be lost sight of by the Board of Education.

It must, however, be borne in mind that the powers of the Board in this direction are in no wise more extensive than those possessed by the Charity Commissioners. They are merely transferred to the Board of Education, and any amelioration in the lot of assistant-masters in endowed schools, if recourse is not to be had to fresh legislation, must be brought about by changes in the schemes of such schools. When the Endowed Schools Acts were passed the importance of providing reasonable security of tenure and advancement for assistant-masters was not appreciated, and consequently there is no express provision with that object in the Acts. Under their general powers to frame and regulate schemes the Commissioners might, however, have introduced such provisions. The lack of initiative and power to grasp the educational needs of the age which the Commissioners have too often shown fully accounts for this

omission, and they depart from the educational stage perhaps less regretted by the assistant-masters of the endowed schools than by any other educational section.

While upon this subject it may be well to point out that the separate alteration of school schemes, which is now the only method by which through existing agencies a change can be brought about, is clearly out of the question. Fresh legislation will be necessary, and an early deputation to the Board of Education suggesting that the Board should frame a Bill, after reference to the Consultative Committee, embodying the views of the profession as to the status and conditions of tenure of assistant-masters, might probably lead to some result. It may be said that the formation of the Register should precede such a measure. But the matters at issue are definite and urgent; and a Bill promoted by the Board would mean business, while the introduction of a private members' Bill, as has been suggested, would not.

### NOTES.

THANKS to the consideration which it has shown to the representatives of the Headmasters' and the Assistant-Masters' Associations in matters of school curriculum, the Central Welsh Board for Intermediate Education has been able to combine elasticity with firmness in its work in relation to the county schools. Owing to the larger area of the country, and other considerations, it might be difficult in any scheme of secondary education for England to work such a body as the Central Welsh Board; but, so far as Wales is concerned, educationalists who know the system intimately are of opinion that it has been remarkably successful. The aim of the Board has been throughout not to crush the individuality and originality of the teacher, but to guide their development on the most fruitful lines. The county schools are already making their influence felt in many districts on the life of the country, and a noticeable feature of the scholarship lists at the University Colleges of recent years has been the high places obtained by pupils from these schools. Generally speaking, the educational system in connexion with the Welsh University and the county schools seems full of promise.

THE TOWN Council of Hamburg has endorsed the proposal to combine the various institutions of the city in a single organization of University rank. Hamburg has a fine ethnological museum, a museum of antiquities, a museum of arts, an observatory, a chemical and a physical State laboratory, an institution for natural history, a botanical institute, and a public library. With respect to medical science, there are a number of good hospitals, of which the new State Hospital at Eppendorf is one of the best equipped on the Continent. The Institution for Tropical Diseases established by the Imperial Government will be in connexion with the hospitals of Hamburg. As a first step in the direction of University organization the Senate of Hamburg recently submitted a scheme to the representative assembly of the city providing that the heads of the above institutions, together with a staff of lecturers, should form the "teaching body" of Hamburg, and elect a rector. The number of lectures will be augmented, and it is hoped that the combination of the various institutions may lead in course of time to the formation of a fully equipped University. We see it

stated in a German paper that the Kaiser has expressed a personal interest in the proposal.

EARL FORTESCUE, whom we quote merely as a veteran in education, recently wrote a letter to the *Times* which, to say the least of it, did not support the claim for further State aid towards the training of elementary teachers. Concluding his letter, Lord Fortescue says:

I have examined the report of the Education Department for 1899, presented since last July, and I find that the average cost of each student in the male training colleges was £62. 7s. 5d. for the year ended June 30, 1898. At Hammersmith, the highest, it was £69. 4s. 9d.; at Chester, the lowest, it was £51. 18s. 11d.; and the cost of tuition in those sixteen boarding colleges was £3,470. 7s. 3d., and of keep £37,524. 12s. 10d. . . . I would suggest that, as the contribution of the State towards the training of elementary schoolmasters seems to be needlessly large, it ought either to be diminished for the relief of the taxpayer, or a larger number ought to be trained for the money, which I venture to think practicable without any sacrifice of efficiency. It should never be forgotten that these students are almost wholly drawn from the wage class, and are trained at very small cost to their parents for an honourable and, on the whole, increasingly remunerated profession.

"The wage class" is good. So are Lord Fortescue's intentions. So, no doubt, are the intentions of those who ask the Government not so much for fresh money as for a more comprehensive provision for the training of teachers without invidious distinctions.

A HOLIDAY course held at Oxford last year mainly, but not exclusively, with a view to the needs of foreign students, proved to be such a successful experiment that it will be repeated this summer. The object is to provide foreign students with practical help in the study of English language and literature. Courses of lectures in modern poets and prose writers have already been arranged, and small classes will be formed for practice in letter-writing, composition, and pronunciation. In response to a request from teachers of English in foreign schools, English institutions and social customs will also be dealt with, and the following are among the chosen subjects:—Political parties, etiquette, Parliamentary procedure, trial by jury—this last to be illustrated by a costume representation. St. Hugh's Hall has been secured as a vacation school for July, August, and September. Here it is hoped that "all will enjoy the advantage of college life while conforming to the best traditions of an English home," and the association of English and foreign students under such circumstances is not the least among the attractions offered. The arrangements have the approval of Mr. Arthur Sidgwick, Mr. Michael Sadler, Miss Maitland, Principal of Somerville College, and Miss Rogers, tutor in classics to the Association for the Education of Women, and there are other well known Oxford names on the list. Mr. Sidgwick has promised to lecture on "Mrs. Browning," and Miss Maitland on "The Education of Women in the Reign of Victoria."

SINCE we dealt last month with the question of rural education the Elementary Code for 1900 has appeared, and its new provisions go far towards creating the conditions which we regarded as necessary. It is a good augury of what the Board of Education will be able to do when it sets to work. No doubt the block-grant system of judging and paying for the work done in all subjects, on the aggregate rather than in-

dividually, is to be welcomed from the point of view of the rural teachers. The more "urban subjects" have hitherto been found most effective for the purpose of grant earning. Again, the kind of teaching is to be determined by the requirements of each district and the needs of the scholars. There is henceforth no reason why rural economy should not become part of the general education of all village children. Opportunities of giving object lessons have been afforded in all standards, and here again "Nature knowledge" should do much towards the end in view. The question of actual work on the land may well be left to a process of gradual development; and here it may be pointed out that a special grant is still obtainable for teaching a number of subjects, among which are gardening and manual instruction, which latter has been taken to include the former in times gone by. The importance of a special training of the girls who are to be the housewives of the next generation has been further recognized. Altogether the Code is decidedly encouraging for those who have laid stress on the value of rural education. Opinions differ as to its probable effect on elementary education in general; but we are not surprised to see that bodies like the Agricultural Education Committee have welcomed it "with the greatest satisfaction."

THIS month brings round the hundredth anniversary of the poet Cowper's death. "John Gilpin" is still very much alive; but, we think, there are not many in this generation who claim acquaintance with Cowper's "Tirocinium: or a Review of the Schools." Its condemnation of the low tone and rude manners of the schoolboys of his day is expressed in such extreme terms that it might be thought to be due as much to his sensitive and retiring nature as to the actual hardships and persecution endured by him at the hands of his schoolfellows at Westminster. Cowper's criticism was, however, justifiable. In an article on "Public Schools," which appeared in the *Edinburgh Review* only some ten years after the poet's death, Sydney Smith denounces the bullying tyranny and accompanying slavery prevalent in the public schools in stronger language even than Cowper's. Sydney Smith could only suggest as a remedy the establishment of small schools so as to permit more effective supervision. The evil has, fortunately, almost entirely disappeared, and, instead of a "Tirocinium," we have the school magazine. The conservative instincts of schoolboys have, at last, succumbed to the civilizing spirit of the century.

In the review to which we have just referred, Sydney Smith maintains that the most eminent Englishmen in every art and science had not been educated in public schools. As he was a Winchester boy himself, the admission is all the more remarkable, and he attempted to prove his case by a formidable list of poets, philosophers, lawyers, men of science, warriors, statesmen, and divines who were never at a public school. It would be interesting if a similar list were made of the distinguished men of the Victorian period. As to science and mathematics the contention is still largely true, but certainly not as to statesmen, warriors, and men of letters.

THE announcement that the Chicago Board of Education have decided to omit histories of England from the literature used in

the public schools, on the ground that they are biased in favour of England, opens out a vista of charming possibilities to the American schoolboy. He doubtless, by this time, has suggested that Spanish histories should receive similar treatment. The strong local equation in American politics may lead to strange results. While English history is anathema in Chicago, Boston may refuse to countenance any educational recognition of the growth of Russia's uncultured despotism, and the development of modern Germany may be treated as non-existent on the Western slope. One of the trustees of the Chicago schools, we are told, is President of the Ancient Order of Hibernians. We thought so. We may take courage, nevertheless, because the still small voice of the Report of the American Historical Association, recently issued, speaks thus:—"The pupils in our schools can ill afford to lose such an introduction to the study of the history and institutions of the United States; for without a knowledge of how the English people developed and English principles matured they can have slight appreciation of what America means." There is, perhaps, a municipal election pending in Chicago.

## SUMMARY.

### THE MONTH.

ON March 16 Lord Balfour introduced in the House of Lords an amending Education Bill for Scotland. This measure is mainly concerned with higher education, its chief purpose being to organize the administration of various funds, and to establish Local Authorities for secondary and higher education. Lord Balfour said that the Act of 1872, dealing mainly with elementary education, had various clauses touching higher schools and higher education, putting such under local School Boards, with provision for their maintenance out of rates and ancient endowments. On the whole the power of the School Boards had been well and wisely exercised, but there had in some quarters been a tendency to grudge expenditure, and higher schools were at a disadvantage in not receiving assistance from Imperial funds.

The Government hoped the authority they set up would rule over a wider area than the parish or the burgh, and would be enabled to harmonize and to provide the means whereby every child, either by means of higher schools, higher departments, or, in the event of these two methods failing, by means of bursaries, would be brought within the reach of higher schools, if he or she would profit by it. They proposed to take as their unit of administration the county and some of the larger boroughs, and one parish of Govan, which at present had a Higher Education Committee of its own. He regretted that it had not been found possible to lay down in the Bill the precise conditions of the constitution of these Higher Committees. They proposed to do that by a scheme to be subsequently approved by Parliament. The reason for that was this: that the circumstances of the counties and towns differed so widely. They intended that there should be on the Higher Education Committees a considerable representation of the municipal element, whether County Council or Town Council; that those School Boards which gave higher education should also be represented, and that there should be a small admixture of gentlemen chosen for their interest in education and on account of their possessing the confidence of the locality.

WITH respect to professional representation and the assistance of educational experts, Lord Balfour went on to say—

A Consultative Committee had been established for Wales, and one would shortly be established for England. Scotland and England, however, were hardly parallel in this matter. Scotland had much less to do in the matter of the organization of its system of higher education than was the case in England. Secondary education had for a long time been part of the national system of education in Scotland, and he found no difficulty in ascertaining Scottish opinion. But on matters of administration large towns such as Edinburgh and Glasgow differed materially from one another, and there were different problems affecting Highland and Lowland counties and urban and rural districts. He proposed, therefore, to rely mainly for advice and assistance upon the County Committees. He believed they would form the best Consultative Committees for the Vice-President of the Scotch Educational Department. They would exist all over Scotland, and would know the



needs of their own particular district, and he should look with considerable jealousy on the establishment of any Committee which would tend to come between the Vice-President of the Council and the Local Authorities who were doing the local work of education. On the other hand, he did not regard this as a matter of principle. He was open to argument and conviction on the subject, and if there was a more general desire for a Consultative Committee in Scotland than he believed there was he would be willing to revise his opinion.

A MOTION virtually in favour of establishing a Roman Catholic University in Ireland out of national funds was made in the House of Commons on March 23, and defeated by a majority of eighty-six. Neither the Ministerialists nor the Opposition were unanimous on the subject. Fourteen Liberals and fourteen Unionists voted with the Nationalists. Sir H. Campbell-Bannerman, Sir W. Harcourt, Sir H. Fowler, and other Liberals took no part in the division; but included in the minority of ninety-three were Mr. John Morley, Sir E. Grey, Mr. Asquith, Sir Robert Reid, Mr. Haldane, and Mr. Birrell. The Unionists accompanying them included Mr. Courtney, Sir W. Anson, Mr. Jebb, Mr. Malcolm, Mr. Monk, Mr. H. Foster, Mr. Yerburgh, and Sir Barrington Simeon. The majority of 179 was composed almost entirely of Ministerialists. Mr. Balfour—whose speech warmly supported the motion—being among the number.

ON March 23, in the House of Lords, Lord Reay congratulated the Education Department on the new Code, which completes what is known as the "block system" of grants to elementary schools, and at the same time gives credit for several new subjects in the rural schools. Lord Reay assumed that one object of the Committee of Council had been to bring the English Code more in harmony with the Scotch Code. Having assimilated the Code to some extent, it would have been wiser to have put in it all the guarantees which the Scotch Code gave. One of the things he feared was that the increased powers given to the inspectors would lead to friction between the inspectors and managers. He also feared that there would be a diminution of the earning powers of the urban schools. The Duke of Devonshire replied:—

The cases of England and Scotland were very far from being analogous, because Scotland had authority to introduce secondary education, whereas the School Boards in this country had no such power. The Government had, however, under consideration a measure which they considered necessary to constitute the authority which should give to localities the power to afford secondary education. When that time came they might be in a position to make some further advances towards assimilating English and Scotch Codes. The proposed additional powers to inspectors would be subject, if necessary, to appeal to the Education Department.

THE Civil Service Estimates provide, as usual, for the distribution of the Parliamentary grants to the Universities and University colleges. Wales, as our readers are aware, is favourably treated in respect of these annual subventions. The grant to the University of Wales is to remain at £4,000, as compared with £2,000 granted to the Victoria University and £42,000 to the Scottish Universities. The grants in aid of University colleges amount to £37,000, of which £25,000 goes to English colleges and £12,000 to Welsh, divided into equal parts for Aberystwyth, Bangor, and Cardiff. In addition to this, a grant of £20,500 is to be made in respect of Welsh intermediate schools—£500 towards the cost of inspection and examination, and the remainder in the form of grants in aid to the various counties to meet an equal sum raised in each case by a county rate of  $\frac{1}{2}$ d. in the £. Out of a total estimated sum of £105,700 to be expended on Universities, University colleges, and intermediate schools, Wales gets £36,500, or a little over a third. The following are the amounts estimated to be due in respect of intermediate schools in each county and county borough in the Principality:—Anglesey, £259. 11s. 8d.; Brecon, £577. 8s.; Cardigan, £610; Carmarthen, £1,322. 2s. 10d.; Carnarvon, £1,250; Denbigh, £1,228. 1s. 1d.; Flint, £925. 1s. 11d.; Glamorgan, £5,608. 8s. 6d.; Merioneth, £569. 6s. 7d.; Monmouth, £2,049. 4s. 9d.; Montgomery, £759. 12s. 8d.; Pembroke, £883; Radnor, £358. 13s. 10d.; Cardiff, £2,029. 8s. 11d.; Newport, £690; Swansea, £650.

IN answer to a question in the House of Commons, the Irish Attorney-General said that the National Education Board had received a letter from the Gaelic League, urging the desirability of conserving the Irish language in the schools in the interests of

the poor people of Ireland, as is now done with the Welsh language in Wales, with the approval of the Committee of Council on Education for Great Britain. The matter is now under the consideration of the Commissioners, who are the proper authorities to deal with it in connexion with the revision of the school programme shortly to be carried out.

THE Cambridge Teachers' Training Syndicate, in their annual report for 1899, state that during the year lectures on the Theory, History, and Practice of Education have been delivered by Mr. S. S. Fletcher, of King's College. Two examinations have been held, in June and December. The June examination was held at seven centres—London, Cambridge, Cheltenham, Liverpool, Edinburgh, Aberystwyth, and Waterford—when 117 candidates presented themselves for examination, of whom 6 were placed in the first class, 81 in the second, 16 in the third, and 14 failed to satisfy the examiners. The December examination was held at London, Cambridge, Cheltenham, and Exeter, when 57 candidates presented themselves for examination, of whom four were placed in the first class, 32 in the second, 16 in the third, and 5 failed to satisfy the examiners. This makes a total of 174 candidates examined this year, as against 145 examined in 1898 and 154 in 1897. It is the largest number the Syndicate has ever examined.

THE report of the Committee of the Cambridge University Day Training College for the academical year 1898-99 has been published. In June, 1899, the college consisted of twenty-four students—seven in the third year, eleven in the second year, and six in the first year. The professional education of the students has been given by the Principal, Mr. Browning, of King's College, Masters of Method, Mr. S. S. Fletcher, of King's College, and Mr. Iliffe, of St. John's College, and by Mr. Jenkyn Jones, of Caius College. The instruction in music has been given partly gratuitously by Mr. Sedley Taylor, of Trinity College, and, partly, at Mr. Taylor's expense, by Mr. Field Hyde. Of the present students, eleven hold scholarships given by the Drapers' Company, and two hold scholarships given by the Clothworkers' Company, and one an exhibition given by the Leathersellers' Company. One is a sub-sizar of Trinity College, one holds a choral scholarship at King's College, and one a choral scholarship at Jesus College; one holds a sizarship at St. John's College, and three hold exhibitions at Emmanuel College. The Committee desire to express their gratitude to King's, St. John's, and Emmanuel Colleges for these exhibitions and those which they have offered for the ensuing year; they are still of opinion that the progress of the college must depend upon assistance of this nature being continued and extended.

ON March 9 Miss Sara A. Burstall, B.A., formerly scholar of Girton College, Cambridge, now Headmistress of the Manchester High School for Girls, gave an address to the female students of the Mason University College on "The Position of Women in the New University." Prof. Burstall presided. Miss Burstall said that she felt profoundly convinced of the excellence of such a solution as had been achieved in Birmingham by the co-educational college and the impartial University. The great movement which had given women the opportunity of sharing in the studies and culture which strengthened and stimulated, refined and consoled, was now fifty years old. The first result was the recognition of the right of women to education and degrees. That was so much a commonplace now that there had been no question in the new University of Birmingham as to whether women were to have degrees or not. It was taken for granted. Women in the new University, in all but one—and that a technical—faculty, were on absolute equality with men. She was particularly gratified to know that women were eligible, not only to study and obtain degrees, but also to any and every office connected with the government of the University.

ON March 15 a deputation from the London School Board was received by Mr. G. H. Alderson, Chief Commissioner of the Charity Commission, to hear certain suggestions as to the schemes applying to secondary or technical schools. Mr. Whiteley introduced the subject by explaining that the School Board for London were of opinion that it would be a very useful provision in all future schemes, or alterations of schemes, for secondary or technical schools that, wherever a headmaster called upon an assistant-master to resign, there should be an appeal from the headmaster's decision to the governing body of the school. The deputation had also been asked to urge upon the

Commissioners the desirability of a provision being inserted in the scheme for these schools, providing for the appointment of an independent auditor, who would be able to examine the valuable deeds of endowed schools periodically, and to check the accounts. Mr. Alderson, in reply, said there appeared no objection to the appointment of an independent auditor, provided he had no power to surcharge; and, as to the further question of the dismissal of assistant-masters, the Commissioners had distinct sympathy with anything which would tend to improve their condition. As, however, the powers of the Commissioners in this matter were about to be transferred to the Board of Education, he must refrain from saying anything which would prejudice the question before it had been considered by the new Department to which it would be referred. The Commissioners also received a deputation of a similar character from the London County Council.

IN their annual report for the past year, the Poor Schools Relief Committee of the London Diocesan Board of Education state that the operation of the Voluntary Schools Act during the past three years has made it abundantly clear (1) that the special aid grant does little more than meet the permanently increased expenditure which is demanded, an expenditure which, in many cases, is even out of proportion to the amount of aid grant allotted; and (2) that, whilst in past years "the intolerable strain" served as a stimulus, so that the Committee were able to boast that not only were existing Church schools preserved, but fresh accommodation was continually being provided, the Act of 1897 seems, for the time, to have had an enervating influence upon many who expected much more from it than it has effected, or, indeed, was designed to effect. If, therefore, the schools are, through the operation of the Act, better equipped, staffed, and salaried than in the past, they will, the Committee say, nevertheless, still feel severely the financial strain, unless the flow of voluntary contributions be liberally maintained. Upwards of £22,000 is being raised and expended upon the rebuilding and enlargement of two Church schools in the East end of London. In another part of the diocese the important schools of St. Paul, Hammersmith, have recently been rebuilt, all of which "shows the keen interest which is being taken in Church schools in the poorest districts, and ought to serve as a stimulus to the more well-to-do parts of the diocese." It has been determined by the Committee to revert to the plan of inviting a special "Church Schools Sunday" appeal throughout the diocese, and Sunday, July 15, has been chosen for the purpose.

A PARLIAMENTARY return gives particulars with respect to the evening continuation schools inspected for the year ended April 30, 1899. It appears that the number of schools inspected was 5,908, the number of scholars on the books was 474,563, the grants paid by the Education Department amounted to £184,271, and the total income of the schools for the year amounted to £371,768, of which the sum of £123,031 was derived from School Board rates.

THE Committee of the City and Guilds Institute have decided that in counties and county boroughs possessing an organization for the promotion of secondary education, recognized by the Science and Art Department, such organization may, on application through the Secretary of the Technical Instruction Committee, or otherwise, be held responsible, under certain conditions, for the conduct of the Institute's examinations, and for the establishment of new classes in technology, in accordance with Clause VII. of the "Science and Art Directory." The Committee will, however, continue to require, as a condition for the registration of a class in any technological subject, the approval by the Institute of the qualifications of the teacher proposed to be appointed.

ON March 13 Dr. G. E. Shuttlesworth read a paper before the Childhood Society, the Rev. T. W. Sharpe in the chair, on "The Training of Defective Children under School Boards." Tracing the formation of special classes for the instruction of dull, backward, and defective children to Germany (where they had existed since 1863), the lecturer stated that at the present time probably no fewer than six thousand children were receiving special instruction within the limits of the German Empire:

In Scandinavian countries such instruction had existed for upwards of twenty years. In England, the Leicester School Board had actually opened the first special class in April, 1892; though the London School Board had formally approved the system in March, 1891, and started centres of instruction in the following year. The latter had now no

less than 2,125 children on the roll at upwards of fifty "special" centres scattered through the metropolis; and, in addition to London and Leicester, the School Boards of Birmingham, Bolton, Bradford, Brighton, Bristol, Burnley, Halifax, Nottingham, and Plymouth had established special classes, whilst Manchester, Liverpool, and Derby had determined to do so. The estimate of the Departmental Committee was that at least 1 per cent. of the elementary school population of the country would require such special provision, which would be facilitated by increased grants from the Education Department under the Act of 1899.

#### UNIVERSITIES.

(From our Correspondents.)

No review of the past term could mean much if it Oxford. left out of sight the weather. The Oxford climate is singularly enslaving, and, in its clumsy, inevitable way, can almost paralyse work if it pleases. This term it has pleased, and hence a certain inertia in University life.

Quite early in term there died one of our greatest men, Sir William Hunter, Curator of the Indian Institute. Probably the Indian Civil Service draws at present a greater preponderance of its recruits from Oxford than ever before. In the University life of such men Sir William Hunter played a notable part; his experience and his sympathy were every one's help. Of his own work, the administrative part, which first made him famous, is, of course, achieved; but his literary labours, which promised incalculable things, will now never be. The great "History of British India," whose first volume appeared in 1899, must remain a fragment.

Early in term (February 6) the preamble to the statute establishing D.Sc. and D.Litt. degrees was passed *nem. con.* Prof. Poulton, indeed, gave such circumstantial proof of the success of the B.Sc. that opposition was paralysed. On February 20 various amendments were thrown out, including a proposal that heads of houses and professors should receive these degrees *ex officio* and without examination. This proposal, which is not, however, such a mere case of "corrupt oligarchy" as it sounds, was crushed by the self-abnegating zeal of the President of Trinity and the Professor of International Law. Finally, on March 13, the statute was definitely approved. There can be little doubt that, in the case of the D.Sc., it is a real step gained, completing our excellent modern science course as sketched in my last letter. Whether the B.Litt. has been, or the D.Litt. will be, at all as valuable is by no means equally certain.

On February 20 the preamble was carried to yet another statute of distinctly parallel tendency, affecting the Law School. The proposal, backed by Sir William Anson and Prof. Dicey, is to allow graduates of other Universities to take our B.C.L. The idea is to collect the more advanced students of Law from America and the Colonies as well as from the United Kingdom, and build up at Oxford a great school for the most advanced study of law. The question then is: Will our present staff suffice? If the Professors are concentrated upon the B.C.L. School, will the non-professorial lecturers in law be able to cope alone with the Final School of Jurisprudence? One, of course, can only answer this by making a careful scrutiny of our *personnel*; most answers so given are in the affirmative.

The War Office has awoken to many things lately; and amongst them to the merits of the Universities as recruiting-grounds for officers. The Vice-Chancellors of Oxford and Cambridge have suddenly been authorized to dispose of no less than seventy-three commissions apiece. There is no lack of applicants, and choice is to be made from them according as they possess "good moral character" and "any academic distinctions." So, at least, the War Office has proposed; how an already over-worked Vice-Chancellor will dispose remains to be seen. In so far as the step, in itself an emergency step, indicates an official desire to base the Army more on the Universities than heretofore, it can only meet with our approval. In all, about two hundred and fifty Oxford men have gone to the front in various capacities. The list includes not a few prominent undergraduates.

The O.U.D.S., this term, acted "Twelfth Night." It is rapidly becoming confined to Shakespeare, which seems a pity, since it can then only do moderately what is better done elsewhere. Greek plays give an academic society far more chance of being interesting. Only scholarship is, unhappily, not the *forte* of the O.U.D.S.; and their last attempt at a Greek play, "The Knights," contained so little recognizable Greek that its memory still haunts them as an awful warning.

Music in Oxford has, for various reasons, been rather in the background during this term. Chief among these reasons is the lamentable illness of Mr. John Farmer, to whom, as an organizer,

if not as an organist. Oxford music owes very much. On March 7 Sir Hubert Parry, our new Professor of Music in succession to Sir John Stainer, delivered his inaugural lecture.

A new research scholarship, in Egyptology, has been started at Worcester College; and the first of "Laycock Scholars" accordingly is Mr. D. MacIver, of Queen's; a most auspicious beginning. Mr. C. H. Firth, M.A. Balliol College, has been elected Ford Lecturer in English History for the ensuing academical year. Sir William Markby, D.C.L. Balliol College, having resigned the Readership in Indian Law, is to be succeeded by Mr. E. J. Trevelyan, late Judge of the Calcutta High Court and late Vice-Chancellor of Calcutta University.

The Hall and Houghton Prizes show a great falling off in the study of Divinity in Oxford. Of the two senior prizes, neither was awarded; for the Junior Septuagint Prize there was not even a candidate. The Junior Greek Testament Prize was alone won, by Mr. P. B. Emmet, B.A. Magdalen College.

Oxford Evangelicalism will be greatly weakened by the appointment of Dr. Chavasse to the see of Liverpool. No one seems yet to prophesy confidently who will succeed him as Principal of Wycliffe Hall.

WHILE things Irish have been attracting the attention of the British public, the University has only followed the fashion in acquiring a valuable collection of Irish antiquities which formerly belonged to Mr. Murray, of Edenderry, King's County. The collection, which is probably worth about £600, was acquired for a quarter of that sum, and the whole of the purchase money was raised by Prof. Ridgway with the aid of the Antiquarian Society. Mr. Murray has stipulated that his name shall be attached to the collection, and that the sets of objects from separate graves or found otherwise associated shall never be broken up or divided.

Through the generosity of Mr. Richard Horton-Smith, Q.C., late Fellow of St. John's College, a prize has been offered to the University in memory of the donor's son Raymond Horton-Smith, M.A., M.B. of St. John's College; the prize is to be awarded to the candidate for the M.D. degree who during the academical year has presented the best thesis. Much valuable work is done by the members of our Medical School in this connexion, and the establishment of a prize will doubtless serve to perpetuate work of solid and permanent value.

The annual report of the examiners for poll degrees contains nothing very startling. The special examinations in Theology show 88 failures out of 277 candidates, which is somewhat abnormal; while the first part of the Law Special is responsible for 53 plucks out of 102 candidates—a result possibly due to the examiners as much as the candidates. When members of the Senate have the courage to *non-placet* personal graces we shall have made some progress towards the maintenance of uniformity of standard.

To oppose a personal grace is generally a somewhat invidious taste, but there are occasions on which the dictates of duty plainly point to such a course. On March 13 the *Reporter* gave notice of a grace for the appointment of a certain gentleman to fill the new office of Salomons Lecturer in Russian. Mr. E. G. Browne, who is closely associated with the training of Student Interpreters in Cambridge, at once gave notice of opposition on the ground that Cambridge men have of late years been habitually thrust aside in the making of all such appointments. The result of the voting must have been a surprise for the Council, as the grace was rejected by 61 to 19. It was once said by a well known head of a house that "imported professors think they should come in duty-free"—those days are happily over; but Cambridge men for Cambridge" will be a cry which will have a material effect on the determination of future appointments.

If the term came in like a lamb, it certainly went out like a lion as far as our social life was concerned. On the evening of "Lady-smith Day" the usual patriotic bonfire was duly lit in the Market Place; the undergraduates and townsmen alike were more zealous than discreet in their selection of appropriate material. Fire-wood was commandeered from various sources of supply, including the Corporation's bandstand on Christ's Piece. The result was that a few undergraduates and townsmen were duly arrested, and, in the morning, charged with "feloniously stealing, taking, and carrying away" the combustible materials in question. In hot haste the Mayor and his bench of local wiseacres, without intimating to the accused the serious character of the charge against them, accepted pleas of guilty from some and convicted others of the prisoners. The proper course would have been to give a warning and remand the prisoners till counsel could be

instructed. The popular anger was quickly roused, and the gross impropriety of the whole transaction led to communication with the Home Secretary, and a decision on the part of that official on the distinct impropriety of the conduct of the whole proceedings.

It should be noted, however, that the persons convicted and fined had, by paying their fines, removed any disqualification for office, civil or military, it being specially provided by a statute of 1829 that a felon who has suffered his imprisonment or paid his fine shall be in the same position as if he had received a pardon under the Great Seal. Still, the decision of the Home Secretary is a graceful one, inasmuch it states that, on the recorded facts, the convictions should never have taken place. The town has been put to great expense, not so much in keeping order in the Market Place as in protecting Mr. A. I. Tillyard, the Mayor, from the anger of the mob. If any great success is achieved in South Africa, it will be interesting to see how the Cambridge celebrations will be managed by our municipal authorities.

University Prizemen:—Chancellor's Medal for English Verse, Frank Sidgwick; Porson Prize, R. K. Gaye; Powis Medal, Gilbert Norwood.

DR. T. C. EDWARDS, D.D., Principal of the Theological College, Bala, and formerly Principal of the University College of Aberystwyth, who had been in failing health for some time, died on March 22 at the age of sixty-one. He was the son of Dr. Lewis Edwards, D.D., his predecessor in the Principalship of the Bala Theological College, and a descendant of the Rev. Thomas Charles, B.A., of Bala, one of the founders of the British and Foreign Bible Society. Dr. T. C. Edwards was a graduate of both London and Oxford. In the M.A. list of London University he held the second place, the first place in that year being taken by the late Prof. Jevons. At Oxford he was a scholar of Lincoln College, and took a First Class in the School of Literæ Humaniores. After graduating, however, he chiefly devoted himself to theology, and wrote, among other works, a well known commentary on the First Corinthians. As first Principal of Aberystwyth, he, with other faithful friends of the College, some of whom are still living, succeeded, through much anxiety and apparently insuperable difficulties, in placing the College on a permanent footing. In this work, which has by now borne abundant fruit, Dr. Edwards's energy and magnetic personality contributed in no small degree to the success attained. He was a powerful preacher, and was well known outside the circle of his native land. Merionethshire has been singularly unfortunate in the course of the past year in losing three of her most distinguished sons—Mr. T. E. Ellis, M.P., Dr. Edward Jones, of Dolgellau, one of the most active educationalists in Wales, and now Dr. T. C. Edwards.

The next meeting of the Court of the University of Wales will be held at Wrexham on April 26. On the following day the April meeting of the Central Welsh Board will be held at Carnarvon.

The following gentlemen have been elected by the Guild of Graduates of the University as its representatives on the Court for a period of three years from April 6, 1900:—Mr. D. E. Jones, B.Sc., Her Majesty's Inspector under the Science and Art Department for Wales; Mr. F. Llewelyn Jones, B.A., LL.B., Solicitor, Holywell; Prof. Edward Edwards, M.A., of the University College of Wales, Aberystwyth; Mr. F. P. Dodd, M.A., Headmaster of the County School, Blaenau Festiniog; and Mr. T. W. Phillips, B.A., Headmaster of the County School, Newport, Mon.

### WHAT IS GRAMMAR?

1. At a recent University examination one question in the English paper required candidates to explain what is meant by *grammar* and to give its *chief divisions*. It was my duty to read some hundreds of the answer books, and I was struck by the fact that not one candidate—thanks probably to the bad school-books that abound—was able to give an exact answer to the question, and very few approximated to exactitude. Some, for example, furbished up the antiquated definition current in ladies' "seminaries" early in this century (perhaps in the last) to the effect that "grammar is the art of speaking and writing with propriety"—which it isn't. Others, less badly, called it "the science of words," or even "the science of language," both of which formulæ are too wide and too vague. Similarly, as to the "chief divisions" of grammar, many candidates thought that the "parts of speech" were meant; others gave that hoary quartet "Orthography, Etymology, Syntax, and Prosody," of which only "Syntax" is unobjectionable.

2. Now let it be noted first that grammar proper is not an "art" any more than chemistry proper; both are sciences, which investigate facts and deduce laws or principles, and neither is concerned with the way in which these latter are carried out in practice. Grammar, *e.g.*, takes no more—perhaps less—account of what we call "orthography," or of rhetoric, or of prose or verse composition, or of syllogistic logic, than chemistry does of the alkali trade or of the manufacture of aniline dyes.

3. Next, chemistry having been thus mentioned in connexion with grammar, let us note the close analogy that subsists between the two—so close, indeed, that I was rather surprised that none of the more intelligent candidates should have thought of utilizing it. For how did men work towards and arrive at a science of chemistry? By observing and examining the various forms of matter as they exist in Nature, reducing complex forms to simpler constituents, and these, again, to irreducible elements. If for "forms of matter" we substitute "forms of speech" or "groups of words," then it was by precisely the same procedure that men arrived at a science of grammar; and the imitative repetition, to some extent, of this "analytical" process is the very best way of introducing commencing students to each of those sciences. (See § 9.) In text-books of both, however, the method nearly always adopted is the "synthetical" or constructive one, beginning with irreducible elements, and passing on, firstly, to the simpler, and then to the more and more complex, combinations of such elements.

4. I have instituted this slight comparison in order to arrive at satisfactory definitions. If I am correct, chemistry may be defined as the science that treats of the elements of matter and their various compositions; and, in exactly parallel terms, grammar may be defined as the science that treats of the elements of speech and their various combinations. The latter definition is, I think, at once elastic enough and precise enough to cover grammar, both over its widest ranges—historical grammar, comparative grammar—and within its narrowest limits—*viz.* the special grammar of an individual language at a given stage; *e.g.*, the grammar of present-day English, to which, in this article, I must confine my attention.

5. But what are the "elements of speech"? Some grammar-books appear to ignore speech altogether, and, for elements, go back to letters, as if language depended on the evolution of alphabetical writing! The illustrious authors are unaware that in the history of man, for every word that has been more or less clumsily represented by symbols, thousands of millions have been spoken—*i.e.*, uttered—as clusters, or, rather, concatenations, of voice sounds. It would seem, therefore, at first sight, as if "elements of speech" might be defined as "simple voice sounds," of which such clusters are made up. But this definition will not do; for, firstly, all simple voice sounds are not elements of speech; and, secondly, no such sound in and by itself, unless (as very rarely happens) it is also a word, has any linguistic value. This latter point opens a new consideration—*viz.*, that, unlike the chemist, the grammarian, in much of his work, besides the physical—*i.e.*, acoustic and physiological—characteristics of his speech forms, has to take into account their psychological content—*i.e.*, the percepts, concepts, thoughts, emotions, and volitions expressed by them, or what is commonly called their "meaning"; and of "meaning" the phonetic elements of speech, as such, are destitute. To avoid possible difficulties, therefore, let us take "speech" to denote language regarded on its physical side, and the wider and more abstract "language" to denote speech regarded on its psychological side. Then *elements of speech* may be defined as *simple voice sounds applied to linguistic purposes*. Language appears as soon as "meaning" comes in; its ultimate element, therefore, is the word.

6. The study of the elements of speech in general, as found in various languages, and apart from grammar, has been raised, within the last half-century, almost to an independent science, under the name of *phonetics*. The phonetic system of any particular language is called its *phonology*—sometimes rendered "soundlore"; German, *Lautelehre*—and falls within its grammar, of which (when synthetically treated) it should form the first "chief division." I have seen the name, indeed, in two or three of the more pretentious school-books; but, in each instance that I can call to mind the author proceeded at once to show that he knew little or nothing of the thing.\*

\* *Per contra*, I remember seeing the subject, although the name did not appear, handled with knowledge, and to the requisite extent for a primer, in Dr. Gow's fresh and interesting "Method of English," Part I.

7. Under phonology, two subsidiary matters may be glanced at. The first relates to methods of representing spoken sounds to the eye, by means of *symbols*. Such symbols are purely arbitrary. They may be diagrams (as in Bell's "Visible Speech"), or, say, in Laputa, even material objects. Phoneticians, however, generally use the letters of the ordinary alphabet, and various modifications of them. The main requisite is that every sound should have its own single and special symbol, and no second one. With such an alphabet, or system of symbols, the "spelling," as we call it, of every word in the national vocabulary would correspond with the pronunciation. Our current spelling, often facetiously called "orthography," is to be noticed under phonology, chiefly that it may be condemned for its appalling demerits. It ranks, in fact, with inconvenient habits acquired (sometimes with infinite trouble) through imitation of the traditional bad habits of people about us.

8. The other matter relates to the *syllable*. This, *qua* syllable, is not recognized in language, as above defined; but a single syllable may be, and very often is, a word, and is then, of course, recognized as such. Yet, as a sound-group utterable by a single explosion of the voice, the syllable may fairly find a place under phonology. In formal word-analysis, indeed, the syllable assumes functions of great importance; for, from historical and comparative grammar—at least, of the Indo-European languages—we learn that the fundamental syllable of a composite word, and, probably, the secondary syllable, were themselves originally independent words.

9. From the merely phonetic "elements of speech," let us now turn to the "elements of language"—*i.e.*, words. In this department, although it is generally planned with reference to the form of words, we have also to keep continually before us their meaning and use. It is here and hence that we discover the advantage of the analytical, and the disadvantage of the synthetical, treatment of grammar (§ 3). Thus, before he deals with words, the grammarian's business is to classify them, the classes generally acknowledged being known as the "parts of speech"; but, with one or two exceptions (the noun and interjection), the grounds on which these classes are differentiated involve the relationship of words of one class to words of another. This, in turn, involves references to phrases and to sentences—at least, to simple sentences or propositions—which may be called the psychological units of language, as expressing a single complete thought. But in strictly synthetic grammar we do not reach sentences, either simple or compound, till we come to syntax.

10. It may be pointed out, by the way, that classification is a process that must be applied to grammar, as to other sciences, from one end to the other—to sounds, to rules, and to sentences, as well as to words; without it, indeed, grammar would be a mere unscientific jumble. And the main classes, of course, may severally be subdivided. In the case of words, for example, each class is distributed into sub-classes: nouns—*e.g.*, into "proper," "common," or "masculine," "feminine," &c., according to meaning or use.

11. But, as above said (§ 9), we have now to deal specially with the form, or construction, of words. Hence the second "chief division" of grammar is called *morphology* ("form-lore"), which may be subdivided into *inflexion*, *derivation*, and *composition*. The second and third of these are sometimes taken together under one or the other of the two names; and not without reason, for "derivation" covers the formation of words by means of suffixes, of which some are known to be, and all probably once were, themselves independent words; so that we have here a species of "composition." Again, the latter term indicates the formation of words by prefixes (which have kept their independent character to a much larger extent than suffixes), or by combining national words; and, from another point of view, the resulting words may be regarded as "derivatives" from their primary components. To the term "inflexion" a slight objection may be raised, inasmuch as, besides its titular and abstract use, it takes a concrete sense to indicate a vowel change, and more especially an ending that modifies the relationship of a word; but no practical difficulty arises. This subdivision of morphology, together with the classes and sub-classes of words, used to be treated in English grammars under the head of "etymology," a term for which we have found a better use; and in Greek and Latin grammars, under the head of "accidence," which is still often employed.

12. There should be, however, a fourth subdivision under morphology—*viz.*, *accentuation*; for accent is a powerful and extensive modifier of words—*i.e.*, spoken words. In writing our

rigid orthography carefully conceals its effects from the eye. For example, if the initial syllable of a compound or a derivative word has a long vowel, and is accented, the vowel is often shortened, and the neighbouring vowel or vowels tend to disappear. Thus we write *break+fast* as *breakfast*; but we say *brék'f'ast*; so, *two+pence* gives *túpp'ns*, *knów+lodge* = *nóllej*; and many similar. And, if the accent be shifted from one syllable to another, the former, even if long, tends to disappear—e.g., *compáre*, but *incómp'ráble*; *bálcóny* (the old pronunciation), but now *bálc'ny*. In instances like *exercise* (*x=ks*) beside *example* (*x=qz*) we note phenomena closely similar to the effects produced by the primitive Indo-European accentuation upon the vocabulary of the parent Teutonic speech: which effects, after thousands of years, still survive in modern Teutonic dialects, in the past or passive participles of our own weak verbs. For example, where the final *d* is due to the fact that the full accent originally followed a primitive *t*—e.g., primitive, *domito* = Latin, *domitu-s*; gives English *tamed*—if the accent had immediately preceded the *t* (*domito*), we should have had *-th* for *d*—*tameth*, and so *beloveth*, and thousands more.

13. I have left myself neither time nor space to remark on the third "chief division" of grammar—viz., *syntax*, which deals with the mutual relationships of the words and phrases that make up a simple sentence, whether it stands alone or is a member—i.e., a clause—of a composite sentence; and, likewise, with the relationships, *inter se*, of clauses that make up a sentence of any degree of complexity.

14. To sum up: it appears that the material, or subject-matter, of grammar consists of *sounds, words, and sentences*. The "chief divisions" of grammar are, accordingly, *phonology, morphology*—comprising inflexion, derivation, composition, accentuation—and *syntax*.  
T. LE MARCHANT DOUSE.

## CORRESPONDENCE.

### THE GEOGRAPHICAL ASSOCIATION.

To the Editor of the Educational Times.

SIR,—May I call the attention of any of your readers who are interested in the teaching of geography to the Geographical Association, which was founded some years ago for the improvement of geographical teaching? Hitherto the Association has confined its efforts to the field of secondary education, but, at the annual meeting held in January last at the Imperial Institute in connexion with the English Education Exhibition, the Association was thrown open to teachers in primary schools as well, a step which, it is hoped, will greatly extend its usefulness.

The aim of the Association, explained in some detail in the enclosed leaflet, is, firstly, to supply teachers with information as to the best methods of teaching geography; and, secondly, to impress upon educational authorities the value of geography as an educational subject, when properly taught. The Committee some years ago memorialized various boards of public examiners, and note with pleasure the increasing tendency among examiners in geography to discourage mere learning by rote, and to set questions which call out the pupils' intelligence and reasoning powers. The events of the past few years, with the growth of public interest in what are called Imperial questions, encourage the Committee to hope that public opinion will heartily support their efforts to raise geography in this country to the position it already holds in the educational systems of our chief Continental rivals.

The Association devotes much attention to the improvement of such aids to teaching as text-books, atlases, hand and outline maps, and lantern slides, and possesses a collection of more than 1,500 slides for the use of its members. By means of lectures, meetings for discussion, and the publication of occasional papers, it seeks to spread information regarding the best methods that have been adopted in our own or in foreign countries; and, as there is at present no journal in this country written especially for teachers of geography, the *American Journal of School Geography*, edited by Prof. Dodge, of Columbia University, New York, has been temporarily adopted by the Association as a medium for discussing methods and diffusing information among teachers.

The Association numbers among its members many of the best known teachers of geography in the country, and has from the first received a large measure of encouragement and support from the various geographical societies, whose services to the cause of education it gratefully acknowledges.

I shall be glad to send copies of the enclosed leaflet to any who apply, and to receive the names of persons who may wish to join the Association.—I am, Sir, yours faithfully,

A. J. HERBERTSON, *Hon. Sec.*  
Assistant to the Reader in Geography in the  
University of Oxford.

25 Norham Road, Oxford, March 18, 1900.

# BELL'S ILLUSTRATED CLASSICS.

Edited by E. C. MARCHANT, M.A.,  
late Classical Master at St. Paul's School.

In post 8vo size, 1s. 6d. each (with or without Vocabularies).

The Texts and Vocabularies (without Notes), limp cloth, cut flush,  
1s. each.

NOW READY.

**Cæsar.—De Bello Gallico. Book I.** Edited by A. C. LIDDELL, M.A., Assistant-Master at Nottingham High School.

**Cæsar.—De Bello Gallico. Book II.** Edited by A. C. LIDDELL, M.A.

**Cæsar.—De Bello Gallico. Book III.** Edited by F. H. COLSON, M.A., Headmaster of Plymouth College, and G. M. GWYTHER, M.A., Assistant-Master.

**Cæsar.—De Bello Gallico. Book IV.** Edited by the Rev. A. W. UPCOTT, M.A., Headmaster of St. Edmund's School, Canterbury.

**Cæsar.—De Bello Gallico. Book V.** Edited by A. REYNOLDS, M.A., Assistant-Master at Merchant Taylors' School.

**Cæsar.—De Bello Gallico. Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. Prescribed for Cambridge Local and College of Preceptors Certificate.

**Virgil.—Æneid. Book I.** Edited by the Rev. E. H. ESCOTT, M.A., Assistant-Master at Dulwich College.

**Virgil.—Æneid. Book II.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School.

**Virgil.—Æneid. Book III.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School. With a Map of the Wanderings of Æneas.

**Virgil.—Æneid. Book IV.** Edited by A. S. WARMAN, B.A., Assistant-Master at the Grammar School, Manchester.

**Eutropius. Books I. and II.** Edited by J. G. SPENCER, B.A., Assistant-Master at St. Paul's Preparatory School.

**Horace.—Odes. Book I.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School.

**Cornelius Nepos.—Epaminondas, Hannibal, Cato.** Edited by H. L. EARL, M.A., Assistant-Master at the Grammar School, Manchester.

**Livy. Book IX., chaps. i.—xxix.** Edited by W. C. FLAMSTEAD WALTERS, M.A.

**Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI., and edited by F. E. A. TRAYES, M.A., Assistant-Master at St. Paul's School.

**Ovid.—Metamorphoses. Book I.** Edited by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School.

**Selections from Ovid's Metamorphoses.** Edited by J. W. E. PEARCE, M.A., Merton Court Preparatory School, Sidcup.

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the Illustrated Classics.  
Price One Shilling each.

**Scalæ Primæ.** Simple Stories and Fables for Translation. With Notes and Vocabulary. By J. G. SPENCER, B.A., St. Paul's Preparatory School.

**Scalæ Mediæ.** Extracts from Eutropius and Cæsar. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A.

Specimen Copies post free to Headmasters on application.

LONDON: GEORGE BELL & SONS, YORK STREET, COVENT GARDEN.



# Blackie & Son's New Books.

## Blackie's New Illustrated Latin Series.

Edited by Prof. R. Y. TYBRELL, Litt.D., D.C.L.,  
Examiner to the Universities of London and Glasgow, &c.

**E**ACH Volume is furnished with Introduction, Explanatory Notes, and full  
Vocabularies, and is illustrated with numerous Maps, Plans, and Drawings  
from Coins, Gems, Statues, and other objects of ancient art. With or without  
Vocabularies. Crown 8vo, cloth.

### VOLUMES READY.

**EUTROPIUS.—BOOKS I. AND II.** Edited by W. CECIL LAMING,  
M.A., Classical Master in Edinburgh Academy. 1s. 6d.

This should prove the most attractive edition of this portion of Eutropius yet  
published. The text is printed in large type, and is lavishly illustrated with full-page  
and other pictures of a kind to explain the text and interest young pupils. The  
notes also are printed in a larger type than is usual, and are very clearly and  
simply expressed. There is a complete vocabulary.

**CICERO.—THE FIRST CATILINE ORATION.** Edited by  
C. H. KEENE, M.A., Professor of Greek, Queen's College, Cork. 1s. 6d.

**CICERO.—THE CATILINE ORATIONS (Complete).** Edited  
by C. H. KEENE, M.A. 2s. 6d.

**HORACE.—THE ODES. BOOKS I., II., III., IV.** Edited by  
STEPHEN GWYNN, B.A., late Scholar and Hulsean Exhibitor of Brasenose  
College, Oxford. 1s. 6d. each.

**TACITUS.—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS,  
M.A., formerly of Christ's College, New Zealand. 1s. 6d.

**LIVY.—BOOK V.** Edited by W. CECIL LAMING, M.A., Classical  
Master in Edinburgh Academy. 2s. 6d.

**VIRGIL.—AENEID III.** Edited by P. SANDFORD, M.A., Professor  
of Latin at Queen's College, Galway. 1s. 6d. [Nearly ready.

### VOLUMES IN PREPARATION.

**VIRGIL.—GEORGICS I. AND II.** Edited by S. E. WINBOLT,  
M.A., Assistant-Master in Christ's Hospital.

**SALLUST.—THE CATILINE CONSPIRACY.** Edited by the  
Rev. W. A. STONE, M.A., Assistant-Master in Bristol Grammar School.

**LIVY.—BOOK I.** Edited by JOHN BROWN, B.A., Professor of Latin  
in Wellington University, New Zealand.

**LIVY.—BOOKS XXI. AND XXII.** Edited by G. G. LOANE, M.A.,  
Assistant-Master in St. Paul's School.

**CICERO.—PRO LEGE MANILIA.** Edited by W. J. WOOD-  
HOUSE, M.A., Assistant Lecturer in Classics, University College of North Wales.

### OPINIONS OF THE PRESS.

#### *The Odes of Horace.*

"The merits are certainly remarkable. The translations are elegant and faithful,  
and worthy of the original. This edition is further enriched with illustrations from  
antique gems. The parallels drawn from English poetry, especially in linguistic  
usages, are very felicitous."—*Morning Post.*

"The introduction is literary as well as scholarly, and the notes contain all the  
information that even a sixth form should need."—*Literature.*

"The notes are good, far removed from the patent digesting-machinery that is so  
often supplied. The illustrations, chiefly from gems and marbles, are a distinct  
addition to the value of the book."—*University Correspondent.*

#### *The Catiline Orations of Cicero.*

"The introduction (with illustrations) gives an excellent account of Cicero's life  
and times. The notes are clear and to the point and the vocabulary comprehensive.  
Lucky indeed is the schoolboy who finds, within the compass of one small volume  
such as this, practically all that is necessary for the study of the text. The printing  
of the book is excellent."—*Journal of Education.*

"We have already expressed approval of the series as a whole. . . . We can honestly  
praise Prof. Keene's notes as well suited for their purpose."—*Educational Times.*

"It is a good book, and some exercises in Latin prose suggested by the text are a  
valuable innovation."—*Literature.*

#### *The Agricola of Tacitus.*

"The notes appear to be just what is wanted."—*Literature.*

#### *Livy, Book V.*

"Mr. Laming has incorporated excellent matter in his book. . . . There are some  
valuable hints on translation. . . . There are some excellent illustrations which add  
much to the value of the book."—*Spectator.*

## English.

**MACAULAY.—ESSAY ON HORACE WALPOLE.** Edited  
by JOHN DOWNIE, M.A. 2s.

**MACAULAY'S ESSAY ON CLIVE.** Edited by JOHN D. WYNIE,  
M.A. 2s.

**POPE.—RAPE OF THE LOCK.** Edited by FREDERICK RYLAND,  
M.A. 1s. 6d.

**POPE.—ESSAY ON CRITICISM.** Edited by F. RYLAND, M.A. 1s. 6d.

**DRYDEN.—ESSAY ON DRAMATIC POESY.** Edited by  
D. NICHOL SMITH, M.A. [Nearly ready.

**TENNYSON.—SELECT POEMS.** Edited, for Schools, by  
AGNES WILSON. In Three Booklets, paper covers, 2d. each; limp cloth, 3d. each.

1: **MORTE D'ARTHEUR. THE LADY OF SHALOTT.**

2: **MARIANA. DOXA. THE MAY QUEEN.**

3: **THE DAY DREAM. THE DEATH OF THE OLD YEAR.  
THE CHARGE OF THE LIGHT BRIGADE.**

**BROWNING.—SELECT POEMS.** Edited by E. H. BLAKENEY,  
M.A., Headmaster of Grammar School, Sandwich. Paper, 2d.; cloth, 3d.

**PECIENS OF ENGLISH PROSE.** Selected and Edited by  
BERTHA SKEAT, Ph.D., Headmistress of Baliol School, Barnard Castle. 1s. 6d.

**A BRIEF SURVEY OF BRITISH HISTORY.** By G. TOWN-  
SEND WARNER, M.A., sometime Fellow of Jesus College, Cambridge: Assistant-  
Master at Harrow. With Tables, Summaries, Maps, Notes, &c. 1s. 6d.

*The Athenæum* says:—"Mr. Warner's style is clear, direct, and sufficiently varied.  
Moreover, his selection of facts is, as a rule, judicious, and his patriotic and reason-  
able tone, the fullness of the recent history. . . . please us very much. The book is  
well printed, type and paper please the eye, and it is exceedingly cheap. The  
concluding synopsis is a practical and well-worked-out feature of the volume."

## French.

**A SHORT HISTORY OF FRENCH LITERATURE.** By  
L. E. KASTNER, B.A., Assistant Lecturer in Modern Languages at Gonville and  
Cuis College, Cambridge, and H. G. ATKINS, M.A. (Lond.), B.A. (Camb.),  
Instructor in German at the Royal Naval College, Greenwich. [Nearly ready.

**FIRST FRENCH COURSE.** By J. J. BRUZEMAKER, B.A., formerly  
Examiner to the College of Preceptors.

A KEY to this well known book is now in the press, and will shortly be issued.

**FRENCH STORIES FOR MIDDLE AND UPPER FORMS.**  
By Professor WEEKLEY, M.A. [In the press.

**MY FIRST FRENCH BOOK.** A Picture Reading-Book. By  
MARGUERITE NINET. Illustrated. 1s.

A little book of easy anecdotes, stories, and sketches, in large type, with pictures  
to each lesson, and complete vocabularies.

## Science and Art.

**FIRST STEPS IN EARTH KNOWLEDGE. (Preliminary  
Physiography, Section I.)** By J. ANSTED HARRISON, B.Sc. (Lond.),  
A.R.C.Sc., Science Master, County School, South. And by W. JEROME  
HARRISON, F.G.S. Illustrated. Crown 8vo, cloth, 2s. 6d.

"A really excellent introduction to Physiography. . . . Every experiment has  
prefixed to it a list of the apparatus required, and a short statement of the purpose  
for which it is performed—a useful feature."—*Literature.*

"Well written, illustrated, and printed."—*Educational Times.*

**AN INTRODUCTION TO ANALYTICAL CHEMISTRY.** By  
Prof. G. G. HENDERSON, D.Sc., M.A., F.I.C., and M. A. PARKER, B.Sc. 5s.

**SHADED DRAWING OF MODELS AND ORNAMENT  
FOR CLASS-TEACHING.** By LEWIS R. CROSSKEY, Director Industrial  
Art Department, Glasgow Technical College. 24 Sheets, beautifully printed on  
superfine heavy paper, each Sheet 28 ins. by 22 ins. In portfolio, 31s. 6d. per  
Set. Illustrated Prospectus on application.

**BLACKIE'S SOUTH KENSINGTON DRAWING SHEETS.**  
Based on Posner's South Kensington Drawing Books. Six Sets of 20 Sheets  
each. Sets I. and II. (Outline only), price 10s. each. Sets III.-VI. (Coloured),  
price 12s. 6d. each. Coloured Prospectus on application.

# MESSRS. METHUEN'S LIST

## WORKS BY A. M. M. STEDMAN, M.A.

**Initia Latina:** Elementary Lessons in Latin Accidence. Fourth Edition. Fcap. 8vo, 1s.

**First Latin Lessons.** Fifth Edition. Enlarged. Crown 8vo, 2s.

**First Latin Reader.** With Notes adapted to the Shorter Latin Primer and Vocabulary. Fourth Edition. Revised. 18mo, 1s. 6d.

**Caesar.—The Helvetic War.** With Notes and Vocabulary. Second Edition. 18mo, 1s.

**Livy.—The Kings of Rome.** With Notes and Vocabulary. Illustrated. 18mo, 1s. 6d.

**Easy Latin Passages for Unseen Translation.** Sixth Edition. Fcap. 8vo, 1s. 6d.

**Exempla Latina: First Exercises on Latin Accidence.** With Vocabulary. Crown 8vo, 1s.

**Easy Latin Exercises on the Syntax of the Shorter and Revised Latin Primers:** With Vocabulary. Eighth and Cheaper Edition. Revised. Crown 8vo, 1s. 6d. Issued with the consent of Dr. KENNEDY.

**The Latin Compound Sentences:** Rules and Exercises. Crown 8vo, 1s. 6d. With Vocabulary, 2s.

**A Vocabulary of Latin Idioms and Phrases.** Second Edition. 18mo, 1s.

**Notanda Quaedam: Miscellaneous Latin Exercises on Common Rules and Idioms.** Third Edition. Fcap. 8vo, 1s. 6d. With Vocabulary, 2s.

**Latin Vocabulary for Repetition:** Arranged according to Subjects. Eighth Edition. Fcap. 8vo, 1s. 6d.

**Steps to Greek.** 18mo, 1s.

**A Shorter Greek Primer.** Crown 8vo, 1s. 6d.

**Easy Greek Passages for Unseen Translation.** Third Edition. Fcap. 8vo, 1s. 6d.

**Greek Vocabulary for Repetition.** Second Edition. Fcap. 8vo, 1s. 6d.

**Greek Testament Selections.** With Introduction, Notes, and Vocabulary. Third Edition. Fcap. 8vo, 2s. 6d.

**Steps to French.** Fourth Edition. 18mo, 8d.

**First French Lessons.** Fourth Edition. Crown 8vo, 1s.

**Easy French Passages for Unseen Translation.** Third Edition. Fcap. 8vo, 1s. 6d.

**Easy French Exercises on Elementary Syntax.** With Vocabulary. Second Edition. Crown 8vo, 2s. 6d. Key, 3s. net.

**French Vocabulary for Repetition.** Eighth Edition. Fcap. 8vo, 1s.

## TEXT-BOOKS OF TECHNOLOGY

**Carpentry and Joinery.** By F. C. WEBBER. With numerous Illustrations. Crown 8vo, 3s. 6d.  
"It has the marks of practical knowledge set forth by a practical teacher."—*Guardian*.

**Practical Mechanics.** By SIR WYLLIE H. WELLS. Illustrated. Crown 8vo, 3s. 6d.

**Practical Physics.** By H. STROUD, D.Sc., M.A., Professor of Physics in the Durham College of Science, Newcastle-on-Tyne. Fully Illustrated. Crown 8vo, 3s. 6d.

**Practical Chemistry.** By W. FRENCH, M.A. Part I. With numerous Diagrams. Crown 8vo, 1s. 6d. [*Shortly*].

**Millinery, Theoretical and Practical.** By Miss HILL. With numerous Diagrams. Crown 8vo, 2s. 6d. [*Shortly*].

**Educational Reform. The Task of the Board of Education.** By FABIAN WARE. Crown 8vo, 2s. 6d.

**General Elementary Science.** By J. T. DUNN, D.Sc., and V. A. MUNDELLA. With many Illustrations. Crown 8vo, 3s. 6d. [*Methuen's Science Primer*].

**A Constitutional and Political History of Rome.** By T. M. TAYLOR, M.A., Fellow of Gonville and Caius College, Cambridge, Senior Chancellor's Medalist for Classics, Porson University Scholar, &c., &c. Crown 8vo, 7s. 6d.  
An account of the origin and growth of the Roman institutions, and a discussion of the various political movements in Rome from the earliest times to the death of Augustus.

**Lacemaking in the Midlands.** By C. C. CHANNER and M. E. ROBERTS. With 16 Full-page Illustrations. Crown 8vo, 2s. 6d. [*Shortly*].

## SCHOOL EXAMINATION SERIES

EDITED BY A. M. M. STEDMAN, M.A. Crown 8vo, 2s. 6d.

**French Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Tenth Edition.  
**A Key,** issued to Tutors and Private Students only, to be had on application to the Publishers. Fourth Edition. Crown 8vo, 6s. net.

**Latin Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Tenth Edition.  
**Key,** Fourth Edition (issued as above), 6s. net.

**Greek Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Sixth Edition.  
**Key,** Second Edition (issued as above), 6s. net.

**Examination Papers in English History.** By J. TAIT WARDLAW, B.A., King's College, Cambridge. Crown 8vo, 2s. 6d.

**German Examination Papers in Miscellaneous Grammar and Idioms.** By E. J. MORICH, Manchester Grammar School. Fifth Edition.  
**Key,** Second Edition (issued as above), 6s. net.

**History and Geography Examination Papers.** By C. H. SPENCE, M.A., Clifton College. Second Edition.

**Science Examination Papers.** By R. E. STEEL, M.A., F.C.S., Chief Natural Science Master, Bradford Grammar School. In Three Vols. Part I., Chemistry. Part II., Physics.

**General Knowledge Examination Papers.** By A. M. M. STEDMAN, M.A. Third Edition.  
**Key,** Second Edition (issued as above), 7s. net.

**The Scientific Study of Scenery.** By J. E. MARR, Fellow of St. John's College, Cambridge. Illustrated. Crown 8vo, 6s.  
An elementary treatise on geomorphology—the study of the earth's outward forms. It is for the use of students of physical geography and geology, and will also be highly interesting to the general reader.

**A Class Book of Dictation Passages for the Use of Middle and Higher Forms.** By the Rev. W. WILLIAMSON. Second Edition. Crown 8vo, 1s. 6d.  
The passages are selected from recognized authors, and a few newspaper passages are included. The lists of appended words are drawn up mainly on the principle of comparison and contrast, and will form a *répertoire* of over 2,000 words, embracing practically all the difficulties felt by the pupil.

**A Short Story of English Literature.** By EMMA S. MELLOWS. Crown 8vo, 3s. 6d.  
The history of English literature told in a simple style for young students. It is particularly rich in biographical detail and contains a considerable number of illustrative extracts.

**The Construction of Large Induction Coils.** By A. T. HARR. With numerous Diagrams. Demy 8vo, 5s.

**The Metric System.** By LÉON DELBOS. Crown 8vo, 2s.  
A theoretical and practical guide for use in elementary schools and by the general reader.

## CLASSICAL TRANSLATIONS

EDITED BY H. F. FOX, M.A., Fellow and Tutor of Brasenose College, Oxford.

**Cicero.—De Natura Deorum.** F. BROOKS, M.A., late Scholar of Balliol College. Crown 8vo, 3s. 6d.

**Cicero.—De Oratore, I.** E. N. P. MOOR, M.A., late Assistant-Master at Clifton. Crown 8vo, 3s. 6d.

**Cicero.—Pro Milone, Pro Murena, Philippic II. in Cæcilium.** H. D. BLAKISTON, Fellow and Tutor of Trinity College, Oxford. Crown 8vo, 5s.

**Horace.—Odes and Epodes.** A. D. GODLEY, M.A. Crown 8vo, 2s.

**Sophocles.—Electra and Ajax.** E. D. A. MORSEHEAD, M.A., Assistant-Master at Winchester. Crown 8vo, 2s. 6d.

**Aeschylus.—Agamemnon, Choephores, Eumenides.** LEWIS CAMPBELL, M.A., LL.D., late Professor of Greek at St. Andrews. Crown 8vo, 5s.

**Lucian.—Six Dialogues (Nigrinus, Icaro-Merippus, Cock, Ship, Parasite, Lover of Falsehood).** S. T. IRWIN, M.A., Assistant-Master at Clifton. Crown 8vo, 3s. 6d.

**Tacitus.—Agricola and Germania.** B. B. TOWNSHEND, M.A., late Scholar of Trinity College, Oxford. Crown 8vo, 2s. 6d.

## METHUEN'S COMMERCIAL SERIES

EDITED BY H. DE B. GIBBINS, D.Litt., M.A. Crown 8vo.

**British Commerce and Colonies from Elizabeth to Victoria.** By H. DE B. GIBBINS, D.Litt., M.A., Author of "The Industrial History of England," &c. Third Edition. 2s.

**Commercial Examination Papers.** By H. DE B. GIBBINS, D.Litt., M.A. 1s. 6d.

**The Economics of Commerce.** By H. DE B. GIBBINS, D.Litt., M.A. 1s. 6d.

**A Primer of Business.** By S. JACKSON, M.A. Third Edition. 1s. 6d.

**German Commercial Correspondence.** By S. E. BALLY. Crown 8vo, 2s. 6d.

**French Commercial Correspondence.** By S. E. BALLY. Second Edition. 2s.

**A French Commercial Reader.** By S. E. BALLY. 2s.

**Commercial Geography,** with special reference to the British Empire. By L. W. LYDE, M.A. Second Edition. 2s.

**Commercial Arithmetic.** By F. G. TAYLOR, M.A. Third Edition. 1s. 6d.

**Précis Writing and Office Correspondence.** By E. E. WHITEFIELD, M.A. 2s.

**Guide to Professions and Business.** By HENRY JONES. 1s. 6d.

**The Principles of Bookkeeping by Double Entry.** By J. E. B. M'ALLEN, M.A. 2s.

**A History of Egypt, from the Earliest Times to the Present Day.** Edited by W. M. FLINDERS PETERIE, D.C.L., LL.D., Professor of Egyptology at University College. Fully Illustrated. In Six Volumes. Crown 8vo, 6s. each.  
Vol. VI. **Egypt in the Middle Ages under the Saracens.** By STANLEY LANE POOLE. [*Shortly*].

**A Short History of Rome.** By J. WELLS, M.A., Fellow and Tutor of Wadham College, Oxford. With 3 Maps. Second Edition. Crown 8vo, 3s. 6d.  
"An original work, written on an original plan and with uncommon freshness and vigour."—*Speaker*.

**Passages for Unseen Translation.** By E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and A. M. COOK, M.A., late Scholar of Wadham College, Oxford; Assistant-Masters at St. Paul's School. Crown 8vo, 3s. 6d.  
"A capital selection, and of more variety and value than such books usually are."—*Athenæum*.

**Exercises in Latin Accidence.** By S. E. WINBOLT, Assistant-Master in Christ's Hospital. Crown 8vo, 1s. 6d.  
"Accurate and well arranged."—*Athenæum*.

**Notes on Greek and Latin Syntax.** By C. BUCKLAND GREEN, M.A., Assistant-Master at the Edinburgh Academy, late Fellow of St. John's College, Oxon. Crown 8vo, 3s. 6d.  
"Well arranged, clear, and extremely useful."—*School Guardian*.

**New Testament Greek. A Course for Beginners.** By G. ROWELL, B.A. With a Preface by WALTER LOCK, D.D., Warden of Keble College. Crown 8vo, 3s. 6d.

**A Greek Anthology.** Selected by E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and Assistant-Master at St. Paul's School. Crown 8vo, 3s. 6d.

# SCIENCE & ART DEPARTMENT EXAMINATIONS.

SUITABLE BOOKS IN THE  
**Organized Science Series.**

FOR THE ELEMENTARY STAGE.

2s. each Volume.

**PRACTICAL PLANE AND SOLID GEOMETRY.**

[In preparation.]

**MACHINE CONSTRUCTION AND DRAWING.**

[In preparation.]

**BUILDING CONSTRUCTION.**

[In preparation.]

**FIRST STAGE MATHEMATICS.** Containing all the Algebra and Euclid required.

[In preparation.]

**FIRST STAGE MECHANICS (SOLIDS).** By F. ROSENBERG, M.A., B.Sc. *Second Edition.*

**FIRST STAGE MECHANICS OF FLUIDS.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*

**FIRST STAGE SOUND, HEAT, AND LIGHT.** By JOHN DON, M.A., B.Sc.

**FIRST STAGE MAGNETISM AND ELECTRICITY.** By R. H. JUDE, M.A. Cantab., D.Sc. Lond. *Second Edition.*

**FIRST STAGE INORGANIC CHEMISTRY (THEORETICAL).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WILLIAM BRIGGS, M.A., F.C.S.

**FIRST STAGE HUMAN PHYSIOLOGY.** [In preparation.]

**FIRST STAGE BOTANY.** By A. J. EWART, D.Sc. [In preparation.]

**FIRST STAGE PHYSIOGRAPHY.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.

**SECTION ONE PHYSIOGRAPHY.** [In preparation.]

**FIRST STAGE HYGIENE.** By R. A. LYSTER, B.Sc. [In preparation.]

Price 1s.

**FIRST STAGE INORGANIC CHEMISTRY (PRACTICAL).** By F. BEDDOW, Ph.D., D.Sc. *Second Edition.*

Price 1s. 6d.

**PRACTICAL ORGANIC CHEMISTRY.** By GEORGE GEORGE, F.C.S.

FOR THE ADVANCED STAGE.

3s. 6d. each Volume.

**SECOND STAGE MATHEMATICS.** Being the Additional Algebra and Euclid with the Trigonometry required for the Second Stage. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*

**ADVANCED MECHANICS.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. I., Dynamics.

**ADVANCED MECHANICS.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. II., Statics. *Second Edition.*

**ADVANCED HEAT.** By R. WALLACE STEWART, D.Sc. Lond. *Second Edition.*

**ADVANCED MAGNETISM AND ELECTRICITY.** By R. WALLACE STEWART, D.Sc. Lond.

**ADVANCED INORGANIC CHEMISTRY.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*

Price 2s.

**ADVANCED INORGANIC CHEMISTRY (PRACTICAL).** By R. WALLACE STEWART, D.Sc., and WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. [In the press.]

Price 1s. 6d.

**PRACTICAL ORGANIC CHEMISTRY.** By GEORGE GEORGE, F.C.S.

Complete Catalogue of the ORGANIZED SCIENCE SERIES, and List of Books classified for College of Preceptors, London University, and other Examinations, free on application.

LONDON: W. B. CLIVE,  
THE UNIVERSITY TUTORIAL PRESS

(University Correspondence College Press),  
13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	" 2 10 0	.....	"	" 3 0 0
Quarter Page	" 1 10 0	.....	"	" 1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—80 words or under, 2s.; each additional 10 words, 6d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

April 2, 1900.

At the College of Preceptors, on Wednesday, April 4, Mr. A. H. Kahn, M.A., of University College School, will read a paper on "Commercial Education in Secondary Schools." The chair will be taken at 7.30 p.m. by Dr. William Garnett, M.A., D.C.L., Secretary of the Technical Education Board of the London County Council.

IN connexion with the Paris Exhibition this year, an International Congress on Physical Education will be held between August 30 and September 6. It is intended to establish a permanent International Technical Commission. The General Secretary of the Congress is Prof. Georges Demeny, 95 Avenue de Versailles, with whom contributors of papers and intending visitors are requested to communicate.

THE Technical Education Board of the London County Council, acting as the Local Authority under Clause VII. of the "Science and Art Directory," has been entrusted with the duty of convening meetings for the election of special local secretaries for the conduct of the forthcoming Science and Art Examinations. The following gentlemen have been elected to serve for the various districts of the Metropolis:—Chelsea and Westminster, J. R. Langler, Esq., 128 Horseferry Road, Westminster, S.W.; City (East) and Hackney, W. H. Jeffries, Esq., 87 Mattison Road, Haringay, N.; City (West) and Finsbury, W. H. Congreve, Esq., Birkbeck Institution, Bream's Buildings, Chancery Lane, E.C.; Greenwich and Deptford, J. S. Redmayne, Esq., Goldsmiths' Institute, New Cross, S.E.; Lambeth (East), E. Janau, Esq., 92 Elms Road, Clapham Common, S.W.; Lambeth (West), The Rev. E. B. Hugh Jones, M.A., St. John's Training College, Battersea, S.W.; Marylebone, Robert Mitchell, Esq., The Polytechnic, Regent Street, W.; Southwark and Lambeth (North), E. B. Gammon, Esq., 18 Grosvenor Park, Camberwell, S.E.; Tower Hamlets, E. J. Sharpe, Esq., 30 Powerscroft Road, Lower Clapton, N.E.; Woolwich and Plumstead, J. R. Clayton, Esq., Royal Arsenal Mechanics' Institution, Plumstead Road, Woolwich, S.E. The secretaries named above will be responsible for the examinations in the districts for which they have been elected, and communications with regard to the examinations should be addressed to them. The examinations of the Department will commence on April 28, and will extend over several weeks.

PROF. H. G. SEELEY, F.R.S., will conduct the annual course of excursions of the London Geographical Field Class, arranged to illustrate the physical geography and geology of hills, valleys, and rivers in the basin of the Thames. The course begins on April 28. The excursions this year illustrate the geological structure of the London basin by devoting a day to examination of each of the cretaceous groups of rock which share in the great trough-shaped fold which depresses the overlying tertiary strata. The stratification will be seen at Godalming, Otford, Gomshall, Oxted, and Upnor. One excursion to Bedford will be made in illustration of the oolitic rock which has been found beneath London in some deep borings.

THE Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland have joined forces in

the establishment of an examination in the science and practice of agriculture to take the place of the separate examinations which have heretofore been held by the two Societies independently. Candidates who pass this examination, which is under the management of the National Agricultural Examination Board appointed by the two Societies, are to receive the National Diploma in Agriculture. Those who obtain not less than a certain percentage of the maximum number of marks in each of the subjects will receive the Diploma with Honours, a gold medal being awarded to the candidate who is highest on the Honours list. It has been arranged that the first examination for the Diploma shall be held in the Great Hall of the Yorkshire College, Leeds, on Monday, April 30, and five following days.

THE examination for the Lightfoot Scholarship will begin at Cambridge on May 1. It is open for competition to all members of the University who, having resided at least one year and being still in residence, or having taken their first degree, are under twenty-five years of age when the examination begins. The names of candidates should be sent to the Vice-Chancellor, through their tutors, not later than April 28.

THE examination for Tyrwhitt's Hebrew Scholarships and the Mason Prize for Hebrew will begin at the same University on Tuesday, May 8. Candidates for these scholarships or the Mason prize must send their names to the Vice-Chancellor on or before April 25.

AT St. John's College, Cambridge, an examination for election to a choral studentship will be held on Wednesday, May 2. The studentship will be awarded to a bass singer. Further information may be obtained from any of the tutors, Dr. Sandys, or the Rev. C. E. Graves.

THE Council of Bedford College for Women will, in June next, award an additional science scholarship, the "Henry Tate Scholarship," of the value of £50 per annum for three years. This scholarship was endowed by the late Sir Henry Tate. The Committee of the Liberal Memorial to Mr. Gladstone have offered to the Council an annual prize of the value of £5 to be expended in books, to be given for proficiency in history, political science, or economics. This prize will be open for competition to all present students and all students who have left the college not more than one session. The first award will be made in the Easter term 1901; the subject will be announced during next term.

THE local centre examinations of the London College of Music in various branches of practical music will commence on the 2nd inst. In theory of music the examinations will be held simultaneously at all centres on April 7. In the teaching department of the College the new term will begin on April 23, when rehearsals will also be resumed of the orchestra, choir (S.A.T.B.), operatic class, string quartet, and ladies' choir.

THE Bangor Old Students' Association will hold its annual *r union* at Bangor during the Easter vacation, beginning on Thursday, April 12, and ending on Tuesday, April 17.

THE second course of "Jowett Lectures" will be delivered at the Passmore Edwards Settlement, Tavistock Place, by Prof. George Adam Smith, of Glasgow, on Thursday, April 26, and seven following Thursdays, at 3 p.m., and again at 8 p.m. The subject will be "The Religion of Israel in the Eighth and Seventh Centuries B.C."

THE Special Inquiries Branch of the Education Department have again prepared a table of holiday courses on the Continent for instruction in modern languages. The courses will be held as follows:—(1) in Germany at Bonn (August 6–18); Greifswald (July 16–August 4); Jena (August 6–18); conversation

classes continue until August 25), and Marburg (First Course, July 8–28; Second Course, August 5–25). (2) in France at Elbeuf (August 3–28); Lisieux (August 3–28); Tours (August 3–24); and Paris (First Course, July 2–31; Second Course, August 1–31). (3) in Switzerland at Geneva (July 18–August 28); Lausanne (July 19–August 29); and Neuchatel (First Course, July 16–August 11; Second Course, August 13–September 8). For further details we must refer our readers to the complete table above mentioned.

THE heads of Colleges at Oxford and Cambridge have agreed to accept the first Monday in December as the date before which no scholarship examinations shall be held. The agreement applies to all open scholarships, whether given for classics, mathematics, science, or history, and to all close scholarships. This is hard luck for a boy who completes his nineteenth year shortly before that date. But the age difficulty is familiar at the Universities, and we must conclude that, in a choice of evils, the authorities have chosen that which seems to them to be the least.

A CORRESPONDENT of the *Oxford Magazine*—which, we regret to see, loses the services of its late versatile and genial editor—takes a pessimistic view of the change:—

The *Oxford Magazine* and the schoolmasters must be easily pleased if they think that the new arrangement here as to scholarships is any gain or a matter of congratulation. It rather makes confusion worse confounded; by it eighteen colleges examine in the space of six weeks! It is not for the sake of any single college that we complain; all are equally likely to suffer in the *m le*, and deserve to do so: but, in the interests of the persons most concerned, i.e., the schoolboys, may we not ask if something can be done to stop this suicidal rivalry? The Headmasters' proposal of a close time has simply resulted in cutting off a month of the scholarship season, and already a representative of one of the most distinguished schools in England is writing to the *Times* to protest. Neither the Headmasters nor the colleges seem to have any care for boys who had the misfortune to be born in the summer months. It is to be hoped that after this year, at any rate, the colleges will consent to drop their recriminations, and adopt a reasonable rearrangement of their examinations. If not, there is nothing for it but Government interference, by a new Commission or otherwise.

THE War Office is lavishing commissions on the Universities. In addition to the first distribution, it has offered seventy-three each to Oxford and Cambridge, twenty-eight to Dublin, twenty to London, and smaller numbers to other Universities.

EDINBURGH UNIVERSITY has conferred its honorary degree of LL.D. for the first time on a woman. The new Doctor is Miss Eleanor H. Ormerod, the entomologist, who for many years, under Government auspices, has done excellent work by studying the insect pests of agriculture.

THE Senatus Academicus of Glasgow University have conferred the honorary degree of Doctor of Laws on Mr. Robert Caird, F.R.S.E., President of the Institution of Engineers and Shipbuilders in Scotland; Professor A. R. Forsyth, Cambridge; Mr. John G. Kerr, M.A., Headmaster of Allan Glen's School, Glasgow; Mr. Andrew Stewart, D.L., Glasgow; *emeritus* Professor George G. A. Murray, Glasgow; and Mr. Arthur S. Woodward, of the Geological Department of the British Museum.

MR. E. WEEKLEY, M.A., contributes to the *University Correspondent* a good estimate of the value of a German degree of Ph.D.—which, as he says, is now "as much in danger of being over-valued as it was previously of being under-valued."

Germany has twenty-two Universities, Austria seven, and Switzerland four, and, though the regulations vary slightly in individual cases, the general conditions laid down by the authorities are, roughly speaking, the following:—(1) Proof that the candidate has studied for three years at a University. (2) A dissertation on some subject approved by the faculty. (3) An oral examination (practically always

in German) on the branch of learning from which the subject of the dissertation is taken (*Hauptfach*), and on two other branches selected by the candidate (*Nebenfächer*). (4) A fee of about £15.

\* \* \*

THE value of such a degree evidently depends on that of the three years of University study. As for the dissertation, Mr. Weekley says:

The German Doctorate of a good University is, if obtained with distinction, a proof of sound scholarship and original power; but it is erroneous to suppose that the average degree is at all equal in value to a good place in an Honours school at one of the English Universities. The dissertation is supposed theoretically to constitute an original contribution to the advancement of learning; in the majority of cases it is merely a laborious and minute compilation of a set of facts drawn from a limited field connected with some special subject.

\* \* \*

THERE will be a fortnight's delay, beyond that which we mentioned last month, before the London University statutes can receive the Royal Assent. The responsibility is thrown on the Queen's printers. The Commissioners state, in their final report, that neither the Royal College of Music nor the Royal Academy of Music is willing to become a school of the University except on conditions which the Commissioners were unable to accept; and, in the circumstances, they made neither Trinity College nor the Guildhall School of Music a school of the University; but they included a certain number of the teachers of the principal schools of music amongst the recognized teachers of the University, so that internal students of the University would have the opportunity of pursuing their course of study at those institutions. The Commissioners regret to state that the four Inns of Court have declined, without explanation, to join in establishing a law school. Such a school is very necessary to the completeness of the University, and it is hoped that further steps may be taken to obtain the co-operation of the Inns.

\* \* \*

At the meeting of the Senate of Dublin University on Shrove Tuesday, a grace was passed for the conferring of the degree of LL.D. *honoris causa* at the next Commencement on his Highness Sir Bhagwatsinghji Sagramji, K.C.I.E., Thakur Saheb of Gondal, an Indian prince who is much interested in the cause of education. We gave an account, a few months ago, of some of the more notable services of the Thakur to education in India.

\* \* \*

On March 3 Dr. William Garnett gave a lecture at the Durham College of Science on "English Education, as illustrated by the Education Exhibition." The Warden presided, and unveiled the bust of Dr. Garnett, modelled by Mr. G. J. Frampton, A.R.A. Dr. Garnett was formerly Principal of the College.

\* \* \*

At Berlin the Prussian Academy of Sciences has celebrated its bicentenary. The Minister of Education, Dr. Studt, read the Imperial decree providing for the augmentation of the chairs devoted to German philology and technical sciences. He further announced that His Majesty had provided means for the publication of the works of Wilhelm von Humboldt and of the Dictionary of Classical Jurisprudence. A number of decorations in honour of the day had also been awarded, including the Order of the Red Eagle to Prof. Theodor Mommsen. Lord Kelvin, of Glasgow, and the Right Hon. Frederick Max Müller, of Oxford, were elected foreign members of the Academy; and as corresponding members the following gentlemen were elected:—Prof. Josiah Willard Gibbs, Newhaven, U.S.A.; Sir John Burdon Sanderson, Oxford, physico-mathematical class; Prof. Frederick Kenyon, London, and Prof. J. P. Mahaffy, Dublin, philosophical-historical class; Prof. John Stuart Murray, London, for history; Prof. Francis Griffith, Ashton-under-Lyne, Oriental philology; and Prof. Frederick William Maitland, Cambridge, for jurisprudence.

\* \* \*

THE Kaiser certainly deserves well of the friends of science, both in Germany and elsewhere. In his address of welcome to

the Academy, he mentioned its relations with the Hohenzollern rulers since its foundation by Leibnitz. "Let it continue its labours of disinterested devotion," the Emperor concluded, "so that, in the words of Leibnitz, through science might be promoted the honour of God and all that is best in human races."

\* \* \*

MR. FABIAN WARE, author of the series of essays on "Educational Reform," reviewed in our last number, has been named as Director of the British Educational Section of the Paris Exhibition. Mr. Ware lectured during the month before the Franco-English Guild, in Paris, on "Secondary Education in England, with special reference to the Board of Education Act." Our neighbours, it seems, show a friendly eagerness to be abreast of our doings in these matters.

ON the nomination of the Secretary for Scotland, the Rev. J. Marshall Lang, D.D., has been appointed to the Principalship of Aberdeen University, which was vacant by the death of Sir William Geddes.

\* \* \*

DR. EDWARD CAIRD, Master of Balliol College, Oxford, who was formerly Professor of Moral Philosophy at Glasgow University, has been nominated as Gifford Lecturer in the latter University in place of Sir Michael Foster, M.P.

\* \* \*

SIR WILLIAM MARKBY, Reader of Indian Law at Oxford, has been appointed a Perpetual Curator of the Indian Institute. He is succeeded as Curator by the Rev. W. H. Hutton, of St. John's College. Mr. F. C. Montague, M.A. Oriel, has been appointed a Curator of the Institute in place of the late Sir William Hunter.

\* \* \*

MR. E. J. TREVELYAN, late Judge of the Calcutta High Court and Vice-Chancellor of Calcutta University, has been appointed Reader of Indian Law at Oxford in place of Sir William Markby, resigned.

\* \* \*

Two headships are vacant at Oxford by the resignation of Dr. J. E. Sewell, Warden of New College since 1860, and of the Hon. G. C. Brodrick, D.C.L., Warden of Merton since 1881. No fewer than six heads, by the way, were elected in 1881—Sir W. Anson, Warden of All Souls; Dr. Fowler, President of Corpus; Dr. Bright, Master of University; Mr. Thorley, Warden of Wadham; Dr. Inge, Provost of Worcester; and Dr. Brodrick. The oldest head of a college (by election) will now be Dr. Bellamy, President of St. John's.

\* \* \*

At Cambridge, Dr. Langley has been approved as Deputy for the Professor of Physiology, Sir Michael Foster, up to Michaelmas, 1901.—Mr. W. B. Hardy, M.A., has been appointed Senior Demonstrator in Physiology for a period of five years, from Christmas, 1899.—Dr. H. K. Anderson has been reappointed Assistant-Demonstrator.

\* \* \*

THE General Board of Studies at Cambridge has appointed Dr. Breul to be Reader in Germanic, and Mr. E. G. W. Braunscholtz, M.A., to be Reader in Romance; whilst the appointments of University Lecturers in French and German are cancelled. Mr. H. Woods, M.A., has been appointed University Lecturer in Palæozoology at Cambridge for a period of five years from Michaelmas, 1899.

\* \* \*

DR. HECTOR CLARE CAMERON, President of the Faculty of Physicians and Surgeons, Glasgow, has been elected to the Chair of Clinical Surgery in the University.

\* \* \*

THE REV. J. P. MAHAFFY, Professor of Ancient History in the



University of Dublin, has expressed a desire to resign his Chair.

\* \* \*

AT Owens College, in pursuance of the Act of Parliament passed in 1899, Mr. R. C. Christie, Sir W. H. Houldsworth, Bart., M.P., and Dr. Schunck were re-elected governors; and the Rev. Dr. Maclaren, Sir F. Forbes Adam, Mr. Edward Partington, and Mr. W. J. Crossley have been elected governors of the College. At a recent meeting of the Court, the Marquis of Lorne, M.P., was elected Parliamentary governor in place of Lord Balcarras, who has resigned. Mr. A. H. Worthington was re-elected a member of the Council, and Prof. Jebb, M.P., was elected a representative of the Court of the University in place of the late Mr. Jacob Bright, the other retiring representatives being reappointed. On the recommendation of the Senate, Mr. W. A. Bone was appointed demonstrator and assistant lecturer in chemistry and assistant lecturer in metallurgy, and Mr. F. W. Gamble demonstrator and assistant lecturer in zoology.

\* \* \*

THE Principalship of the Bala Theological College is vacant by the death of Dr. Charles Edwards.

\* \* \*

THERE is a vacancy for a Lecturer in French at Liverpool University College, and for an Assistant-Lecturer in French at Mason University College, Birmingham. Dr. Tille, Lecturer in German at Glasgow University, has retired from his position in consequence of extra-mural utterances and intra-mural intolerance.

Literary Gossip. THE *Periodical* for March has a highly interesting illustrated account of the Oxford University Press Binding House, an art manufactory which employs hundreds of the most skilful artisans of both sexes. Some of its best products are naturally seen in the covers of Bibles, for which 100,000 skins are annually used, whilst over a million copies are sold every year.

Only long experience enables one to differentiate between the different kinds of leather, which, by-the-by, are called by purely conventional names. In the leather store at the Binding House all the better kinds of skins are kept in stock. Here is the genuine Russia leather, the skin of small Russian cows being used in this connexion. The undyed skin alone possesses the distinctive aroma of Russian leather in perfection. Only those skins exported by the Russian house of Savin, and bearing its stamp, are generally regarded in the trade as genuine. The odour is supposed to be derived from some gum, but, however this may be, the process is a secret one, and has been jealously kept for some two centuries. The imitations are numerous—thanks to the use of creosote, &c.—and so good that even an expert might be baffled unless he had some of the genuine Russia beside him. Imitation Russia leather is often made of "English calf." Goats' skins provide most of the best binding leather.

\* \* \*

THE Binding House must be in its way a paradise of artistic craftsmen. Some of the more elaborate bindings (not a few of which will be seen at the Paris Exhibition) have taken the artists weeks and months to perfect. Sometimes the workman follows a copy; sometimes he decorates the leather with a design of his own. The best bindings of this class cover the art publications of the Clarendon Press, the Oxford edition of the poets, prayer books, and other devotional works.

\* \* \*

MR. GOLDWIN SMITH seems to have begun—and not yet ended—a complete career as a Canadian scholar and man of letters since he was Regius Professor of History at Oxford. More than that, he almost appears to have transferred the freshness and energy of youth to the closing years of his life. Only a few months ago he published a vigorous and well considered History of England. Now we have on our table an octavo volume of Shakespeare criticism, in which he has searched the texts of the plays for indications of the poet's personal qualities and con-

victions. "Shakespeare the Man" (Fisher Unwin) is a noteworthy and very attractive volume, which will impress the reader more deeply than ever with a sense of Mr. Goldwin Smith's literary versatility.

\* \* \*

DR. R. W. FORSYTH writes to us from the Royal College of Science that he has undertaken the duties of Reporter for the Physical Society of London, and sends us reports of the meetings of the Society of March 2 and March 23. We regret that we have not sufficient space for the publication of these valuable notes on the progress of physical science, for which we must refer our readers to the pages of our scientific contemporaries.

\* \* \*

WE take this opportunity of acknowledging the contributions which occasionally reach us from mathematical correspondents—apparently under the impression that the *Educational Times* has unlimited space to devote to the interests of mathematics. Alas, it is not so! From time immemorial we have found room for a *palestra* in which the great wits of pure mathematics have wrestled with each other over problems which, it may be supposed, have been caviare to the general reader. But we are compelled to draw a line which excludes correspondence on mathematical subjects, lest, as happens now and then in an ill regulated school, τὰ ἐν παλαίστρᾳ should encroach too much on the γράμματα and the μουσική.

\* \* \*

THE trustees of the Liberal Memorial Fund, after providing for the Gladstone statue in the central lobby of the Houses of Parliament, have been able to establish an annual "Gladstone Essay Prize" of the value of £10 at each of the Universities of Oxford, Cambridge, and London, and of the value of £5 each at the University Colleges of Birmingham, Bristol, Leeds, Liverpool, Manchester, University College, Bedford College, and King's College, London, Newcastle-on-Tyne (Durham Science College), Nottingham, Sheffield, Aberystwyth, Bangor, and Cardiff, and also at St. Andrews, Glasgow, Aberdeen, and Edinburgh Universities, and Dundee University College.

\* \* \*

MR. FISHER UNWIN announces an important contribution to the history of Wales. We wrote quite recently in these columns that there was room and demand for a more systematic treatment of Welsh history. "The Welsh People: their Origin, Language, and History," consists of extracts from the Report of the Royal Commission on Land in Wales and Monmouthshire. It is edited, with additions, notes, and appendices, by Dr. John Rhys, Principal of Jesus College and Professor of Celtic in the University of Oxford, and Mr. David Brynmor Jones, Q.C., M.P.

\* \* \*

A NEW edition of "Gray's Letters," in three or four volumes, is to be published by Messrs. Bell & Sons. The Rev. Duncan Tovey, sometime Clark Lecturer at Trinity College, Cambridge, has undertaken the responsibility of editing the collection, which will be fuller than any which has yet appeared, and will include several letters that have only lately been brought to light. The whole of the correspondence between Gray and Mason will be included.

\* \* \*

MESSRS. PEARSON are making arrangements for a number of volumes dealing with the leading nations of the world, and entitled the "Great Peoples Series." The general editorship has been undertaken by Prof. F. York Powell, who aims at placing before the public a concise and interesting history of each of the great peoples. Volume I. will be "The French," by Mr. Arthur Hassall.

\* \* \*

BRADFIELD COLLEGE celebrates its jubilee this year, having been founded in 1850. The *Athenæum* says that a history of the school up to the present time is being prepared by Mr. A. F. Leach, of the Charity Commission.

## COLLEGE OF PRECEPTORS.

## DISTRIBUTION OF DIPLOMAS, PRIZES, AND CERTIFICATES.

THE public distribution of Diplomas, Prizes, and Certificates to the successful candidates at the last Christmas Examinations took place at the College, Bloomsbury Square, on March 21. The Chair was occupied by Mr. H. WESTON EVE, the Dean of the College, who was supported on the platform by Dr. Wormell, Vice-President; Mr. E. Pinches, Treasurer; Rev. F. Besant, Rev. J. O. Bevan, Mr. Charles, Dr. F. E. Gladstone, Mr. Hagreen, Prof. T. R. Jones, Mr. Langler, Dr. Lawrence, Mr. Musson, Mr. Milner-Barry, Rev. J. E. Symms, Rev. R. O. T. Thorpe, Rev. J. Twentyman, and others.

The CHAIRMAN said:

I cannot open these proceedings without stopping one moment to pay a tribute to a very distinguished member of our Council and of this College who has passed away from us in the last few months—I mean Mr. Charles Peter Mason, who was one of the most distinguished private schoolmasters of his time, and a very loyal supporter of this College, and who is known to the world and probably to many of you as one of the men who first organized in this country that very important element of education, the teaching of our own language. It so happens that the present moment is marked by two very important educational events—one is the thanksgiving at St. Paul's which takes place in a few days to commemorate the jubilee of the foundation of the Frances Mary Buss Schools. The late Miss Buss was for many years a member of our Council, and rendered us very valuable services. I may, perhaps, remind you that even in her last days she was not forgetful of this College, and left us a small legacy. To her is owing one of the greatest movements of the second half of the century. She was the first, I think, who took seriously in hand—at least in such a way as to impress the public—the improved education of girls. I am sure that, when the day comes to celebrate the jubilee of the commencement of her undertaking, there will be many thousands of "old girls"—I believe that is the proper term to use—scattered over the country, who will remember with gratitude the benefit which her initiative has conferred upon them.

The other important educational event is the coming into operation of the Board of Education Act, which takes place, I think, on a somewhat ill-omened day—the first of April. I trust that there will not be associated with that Act the same results that we are accustomed to link with that memorable day. I believe that it is an Act for which public opinion was thoroughly ripe, and which, if carried out with wisdom and discretion, will produce a very marked improvement in our education generally. The obvious results that we have to anticipate from it are: first, it will, it is to be hoped, secure two reforms for which this College has for many years very earnestly pressed, the efficient registration of schools and of teachers and the training of teachers; secondly, it will stimulate—though I hope not unduly stimulate—the inspection of schools. The inspection of schools is valuable for two reasons—first, it is a good thing to see ourselves as others see us; and, next, it is impossible that an intelligent man can go from school to school without, like the honey bee, collecting good ideas and handing them on to others. Lastly, we anticipate a result which, if I call it a good one, you may say involves a paradox. The working of the Act will probably tend to make some of our teaching more mechanical. The word "mechanical" may be used in a good many different ways. Some of the peasants in the more backward parts of Europe, who are still using the same wooden plough that you remember in the "Georgics," are doing their work in a very mechanical way; on the other hand, the skilled artisan, who is helping in some complicated manufacture, or carrying out some great engineering work, also does his work in a mechanical way. But there is a very great difference between the mechanical way of the peasant and that of the skilled artisan. I have noticed in myself and in other people that one is too apt in teaching not to think where one is going—to drift on just as the spirit moves one. I sometimes feel inclined when I come across such teaching to quote two lines of Wordsworth—

Me this unchartered freedom tires,  
I feel the weight of chance desires.

Now what I trust we shall get by the gradual operation of good inspection, and the training of teachers, is that in secondary

schools, as is already the case in primary schools, the best methods of doing the simpler elements of teaching will be more rigorously laid down and more carefully carried out. If a teacher starts from such a foundation, he will then, when he lets himself go, be able to do far more by following his own devices than if he follows his own devices from the very beginning without any such guidance. The person who sets to work to teach by the light of Nature has probably little to guide him but the experience he gained when he was a boy or girl at school, and the people who taught him at school had, perhaps, little but what they could gain from their teachers; and so, unless some step is taken to spread knowledge of the best methods, there is a danger of our lapsing into the state of things which Horace describes—

Ætas parentum pejor avis tulit  
Nos nequiores, mox daturos  
Progeniem vitiosiorum.

Of course this has not been altogether the case; I am only putting in an extreme way the danger which arises from the absence of machinery for spreading good traditions and good methods of teaching. Therefore I still stick to my paradox that we may gain something if a little more of the mechanical element is introduced into our secondary teaching.

I am afraid I have occupied too long with these general dissertations. I now come to the most important part of my talk, and that is to offer my hearty congratulations to the boys and girls who have won prizes. Looking back upon my own school-days, I know what a satisfaction it was to me to win prizes, and I have no reason to think that, though the present generation, and especially, I believe, the young ladies, have the credit of being much in advance of what their fathers and grandfathers were at their age, they have ceased to feel a hearty pleasure in winning their prizes. I shall not, as I have known some speakers do, rather condole with them than congratulate them. My observation of a good many years leads me to think that, on the whole, the boys who do best at school and at college, if they do not always carry off the great prizes in after life, yet do, as a general rule, rise to useful and honourable stations in the world. They have taken the first step. They have shown, as a general rule, some of the qualities that conduce to making good and useful men and women. They have learned something of method. They have generally sound minds in sound bodies, they have learned some of the principles of self-denial, and occasionally, but not, I hope, always, prefer work to play. Remember, too, that there are few more generous rivalries in after life than those which exist between boys and girls who are fighting for a prize.

Perhaps you will expect me, as I have started on this line, to say one or two words as to what you ought to carry away from school. I will put first what is important, but not so important as some other things—a habit of accuracy. Boys and girls do not always realize what a part accuracy plays in the world. Take an example which is very familiar to us just now—the power of sending a shot or shell into an area not much bigger than the square outside—I might say, not much bigger than this room—and that from a distance of several miles. Just think what a number of people must each of them have carried out with perfect accuracy the piece of work assigned to them. Picture to yourselves, again, some great engineering work like the great dam now being made on the Nile, or the Forth Bridge, that had to be put up bit by bit. You have there an admirable illustration of that rigorous accuracy which modern science has gradually learned. Therefore, every boy or girl who is trying to acquire habits of method and accuracy at school is so far fitting himself or herself to play a useful part in the great work of the world, and the work of the world is a machine that gets every day more and more complicated, and calls more and more upon every man and woman to do fully his own proper part in it. A short time ago I had an opportunity of looking over some reports from examiners on the work of a recent examination, and, as might be expected, there were some commendations of good and accurate work, and some fault found with a considerable want of it. There is one subject in particular in which accuracy seemed to be at a very low ebb—that is, the subject of Latin. I am not going to preach that Latin is the all in all in education. The day for that is long passed. For myself, I believe that Greek is a more valuable language to learn, and is at least as good a discipline. I also believe that, unless you can carry classical studies to a fairly advanced point, you will get both more discipline and more permanent benefit out of modern languages. But, for all that, Latin still remains an admirable discipline, and there are few people

who, when they grow older, would not be sorry if they had not learned any Latin at all. What I want to impress upon you is that, if Latin is to be learned, it ought to be learned well, and that the rather disagreeable drudgery of mastering the grammar must be resolutely faced. Latin grammar is not in itself a delightful subject, but without it you cannot possibly make out the sense of a Latin author, unless, indeed, you go to work in that most mean and miserable way—trying to learn a “crib” by heart. So much for accuracy. But there is another much higher thing that you should take away from school, and that is, love of books or of science, or of both. I sometimes fancy that we schoolmasters might do even more than we do to stimulate that love of books. The habit in English schools of reading very minutely small portions of authors, valuable as it is, does not always conduce to a habit of wide reading. I have noticed that French boys of sixteen or seventeen have read in classics far more widely than English boys of their age, though they are not probably as accurate; and one of our great problems in education is to combine with some very careful reading a wider range than is at present often realized in schools. Above all, our business as teachers is to encourage as much as ever we can the study of our own literature. The other day I was looking through the regulations for Prussian secondary education, and from beginning to end the key-note is—how will this study bear on a knowledge of the German language and German literature and the greatness of the German nation? I think we Englishmen cannot do too much to set before us as one of the ends and aims of education the due appreciation of what is probably the greatest literature in the world since the Greek and a legitimate pride in the greatest country and noblest type of government that the world has ever seen,—

A land of settled government,  
A land of just and old renown,  
Where freedom slowly broadens down  
From precedent to precedent.

Lastly, there is one more result that you should take away from school still more important than either of the other two, and that is, training in character. In many ways the modern conditions of all good schools differ from the conditions of a good many years ago. In one way, perhaps, they are a little less favourable to the formation of character, because boys and girls are better looked after than they used to be, and, therefore, though there is less chance of going wrong, there is perhaps a little less chance of forming the stronger and nobler types of character. But there is still plenty of room, even in the best organized school, for laying the foundation of that kind of character which will carry a man or woman safely through the difficulties of the world. After all, masters and mistresses cannot do everything, and one of the most valuable features of English schools—I am glad to say, as much of girls' schools as of boys' schools—is the way in which a common life is inculcated; boys and girls learn the way to give and take, to get over their natural selfishness, and to feel that they must live for others. I am afraid this is a little bit like a sermon, but after having preached the intellectual side I think it is right to impress upon you that there is a higher side of school life even than the intellectual.

The Diplomas, Prizes, and Certificates were then distributed, after which Dr. WORMELL said it was his pleasing duty to move a hearty vote of thanks to the Chairman for his useful and interesting address. He felt that he had undergone a kind of promotion. When the first boy of the class was asked temporarily to take the master's chair, the second moved into the place of the first, and the Bard of Avon had led them to expect under these circumstances that the proud second “dressed in a little brief authority” will play “fantastic tricks before high heaven.” But he could assure them he should endeavour to perform his brief task with the decorum and discretion that were shown on occasions when the task was in the hands of the Dean, for he was sure that this vote was never moved more heartily than it was now, and never with feelings further removed from mere formality; it had never been more worthily bestowed, nor upon one who had gained a better title to their thanks. It was not possible to limit their indebtedness to Mr. Eve to the services rendered that day; throughout an active lifetime he had consistently advocated higher culture upon rational and progressive lines, and as Dean of the College he had always laboured assiduously and with great tact to make the examinations more useful and to preserve their

quality. Although it might be true, as Shakespeare made Ulysses say, that

Time hath, my lord, a wallet at his back  
Wherein he puts alms for Oblivion  
A great-sized monster of ingratitude:  
Those scraps are good deeds past; which are devoured  
As fast as they are made, forgot as soon  
As done;

yet their memory of the indebtedness of education to Mr. Eve, and the indebtedness of the College, was so deeply written that time's wallet could not obliterate it. There were not many who could undertake the post of Dean. Just think of the examiners! His duty was to bring those examiners into line—they were an obstinate class of men—yet he did his work with such gentle courtesy that they could not be offended, and, at the same time, with such firmness that he always had his way. Then there were the teachers. Their popular constitution gave the teachers the right and the opportunity of making suggestions for improvement, and there was no suggestion that was ever seriously made but was carefully considered by the Dean. Then there were the disappointed ones, those who, perhaps, in spite of honest endeavour, had not reached the level of merit which justified the receipt of a certificate or a diploma, and, as a rule, it was only natural that they should think the examinations were at fault. He did not know at all how the Dean managed to soothe them all, but he was quite sure that he succeeded. He felt particularly pleased to see the Dean occupy the chair that day, because he had always been of opinion that the College ought to be more self-contained than it was. He did not think it necessary always to run about and beg and pray some outsider to take the post of honour. At times, no doubt, it was useful, when there were burning questions to the front, to invite a man of light and leading to give his opinion upon those questions, but, as a rule, they need not go outside, for there were many members of the College who could very well perform the functions of distributing prizes. Therefore, he did hope that this would not be the last time by many that they would be favoured by seeing the Dean in the chair. He was glad to see that the Dean had put the work of Miss Buss before the initiation of the work of the Board of Education Act. He conceived that it was a matter of greater importance. With regard to the work of the Board, he was not afraid at all of the first of April—its work would not be regulated by “Carlyle's majority.”

The Rev. J. O. BEVAN, in seconding the vote of thanks, said that upon the last occasion they had a bishop in the chair; now they had a dean, and, as there seemed to be such a suspicion of semi-clerical atmosphere about, it might not be unfitting for a poor priest to second the vote of thanks. Occasionally it might be necessary to go outside the College to procure a chairman to preside on occasions like the present; but he was convinced they could not have obtained a better chairman than Mr. Eve. As there was a power behind the throne which controlled the proceedings of government, so it was with reference to the examiners. There was a power even behind them, and the realization of that power had been brought forward by Dr. Wormell. With regard to the address to which they had listened, he thought it was one which ought not only to be listened to, but should be read. Speakers might be divided into different classes. There were some with regard to whom it might be said that it was known what their subject would be; but the Dean was not a man of this sort—they were not always certain as to what view he would take upon certain subjects. As to the remarks about the ill-omened day when that Bill was to come into force, he might relieve Dr. Wormell and the Dean from any misgiving on that point by stating that the first of April would be a Sunday, and, this being a *dies non*, the Bill would not come into force until the second. The Chairman had referred to the value of accuracy, and he might have touched more particularly on the special need of accuracy in the subject of Euclid, for which he (the speaker), as an examiner, was more immediately responsible.

The vote of thanks having been passed by acclamation, the CHAIRMAN, in reply, said: I feel very much the extreme kindness of Dr. Wormell in moving this vote, and of Mr. Bevan in seconding it. I can only say that I wish I deserved half the compliments that have been paid me. It must be a privilege for candidates for the examinations to see their examiners “spirit to spirit, ghost to ghost.” When you get home go to your Tennyson, and look up the passage.

## SCHOOL MAPS.

At the Monthly Meeting of members of the College of Preceptors, held on Friday, March 16, Dr. J. SCOTT-KELTIE in the Chair, Mr. H. O. ARNOLD-FORSTER, M.P., read a lecture on "School Maps: What they are and what they ought to be."

Mr. Arnold-Forster said it would be agreed that the teaching of geography in this country was lamentably behindhand. What was said on this subject by the Royal Geographical Society in 1886 was, to a large extent, true to-day, and, in the interval that had elapsed, they had not made the progress that might fairly have been expected in geographical teaching. To show the state of things existing fourteen years ago, he read several extracts from the Report of the Geographical Society of that date.

The chief difficulty which confronted any one who desired to produce a good map was the apparent inability of most of the persons concerned to discriminate between a good and a bad one. He had found that the general method of estimating a school atlas which was in favour throughout the country was to make a sort of equation between its weight *avoirdupois* and the smallness of its cost, and, when it was discovered how little they had to pay and how much it weighed, and also the amount of colour they could get, they attained their ideal of what a good atlas should be. It was because he had been compelled to realize the truth of this that he was anxious now to appeal to the members of the College of Preceptors to help in getting over the dead weight of incapacity, and arriving at an understanding of what was really desirable. Until there was a demand on the part of teachers of geography for that which was scientific and correct, those concerned in the production of maps might waste their money and their energies, and little or no progress would be made. It could not be denied that there had been considerable improvement of late years, and that, through the efforts of the Royal Geographical Society and other educational bodies, there had arisen in this country a body of persons who were doing their best to quicken the educational conscience with regard to the teaching of geography; but these efforts had not yet been so successful as he should like to see them. In July, 1897, the Teachers' Guild issued a leaflet, in which they laid down what were considered to be the essentials of a good school atlas, and he desired to acknowledge how much he had been assisted by this leaflet in forming the ideals which he had tried to put into practical shape. He had also received a great deal of assistance from the Geographical Association, which had been good enough to nominate two gentlemen, very well known in the geographical world, to give him the benefit of their assistance and advice.

In compiling a school atlas, the first difficulty he met with was to know what to leave out. The tendency had been, with regard to a school atlas, to ignore the fact that you could not put everything into it. In dealing with the English elementary schools, it was necessary to remember that they had to consider the time and the pockets of the scholars or their parents, and one of his guiding principles had been to include as much as possible without detriment to the subject. In the first place, it was obvious that a school atlas should be scientifically accurate, a quality which did not always characterize the books which were in use in the schools at the present day. Therefore, he would start by saying that scientific accuracy should be an absolute *sine qua non*, to which he would add that the execution of the maps must be such as to attract and not to repel the child; so that among the undesirable qualities he would place the inartistic production of maps, which offended the taste of a qualified observer, and failed to interest the child who was using them. Then, again, they should be sufficiently full for the purposes of general instruction in the class-room; but it was important to point out that it must not be attempted to construct school atlases to be used as reference atlases. They should not expect to find on a school atlas every place that was mentioned in the daily papers; if they attempted to do that, they would most certainly fail, because the atlas would be so overcrowded that it would become obscure and unintelligible. Therefore, in his opinion, it was only necessary to include all the names which a teacher engaged in the everyday work of teaching in an elementary school had a right to expect to find in the atlas. It would be a mistake to leave out of maps names which were undoubtedly connected with the history of this country or such general history as the pupils were supposed to learn. In the maps which he had prepared would be found a considerable number of places which, from a geographical point of view, were not legitimately included in maps of this kind. For instance, there would be found the battlefields of our country, and also certain battlefields which were memorable in the history of the world, though not particularly associated with the history of this country. Of course a place like Crecy had little geographical signification, but he thought it would be very undesirable that a teacher having only one book to use should not be able to ask his pupil to point it out on the map. In putting in such names as this he admitted that he departed from his ideal of making it a purely geographical map. He only referred to this apologetically, because, although he felt there was an intimate connexion between geography and history, the historical aspect should not be a predominant feature in the teaching of geography.

Geography divided itself naturally into political and physical geography, and he did not think these separate branches could be taught satisfactorily from one map. It had been his aim to separate these two kinds of maps altogether, because a confusion arose from attempting to combine the two. In his own maps it would be found that there were both a physical and a political representation of all the countries represented in the atlas. For the purpose of preparing his maps he had visited Switzerland to see the excellent work done at the Institute at Berne, and he had been to Germany and other countries to see what they did. We lived in a country that had a larger coast line for its area than any other country in the world, and there was no important town in the country that was more than fifty miles from the sea or an arm of the sea. Therefore, he thought fit to incorporate in the atlas one example of sea mapping in the shape of an Admiralty chart. Although he did not expect school-children to take the soundings of Portsmouth Harbour, he thought they should understand the great difference that existed between the treatment of sea mapping and land mapping. Again, it was absolutely essential that British children when looking at the maps should be able to realize in the clearest manner the great country they belonged to, and therefore the portraying of the British Empire was a very important part of the work. He had tried to correct the natural failure in the child's mind to see things in their due proportion, and had represented the whole of the component parts of the Empire on one uniform scale, so that they might see at a glance, for instance, the enormous extent of Canada and the relative insignificance of the British Islands compared with the great tracts of the earth's surface which they controlled.

His experience was that children were apt to regard maps as things not very intimately connected with their own experience, and he had, therefore, endeavoured to familiarize children with the meaning of a map by introducing them at the outset to a series of diagrams which would enable their imaginations to pass from the actual physical appearance of the country as it presented itself to their eyes and the representation of the country on the map. To this end he had been greatly assisted by the Ordnance Survey. He had also given a local map—that is, a map of London and the environs. He thought it was important that children going out, as they did, upon expeditions, school treats, and so forth, should when they came back be able to point out on the map the place that they had been to. It had often been said that in order to understand geography at all one must travel. He quite agreed with that; but they could not all travel, or, at any rate, only to a very small extent, and for those who could not it was necessary to give some representation of the features of the country with which they were familiar. Another question that might not perhaps interest them very much was the question of the spelling of the names. Any one who had had anything to do with the preparation of maps would be aware that the spelling of names was one of the great problems that had to be dealt with. There was no canon of geographical spelling, and one had really to go very much as he thought best. The Asiatic Society had a canon of geographical spelling for Asiatic names which he thought was rather a hard doctrine. No doubt it was very good to spell Luknau, and to follow the Asiatic spelling throughout the Asiatic map, but he was quite certain that children coming across these unfamiliar spellings would be unaware that they were dealing with old friends. He had tried to give a familiar spelling, so that a child might look at the map, and know what the places were. Further than that, he thought they ought to teach children, at the very earliest stage possible, the real names of places. We had got familiar with the names of places which had become Anglicized, such as Leghorn (Livorno), which was inconceivable to an Italian. It was misleading the children to call places known all over the Continent by names absolutely unfamiliar to the people who lived in those places. Therefore, he had adopted the expedient, in every case where there was any great variation between the accepted name in this country and the actual name of the place, of putting in two names. This had landed him in some difficulty, because, in Switzerland there were three forms—one, the form which we were pleased to use; another, the German form; and a third, the French form—and he had put in all three names. He also advocated the addition of the accents; otherwise a child would not be able to pronounce the name correctly. These were some of the principles which had guided him in producing his maps. He had endeavoured in every case to give the child some idea of the scale of the map. Taking the map of Africa, for instance, they would find the whole of the European continent introduced, and in a moment they would be able to see the proportion between those small European countries which dominated these enormous expanses of African territory; and this in itself was a lesson in political geography which was very well worth teaching, and very important, if people could be made to comprehend it.

He had not attempted to deal with geological and commercial maps. He found that in the prospectus of the Teachers' Guild they suggested the teaching of geology and commercial facts on a map; but he considered this was outside the scope of any ordinary map. At any rate, it was outside the possible limits of an elementary school map. Though geology was a very delightful and interesting subject, it was not one which should be taught in elementary schools. Then, with regard to the indication of elevations, from the Ordnance Survey map it would

be seen that there was a method of expressing elevation adopted in which colour was used in combination with contour lines. Now, if they were to look at his maps, it would be seen that he had reversed the method of treatment, and put the dark colouring where the light colouring was. This was not a very material point, but he thought it was a more artistic way of treating the subject. While speaking of the Ordnance Survey maps, he would like to say that he thought in them we had something to be proud of; but he regretted that the arrangements for selling and distributing them were very unsatisfactory, and he looked forward to the time when these maps would be in every one's hands. He had come there that evening not only to put his views before the meeting, but to receive their suggestions; and in doing so he would warn them not to put their ideals too low. He most strongly objected to the system which was prevalent, though quite in accordance with some interpretation or misinterpretation of the Code, of doling out the teaching of geography in homœopathic doses during each particular term of the child's school life. He saw no advantage in putting into a child's hands during six months of the year a little book which dealt, for instance, with the geography of Ireland and the tidal currents, or another which dealt with the United Kingdom, India, and the wind currents. For teaching purposes it might be necessary to divide the subject into as much as they could get their pupils to assimilate in a particular time. The whole value of an atlas depended upon its being comprehensive. It was necessary for a child to have the power of comparison and of examining one map alongside of another, and also the power of realizing the meaning of school maps.

All these things together went to teach a child geography, and to give a grown man an interest in the study; and he protested against people putting their ideals too low and saying that, because you cannot imagine a child in the First or the Second Standard finding an intellectual use for the whole atlas, that was any reason you should not put it into his hands. He had gone through the syllabus of geographical teaching of the Sheffield School Board, which was founded on the Code, and adapted to the successive standards, and he was able to demonstrate that the whole subject-matter of the syllabus, from the First Standard to the last, was illustrated by his particular atlas, and that there was absolutely no advantage to be gained by giving a child in the First Standard only the particular atlas illustrations which were appropriate to that standard, to the Second Standard what was appropriate to that, and so on up to the Seventh Standard. There was here no saving of money. On the contrary, there was great gain by adopting the contrary process of putting into the hands of the child, during his school life, the whole of the geographical information that it was proposed to make his during his stay in the school. With regard to the form of map which, in his opinion, should not be adopted, there were some faults which were common to all, and which were very serious departures from scientific methods. For instance, it would be seen in many of the specimens exhibited that there was an absolute failure to carry out the map to the extreme verge of the page. That was a very vital principle. Taking the map of Italy, which was his *bête noire*, in some of the atlases it would be found that Italy was represented as a peninsula bounded on the north by the Sahara, on the east by the Sahara, and across the Mediterranean Sea again by the Sahara. There were four white places found in that map. By this method they absolutely failed to teach any of the elementary facts of the geography of Italy. The whole geographical history was gone, the political history was gone, the Alps were gone, and the consequences of that environment of mountains was eliminated from their view. In some maps there was also a great excess of colouring for political divisions, which was confusing, and, in most cases, absolutely useless, to the child; and, lastly, there was a great overcrowding of the maps, which would be condemned by all those who had any regard for the eyesight of the child, or any love for precision and clearness in the production of a map.

Mr. Arnold-Forster concluded by inviting criticisms on the maps which he had exhibited, and which had been in the hands of the audience during the lecture.

Mr. EVE explained that Mr. L. W. Lyde was unable to be present at the meeting; but he had expressed in writing his views as to some of the desiderata in making maps for the use of school-children. Physical and political maps should be printed side by side. Heights should be indicated by colour, not by contour. The snow-line should be clearly shown, and, if possible, the green shade should exhibit the whole range of ordinary cultivation. There should be a minimum of names, and in the physical maps these might be indicated by initial letters only. The atlas should on no account be unwieldy, and should not cost more than half a crown. Every map should have an inset of England on its own scale. Astronomical maps were unnecessary; but three or four good climatic maps should be included. There should also be an index containing every name that appeared in the maps, and illustrations of typical animals and plants of each district. Railways should be

marked only in the political maps. Mr. EVE, after pointing out that in many respects Mr. Lyde was in agreement with Mr. Arnold-Forster, went on to observe that some improvement might be effected in isothermal maps if different colours were used to denote different degrees of average temperature for the whole year, and some other means were adopted of indicating on the same map whether the climate was an extreme one or an equable one. All maps should have bold outlines, and the number of names should be cut down as much as possible. Mr. Arnold-Forster advocated the placing in the hands of school-children of an atlas which should serve for their entire school career; but this course was rendered difficult by the tendency of children to soil and damage their books. There was therefore much to be said in favour of providing small books intended for one term's work.

Mr. LANGLER remarked that, while it was important that a reference atlas should contain as many names as possible, in maps for school use the principle of selection insisted upon by Mr. Arnold-Forster should be largely used, and names of minor importance should be omitted. He was glad to say that some improvement in this direction had taken place in recent years. He should also like to insist on the desirability of a correspondence between the names shown in text-books and the names printed in the atlas. Every name shown in the former should appear in the latter. The insertion in every school map of a scale of comparison with some known unit would increase the usefulness of the map.

Mr. WILSON considered that a good school map should show on its surface as much information as to the operations of the human race during historic time, and of Nature during the geological ages, as could be put upon it without overcrowding. Mr. Arnold-Forster had expressed his opinion that geology ought not to come into play at all in the teaching of geography; but it seemed desirable that, in a lesson on geography, constant reference should be made to the bearing of geological facts on the questions dealt with. For instance, it was impossible to get a thorough knowledge of the migration of population, or of the flora and fauna of a country, without knowing something of the geological structure of the rocks and the soils produced by their decomposition, and, accordingly, a geological map should always be used in connexion with ordinary maps. It was important that children should be taught to understand the meaning of maps; and, for this purpose, a teacher might usefully explain, by means of models, the construction of maps and the difference between Mercator's and other projections.

Mr. CHISHOLM remarked that considerable progress had been made in geographical education in this country since the issue, some fourteen years ago, of Dr. Scott Keltie's Report, which had been referred to by Mr. Arnold-Forster. The institution of Chairs of Geography at the Universities had greatly influenced this progress, but much remained to be done before England could attain to the position already reached by Germany in this respect. Maps of the kind submitted by Mr. Arnold-Forster, if they could be procured at moderate cost, would materially assist the improvement of geographical study. He agreed with what Mr. Arnold-Forster had said as to the general principles that should be adhered to in drawing up a school atlas, but he did not think it necessary to have the physical and political features entirely separated one from the other. It would be undesirable to have political maps giving no ideas of the physical features at all. For instance, in studying the geography of India, it was not only necessary for the child to learn the position of Bombay, but he must understand also that it is backed by mountains which not long ago separated it from the enormous hinterland which has made it the seaport it now is. Again, Sydney, the capital of New South Wales, suffered from being cut off in the same way by a series of mountains; and this should be shown on the map. The child could be made to understand how the mountains had a very important effect on the history of the colony. He was glad to see, however, that the maps handed round seemed suitable for their purpose. As to the spelling of names, he thought Mr. Arnold-Forster's remarks were entirely sound. Two of the suggestions communicated by Mr. Lyde were especially interesting and valuable. Some climatic maps were absolutely essential; and it was certainly desirable that highlands should not be merely indicated, but that certain shades of colour should be used to indicate definite selected elevations.

Mr. MASTERMAN contended that at least one geological map should be included in every elementary atlas. The older rocks should be indicated by one colour and the newer ones by another.

The CHAIRMAN said that geographical education had made no small progress of late years, and the fact that there were Professors of Geography at Oxford and Cambridge was a proof that geography was gradually achieving a position in this country which would in time be quite equal to that which it held in Germany. The great drawback was the inefficiency of the teaching. Mr. Wilson had advocated the introduction into school maps of a number of details which in his (the Chairman's) opinion would more suitably be looked for in the School of Geography at Oxford. Mr. Arnold-Forster's remarks applied only to elementary maps, and he had set forth certain principles which should govern the construction of such maps. All maps should be characterized (1) by clearness and legibility, (2) by a principle of selection of details,



only the more important ones being shown, and (3) by attractive appearance.

The Lecturer briefly replied, and the usual votes of thanks concluded the meeting.

## REVIEWS.

### LITERARY HANDBOOKS.

(1) "Short Histories of the Literatures of the World." Edited by Edmund Gosse, LL.D.—*A History of Russian Literature*. By K. Waliszewski. (Heinemann.) (2) "Periods of European Literature." Edited by Prof. Saintsbury.—*The Romantic Triumph*. By T. S. Omond, M.A. (Blackwood.)

(1) Sixty years ago few would have cared to maintain that there was anything which deserved the name of a Russian literature. A few journalists, a few pioneers of political inquiry, a little verse, and a little artless fiction of the domestic order accounted for most of the secular output of the Russian press. Then the stimulating influence of German philosophy and ideals, which did so much to open up new vistas in English and American thought, and which had already given rise in Russia to a mystic kind of nationalism, and to the fateful Panslavonian theory, began to yield a harvest of more purely literary achievement. After periods known to Russians as those of national evolution and emancipation—after a transition in which Karamzine and Joukovski, Kryloff and Pouchkine were the most conspicuous names—we come almost suddenly on the pleiads of Lermontoff, Gogol, and Tourguenief, of Dostoevski and Tolstoi. All these are more or less familiar to us, owing to the study of Russian language and letters by the Western nations and the industry of translators. Later Russian novels are full of gloom and mysticism, tragedy and fatality, passion and crime and despair. Mr. Waliszewski estimates the reputation of his countrymen, and analyses many of their plots. If it were not for the actuality and variety thus given to his text, it would strike an ordinary reader as ponderous and vague. But at all times it is characteristically Russian in its outlook and point of view—never more so than when he deals with what he takes to be the typical qualities of his race. Here, for instance, he is commenting on a speech of Dostoevski, in 1880, at the dedication of a monument to Pouchkine:—

The new "elect nation," called to realize the kingdom of God on earth—because she does not isolate herself proudly within herself, because she is disposed to see a brother in every foreigner, and an unfortunate, rather than a malefactor, in the greatest criminal, because she alone incarnates the Christian idea of love and forgiveness—the heiress presumptive of the tribe of Judah, as described in Dostoevski's speech, simply belongs to that cycle of Messianic ideas in which the theory of Panslavism has become finally merged. Yet on one point the orator accentuated his disagreement with the Slavophiles, by extolling that national gift for assimilating foreign culture whereby the Russian had succeeded, or was to succeed, in realizing that type of "universal man," who has since become the object of a good deal of joke, but who, at that moment, thanks to Dostoevski's burning words, evoked a transport of enthusiasm.

(2) Mr. Omond's pleasantly discursive volume aims at presenting a general picture, "preferring broad outlines to finished studies," and making less of biography and bibliography than of the displayed features of the romantic triumph. The subject is fascinating, and has an interest involved in the mere recital of facts, apart from any allurements of style or presentation. But Mr. Omond is equal to his opportunity—which, indeed, is not to account for what is known as the Romantic revival or revolt, since that task has been assigned to Prof. Vaughan in another volume of the same series. The author of the present volume is almost too modest in his disavowals and disclaimers; but the main thing is secured when he recognizes that the "Romantic triumph" implies a return from eighteenth-century formalism and literary deportment to actuality, sincerity, sympathy with the warmer moods of human nature, and the knowledge of men and women from within, as well as from without.

We cannot follow the subject in detail; it must be enough to say that Mr. Omond's readers will find themselves easily led through an attractive field. His treatment of Coleridge is fine on the whole; but there is one passage in regard to which we must slightly demur to his inference. The thought of Coleridge, he truly says, did not create a school, but it passed into the very heart of his age.

The heart, even more than the intellect, of the rising generation became Coleridgean. From him comes most that is strong in modern

idealism; from him much that is weak in our philosophy and religion. The banalities of the pulpit derive from him, as well as its freedom. The common division between faith and knowledge, reason and understanding, the intellect and the heart—division exemplified even by Tennyson when he tells how

"A warmth within the breast would melt  
The freezing reason's colder part,  
And like a man in wrath the heart  
Stood up and answer'd: *I have felt*"—

this dangerous division comes direct from Coleridge. Dangerous, indeed! For the soul of man is not built in water-tight compartments, like Faraday's knowledge, and, if one faculty can mislead, we have no security that another may not.

"No security," of course; but does Mr. Omond deny the possibility? Is it not possible for the same man to act in successive moments with the faculty of reason and with something which impulsively sets reason aside? Tennyson calls this something "a warmth within the breast," and it is, in fact, an *ensemble* of conviction—a reserve of previous reasoning, perhaps, but combined with sensuous sympathies, and summoned by the will to confute what may be only a fallacious deduction of the mind. Where is the "dangerous division," if we only understand our terms?

### LAWS OF THOUGHT.

*Logic*. By St. George Stock, M.A. Pembroke College, Oxford. (Oxford: B. H. Blackwell.)

This is the kind of text-book that students love, for it contains the whole subject in the small compass of four hundred small octavo pages. It is a kind of Liebig's, or rather St. George Stock's, concentrated essence of logic. That this description is no exaggeration will be seen on reading the list of writers on the subject to whom the author acknowledges indebtedness. He has boiled down portions of the following works, favouring the whole with some good pinches of Aristotle:—the works of Archbishop Whately, Mills, and Hamilton, Prof. Jevons' "Lessons," McCosh's "Discursive Laws," Thomson's "Laws of Thought," and the books of Bain, Jevons, Bradley, Walker, Ray, and Weatherley. The gist of each argument, the pith of each classification, the core of each discrimination, used by these writers is to be found somewhere, and to some extent, within these pages. It is necessary in such a compendious text-book that much shall be introduced abruptly and dogmatically, for there is no space or time for introductory preparations. For students working with a tutor this methodical summarizing of the materials will be found very useful, but for the private student it would need to be supplemented by wider reading. For the benefit of such there might have been some guidance as to this reading, as, for instance, "Here read chapter iv. of Thomson, 'Laws of Thought'; or 'Here read such a chapter of Mill.'"

The methods adopted throughout are strictly deductive. For instance, the meanings of terms are usually arrived at by first taking them in their widest sense, and then cutting away the colloquial or metaphorical meanings which are not used in the science, gradually developing the exact and limited scientific connotation. A good example of the general method is the fixing of the meaning of the word "laws" in the phrase "laws of thought."

The word "law" is so ambiguous that it will be well to determine more precisely in what sense it is here used. We talk of the "laws of the land" and of the "laws of Nature." A law in the political sense is a command imposed by a superior upon an inferior, and sanctioned by a penalty for disobedience; but by the "laws of Nature" are meant merely certain uniformities among natural phenomena.

These differences are then fully discussed, and the following definition is finally deduced:—

The laws of thought in their ultimate expression are certain uniformities which invariably hold among mental phenomena and so far resemble the laws of Nature; but in appearance they may be violated, owing to error, as the laws of the land may be violated by crime.

This method of starting with the widest possible view and then narrowing it to what is required is applied in every part. For example, the discussion of mood and figure begins by counting all the possible ways of varying the terms of propositions which had previously been lettered *A, E, I, O*. "There are 64 possible moods, 4 possible figures, and 256 possible forms of syllogism." The application of the preceding rules strikes out illegitimate moods, and then it is found that nine legitimate pairs of premisses remain, and that one of the nine is sterile. The next

step is to determine how many of the legitimate moods are valid in the four figures, with the result that nineteen combinations of mood and figure are found to be at once valid and useful. Then this fact is clenched in the famous mnemonic lines giving a name to each mood in each figure, and indicating thereby the laws of conversion. To the usual five lines are added two others—

Quinque subalterni, totidem generalibus orti,  
Nomen habent nullum, nec, si bene colligis, usum—

translated thus:—"The five subaltern moods which are derived from the same number of moods with universal conclusions have no name, and, if you draw the conclusion rightly, no use."

The treatment naturally grows more interesting as the work proceeds, and the student who toils through the drudgery of the earlier chapters is rewarded by the interest of the later. The last chapter deals with Aristotle's division of fallacies, and an appendix contains sets of most useful exercises, arranged according to chapters, the answers to which may be obtained from the author.

#### THE GREATEST PLANTAGENET.

*The History of Edward the Third (1327-1377).* By James Mackinnon, Ph.D. (Longmans.)

There is plenty of room in these days for separate biographies of our most active and distinguished monarchs, not merely as sections of a general history or articles in a dictionary of biography, but in the form of independent volumes, based on special research. The work should be done by writers of historical training and instinct, of adequate leisure and industry, and not as a mere repatching of old materials, a repetition of other men's work in a different phraseology. Dr. Mackinnon gives us a portly volume on the greatest of the Plantagenets, which is, in some measure, a history of England during the middle half of the fourteenth century. He has set about his task in the right way, studying for himself the contemporary chronicles and documents, and guiding himself by the critical labours of scholars who have edited these same contemporary records. On the whole, his volume is a historical biography of Edward such as we had a right to expect from a careful and legitimate student of history. It is an independent work, which tells the tale of a very important period in reliance on the best authority, and, in so doing, avoids the dryness of a mere narration of facts. Indeed, the author is so anxious to avoid baldness and dryness that he occasionally indulges in a facetious vein. Speaking of a sermon from the Chancellor at the opening of the last session of Edward's reign, he says:

The bishop canted with an unction which must have threatened the gravity of his auditors. . . . Like St. Paul, the King had been spared to be a chosen vessel of Divine grace. If it were permissible to shake one's head during the delivery of a courtly sermon, in the supreme Court of Parliament, surely every head must have wagged at this solemn deliverance. . . . In contemplation of this chosen vessel, let those present strive to merit the same grace and eschew all vice (great inward laughter assuredly!). The head may be sound and full of virtue, but some of the members at the same time be sick. So the King, who is the head of the nation, may be a pattern of virtue, and yet his subjects be given to sin (renewed inward risible shakings!).

"Risible shakings" will hardly pass muster. We prefer Dr. Mackinnon in his more sober mood, which is, in fact, the mood of his ordinary moments. He is not always gilding the pill of history for his St. Andrews students with pawky reminiscences of Carlyle.

It is unnecessary to say that this volume abounds in highly interesting pages, of which the author has very frequently made the utmost. The life of Edward the King and Edward the Prince are full of dramatic passages. Their warfaring in France has been told with great spirit by Froissart, by our own Baker de Swinbroke, Chandos Herald, and other writers of the fourteenth and fifteenth centuries; and Dr. Mackinnon does not allow much of their original vigour to escape in the course of transposition. Not only Crecy and Poitiers, but various intermediate battles by land and sea, are described with plenty of liveliness and effect. The naval encounter with a big Spanish fleet off Winchelsea, a sort of rehearsal of the battle of the Armada, two hundred and thirty years later, makes a very stirring story. The English were greatly overweighted by the Spanish vessels, but they were handled by descendants of Vikings

and ancestors of the men who won Aboukir and Trafalgar. One incident of the day is worth quoting:—

The "Salle du Roi," commanded by Robert de Namur, was engaged in hot combat with a large Spaniard, when the Captain made full sail, and sped off, dragging the English vessel along. The interlocked ships passed near Edward, who called out: "Rescue the 'Salle du Roi.'" In the noise of battle the order was unheard, and the Spaniard got clear away in the gathering darkness. Thereupon one of Lord Robert's servants, named Haekin, sprang on board the Spaniard, and, mounting the rigging, cut the ropes that held fast the sail. Down flapped the canvas, and the vessel came to a standstill. It was a daring deed, in keeping with the wild, reckless *bravoure* of the age, and it was effectual, for Lord Robert and his men, clambering over the bulwarks, cut down the crew, and returned with their prize amid the cheers of the English fleet. Before night closed, and the triumphant trumpet blast of the English ship announced that the battle was over, seventeen great ships had been captured; the rest escaped in the darkness.

The least that can be said for Dr. Mackinnon is that he has produced a good reading book on satisfactory lines, which will make the reign of Edward III. stand out more prominently in the mind of every one who studies it.

#### GREEK ORIGINALS.

*More Finds in Egypt.* (Egypt Exploration Fund.)

The most important of the classical "finds" in this second instalment of the Oxyrhynchus Papyrus is a fragment of Menander's comedy of the "Shaven Lady." This play, hitherto known by two lines only (though there is an epigram in the "Anthology" describing its subject), now ranks among the chief remains of the dramatist, the fragment containing about fifty lines. The plot is of the familiar type, a soldier of fortune and his mistress being the principal characters. The incident which gave the play its name reminds us of a complication which has done duty in modern fiction times without number. The soldier cuts off the lady's hair in a fit of groundless jealousy; he has witnessed her affectionate greeting of a stranger whom he supposes to be a lover, but who turns out to be a brother. In the domain of history, the chief example is a list of the Olympian victors at seven celebrations of the Games, 480, 476, 472, 468, and 456, 452, 448 B.C. The order in which the contests are given agrees, in the main, with what we find in Pausanias and elsewhere. It is interesting to see that the winning horses came from Sicily or Argos in every case where the name is decipherable. The dates, it will be observed, fall in with the poetical activity of Pindar and Bacchylides, and the particulars given by the papyrus help to settle some disputed points. The latest date known for any composition of Bacchylides has hitherto been 468 B.C.; we now know that he was writing in 452. But the most interesting fact suggested by the fragment is one that relates to matters far more important than a list of successful athletes, viz., that modern critics are far too ready to correct the scholiasts and ancient commentators generally. There is not much to say—or, rather, much that can be said within available space—about fragments of extant authors. We observe, however, that the text of a portion of St. John's Gospel (about thirty verses) agrees in the main with the readings of Westcott and Hort, and that some of the *scholia* on Homer are found to be earlier than was supposed, and are accordingly raised in value. The documents relating to private affairs are very varied. There are prescriptions for ear-ache and other maladies (it may be noted that the ancients found turpentine useful), a horoscope, mortgages, marriage settlements, writings of divorce, registration of titles and property generally. One or two examples may be given. Syra complains that her husband had squandered her dowry and ill-treated her. He was without means when she married him and took him to live in her parents' house (the old people must have been complainant), and she asks that he be compelled to repay her dowry of 200 *drachmæ*, with half as much again by way of fine. Unfortunately, we shall never know whether she got it. In the next documents the parts are reversed. Tryphon complains that his wife Demetrous had left him, though he had provided for her in a way that exceeded his resources (*kai υπέρ δύναμιν*), and that she had carried off with her property of the value of 40 *drachmæ*. Tryphon, hope triumphing over experience (as Dr. Johnson put it), marries again, and complains that Demetrous and her mother had assaulted the second wife. A man writes that the fruit crop at Memphis had been poor; nevertheless he sends five hundred beans and fifty apples for his friend's nephews and fifty apples for himself and "the little

one." Another makes a remittance of 8 *drachmæ* for the services of a mouse-catcher (*μυοθηρευτής*, a word not in Liddell and Scott).

It is satisfactory to know that the store from which the editors have to draw is far from being exhausted.

ROMAN HISTORY PRIMERS.

- (1) *Roman History*. By Dr. Julius Koch, translated by L. D. Barnett. (Dent.) (2) *A Skeleton Outline of Roman History*. By P. E. Matheson. (Longmans.)

(1) Dr. Koch's compendium, which appears as a volume of the "Temple Primer" series, includes within a limit of 150 pages the whole of Roman history from the earliest times to the fall of the Western Empire. It is based on the best modern authorities, and is characterized throughout by a just sense of proportion. The small-print summaries of the several periods and the source of our knowledge about them are particularly valuable. A sixth-form boy or a University student ought to find it very useful in revising and methodizing his work for examination. The translation leaves much to be desired. Little or no effort is made to avoid the cumbrous sentences and over-technical language which often make learned German books repulsive to an English reader. Sentences like "the Gallic conquest added to the aging body of the Roman State a limb which contributed largely to the renewal of its youth"; "The influences of foreign culture also enter now with potency into the land," and such a phrase as "in the excessive confidence of his absolutely unswerving methods," are scarcely English. The translator seems not to have realized that a good translation of German often involves as much reconstruction as a version of Livy or Cicero.

(2) That this unpretending little book should have reached an eighth edition is sufficient evidence of its utility. In the present issue some twenty-five pages have been added, carrying the history from the death of Augustus to that of Marcus Aurelius. Besides the chronological list of events, two points call for notice—the excellent short summaries of the general character of the several periods into which the history is divided; and the careful tabulation of the details of treaties, constitutional changes, &c. For example, the proposals of M. Livius Drusus in B.C. 91 are thus tabulated—Object: (1) Restoration of a reformed Senate. (2) Provision for poor citizens. (3) Justice to the Italians. Details: (1) New corn law. (2) Agrarian law. (3) Transference of jury courts to a Senate enlarged by 300 *equites*. (4) Extension of the franchise to the Italians.

ÆSCHYLUS IN ENGLISH.

*The Suppliants of Æschylus*. Translated, from a revised text, by Walter Headlam. (Bell & Sons.)

This little volume appears in Messrs. Bell's shilling series of classical translations; and it is a long expected instalment of what we trust will be ultimately a complete prose translation of Æschylus. Mr. Headlam says that "there is no longer any reason for supposing this curiously interesting play too difficult to read." Of the many excellent footnotes supplied by the translator we need not here speak in detail: they certainly justify the statement that the text of the play has been revised. Mr. Walter Headlam is well known as a learned and militant commentator on Æschylus; and anything from his pen on the subject, on which he differs so widely from the ingenious champions of manuscript oddities, is worthy of attention. We must, however, express in general terms our admiration of the ingenuity and scholarship displayed in dealing with the many thorny places in the text. It appears to us that in his method Mr. Headlam is a follower of Wecklein; and this means that every difficulty is solved in a manner that never fails to command our respect, even though it may fail to compel our assent.

This play—so archaic in manner, whatever be its date—does not afford much scope to the translator. There is plenty of spirit in the story and its unfolding, but little that is beautiful; and we await with much interest Mr. Headlam's version of the "Prometheus" and the "Oresteia." Of the "Suppliants," his own expression "curiously interesting" seems to sum up in two words both the strong and the weak points of the play. But such small opportunities as he had Mr. Headlam has seized. We append a brief specimen of his translation. It is the place where the daughters of Danaus are in suspense while the ship of their wild suitors is approaching.

O for a seat somewhere in the heaven above, against which watery clouds turn into snow, or some sheer, goat-free, uncommunial, solitary, beetling crag, some vulture-haunting peak, assuring me a

plunge into the depth, before I meet perforce with a wedlock that rends my heart! Thereafter I refuse not to become a prey to dogs and a feast unto the fowls of the land; for death delivereth from sorrow and sighing. Come death, befall me death before the marriage bed! What way of escape can I yet find to deliver me from wedlock?

We cannot too strongly recommend all who have occasion to study the "Suppliants" to lay out a shilling on Mr. Headlam's translation.

THE VOICE.

- (1) *Speaking*. By William Mair, M.A., D.D. (Blackwood.) (2) *The Natural Use of the Voice*. By George E. Thorp and Wm. Nicholl, F.R.A.M. (Edward Arnold.)

(1) Dr. Mair has aimed at producing a practical manual chiefly designed to cure provincialisms in pronunciation. It is doubtful whether mere written directions without the assistance of oral demonstration can achieve substantial results in this direction. Correct pronunciation is the result of constant imitation and comparison, and rules may often prove misleading when employed by persons whose auditory and vocal organs vary in power and sensitiveness. A large part of the book is devoted to a careful description of the vowel and consonant sounds, with simple directions for their formation; and ample lists of words are given for purposes of exercise in both similar and contrasted modes of pronunciation. The rest of the book contains much sensible and practical advice on speaking, with particular reference to the faults generally met with in the pulpit. The book is written for the special guidance of young men preparing for the ministry, and it would seem that a monotonous and indistinct delivery is as common in Scotch pulpits as in English. In England speakers are indistinct because they have never practised themselves in keeping their teeth apart while speaking. The only remedy is constant reading with a small cork between the teeth, and Dr. Mair might well have insisted more strenuously on the importance of this exercise.

(2) The appearance of a fourth edition of "The Natural Use of the Voice" shows that its scientific treatment of voice production is appreciated by musical students. The authors have added a short chapter on expression in singing.

GENERAL NOTICES.

CLASSICS.

"Murray's Handy Classical Maps." Edited by G. B. Grundy.—

- (1) *Britannia*, (2) *Hispania*, (3) *Italia*. (John Murray.)

In a note on the map of Gallia we spoke highly of the admirable manner in which Mr. Murray's maps are produced. They are, indeed, vastly superior to any maps that have hitherto been within the reach of English classical students. The scale is large and the system of colouring perfect. The "Italia" will be a great boon to all who read Roman history, for it shows at a glance the method by which Rome controlled the peninsula. The impressive appeal to the eye will assist the memory and help the imagination. The modern names are, in most cases, added to the ancient. It is greatly to be hoped that the series, when completed, will be issued in the form of an atlas.

A *Latin Verse Book*, by A. H. Thomas (Rivington), is intended for beginners in elegiacs, and comprises all that is covered by "Pantion," "Clivus," and "Gepp." The pupil starts with single feet, to arrive at last—if he does arrive—at easy pieces to be done without assistance. Mr. Thomas in no way departs from what may be regarded as the established method of teaching Latin elegiacs to beginners. The weakest point in this system seems to us to occur in the middle, or what we may term the "Gepp," section—that stage in which each piece of poetry printed is followed by an "adaptation." It is true that Mr. Thomas does not make it possible, as Gepp does, for the pupil to "do" the adaptation without once looking at the English passage; but we cannot help thinking that this "adaptation" business would be improved by an infusion of Mr. Rouse's ingenious "demonstration" plan. Every teacher knows how desperately difficult it becomes at a certain point in Latin verse teaching to make the pupil think for himself; and, though we gladly acknowledge that Mr. Thomas has done something to solve this difficulty, we doubt whether he has entirely disposed of it. In the third part the passages are taken from papers set in public-school scholarships and Army examinations.

*Isocrates, De Bigis*, edited by W. J. Woodhouse (Clive), was called into being by an announcement that the speech is selected for examination by the University of South Africa. It is a good subject for the examiner, but a poor thing for the candidate. Doubtless it served its purpose in its day. What that purpose was, indeed, is not quite clear; but Mr. Woodhouse leans to the view that the speech is a rhetorical exercise. This is the only point in which he diverges from the views of

Prof. Jebb, on whose "Attic Orators" he has drawn largely in his introduction. The candidate will find all that he requires in the volume, and we note with pleasure the clearness with which the grammatical points are explained. To express elementary notes clearly and briefly is often difficult. Mr. Woodhouse seems to us to have succeeded. The language of the speech contains no difficulties; but it is not likely to be read in our schools.

*Ovid, Metamorphoses I. and II.*, with Ovid's autobiography, edited by W. T. Peck (Ginn), belongs to the American series of school classics which, in addition to notes and vocabulary, is provided with maps, illustrations, and word-groups. The autobiography is contained in "Tristia" IV. 10, which is printed in full at the beginning of the book. Some of the illustrations are well produced. The vocabulary is more elaborate than we usually find in English school-books. The notes are simple and very brief. On the whole the volume well sustains the favourable opinion that we have formed of this series.

*Livy, Book V.* Edited by W. C. Laming. (Blackie.)

This is a useful edition, with a good supply of maps and illustrations, to which a plan of the site of Veii might, with advantage, have been added. There is a carefully written introduction, dealing with Livy as a historian, and with the credibility of early Roman history. The appendix contains useful hints on translation, and some sentences and longer passages of English, to serve as exercises. Still more might have been done in this direction by following the lines of a Latin exercise book, too little known, Simpson's "Caesarian Prose." The notes are, on the whole, very fair, but there is room for careful revision. For example, in chapter xxxviii., *terga caesa*, following immediately on *ne ulla caedes pugnantium fuit*, can hardly mean "the rearguard was cut to pieces," even if the words would bear that meaning. Again, in chapter xl., *muliebris fletus et concursatio . . . rogantium viros natosque cui se fato darent*, the last words can hardly mean: "To what fate they (the women) were to abandon themselves." Surely they were asking their husbands and sons to what fate they (the men) were consigning them. There is no mention made in the preface of Weissenborn's notes, which might have been consulted with advantage.

*The Odes of Horace, Book III.* Edited by S. Gwynn. (Blackie.)

Horace has been, in recent times, so often and so well edited that it is hard to see why this volume was published. The editor does not seem to have consulted the best modern editions, and his work does not stand high in point of view of scholarship or of felicity of rendering. It might be possible, with the admirable works of Dean Wickham, Mr. Page, and Dr. Gow before one, to construct a perfect elementary school-book, but we can hardly say that Mr. Gwynn has succeeded in doing so. Take, for example:

Quicumque mundo terminus obstitit,  
Hunc tangat armis visere gestiens  
Qua parte debacchentur ignes,  
Qua nebulae pluvique rores,

which is thus rendered: "Whatever boundary bars the universe from spreading, she shall reach with her sword, in eagerness to behold from what quarter wells the riot of fire, from whence the mist and dew of rain." The first clause is nonsense, and the force of the tense ("has been set," Wickham, Page) is missed; *qua parte* can hardly mean "whence"; while it is clear that Horace meant the torrid zone to be a limit both of human habitation and of Roman conquest, not an object of scientific investigation; and, lastly, "wells the riot of fire" is one of those unmeaning expressions which may find a place in inferior modern poetry, but are quite alien to the sanity of Horace. Again:

ex quo destituit deos  
Mercede pacta Laomedon, mihi  
Castæque damnatum Minervæ,

is translated: "Doomed from the day that Laomedon cheated the gods of their covenanted hire, doomed by me . . ." Here *destituit* is treated as equivalent to *fraudavit* (Lewis and Short) without any reference to the more generally accepted view that it is used in its ordinary sense and *mercede pacta* is an ablative absolute. Again, the dative of the agent with a passive participle, a usage almost exclusively limited to cases where the dative can be otherwise accounted for, is accepted as a matter of course, and even said to be very common in verse. Wickham, by the way, takes it as meaning "handed over for punishment to me." The book contains some pretty illustrations from ancient vases, &c.

(1) *Scalæ Primæ*. By J. E. Spencer. (2) *Scalæ Mediæ*. By P. A. Underhill. (Bell & Sons.)

Illustrated classical readers for the lower and middle forms of schools are now becoming common, and have frequently been noticed in these columns. Among them, Messrs. Bell's Series, of which these two books form part, holds an honourable place. "Scalæ Primæ" begins with short narratives, many of them from Roman history, consisting entirely of simple sentences, each beginning a fresh line. Then follow continuous stories, still limited, for the most part, to simple sentences. The third part contains a few simple extracts from classical authors. The extracts seem to be nicely graduated, and the vocabulary is carefully drawn up. Occasionally in the made-up stories one comes across phrases and modes of expression that do not look quite classical,

and would be the better for revision by a first-rate writer of Latin prose. "Scalæ Mediæ" contains selections from Eutropius, followed by the story of the Helvetian War, from the First Book of Cæsar, with notes and vocabulary. It may be questioned whether a complete section of Cæsar, with all its difficulties, is the best sequel to the simple sentences of Eutropius. Would it not have been better to choose easy narrative passages from the whole of the "Gallic War," with short connecting links? The schoolboy would have had more facts, and less *oratio obliqua*. The First Book of Cæsar has been edited far too often.

#### SCIENCE.

*Lessons in Elementary Physiology.* By Thomas H. Huxley, LL.D., F.R.S. Enlarged and Revised Edition. (Macmillan.)

Just a third of a century has passed since Huxley wrote his excellent introduction to physiology, which has, in the meantime, gone through five editions, and has been reprinted more than a score of times. This clear exposition has been the basis of much, not to say most, of the educational work since achieved in physiological science. The revision has been undertaken by Sir Michael Foster and Dr. Lea. In a modest preface Sir Michael gives most of the credit for this difficult work to his collaborator. The work is now well up to date, and teachers will find it once again conspicuously useful.

*An Introduction to Analytical Chemistry.* By G. G. Henderson, D.Sc., M.A., and M. A. Parker, B.Sc. (Blackie.)

After some exercises on "dry" reactions, the student is led through the "wet" tests for all the common bases and acids, and the means of separating the metals of the five groups. The more important methods of organic analysis complete the book, which has been carefully prepared, and should prove a valuable laboratory manual. It is not intended for absolute beginners, but for those who have already had some training in practical work.

*An Introduction to Qualitative Analysis.* By H. P. Highton, M.A. (Rivingtons.)

The author has endeavoured to present the usually dull mechanical work of "test-tubing" in such a way as to be of educational value. He consequently begins by experiments to prove that particular salts contain particular metals, and that the salts of one metal differ from one another in their reactions. At the end of Part I. tables are given for the analysis and separation of the substances already studied. In Parts II. and III. a larger number of bases and acids are dealt with. Teachers who are obliged to push their pupils into analysis early will find this a useful guide.

*Elementary Chemistry for High Schools and Academies.* By Albert L. Arcy. (Macmillan.)

American teachers of chemistry have taught us the best way to set to work; but the present book falls below the usual American standard. It adopts the plan we are now all abandoning, of telling the beginner about elements and compounds, atoms and molecules, at the outset; and, while it follows the plan of questioning after giving instructions for an experiment, the questions sometimes too obviously point to the answer. The spelling of *oxid*, *chlorin*, and *sulfur* (why not also *fosforus*?) will look strange to British eyes.

"Text-Books of Technology."—*Practical Chemistry, Part I.* By W. French, M.A. (Methuen.)

This book contains a course of experimental work for beginners in chemistry, following to a large extent the scheme of the Headmasters' Association. It has been carefully drawn up, the scheme including lecture-table experiments as well as those to be done by every pupil. But it would seem that the last two pages were finished in a great hurry, or we should not find in them the unexplained symbol  $H_2O$ , nor this sentence: "Our conception of an atom, if it exists, is far too small! ever to hope to find the mass."

*Elementary Practical Chemistry.* By A. J. Cooper, B.A., B.Sc. (Whittaker.)

A good introduction to chemistry suitable for an evening course or day classes with limited time. The most modern plans of work are followed.

*Volumetric Analysis.* By John B. Coppock. (Whittaker.)

The student will here find all the usual methods of volumetric work set out and explained in a compact manner. Previous knowledge of general chemical theory is assumed.

*Exercises in Practical Physics for Schools of Science.* By R. A. Gregory and A. T. Simmons, B.Sc. Part II. (Macmillan.)

This second part carries on to heat, light, sound, magnetism, and electricity the methods already noticed in the first part, and maintains the high standard of the latter.

*Elementary Practical Physiography, Section II.* By John Thornton, M.A. (Longmans.)

A continuation of Mr. Thornton's course of lessons and experiments in elementary science, planned so as to be serviceable to candidates for the Queen's Scholarship Examination. The well printed text is simple and sound, and there are some very good illustrations.

## MODERN LANGUAGES.

*The Muret-Sanders Encyclopedic English-German and German-English Dictionary.* Abridged Edition. English-German by B. Klatt; German-English by H. Baumann, M.A. (Grevel & Co.)

This "abridged" edition of the Muret-Sanders Dictionary comprises over 1,730 pages in triple columns, which argues much for the dimensions of the unabridged work. A vast labour has been undertaken by the editors, and, as they say in the preface, apologizing for the number of abbreviations, it is no light matter to deal thoroughly with the two richest vocabularies in existence. Abbreviation was doubtless necessary in order to keep the dictionary within reasonable compass; and opinion may differ as to the value of some of the indications and discriminations for which these scores and hundreds of signs and tokens are employed. Many of them belong to what is known as the Toussaint-Langenscheidt phonetic method; another series, printed distinct from the words, relate to accent and stress of syllables. In any case the apparatus of the dictionary errs, if at all, on the side of superfluous utility. Mr. Baumann, who is responsible for the German-English section, tells us that he has been engaged on his work for fully four years, which one can well believe. He has based his German vocabulary on that of Sachs and Villatte in their German-French Dictionary, and on their "unsurpassed method of grouping compounds." The task of producing this work must have been exceedingly laborious, but it will save labour for all who use it.

*Hauff's Der Scheik von Alessandria.* Edited by W. Rippmann. (Pitt Press.)

This is a welcome addition to the elementary reading-books available for schools, the "Karavane" having become almost too hackneyed, and Mr. Rippmann's name is sufficient guarantee for good editing. The notes are intentionally not very numerous, but they are sufficient. The vocabulary is well arranged, and contains a good many idiomatic uses of words, thus relieving the notes.

*Outlines of German Philology.* By J. E. Mansion. (W. H. White & Co.)

This is a useful summary of the most important points of historical German grammar. It is clearly arranged, and written with constant reference to English as well as to German; but it is not as readable as Behaghel's well known book, of which an English translation has been published. The introductory chapter on the history of the language would be much improved by the insertion of short annotated specimens of Gothic, Old High German, &c. A very few lines would make such names much more real to a student. A short chapter on Phonetics very properly follows, and contains some good illustrations, indicating the work of a practical teacher. The vowel and consonant changes are well set out, and much trouble has been taken to fix the attention by variety of type. The same remarks apply to the accidence; syntax has been intentionally left alone. The appendix contains some useful lists of words belonging to the common Germanic stock, with English and German side by side, of Latin and French loan-words in both languages arranged under several heads, and of a few words etymologically interesting.

## MISCELLANEOUS.

"Story of the Nations."—*Modern Italy, 1748-1898.* By Prof. Pietro Orsi. (T. Fisher Unwin.)

It is true, as Prof. Orsi says, that the internal history of the peninsula of Italy has been somewhat neglected by students; though for artists, antiquarians, churchmen, and travellers, no country is more resorted to or better known. One reason is that the unity of Italy was broken almost beyond hope of recovery, and, for the first hundred years of the period which is dealt with in this volume, the peninsula as a whole had no organic history. It has been different during the last half-century. The Risorgimento has revived its interest and importance; Garibaldi, Mazzini, and Cavour gave us a new Italy, though, as we said when noticing Mr. Stillman's "Union of Italy," the essential work of reunification is not even yet completed. For the former of these two sections, we have been content to follow Italian history through the annals of the Papacy and the records of the Napoleonic wars; and, indeed, Prof. Orsi gives us very little in the way of connected narrative before the present century. His story is brightly told, with more of the genuine Italian spirit and feeling than English writers have been able to import into their books.

"Bell's Cathedral Series."—(1) *The Cathedral Church of Saint Paul: an Account of the Old and New Buildings, with a short Historical Sketch.* By the Rev. Arthur Dimock, M.A. (2) *Carlisle.* By C. King Eley. (Bell & Sons.)

(1) This is naturally one of the most interesting volumes of Messrs. Bell's excellent series of "English Cathedrals." The history of St. Paul's runs parallel with the history of the City of London, and it is told by Mr. Dimock with as much fullness as his space allowed. The book is illustrated by thirty-nine good pictures of the old and new cathedrals, and it ought to find a large sale amongst Londoners.

(2) Mr. Eley gives a succinct account of the Cathedral Church of Carlisle. Carlisle, he says, "is not a large or a notable cathedral." It

seems to us very notable in its way, if only for its correspondence with the significant history of the north-western shoulder of England.

Amongst the reprints of the month, we have from Messrs. Macmillan a cheap reissue, in one volume, of Mr. Parkin's *Edward Thring*, including life, diary, and letters, but considerably abbreviated from the first edition.—Messrs. Ward, Lock, & Co. provide a low-priced edition of Dean Stanley's *Life of Arnold*, with portrait and illustrations, and the interesting appendices of the original work.—Messrs. A. & C. Black send us Scott's *Ivanhoe*, with introduction and notes by J. Higham, M.A.

*The World and its Commerce.* (Pitman.)

A compact and handy primer of commercial geography. The section dealing with the United Kingdom is much fuller, and gives much more local information, than the sections on foreign countries. There are many maps, some political, some physical, some showing the distribution of products. The railways of Great Britain and the United States are mapped and described; otherwise there is a deficiency in this respect; and the chief sea-routes and caravan-routes do not seem to be dealt with at all. The book, however, only claims to be a primer, and it is so full of well arranged useful information that we have no hesitation in recommending it for use in class, either by itself or in conjunction with an ordinary text-book of political geography.

*Princess and Fairy; or, The Wonders of Nature.* By Lily Martyn. (Chambers.)

A little princess, with whom town-life has disagreed, is sent into the country to recruit. She is fortunate enough to be attended by a governess who looks like a fairy, who teaches her experimentally the wonders of Nature. Under this delightful guidance her royal highness learns all about snails and glaciers and the construction of sweet peas and camels. The story is slight, but interesting, and is told with a play of quiet humour that cannot fail to make it a favourite reading book. There are many excellent illustrations by which the youthful reader is taught to observe, and some pretty pictures of the princess and her fairy teacher.

(1) *Chatty Readings in Elementary Science: Nature Knowledge;*  
(2) *Chatty Object-Lessons in Nature Knowledge.* (Longmans.)

(1) This new series of Readers has some excellent points: the text is well printed, simple, and varied; the illustrations are copious and above the average in quality, the large coloured ones and many of the others being pretty, as well as directly to the point; while some of the unobtrusive little ones, showing clearly the teeth, hoofs, and so on of the various animals, are specially good. The book would have been better, and no less chatty and attractive, if arranged on some kind of logical plan. The lists of words at the head of each chapter (an old fetish of the Code) are essentially unnecessary. The "Teachers' Notes" at the close destroy the character of the book from a child's point of view, and are not in any way way valuable enough to justify their intrusion, for any teacher of average ability would be able to expand the reading lesson without such aids. Still, for elementary purposes, the series may be commended.

(2) Ample aid for teachers has been provided in another series of handbooks from the same publishers, entitled "Chatty Object-Lessons in Nature Knowledge," written by F. W. Hackwood in three volumes for the first three standards. It will be found a very useful and suggestive help to young teachers who are expected to give object lessons on plants and animals without having had a vestige of previous scientific training—an expectation, by the way, greatly to be deprecated. The lack of logical arrangement—in thirty lessons we find such diversity of subject as "the monkey," "the oyster," "flowers," and "national foods"—is a more serious drawback in this series than in the Readers, since every course of object lessons should have some general law as a background to check the tendency to discursiveness. Some of the questions designed for the class are poor, but it is to be hoped that no teacher will follow any printed notes of lessons blindly. The outline sketches for the blackboard will be found particularly useful.

*A First Form Grammar.* By M. Morgan Brown. (Longmans.)

If English grammar is passing away from our schools as one of the chief form subjects, there will still remain the need to give children some elementary notions of the parts of speech before plunging them into the highly inflected dead languages. Even Acham assumes in his child of tender years "a knowledge of the three concords," apparently "picked up" in the nursery. The teacher himself must be the source of happy explanations and illustrations, but a plainly printed, simple text-book, such as Mr. Morgan Brown has prepared, for the pupils to have in their hands as a base of operations, will prove a most useful aid. He has kept steadily in view that the book is a mere stepping-stone to Latin grammar, and this singleness of aim will be a recommendation to many teachers. Inevitable difficulties, such as the distinction between "substantival" and "adjectival," are well brought out by continual repetition, while all luxuries in the matter of technical terms are excluded. The exercises at the end are handy for preparation work, being well within a pupil's unaided power. We note the following omissions and imperfections:—The subjunctive of the verb



"to be," for some inscrutable reason, is labelled "not given"; the perfect tense is classed as a past tense, thus preparing a rock ahead for the sequence of tenses in Latin; "can" is treated as an auxiliary verb; no help is given (and it is easy enough to give) in the matter of finding the subject of a sentence—"what we are talking about" being no clue to the given example, "All over the field we found mushrooms."

*Courtesy: A Reader for Older Boys and Girls.* By H. E. Norton. (Macmillan.)

There is certainly room for improvement in the manners of most boys and girls, and a Reader devoted to the subjects of Courtesy, Politeness, Good Manners, Chivalry, and Patriotism is very opportune. Simple explanations of these terms are given, and distinctions between them are carefully drawn, while the bulk of the book is devoted to illustrative anecdotes, tragic, pathetic, and humorous, with very few that can be charged with priggishness. The illustrations are feeble, but no doubt add to the interest of the book for school children. In the hands of a capable teacher who will supplement the stories from his own experience, this book will prove a pleasant change from the ordinary run of information-laden Readers.

*The Concise English Dictionary.* By Charles Annandale, M.A., LL.D. New and enlarged Edition. (Blackie & Son.)

This well-approved "literary, scientific, and technical" dictionary of the English language reaches us in a new form, enlarged by a supplement of additional words and by very useful appendices. Thus there is a list of names from mythology and fiction, followed by a list of authors, a table showing the formal modes of addressing persons of title or official rank, and a conspectus of the moneys of the world. Whilst the substance of the book is enlarged and improved, its price is considerably reduced, so that whatever value it may originally have had is relatively increased.

*How to prepare Essays, Lectures, Articles, Books, Speeches, and Letters, with Hints on Writing for the Press.* By Eustace H. Miles, M.A. (Rivingtons.)

Mr. Miles's experience as an Honours coach in essay writing at Cambridge University has enabled him to supply this useful book on a vague and difficult class of subjects, such as the expression of ideas, style, speaking, writing, proof correcting. The author—perhaps not without reason—passes severe comments on the failings of teachers. He says, in the preface, that "unfortunately a great deal of our teaching is in the hands of those who do things instinctively and by the light of Nature. They themselves do the whole thing as a whole, and they may do the thing very well. But, because they do it in this way themselves, it does not in the least follow that this is the best way for others to learn to do it"; and, in several places, he pauses to consider the reasons "why teachers so often fail to teach." This critical attitude towards teachers will be apt to provoke a *tu quoque*, for there are some of the chapters which leave the reader with a tautologous feeling of vagueness and want of precise answer to the questions raised. For instance: "What is style?" We are treated to an admirable analysis of the characteristics of the expression and style of the Sermon on the Mount. We have also the following suggestive rhyme:—

"Ideas should be the Author's own, seen clear by his own eyes,  
Free from wrong Aims, Omissions, Bias, Fallacies, and Lies,  
With Unity, Proportion, Order, Interest, and Style.  
Style varies with the Subject, causing anger, tear, or smile,  
Excitement, scorn, calm reason, action, sympathy, or fear  
(To the aim and audience fitted); holds the attention and is clear.  
Music and Balance, Contrasts, 'Tropes' and Rhetoric should be seen;  
The Punctuation, Grammar, Language, where 'Good Use' is queen."

Yet we cannot answer the question: "What is style?" Nevertheless, the work teems with useful suggestions, not only for pupils, but also for teachers and examiners.

*Outlines of English Grammar.* By J. C. Nesfield, M.A. (Macmillan.)

A handy and generally sound introduction to grammar, including etymology of the simplest kind, rules of syntax, and a little analysis.

*Pope's Essay on Criticism.* Edited, with Introduction and Notes, by F. Ryland, M.A. (Blackie & Son.)

A very good piece of work by the editor of "The Rape of the Lock." The "Essay" is well elucidated, and the volume is one which we should unreservedly commend for students on literary lines.

*A Text-Book for Morning and Evening Prayer and the Litany.* By the Rev. Septimus Buss, LL.B. (Rivingtons.)

An excellent introduction to the critical study of the Prayer-Book. Mr. Buss keeps the historical value of the English liturgy well in view. His hundred pages are just what is needed for boys and girls who are to be examined in this subject, and for others who are not.

*Geographical Questions specially adapted for Examinations in Commercial Geography.* By J. Wulfson. (Relfe Bros.)

A classified collection of well chosen questions, which will serve very aptly as a guide to elementary teaching of commercial and utilitarian geography.

Messrs. G. Philip & Son send us a series of coloured "Diagram" Hand-Maps. The series includes thirty different maps. The specimens submitted are physical maps without names, though the positions of the greater towns are indicated. In all there is a small inset map of the British Isles, drawn to the scale of the larger ones. A series of "Diagram" outline maps accompanies the coloured ones.

From Mr. Edward Arnold we have a collection of geographical scenes, tastefully printed in flat colours—Mont Blanc, Gibraltar, Hong Kong, Land's End, &c. They are on large single sheets, and may be used, mounted or unmounted, for decorative purposes, or to aid a geography lesson, or even for copying. They are decidedly superior of their kind.

*Military Drill for Boys' Schools, with suitable Music.* By Ben Johnson. (Gill & Sons.)

This is the fifth part of "Musical Drill." It is simple and practical, well printed and illustrated, and should be very serviceable to teachers.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*Return from Local Authorities as to the Application of Technical Education Grants; Calendar, History, and General Summary of Regulations of the Department of Science and Art, 1900.*

*Combined Readers in Elementary Science and Geography, Book III.,* by V. T. Murché (Macmillan).

*Medical Indoor Gymnastics,* by Dr. M. Schreiber (Williams & Norgate).

*One Year of Sunday School Lessons for Young Children,* by Florence U. Palmer (Macmillan).

*Object-Lessons in Botany from Forest, Field, and Garden, Book II.,* by E. Snelgrove, B.A. (Jarrold).

*Play the Man; Talks with Boys,* by Herbert Reid (Oliphant, Anderson, & Ferrier).

*Notes on the Acts of the Apostles i.-xvi.,* by E. A. Belcher, B.A., and C. C. Carter, B.A. (Relfe Bros.)—a very serviceable little handbook.

## MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held at the College, Bloomsbury Square, on March 7. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Charles, Miss Dawes, Mr. Easterbrook, Mr. Eve, Mr. Harris, Miss Jebb, Rev. R. Lee, Sir Philip Magnus, Mr. Millar Inglis, Mr. Pinches, and Rev. J. E. Symns.

The minutes of the last meeting were read and confirmed.

The Diploma of Associate was granted to J. Kirkpatrick, W. J. Herlihy, and C. H. Condell, who had passed the required examination.

Six members of the Council were appointed to represent the College at the Jubilee Commemoration of the Frances Mary Buss Schools, to take place at St. Paul's Cathedral on April 3.

Miss M. Crookshank, L.L.A., St. Leonard's College, Amhurst Park, N., was elected a member of the Council in place of Miss Bailey, resigned.

The following persons were elected members of the College:—

Mr. J. Cussons, B.Sc.Vict., A.C.P., 4 Mount Pleasant, Portmadoc, N. Wales.

Mr. B. Dumville, B.A. Lond., L.C.P., 9 Clissold Road, Stoke Newington, N.

Miss E. Hinton, A.C.P., 28 Hazelwood Road, Northampton.

Mr. A. Lane, A.C.P., 11 Putney Bridge Road, Putney.

Mr. G. C. Oldfield, A.C.P., Church Road, Ashton-on-Mersey, Manchester.

Mr. G. H. O. Piggott, A.C.P., Craven College, Highgate, N.

Mr. J. W. Tucker, A.C.P., 3 Mount Pleasant, Portmadoc, N. Wales.

Mr. R. H. Veun, A.C.P., 118 High Street, Crediton.

The following books had been presented to the Library since the last meeting of the Council:—

By the AGENT-GENERAL FOR NEW SOUTH WALES.—Annual Report of the Department of Mines and Agriculture for the year 1898; Coghlan's Wealth and Progress of New South Wales, 1897-8.

By the BUREAU OF EDUCATION, WASHINGTON, U.S.A.—Report of the Commissioner of Education for the year 1897-8, Vol. II.

By the GENERAL MEDICAL COUNCIL.—Minutes of the General Medical Council, 1899.

By G. BELL & SONS.—Spencer's Scale Prima; Underhill's Scale Media.

By BLACKIE & SON, LTD.—Newton Object Lesson Handbook, No. III.; Blakey's Browning's Select Poems; Downie's Macaulay's Essay on Horace Walpole; Gwynn's Horace Odes, III.; Laming's Livy, Book V.; Leusk's Scott's Marmion, Canto III.

By C. J. CLAY & SONS.—Blythe's Geometrical Drawing, Part I.; Nairn's Homer's Odyssey, Book XI.; Cambridge Higher Local Examination Class List, December 1899.

By W. B. CLIVE.—Hayes' Matriculation Latin.

By MACMILLAN & CO., LTD.—Nesfield's Outline of English Grammar and the Uses of the Parts of Speech; Sandys' Demosthenes (On the Peace, Second Philippic, On the Chersonesus, and Third Philippic).

By RELFE BROS., LTD.—Charter-house Parsing Book; Notes on Analysis and Parsing; Register of Music Practice; Oxford and Cambridge Preliminary Examination Papers in French; Belcher and Carter's Notes on the Acts of the Apostles, I.-xvi.; Perrault's Contes des Fées, with Notes and Vocabulary; Ransom's Modern French Grammar; Wulfson's Geographical Questions.

COLLEGE OF PRECEPTORS.

PROFESSIONAL PRELIMINARY EXAMINATION—PASS LIST.

MARCH, 1900.

THE Supplementary Examination by the College of Preceptors for Certificates recognized by the General Medical Council, the Incorporated Law Society, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, the Education Department, and other bodies, was held on the 6th, 7th, and 8th of March, in London, and at four other local centres, viz., Birmingham, Bristol, Leeds, and Liverpool. The following candidates obtained Certificates:—

FIRST CLASS.

Pass Division.

Berry, A. W.	Doughty, W. C.	Loughborough, W. G.
Burn, A. J.	Harries, E. H. R.	Thomson, G. M.
Chater, V.	Iredell, J. S.	Vandermin, H. F.
Dawson, R. B.	King, W. W.	

SECOND CLASS.

First Division.

Andrews, J. O.	Busby, R. G. C.	Smith, J. B.
Barker, E. E.	Collet, G. G.	Speer, S.
Battle, F. A.		

Second Division.

Austin, G. E.	Henry, W. R.	Smith, M. R.
Balchin, E. J.	Hills, H. J.	South, F. M. W.
Brown, B. B.	Miller, C. A. E.	Taylor, R. W.
Clarke, R. W. L.	Roberts, W. R. S.	Thompson, E. M.
Ernst, H. E. G.	Sadler, H. J.	Young, A.
Griffiths, T.	Shaw, E. H.	

Third Division.

Beadnell-Gill, R.	Marriott, C. L.	Roberts, J. G.
Casey, E. R.	Miller, J. R. V.	Russell, E. P.
Chaplin, E.	Parker, W. B.	Stanley, P. A.
Collins, W. T.	Powell, L. L.	Whiteley, E. P.

MATHEMATICS.

6361. (Professor W. H. H. HUDSON, M.A.)—A paraboloid of revolution floats with the lowest point of its base in the surface of a fluid, and its axis inclined at an angle  $\theta$  to the horizon; find its height and specific gravity.

Solution by the PROPOSER.

Let the equation of the paraboloid referred to rectangular axes, with the vertex as origin, be  $y^2 + z^2 = 4ax$  ..... (1) where the axis of  $z$  is parallel to the horizontal tangent at the lowest point Q of the base, the coordinates of which are  $h, k, 0$ . Therefore  $k^2 = 4ah$ .

Let the coordinates of P, the point of contact of the horizontal tangent plane, be  $at^2, 2at, 0$ , where  $t = \cot \theta$ . The equation of the plane of flotation is  $t(y - k) = x - h$  ..... (2)

If PV parallel to the axis meet the plane of flotation in V, the coordinates of V are  $h + 2at^2 - kt, 2at, 0$ . The coordinates of H, the centroid of the immersed portion, which divides PV in the ratio 2 : 1, are  $\frac{1}{3}(5at^2 + 2h - 2kt), 2at, 0$ . The coordinates of G, the centroid of the whole body, are  $2h/3, 0, 0$ . Therefore the direction cosines of HG are proportional to  $\frac{1}{3}(5at^2 - 2kt), 2at, 0$ . But HG is vertical; therefore its direction cosines are proportional to 1, -t, 0. Therefore

$$\frac{1}{3}(5at^2 - 2kt) = -2a.$$

$$\text{Therefore } k = \frac{a(5t^2 + 6)}{2t} \text{ and } h = \frac{a(5t^2 + 6)^2}{16t^2} = \frac{a(5 + \sin^2 \theta)^2}{4 \sin^2 \theta}.$$

This gives the height. Now  $PV = h + at - kt^2 = x'$  suppose, and from (1) and (2) the projection on the plane  $yz$  of the section of the solid by the plane of flotation is  $y^2 + z^2 = 4a(ty + h - kt) = 4aty - 4at^2 + 4ax'$ .

This is a circle of area  $4\pi ax'$ , and therefore the area of the section is  $4\pi ax' \csc \theta$ . Since all parallel sections are similar curves, the area of any section parallel to this cutting PV at a distance  $z$  from P is  $4\pi az \csc \theta$  and the volume immersed is  $\int_0^{x'} 4\pi az dz = 2\pi ax'^2$ . Therefore the specific gravity of the solid referred to the fluid is  $x'^2/h^2$ . Making the substitutions, this will be found to be

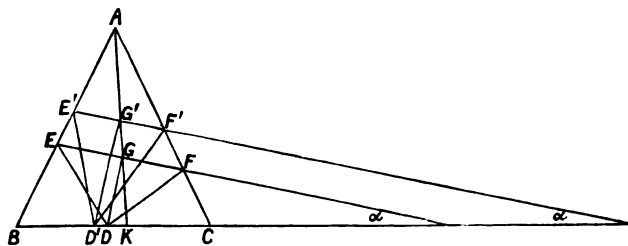
$$\left( \frac{1 + 5 \sin^2 \theta}{5 + \sin^2 \theta} \right)^4.$$

14475. (A. GEORGE.)—Find the maximum value of an isosceles triangle DEF inscribed in an isosceles triangle ABC, D being on BC,

EF inclined at an angle  $\alpha$  to BC, where  $\alpha$  is less than both  $\frac{1}{2}A$  and  $\frac{1}{2}(\pi - A)$ .

Solution by J. H. TAYLOR, M.A.

The limitations of the magnitude of  $\alpha$  make the point D always fall within BC. Let EFD, E'F'D' be two triangles of the series; G and G' are the middle points of their bases; and GD, G'D' their altitudes.



$$E'F' : EF :: AG' : AG, \text{ by similar triangles;}$$

$$G'D' : GD :: G'K : GK, \text{ " " " "}$$

therefore  $\Delta E'D'F' : \Delta EDF :: AG' \cdot G'K : AG \cdot GK$ , and AK is a straight line of fixed length, and the rectangle of its segments is greatest when it is bisected. Therefore the greatest triangle of the series is that of which the base bisects AK.

6400. (J. HAMMOND, M.A.)—Prove that the surface

$$x^3 + y^3 + z^3 - 3xyz = a^3$$

is one of revolution, and find its axis and the equation of the generating curve (referred to its asymptotes as axes).

Solution by JAMES BLAIKIE, M.A.; H. M. TAYLOR, M.A., F.R.S.; Professor JAN DE VRIES; and others.

This equation may be written

$$(x + y + z) \times (x^2 + y^2 + z^2 - yz - zx - xy) = a^3,$$

$$\text{or } (x + y + z) \times \{3(x^2 + y^2 + z^2) - (x + y + z)^2\} = 2a^3.$$

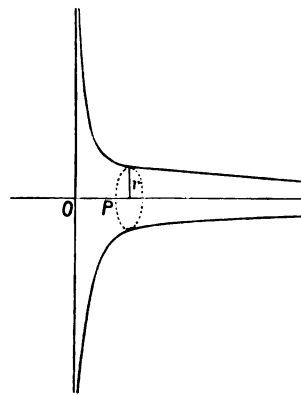
This meets the plane  $x + y + z = p\sqrt{3}$  in a circle of the sphere

$$p\sqrt{3} \{3(x^2 + y^2 + z^2) - 3p^2\} = 2a^3.$$

The surface is therefore one of revolution, the axis being the line  $x = y = z$ . If  $r$  be the radius of the circle above mentioned, then we may write

$$x^2 + y^2 + z^2 = r^2 + p^2,$$

where  $p$  is the perpendicular on the cutting plane, and the equation takes the form  $p^2 = 2a^3/(3\sqrt{3})$ . This is clearly the equation to the generating curve, in which any plane through the axis meets the surface,  $p$  and  $r$  being rectangular coordinates. It is easily seen that this curve has two infinite branches on the same side of the intersection with the plane  $x + y + z = 0$ , and on opposite sides of the line  $x = y = z$ . The surface of revolution is therefore in the form of a trumpet with mouthpiece and rim both at infinity, the axis being asymptotic to the tube, and the plane  $x + y + z = 0$  to the rim.



14466. (Rev. A. M. WILCOX, M.A.)—Four pennies are placed flat on a table so that each touches two of the others. Find when the space enclosed between them is a maximum or minimum.

Solution by Prince C. DE POLIGNAC; J. H. TAYLOR, M.A.; and others.

The space enclosed is equal to the area of the lozenge formed by joining the centres of the four circles represented by the pennies, minus the sum of the four circular sectors thus obtained, which latter is constant, as the sum of the angles of the lozenge is constant. Hence the maximum of the space enclosed coincides with the maximum of the lozenge, and occurs when such lozenge is a square ( $\theta = \frac{1}{2}\pi$ ).

The same can be seen graphically. Every possible modification of the figure is identical with one in which one side of the lozenge remains fixed; that is to say, two of the pennies, say 1 and 2, remain fixed, while pennies 3 and 4 roll together backwards and forwards, on 1 and 2. Now, starting with the figure in which the centres form a square, if the top pennies are made to roll a little to the right or a little to the left, the spaces enclosed will be identical by reason of absolute symmetry. Hence the space corresponding to the square lies between two indefinitely near equal spaces. By a known principle, it is then a maximum or a minimum, and the graphic construction shows it to be a maximum, the minimum corresponding to the final position in which two of the pennies touch the other three ( $\theta = \frac{1}{2}\pi$ ).

14365. (Professor COCHEZ.)—Lieu des foyers des hyperboles tangentes

à l'origine à l'axe des  $x$  et ayant une asymptote perpendiculaire à l'axe des  $x$ .

*Solution by Professor SANJANA, M.A.*

O being origin, OA (=  $a$ ) axis of  $x$ , AB the asymptote, S either focus, and MSN ordinate, we have

$$\begin{aligned} \angle ASO &= \angle ASN \\ &= \pi - \angle ASM \\ \text{or} &= \pi - \angle ASN \\ &= \angle ASM, \end{aligned}$$

according as AO touches nearer or further branch. This leads to

$$\begin{aligned} \angle SOA + 2\angle SAO &= \frac{1}{2}\pi \text{ or } \frac{3}{2}\pi; \end{aligned}$$

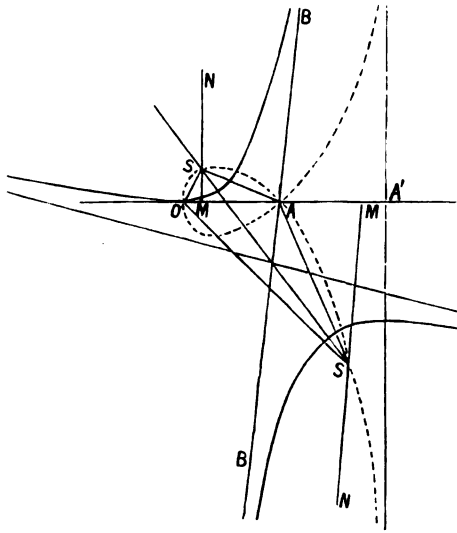
hence, in both cases,  $\tan SOA \cdot \tan 2SAO = 1$ .

If, then,

$$\begin{aligned} OM &= x \\ \text{and } SM &= y, \end{aligned}$$

$$\text{we have } \frac{y}{x} \frac{2y(a-x)}{(a-x)^2 - y^2} = 1, \text{ that is, } \frac{x}{2a-x} = \frac{y^2 + x^2}{a^2}.$$

Thus either focus lies on a cubic passing through the origin, touching the axis of  $y$ , having a node at  $x = a$  and an asymptote  $x = 2a$ .



**14263.** (D. BIDDLE.)— $T$  is a multiple of  $(N-T)^2$ : prove that  $N$  is factorizable, unless  $N-T = 1$ ; and, conversely, that  $N$  is either a prime or the square of a prime, when no lower value of  $T$  than  $N-1$  will fulfil the conditions.

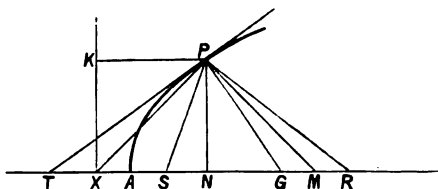
*Solution by H. A. WEBB; Lt.-Col. ALLAN CUNNINGHAM, R.E.; and G. H. HARDY, B.A.*

Let  $(N-T)^2 = P$ , and  $T = PQ$ ,  $P$  and  $Q$  being positive integers. Then  $N = P^2 + T = P^2 + PQ = P(P+Q)$ . Hence  $N$  is factorizable, unless  $N-T = P^2 = 1$ .

In the second case, the condition  $T = Q \times (N-T)^2$  is not satisfied by a lower value of  $T$  than  $(N-1)$ . Hence  $T = N-1$ , or  $T = N$ , or  $Q = 0$ , and only under one of these three conditions does the equation  $N = P(P+Q)$  hold good. The first condition gives  $Q = N-1$ , and, since  $P(P+N-1) = N$ , we must have  $P = 1$ . The second condition gives  $N = 0$ . The third condition gives  $N = P^2$ . Hence the only possible factors of  $N$  are  $N$  and 1, or  $P$  and  $P$ :  $N$  is therefore a prime, or the square of a prime.

[The rest in Volume.]

**14465.** (Rev. T. ROACH, M.A.)—In a parabola, PG, PM, PR are perpendicular to PT, PX, PA. Find the condition that M bisects GR.



*Solution by R. TUCKER, M.A.; LIONEL E. REAY, B.A.; and many others.*

NR = latus rectum = 4AS, and NG = 2AS;  $\therefore$  NM = 3AS. But NM.NX = PN^2 = 4AS.AN;  $\therefore$  3NX = 4AN;  $\therefore$  AN = 3AS;  $\therefore$  SP = latus rectum, and  $\triangle$ SPG is equilateral.

**6172.** (J. J. WALKER, M.A.)—The sides of a triangle repelling with a force varying inversely as the cube of the distance (as in Quest. 6120), show that the attractions of the three sides on a particle situate at the centre of the inscribed circle are reducible to three forces perpendicular to the sides and proportional respectively to the angles which they subtend at that point. [With the solution to this Question, we shall be glad to receive a solution, partial or complete, of the connected Quest. 6120 (by the late Professor W. K. CLIFFORD, F.R.S.), which is as follows:—“The sides of a triangle repel with a force varying inversely as the cube of the distance: (1) find the position in which a particle will rest; also (2) supposing the faces of a tetrahedron to repel according to the same law, find where a particle will rest.”]

*Solution by Professor T. W. EDMONDSON.*

(6172.) Consider the repulsion at I due to the side BC.

Take an element PQ (=  $dx$ ) in BC, and join IP, IQ, cutting the circumference of the incircle in  $p, q$ , respectively.

Let the angle DIP =  $\theta$ , and let the mass of each side per unit length be  $m$ .

Then repulsive force of PQ

$$= \frac{m dx}{IP^3} = \frac{m dx}{r^3 \sec^3 \theta}$$

Draw PR perpendicular to IQ, and let PR =  $dx'$ ;

$$dx/dx' = \sec \theta \text{ and } dx'/(r d\theta) = IP/IP = \sec \theta;$$

therefore

$$dx = r \sec^2 \theta d\theta.$$

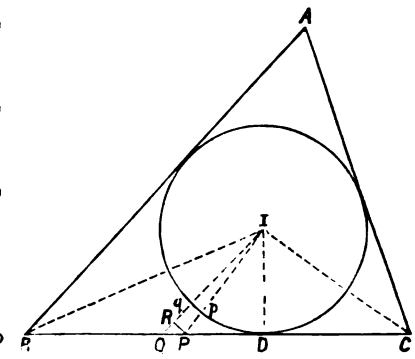
Hence repulsive force of PQ =  $m/r^2 \cos \theta d\theta$ ; and we have component of repulsion due to BD

$$\text{in direction DI} = \frac{m}{r^2} \int_0^{\frac{1}{2}\pi - B} \cos^2 \theta d\theta = \frac{m}{2r^2} \{ \frac{1}{2}(\pi - B) + \sin \frac{1}{2}B \cos \frac{1}{2}B \},$$

$$\text{in direction BD} = \frac{m}{r^2} \int_0^{\frac{1}{2}\pi - B} \sin \theta \cos \theta d\theta = \frac{m}{2r^2} \cos^2 \frac{1}{2}B.$$

We shall have similar expressions for the repulsion-components of DC, CE, EA, &c.

[The rest in Volume.]



**4381.** (ARTEMAS MARTIN, M.A., Ph.D.)—A sphere of radius  $r$  rolls down the surface of another sphere of radius  $R$ , placed on a horizontal plane. The surfaces of both spheres and plane are rough enough to ensure perfect rolling. Find the point of separation of the spheres and the path of the centre of the upper one.

*Solution by Professor SEBASTIAN SICCOM, M.A.*

Supposing the motion to start from the position in which the line joining the centres is vertical; the equation of energy is

$$M(K^2 + R^2) \dot{\theta}_1^2 + m(\dot{x}^2 + \dot{y}^2 + \dot{z}^2) = 2mg(r + 2R - y),$$

where  $\theta_1, \theta, \phi$  are the angles made with the vertical at the time  $t$  by the radii which were initially together, and by the line joining the centres at the time  $t$ . Taking the origin at the original point of contact of the lower sphere with the plane, we have, for the point O,

$$x = (r + R) \sin \phi - R\theta_1,$$

$$r(\theta - \phi) = R(\theta_1 + \phi);$$

whence  $y = (r + R) \cos \phi + R$ ,

$$R\theta_1 = r\theta - (r + R)\phi.$$

Let  $P$  be the normal pressure,  $F$  the friction at C. Then, for the lower sphere,

$$M(K^2 + R^2) \ddot{\theta}_1 = PR \sin \phi - FR(1 + \cos \phi) \dots \dots \dots (2);$$

for the upper,

$$m\ddot{x} = P \sin \phi - F \cos \phi, \quad m\ddot{y} = P \cos \phi + F \sin \phi - mg, \quad mk^2 \ddot{\theta} = Fr \dots \dots \dots (3, 4, 5);$$

whence  $M(K^2 + R^2) \ddot{\theta}_1 = mR\ddot{x} - mk^2(R/r) \ddot{\theta}$ ;

and, since  $\theta, \theta_1, x, \dot{\theta}, \dot{\theta}_1, \dot{x}$  all vanish together,

$$M(K^2 + R^2) \theta_1 = mR\dot{x} - mk^2(R/r) \dot{\theta}.$$

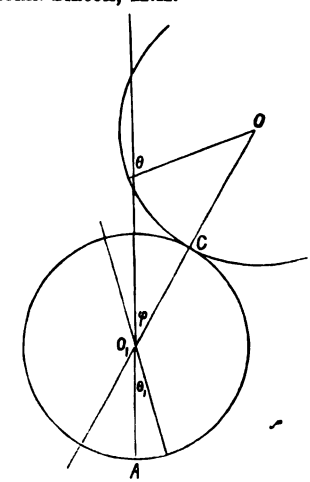
[The rest in Vol.]

**14361.** (Professor E. LEMOINE.)—Dans un triangle ABC inscrit un triangle A'B'C' semblable à un triangle donné et tel que ABC et A'B'C' soient orthologiques. On sait que deux triangles ABC, A'B'C' sont dits orthologiques si les perpendiculaires abaissées des sommets de l'un sur les côtés de l'autre sont concourantes.

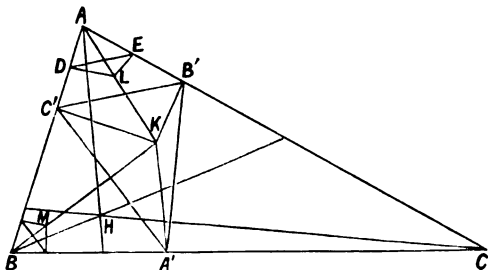
*Solution by A. F. VAN DER HEYDEN, B.A.; and H. W. CURJEL, M.A.*

Within the angle ABC, find a point H at which the sides subtend angles supplementary to those of the second triangle (III. 33). Draw any line DE perpendicular to AH. Draw DL, EL perpendicular to AB, AC. It is easily seen that the locus of L is the straight line AL.

Find BM, the corresponding locus through B, and let AL, BM intersect in K. Draw KA', KB', KC' perpendicular to the sides of the triangle. Then A'B'C' is the triangle required.



Obviously, AH, BH are perpendicular to B'C, C'A'. Hence, from



the reciprocity of orthological properties, CH must be perpendicular to A'B'. Therefore also the triangle A'B'C' is similar to the given triangle, as required.

**14224.** (Professor CROFTON, F.R.S.)—Four points are taken at random in a triangle. Find the chance that the point nearest to the side AB shall also be the nearest to AC. (*Ans.*,  $\frac{1}{3}$ .) By means of this, an elementary proof may be given that the chance of a convex quadrilateral is  $\frac{1}{3}$ .

*Solution by Rev. W. A. WHITWORTH, M.A.*

More generally, if  $n$  points be taken, the chance will be  $1/(2n-1)$ .

We know that, if P be a random point on a line OQ =  $a$ , the expectation of  $OP^m$  will be  $a^m/(m+1)$ . (*Expectation of Parts*, Prop. iv.)

Let P be the point nearest to AB. Draw OPQ parallel to AB and PZ parallel to AC. Since P is the point nearest to AB, the other  $n-1$  points must lie on the area OQC, and, if P is to be also nearest to AC, they must lie on the area OPZ.

But the chance that one falls on the latter area is  $OP^2/OQ^2$ ; and the chance that all fall thereon is  $OP^{2n-2}/OQ^{2n-2}$ ; and, by the proposition cited, the expectation of this is  $1/(2n-1)$ , which is therefore the chance required.

[The rest in Volume.]

**QUESTIONS FOR SOLUTION.**

**14510.** (Professor MATHEWS, M.A., F.R.S.)—Suppose that the Jacobian transformation of the sixth order converts  $\kappa, K$  into  $\lambda, \mu K$  respectively; prove that

$$\sin \frac{2K}{3} = \sqrt{\frac{3}{2}} \left\{ \sqrt{\frac{\mu}{1+\kappa'}} + \sqrt{\frac{\lambda\mu}{1-\kappa'}} \right\}.$$

**14511.** (JOHN C. MALET, M.A., F.R.S.)—If in the sextic algebraic equation  $x^6 - p_1x^5 + p_2x^4 - p_3x^3 + p_4x^2 - p_5x + p_6 = 0$ ,

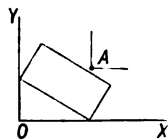
the sum of three roots is equal to the sum of the other three, (1) prove

$$4p_6Q_4 - 4Q_4Q_3^2 - p_6Q_2^2 + p_5Q_2Q_3 - p_5^2 = 0,$$

where  $Q_2 \equiv p_2 - \frac{1}{3}p_1^2$ ,  $Q_3 \equiv p_3 - \frac{1}{2}p_1p_2 + \frac{1}{3}p_1^3$ ,  $Q_4 \equiv p_4 - \frac{1}{2}p_1p_3 + \frac{1}{4}p_1^2p_2 - \frac{1}{8}p_1^4$ ; (2) solve the equation.

**14512.** (Professor NEUBERG.)—Trouver dans le plan du triangle ABC un point M qui soit le centre de gravité de ses projections A', B', C' sur BC, CA, AB, pour les poids donnés  $\alpha, \beta, \gamma$ .

**14513.** (Professor F. MOHRLY.)—In the figure OX, OY are vertical walls at right angles; A is the corner of an obstacle. Find the largest rectangle which can pass, in a horizontal plane, between the walls and the obstacle; taking the case when the length of the rectangle is twice its breadth.



**14514.** (Professor COCHEZ.)—Courbe  $\rho = \tan \omega \tan 2\omega$ .

**14515.** (J. A. THIRD, M.A., D.Sc.)—X, Y, Z are three points in the plane of a triangle ABC, such that the pairs AY and AZ, BZ and BX, CX and CY are equally inclined to the bisectors of the angles A, B, C respectively. Y moves on the straight line  $u_b$ , and Z on the straight line  $u_c$ . Prove the following statements:—(1) the locus of X is a straight line  $u_a$ ; (2) if  $u_b$  pass through B, and  $u_c$  through C,  $u_a$  passes through A; (3) if  $u_b$  be perpendicular to CA, and  $u_c$  to AB,  $u_a$  is perpendicular to BC; (4) if L, M, N be the points where  $u_a, u_b, u_c$  meet BC, CA, AB respectively, AL, BM, CN meet in a point P; (5) AX, BY, CZ are concurrent in a point whose locus is, in general, a conic circumscribed to the triangle and passing through P; (6) if  $u_b, u_c$  meet on the cubic circumscribed to the triangle, and passing through every pair of isogonal points whose join passes through P, viz.

$$l\{(y^2-z^2)/yz\} + m\{(z^2-x^2)/zx\} + n\{(x^2-y^2)/xy\} = 0,$$

where  $l, m, n$  are the co-ordinates of P,  $u_a, u_b, u_c$  are concurrent.

**14516.** (Professor JAN DE VRIES, Ph.D.)—For each conic of a given pencil the orthoptical circle (circle of MONGE) is constructed. How many of these circles will pass by a given point?

**14517.** (Professor SANJANA, M.A.)—In the triangle ABC, AD is drawn from A dividing BC in the ratio  $m : n$ ; AE and AE' are the internal and external bisectors of the angle A. Prove that

$$AD \cos DAE = \{(n \cdot AB + m \cdot AC)/(m+n)\} \cos \frac{1}{2}A,$$

and  $AD \cos DAE' = \{(n \cdot AB - m \cdot AC)/(m+n)\} \sin \frac{1}{2}A.$

Also apply these equalities to find the distances of the centroid from the incentre and the excentres; and show that the sum of the squares of these four distances is  $16R^2 - \frac{1}{3}(a^2 + b^2 + c^2)$ .

**14518.** (Professor A. GOLDENBERG.)—Résoudre le système

$$(x+2y)(x+2z) = a^2, \quad (y+2z)(y+2x) = b^2, \quad (z+2x)(z+2y) = c^2.$$

**14519.** (Professor U. C. GHOSH.)—Find the sum of the products of the terms of the geometric series  $a, a^2, a^3, a^4, \dots, a^n$ , taken  $r$  at a time,  $r$  being less than  $n$ .

**14520.** (Professor N. BHATTACHARYYA.)—Required a direct proof of the old problem:—If the bisectors of the base angles of a triangle, being terminated at the opposite sides, be equal, show that the triangle is an isosceles one. (See TODHUNTER'S *Euclid*.)

**14521.** (D. BIDDLE.)—[In continuation of Quest. 14457 and 14490.] Writing down N in terms of 3 and its powers, the only coefficients used being  $\pm 1$  or 0, it will be convenient to omit both index and root, using only the sign preceding (or 0), and reckoning the powers from the right hand (as usual). Thus,  $1843 = 3^7 - 3^5 - 3^4 + 3^2 - 3 + 1$ , and it may be written  $+0 - 0 + - +$ . Similarly, 1769 may be written  $+ - + 0 - -$ . Since the last sign is for  $3^0 (= 1)$ , the first index is one less than the number of signs (including zeros). Prove that, having bracketed together any number of the given signs beginning with the first (which is always positive), and having assigned to them the value they would have if standing alone, we can, to the successive signs beyond, append  $p, p^2, p^3, \dots$  in ascending order, and thus obtain a multiple of  $3p \pm 1$ , a factor of N ( $p$  being even), provided we reverse the signs attached to the odd powers of  $p$  when the factor is  $3p + 1$ , but leave them unchanged when the factor is  $3p - 1$ . Thus,  $1769 = (+ - + + 0) - (- -)$ , and  $66 + 20 - 400 + 8000 = M(61)$ ; also  $66 - 10 - 100 - 1000 = M(29)$ .

**14522.** (J. H. TAYLOR, M.A.)—If A, B, C are vertices of equilateral triangles described all externally, or all internally, on the sides of a triangle A'B'C', and A<sub>a</sub>, B<sub>b</sub>, C<sub>c</sub> are diameters of circle circumscribing those equilateral triangles, then AA', BB', CC' are equal and concurrent, and a, b, c form an equilateral triangle and are middle points, each of a pair of arcs, on sides of the triangles ABC, A'B'C'. [The PROPONER desires that the words "equal and" be omitted from Quest. 14493.]

**14523.** (R. TUCKER, M.A.)—Pairs of chords are drawn, from points on a given circumference, in fixed directions. Find the radius of the circular locus of the centroids of the variable triangles.

**14524.** (R. F. DAVIS, M.A.)—If A, B, C, D be the angles of any convex quadrilateral,

$$\sin A \{ \sin C + \sin B - \sin(A+D) \} : \sin C \{ \sin A + \sin B - \sin(C+D) \} \\ = \sin A + \sin D - \sin(A+D) : \sin C + \sin D - \sin(C+D).$$

**14525.** (J. MACLEOD, M.A.)—KL is a diameter of the circle KML. From L any two chords LM, LN on the same side of KL are drawn and produced to meet the tangent at K in Q' and O. Through O a line is drawn parallel to MN, and LQ' is produced to meet it in Q. QQ' is bisected in V, and the straight line OV in P; through P a tangent is drawn to the parabola which is touched by OQ, OQ' in the points Q, Q', and meeting OQ, OQ' in R, R'. Prove that the angle KOL is equal to the angle of the focal distances of P and R.

**14526.** (R. C. ARCHIBALD, M.A.)—With reference to the centre of the fixed circle, the corresponding tangent and normal pedal curves (positive or negative) of the cardioid are similar.

**14527.** (G. H. HARDY, B.A.)—Explain precisely what is meant by the assertion that the principal values of such integrals as

$$\int_0^\infty \frac{\tan ax}{x} dx, \quad \int_0^\infty \frac{1}{\cos ax} \frac{1}{1+x^2}$$

are determinate quantities; and prove rigorously that it is true. (See CAUCHY, *Mémoire sur les Intégrales Définies*; and Mr. CURJEL'S note, *Reprint*, Vol. LXXII., p. 55.)

**14528.** (R. P. PARANJPE, B.A.)—Show that any triangle can be projected into an equilateral triangle whose centre of gravity is the projection of a given point.

**14529.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Show that  $q^2 \equiv 1 \pmod{p}$ , where  $x = \frac{1}{2} \cdot 210^4 q$ ,  $Q = q^4$ ,  $p = Q \cdot 210^4 q + 1 = \text{prime}$ .

**14530.** (ROBERT W. D. CHRISTIE.)—If  $6m + 1 = a$  prime, prove  $r^{2m} + r_1^{2m} \equiv 0 \pmod{p}$  and  $r_1^{2m} + r^{2m} \equiv 0 \pmod{p}$ , where  $r$  and  $r_1$  are associated primitive roots.

**14531.** (J. J. BARNVILLE, B.A.)—Prove that

$$\begin{aligned} \frac{1}{1+2} + \frac{1}{7+2} + \frac{1}{97+2} + \frac{1}{1351+2} + \dots &= \frac{\sqrt{3}+1}{6}, \\ \frac{1}{1+\sqrt{5}} + \frac{1}{9+\sqrt{5}} + \frac{1}{161+\sqrt{5}} + \frac{1}{2889+\sqrt{5}} + \dots &= \frac{\sqrt{5}+1}{8}, \\ \frac{1}{1+\sqrt{6}} + \frac{1}{11+\sqrt{6}} + \frac{1}{241+\sqrt{6}} + \frac{1}{5291+\sqrt{6}} + \dots &= \frac{\sqrt{6}+\sqrt{5}-1}{10}, \\ \frac{1}{1+\sqrt{7}} + \frac{1}{13+\sqrt{7}} + \frac{1}{337+\sqrt{7}} + \frac{1}{8749+\sqrt{7}} + \dots &= \frac{\sqrt{7}+\sqrt{6}-1}{10}. \end{aligned}$$

**14532.** (Rev. J. CULLEN.)—Let  $\Delta$  be any conic in the plane of a given triangle ABC. A point P is taken on  $\Delta$ , and parallels through P to BC, CA, AB meet  $\Delta$  again in  $A'$ ,  $B'$ ,  $C'$ . Prove that AP, BP, CP intersect  $B'C'$ ,  $C'A'$ ,  $A'B'$  in three collinear points L, M, N. (A particular case is that the intersections of the symmedian lines with the corresponding sides of BROCARD'S triangle are collinear.)

Prove also that, if  $\Delta$  be the circumcircle, then LMN is at right angles to the SIMSON-LINE of P.

**14533.** (Rev. T. WIGGINS, B.A.)—Express the numbers 131, 133, 137, 139 by four nines. Algebraical symbols and decimal points may be used, but the expression for each number must contain the four nines and no other figure. Also, express the number 113 by four fours, with similar conditions. (The above is part of Quest. 6487, which was re-proposed in the March number.)

**14534.** (W. S. COONEY.)—Let  $O_1, O_2, O_3$  be the centres of squares described externally, and  $\omega_1, \omega_2, \omega_3$  the centres of squares described internally on the sides  $a, b, c$ , respectively of triangle ABC. Join  $O_1$  to  $\omega_2$  and  $\omega_3$ , meeting side BC in P, P';  $O_2$  to  $\omega_3$  and  $\omega_1$ , meeting CA in Q, Q';  $O_3$  to  $\omega_1$  and  $\omega_2$ , meeting AB in R, R'. Prove that  $A', B', C'$ , the intersections of P'R, Q'P, R'Q are the centres of the insquares of ABC, and that, if AA', BB', CC' meet sides of  $A'B'C'$  in  $\alpha, \beta, \gamma$ , then triangle  $\alpha\beta\gamma$  is similar to ABC.

**14535.** (R. KNOWLES.)—A circle touches a parabola in a point P, and cuts it in C, D; prove (1) that the line joining the pole of CD, with respect to the parabola, to P is bisected by the axis; (2) if the circle pass through the focus, CD passes through a fixed point on the axis.

**14536.** (I. ARNOLD.)—In any triangle the radius of the circumscribed circle is to the radius of the circle which is the locus of the vertex, when the base and the ratio of the sides are given, as the difference of the squares of those sides is to four times the area.

**14537.** (R. CHARTRES.)—A point P is taken at random in a polygon ABCD... of  $n$  sides. What is the probability that, if  $n$  other random points be taken, one shall lie in each of the triangles APB, BPC, &c.?

**14538.** (SALUTATION.)—Arrange in one plane two triangles of given dimensions in such manner that two specified vertices may coincide, and the other four be concyclic.

**14539.** (Professor LANGHORNE ORCHARD, M.A., B.Sc.)—If  $r$  and  $n$  be any positive integers, show that the sum of the series

$$1^r + 2^r + 3^r + 4^r + \dots + n^r$$

is a fraction, whereof the numerator is exactly divisible by  $n$ , and the denominator is some integer independent of  $n$ .

#### OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6498.** (J. W. RUSSELL, M.A.)—Show that

$$5(a+b+c)^2(a+b)^2(b+c)^2(c+a)^2 - 3a^2(a+b)^3(a+c)^3$$

is divisible by  $(a+b+c)^2 + abc$ .

**6514.** (W. J. C. MILLER, B.A.)—Find, to 4 decimals, the value of

$$\int_0^1 \int_0^{1-x} \int_0^{1-x-y} dx dy dz \frac{3xyz(1-x-y-z)}{(1-x)(1-y)(1-z)(x+y+z)}.$$

**6515.** (ELIZABETH BLACKWOOD.)—C is the centre of a given circle, X, Y are random points in the area, and P is any point in the circumference; two concentric circles, with radii CX, CY, divide CP into three segments: find the chance that these three segments can be the sides of an acute-angled triangle.

**6530.** (W. E. WRIGHT, B.A.)—Two vertices of a given triangle move along a diameter of an ellipse and the periphery respectively; find the locus of the third vertex.

**6531.** (Professor SYLVESTER, F.R.S.)—Prove that only one proper circular cubic can be drawn having four concyclic foci at the angles of a trapezoid. (May be solved with Quest. 6405, re-proposed in *Ed. Times* of March, 1900.)

**6535.** (Professor TOWNSEND, F.R.S.)—Three forces, given or taken arbitrarily in a common space, being supposed transferred to the centre of the quadric determined by their three lines of direction in the space; show, on elementary principles, that the plane of their resultant moment is always conjugate to the direction of their resultant force with respect to the surface.

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to

D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

#### THE LONDON MATHEMATICAL SOCIETY.

Thursday, March 8, 1900.—Prof. Elliott, F.R.S., Vice-President, in the Chair. Fifteen members present.

The Chairman announced that, in accordance with a resolution of the Council, the meetings in future would be held at 5.30 p.m., instead of 8 p.m. as heretofore, and that the May meeting (at 5.30 p.m.) would be made "special" in order to alter the by-law as to the hour of holding the Annual General Meeting.

Votes of condolence with the families of the late Prof. Beltrami and Mr. J. J. Walker were carried, and the Senior Secretary was directed to convey the announcement of the same to the proper quarters.

Prof. Lamb read a paper, "Problems relating to the Impact of Waves on a Spherical Obstacle in an Elastic Medium." Dr. Larmor spoke on the subject.

Mr. W. F. Sheppard (Prof. Lamb, V.P., in the Chair) spoke "On the Use of Auxiliary Curves in Statistics; with Tables for the Curve of Error." Messrs. Lamb, MacMahon, and Hargreaves joined in a discussion of the paper.

A "Supplementary Note on the Theory of Automorphic Functions," by Prof. A. C. Dixon, was taken as read.

## SEELEY'S CHEAP SCHOOL SERIES.

Conducted by the REV. A. J. CHURCH, M.A., sometime Professor of Latin at University College, London.

Each Volume contains sufficient matter for the work of one term, with notes by a competent Editor of practical experience in tuition; and is well printed and strongly bound in cloth.

**Ovid.** *Elegiac Verse.* With Vocabulary. By Prof. CHURCH. 8d.

**Ovid.** *Metamorphoses.* With Vocabulary. By Rev. NORTH PENNER. 8d.

**Horace.** *Select Odes.* By Rev. W. J. BRODRIBB. 8d.

**Cæsar.** *Selections.* By Rev. F. B. BUTLER. 8d.

**Cicero.** *Select Passages.* By Rev. W. J. BRODRIBB. 10d.

**Livy.** *Select Passages.* By Rev. J. H. MERRITT. 8d.

**Phædrus.** *Select Fables.* With Vocabulary. By E. WALFORD. 8d.

**Cornelius Nepos.** *Select Lives.* With Vocabulary. By E. WALFORD. 8d.

**A Latin Delectus.** By C. OAKLEY. 8d.

**Easy Latin Reading Book.** By Rev. H. M. STEPHENSON. 8d.

**A Latin Exercise Book.** Part I. By Prof. CHURCH. 8d.

**A Latin Exercise Book.** Part II. By Prof. CHURCH. 8d.

**Latin Prose through English Idiom.** By Rev. E. A. ABBOTT, D.D. 2s. 6d.

**First Latin Grammar.** By Dr. WHITE. 1s.

**Priora Latina.** A First Latin Book. By W. MODLEN. 1s.

**The Stories of the Iliad and the Æneid.**

A Classical Reading Book. By Prof. CHURCH. 1s.

**First Latin Dictionary.** By E. S. MORGAN. 1s. 6d.

**Milton.** "Comus." "Lycidas." &c. By Dr. HUCKIN. 8d.

**Milton.** "Samson Agonistes." By Prof. CHURCH. 1s.

**Cowper.** Two Books of "The Task." By Prof. HALES. 8d.

**Goldsmith.** "The Traveller." "Deserted Village." and "Retaliation." By Rev. A. R. VARDY. 8d.

**English Verse for Repetition.** Part I. By Rev. W. BEDELL STANFORD. 1s.

**English Verse for Repetition.** Part II. By Prof. CHURCH. 1s.

**Literary Selections for Practice in Spelling.** By R. LOMAS. 1s.

**Algebra.** By R. PROWDE SMITH. 1s.

**Euclid.** By L. B. SEELEY. 1s.

**Arithmetical Exercises.** By F. C. HORTON. 1s.

**French Grammar.** By HENRY TARVER. 1s. 6d.

#### NEW VOLUMES.

**LATIN VOCABULARIES.** Arranged according to subject. By A. W. READY, B.A. 16mo, cloth, 8d.

**LATIN EXERCISES.** Third Part. By Rev. A. J. CHURCH, M.A. 8d.

These two volumes may also be had, bound together in cloth, 1s.

"Mr. Church's elementary editions of Greek and Roman classics are so well known that it goes without saying that this book is excellently adapted for its purpose, i.e., for the use of pupils who have made a beginning in writing Latin. The hints on Latin prose in the introduction are clear and to the point."—*Journal of Education.*

#### DR. ABBOTT'S SCHOOL BOOKS.

**Via Latina.** A First Latin Book. 127th Thousand. 3s. 6d.

**How to Write Clearly.** Rules and Exercises on English Composition. 62nd Thousand. 1s. 6d., cloth.

**How to Tell the Parts of Speech; or, Easy Lessons in English Grammar.** 34th Thousand. 2s., cloth.

**How to Parse.** An Attempt to Apply the Principles of Scholarship to English Grammar. 32nd Thousand. 3s. 6d., cloth.

**English Lessons for English People.** By the Rev. EDWIN A. ABBOTT, D.D., and Prof. J. R. SEELEY, M.A. 17th Thousand. 4s. 6d.

LONDON: SEELEY & CO., LIMITED, 38 GREAT RUSSELL STREET.

## CAREY'S "GRADUS AD PARNASSUM,"

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, Price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.



# MACMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

## MACMILLAN'S MANUALS FOR TEACHERS.

**THE LOGICAL BASES OF EDUCATION.** By J. WELTON, M.A., Professor of Education in the Yorkshire College, Victoria University. Globe 8vo, 3s. 6d.  
\* \* This book meets the requirements of the Teachers' Certificate Examination.

*Educational Times.*—"Mr. Welton has written distinctively well on logic, but we are inclined to think that he has never produced anything better than this succinct and lucid exposition of the application of logical method to educational purposes. . . . The volume appears in a series of 'Manuals for Teachers.' . . . It will be an admirable series if the rest of the volumes come anywhere near the excellence of this one."

## TEACHERS' PROFESSIONAL LIBRARY.

**THE TEACHING OF ELEMENTARY MATHEMATICS.** By DAVID EUGÈNE SMITH, Principal of the State Normal School at Brockport, New York. Crown 8vo, 4s. 6d. net.

## GRADUATED SERIES OF ENGLISH GRAMMARS.

By J. C. NESFIELD, M.A. *For Use in Secondary Schools.*

**THE USES OF THE PARTS OF SPEECH.** Price 6d., cloth. A general outline, with a large number of Exercises, showing the main purpose or purposes for which each part of speech is used in the construction of a sentence. For the use of students up to the age of ten or thereabouts.

*Educational News.*—"That this grammar is the work of Mr. Nesfield is sufficient guarantee of its excellence."

**OUTLINE OF ENGLISH GRAMMAR.** Price 1s. 6d. cloth. A short and easy guide to Accidence, Parsing, Analysis of Sentences, Conversion of Sentences from one form to another, Sequence of Tenses, Analysis of Words, the Sounds, Symbols, and Spellings in present use, the origin and history of the chief inflexions and of words in common grammatical use. With copious and carefully graded Exercises throughout.

*Educational News.*—"It is easily the best work of its kind, and we give it our heartiest recommendation."

**MANUAL OF ENGLISH GRAMMAR AND COMPOSITION.** Price 2s. 6d., cloth. A guide to Parsing and Analysis, Composition, the Figures of Speech, Enlargement of the Vocabulary by Adjectives and Metaphors, the main divisions of Prose Composition, the peculiarities of Poetic Diction, and an outline of the History of the Language. With copious and carefully graded Exercises.

*Key to Manual of English Grammar and Composition.* 2s. 6d. net.  
*Guardian.*—"The whole of Mr. Nesfield's work is stamped with the impress of individual thought, and with the earnest desire to remove those absurdities of grammatical classification and terminology which are the despair of the teacher and one of the chief drawbacks to the attainment by English grammar and literature of that high place in the school curriculum which should naturally be its due."

**ENGLISH GRAMMAR PAST AND PRESENT.** Price 4s. 6d., cloth. A full account of Modern English Grammar, some peculiarities of Idiom and Construction, the Origin and Growth of English, a History of Sounds, Symbols, Spellings, and Accents, the Growth of Accidence from Anglo-Saxon and other sources, the origin and use of Prefixes and Suffixes. With Appendices on Prosody, Synonyms, the Changed Meanings of Words, and other outlying subjects. With copious and carefully graded questions selected from the London Matriculation Examinations.

*Educational Times.*—"His book gives evidence of good judgment and experience in teaching."

New and Abridged Edition.  
**EDWARD THRING, HEADMASTER OF UPPINGHAM SCHOOL. LIFE, DIARY, AND LETTERS.** By GEORGE R. PARKIN, C.M.G., M.A., Hon. LL.D. University of New Brunswick. With Portrait. Crown 8vo, 6s.  
*Spectator.*—"We heartily welcome this book in its present form. . . . Of latter-day biographies few are more admirable than this."

## CLASSICS.

MACMILLAN'S CLASSICAL SERIES.—New Volumes.

**EURIPIDES.—THE ANDROMACHE.** With an Introduction and Notes by A. R. F. HYSLOP, M.A., Assistant-Master in Harrow School. Fcap. 8vo, 2s. 6d.

**GREEK MELIC POETS.** By HERBERT WEIR SMYTH, Ph.D. Gottingen, Professor of Greek at Bryn Mawr College, Pennsylvania. Fcap. 8vo, 7s. 6d.

**DEMOSTHENES.—ON THE PEACE, SECOND PHILIPPIC, ON THE CHERONESUS, AND THIRD PHILIPPIC.** Edited, with Introduction and Critical and Explanatory Notes, by JOHN EDWIN SANDYS, Litt.D., Fellow and Tutor of St. John's College, and Public Orator in the University of Cambridge. Fcap. 8vo, 5s.

## MATHEMATICS AND SCIENCE.

**THE PRINCIPLES OF MECHANICS PRESENTED IN A NEW FORM.** By HEINRICH HERTZ, late Professor of Physics in the University of Bonn. With an Introduction by H. VON HELMHOLTZ. Authorized English Translation by D. E. JONES, B.Sc., District Inspector under the Department of Science and Art, &c., and J. T. WALLEY, M.A. 8vo, 10s. net.

*Engineer.*—"A very remarkable book. . . . It represents the latest work of one of the finest intellects of the century."

Enlarged and Revised Edition.  
**LESSONS IN ELEMENTARY PHYSIOLOGY.** By THOMAS H. HUXLEY, LL.D., F.R.S. Globe 8vo, 4s. 6d.

**AN ELEMENTARY COURSE OF PRACTICAL ZOOLOGY.** By the late Prof. T. J. PARKER, D.Sc., F.R.S., and Prof. W. NEWTON PARKER, Ph.D. With 156 Illustrations. Crown 8vo, 10s. 6d. [*Manuals for Students.*]

**THE NATURE AND WORK OF PLANTS:** an Introduction to the Study of Botany. By DANIEL T. MACDOUGAL, Ph.D., Director of the Laboratories, New York Botanical Garden. Crown 8vo, 4s. 6d.

**DRYDEN.—THE HIND AND THE PANTHER.** With Introduction and Notes by W. H. WILLIAMS, M.A., formerly Scholar of Trinity College, Cambridge, Professor of Classics and English Literature in the University of Tasmania. Globe 8vo, 2s. 6d. [*Macmillan's English Classics.*]

*Schoolmaster.*—"A skilfully written introduction of some dozen pages gives a clear and concise enumeration and criticism of the animal fable which the poem is in form. . . . The notes which follow the text are, as far as we have tested them, accurate and full."

**THE NERVOUS SYSTEM IN THE CHILD:** Its Growth and Health in Education. By FRANCIS WARNER, M.D. Lond., F.R.C.P., F.R.C.S. Eng. Crown 8vo, 4s. 6d. net.

## FRENCH.

**A HISTORICAL FRENCH GRAMMAR.** By Prof. ARSÈNE DARMESETER. Edited by Prof. ERNEST MURET and Prof. LÉOPOLD SUDRE. Authorized English Edition by Prof. ALPHONSE HARTOG. Crown 8vo, 12s. 6d.

*Educational Times.*—"MM. Muret and Sudre have done their work very thoroughly. . . . The outcome appears to be eminently satisfactory."

**SPECIMENS OF MODERN FRENCH PROSE.** Edited, with Biographical and Critical Notes, by H. E. BERTHOUD, Taylorian Teacher of French in the University of Oxford. Pott 8vo, 2s. 6d. [*Foreign School Classics.*]

### Latest Additions to Slepman's Elementary French Series.

**DAUDET.—LA TOUR DES MAURES.** Par ERNEST DAUDET. Adapted and Edited by A. H. WALL, M.A., Assistant-Master at Marlborough College. Globe 8vo, 2s.

**VERNE.—LE TOUR DU MONDE EN QUATRE-VINGTS JOURS.** Par JULES VERNE. Adapted and Edited by LOUIS A. BARBÉ, B.A., Headmaster of the Modern Language Department in the Glasgow Academy. Globe 8vo, 2s.

WORD AND PHRASE BOOK. Globe 8vo, sewed, 6d.

APRIL NUMBER NOW READY.

# THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS. PRICE SIXPENCE.

Annual Subscription, including postage, 8s. net.

## LEADING CONTENTS.

**The Board of Education.** Its Work and Relations with the Chief Grades of Secondary Schools. Inspection and Registration. By Rev. T. W. SHARPE, C.B., M.A. The Great Public Schools. By Rev. H. W. MOSS, M.A. Grammar and Proprietary Schools. By Dr. R. P. SCOTT, M.A. Technical Instruction Committees. By WILLIAM HEWITT, B.Sc. Private Schools. By Rev. J. O. BRVAN, M.A., F.S.A. Higher Grade Schools. By WILLIAM DYCHE, B.A.—**The Study of "As You Like It."** I. General Conception of the Play. By J. A. NICKLIN, B.A.—**On the Use of the Voice in Teaching.** By PATRICK KIRWAN.—**Pioneers in Education.** IV. Rousseau as an Unpractical and as a Practical Educationist. By Prof. FOSTER WATSON, M.A. **Manual Instruction in Secondary Schools.** By W. A. KNIGHT.—**Dr. Leaf's "Tiad."** (Illustrated.)—**Correspondence:** Use of the Lantern in Teaching. By Prof. W. C. F. ANDERSON, M.A.

\* \* Also ready, Volume I, containing Nos. 1-12, January-December, 1899. 480 pp., Index. Price 7s. 6d. net. Cases for binding Vol. I, price 1s. net.

# OXFORD UNIVERSITY PRESS.

**ARABIC.**—**A Practical Arabic Grammar.** Compiled by A. O. GREEN, Lieut.-Colonel, R.E.

PART I. Third Edition. Enlarged. Crown 8vo, 7s. 6d.  
PART II. Third Edition. Enlarged and Revised. 10s. 6d.

**BENGALI.**—**A Grammar of the Bengali Language; Literary and Colloquial.** By JOHN BEAMES. Crown 8vo, cloth, 7s. 6d.; cut flush, 6s.

**BOHEMIAN.**—**A Grammar of the Bohemian (or Čech) Language.** By W. R. MORFILL, M.A. Crown 8vo, 6s.

**BURMESE.**—**A Burmese Reader.** By R. F. ST. ANDREW ST. JOHN, Hon. M.A. Crown 8vo, 10s. 6d.

**FINNISH.**—**A Finnish Grammar.** By C. N. E. ELIOT, M.A. Crown 8vo, roan, 10s. 6d.

**GOTHIC.**—**A Primer of the Gothic Language.** Containing the Gospel of St. Mark. Selections from the other Gospels, and the Second Epistle to Timothy. With Grammar, Notes, and Glossary. By JOSEPH WRIGHT, M.A., Ph.D. Second Edition. Extra fcap. 8vo, cloth, 4s. 6d.

**HINDŪSTĀNĪ.**—**A HindŪstānĪ Grammar.** By A. O. GREEN, Lieut.-Colonel, R.E. Crown 8vo, cloth.  
PART I. 8s. 6d. PART II. 7s. 6d.

**ICELANDIC.**—**An Icelandic Primer,** with Grammar, Notes, and Glossary. By HENRY SWEET, M.A., Ph.D. Second Edition. Extra fcap. 8vo, 3s. 6d.

**RUSSIAN.**—**A Grammar of the Russian Language.** By W. R. MORFILL, M.A. Crown 8vo, 6s.

**DANO-NORWEGIAN.**—**Grammar of the Dano-Norwegian Language.** By J. Y. SARGENT, M.A. Crown 8vo, 7s. 6d.

By HENRY SWEET, M.A., Ph.D., LL.D.

**A New English Grammar, Logical and Historical.**

PART I. Introduction, Phonology, and Accidence. Crown 8vo, 10s. 6d.  
PART II. Syntax. Crown 8vo, 3s. 6d.

**A Short Historical English Grammar.** Extra fcap. 8vo, 4s. 6d.

**A Primer of Historical English Grammar.** Extra fcap. 8vo, 2s.

**History of English Sounds from the Earliest Period.** With full Word-Lists. 8vo, 14s.

**The Student's Dictionary of Anglo-Saxon.** Small 4to, 8s. 6d. net.

**First Steps in Anglo-Saxon.** Extra fcap. 8vo, 2s. 6d.

**An Anglo-Saxon Primer,** with Grammar, Notes, and Glossary. Eighth Edition. Extra fcap. 8vo, 2s. 6d.

**An Anglo-Saxon Reader.** In Prose and Verse. With Grammatical Introduction, Notes, and Glossary. Seventh Edition, Revised and Enlarged. Crown 8vo, 9s. 6d.

**A Second Anglo-Saxon Reader.** Extra fcap. 8vo, 4s. 6d.

**Old English Reading Primers:**

I. Selected Homilies of Ælfric. Second Edition. 2s.  
II. Extracts from Alfred's Orosius. Second Edition. 2s.

**First Middle English Primer,** with Grammar and Glossary. Second Edition. Extra fcap. 8vo, 2s. 6d.

**Second Middle English Primer.** Extracts from Chaucer, with Grammar and Glossary. Second Edition. Extra fcap. 8vo, 2s. 6d.

**Elementarbuch des Gesprochenen Englisch.** Grammatik, Texte und Glossar. Third Edition. Extra fcap. 8vo, stiff covers, 2s. 6d.

**A Primer of Spoken English.** Second Edition, Revised. Extra fcap. 8vo, 3s. 6d.

**A Primer of Phonetics.** Extra fcap. 8vo, 3s. 6d.

**A Manual of Current Shorthand, Orthographic and Phonetic.** Crown 8vo, 4s. 6d.

By W. W. SKEAT, Litt.D.

**An Etymological Dictionary of the English Language,** arranged on an Historical Basis. Third Edition. 4to, £2. 4s.

A Supplement to the First Edition of the above. 4to, 2s. 6d.

**A Concise Etymological Dictionary of the English Language.** Fourth Edition. Crown 8vo, 5s. 6d.

**Principles of English Etymology:**

First Series. THE NATIVE ELEMENT. Second Edition. Crown 8vo, 10s. 6d.

Second Series. THE FOREIGN ELEMENT. Crown 8vo, 10s. 6d.

**A Primer of English Etymology.** Third and Revised Edition. Extra fcap. 8vo, stiff covers, 1s. 6d.

**A Student's Pastime:** being a Select Series of Articles reprinted from "Notes and Queries." Crown 8vo, 7s. 6d. net.

**Twelve Facsimiles of Old English Manuscripts,** with Transcriptions and an Introduction. 4to, paper covers, 7s. 6d.

**The Student's Chaucer.** Being a Complete Edition of his Works, edited from Numerous MSS., with Introduction and Glossary, by W. W. SKEAT, Litt.D. In One Vol., crown 8vo, cloth, 7s. 6d.

**The Prologue to the Canterbury Tales.** (School Edition.) Edited by W. W. SKEAT, Litt.D. Extra fcap. 8vo, 1s.

**The Prologue, The Knightes Tale, The Nonne Preestes Tale;** from the Canterbury Tales. Edited by R. MORRIS, LL.D. A New Edition, with Collations and Additional Notes by W. W. SKEAT, Litt.D. Extra fcap. 8vo, 2s. 6d.

**The Prioresses Tale, Sir Thopas, The Monkes Tale, The Clerkes Tale, The Squieres Tale, &c.** Edited by W. W. SKEAT, Litt.D. Seventh Edition, Revised. Extra fcap. 8vo, 4s. 6d.

**The Tale of the Man of Lawe, The Pardoner's Tale, The Second Nonnes Tale, The Chanouns Yemannes Tale.** W. W. SKEAT, Litt.D. New Edition, Revised. Extra fcap. 8vo, 4s. 6d.

**Minor Poems.** Edited by W. W. SKEAT, Litt.D. Second Edition. Crown 8vo, 10s. 6d.

**The Hous of Fame.** Edited by W. W. SKEAT, Litt.D. Crown 8vo, paper boards, 2s.

**The Legend of Good Women.** Edited by W. W. SKEAT, Litt.D. Crown 8vo, 6s.

**Beaumarchais' Le Barbier de Séville.** Edited, with Introduction and Notes, by AUSTIN DONSON. Extra fcap. 8vo, 2s. 6d.

**Corneille's Horace.** Edited, with Introduction and Notes, by GEORGE SAINTSBURY, M.A. Extra fcap. 8vo, 2s. 6d.

**Molière's Les Précieuses Ridicules.** Edited, with Introduction and Notes, by ANDREW LANG, M.A. Second Edition. Extra fcap. 8vo, 1s. 6d.

**Musset's On ne badine pas avec l'Amour, and Fantasio.** Edited, with Prolegomena, Notes, &c., by W. H. POLLOCK. Extra fcap. 8vo, 2s.

**Racine's Esther.** Edited, with Introduction and Notes, by GEORGE SAINTSBURY, M.A. Extra fcap. 8vo, 2s.

**Voltaire's Mérope.** Edited, with Introduction and Notes, by GEORGE SAINTSBURY, M.A. Extra fcap. 8vo, 2s.

\* \* \* The above six plays may be had in ornamental case, and bound in Imitation Parchment, price 12s. 6d.

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.



# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 469.

MAY 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, JULY AND DECEMBER, 1900.

Notice is hereby given that at the above Examinations the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar*, *Gælic War*, Book vi., *Virgil*, *Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

## PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.—

The COLLEGE of PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.  
Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

### EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— (Bloomsbury Square, W.C.)

The next Monthly Evening Meeting of the Members will take place on Wednesday, the 16th of May, when R. Wormell, Esq., D.Sc., M.A., will read a Paper on "Unsettled Questions of Method in the Teaching of Elementary Science."

The Chair will be taken at 7.30 p.m., and a discussion will follow the reading of the Paper.

Members have the privilege of introducing their friends.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.

### THE CALENDAR FOR 1900

is now ready, and may be obtained from Mr. F. HODGSON, 89, Farringdon Street, E.C. Price, free by post,

To Members of the College ... 1s. 6d.

To Non-Members ... 2s. 6d.

The Calendar contains, in addition to the Lists of Members, and of Schools sending in candidates to the Certificate Examinations, the Regulations respecting the Examinations to be held in 1900, &c., and the

### EXAMINATION PAPERS

set at the Certificate, Junior Forms, Professional Preliminary, and Diploma Examinations held in 1899.

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## ROYAL INDIAN ENGINEERING

COLLEGE, COOPERS HILL, STAINES.—The Course of Study is arranged to fit an Engineer for employment in Europe, India, and the Colonies. About 40 Students will be admitted in September, 1900; the Secretary of State will offer them for competition Twelve Appointments as Assistant Engineers in the Public Works Department, and Three Appointments as Assistant Superintendents in the Telegraphs Department, and One in the Accounts Branch P.W.D. For particulars apply to SECRETARY at College.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FOR MUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KERN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 360 Provincial Centres in July (June for Scotland and Ireland), when certificates will be granted to all successful candidates. Last day for entry (England), June 15, (Scotland and Ireland), May 19.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.

HYDE PARK CORNER, S.W.

The SUMMER SESSION of 1900 will commence on Tuesday, May 1st.

Particulars of Classes, Fees, Entrance Scholarships, Exhibitions, and Prizes, &c., &c., may be obtained on application to the Dean of the School, at the Hospital.

## University Correspondence College.

## FREE GUIDES

TO

## LONDON UNIVERSITY EXAMS.

FREE GUIDE TO MATRICULATION

(Postage 1d.),

INTER. ARTS, INTER. SCIENCE, B.A., OR

INTER. LAWS EXAMINATION.

Any one of the above Guides, Prospectus, and further particulars will be sent post free on application to

THE SECRETARY,

(Univ. Corr. Coll., London Office.)

32 Red Lion Square, London, W.C.

## UNIVERSITY OF LONDON.

**NOTICE IS HEREBY GIVEN**, that the next Half-yearly Examination for MATRICULATION in this University will commence on MONDAY, the 11th of June, 1900. In addition to the Examination at the University, Provincial Examinations will be held at University College, *Aberystwith*; University College, *Bangor*; The Modern School, *Belford*; Mason University College, *Birmingham*; University College, *Bristol*; College and Technical Buildings, *Dumfries Place* (for University College), *Cardiff*; The Ladies' College, *Cheltenham* (for Ladies only); The Heriot-Watt College, *Edinburgh*; The Royal Medical College, *Epsom*; The Victoria Hall (for The Yorkshire College), *Leeds*; St. Edward's College, *Liverpool*; University College, *Liverpool*; The Owens College, *Manchester*; Rutherford College, *Newcastle-on-Tyne*; University College, *Nottingham*; The Public Buildings, *Penzance*; The Technical Schools, *Plymouth*; University College, *Sheffield*; Hartley College, *Southampton*.

Every Candidate is required to apply to the REGISTRAR (University of London, Burlington Gardens, London, W.) for a Form of Entry on or before April 25th.

F. VICTOR DICKINS, M.B., B.Sc.,  
Registrar.

April 4th, 1900.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

The Session began October 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar

## METHOD GASPEY-OTTO-SAUER

FOR THE STUDY OF MODERN LANGUAGES.

PUBLISHED BY JULIUS GROOS, HEIDELBERG.

## JUST OUT.

**Elementary German Grammar**, combined with Exercises, Readings, and Conversations, by Dr. EMIL OTTO. Revised by Dr. J. WRIGHT. Seventh Edition. 8vo, cloth, 2s.

**Elementary French Grammar**, by Dr. J. WRIGHT. Second Edition, with Vocabulary. 8vo, cloth, 2s.

**Elementary Swedish Grammar**, combined with Exercises, Readings, and Conversations, by HENRY FORT. 8vo, cloth, 2s.

At present the Grammars of the "Gaspey-Otto-Sauer" Method comprise: GERMAN, FRENCH, DUTCH, ITALIAN, RUSSIAN, SPANISH, and SWEDISH. Besides the Grammars, there are smaller Guides, Reading, and Conversation Books.

For complete Catalogues (also for Germans, French, Italians, Portuguese and Brazilians, Spaniards, &c.), gratis and post free, apply to Messrs. DULAU & Co., 37 Soho Square, W.

Mr. DAVID NUTT, 57-59 Long Acre, W.C.

SAMPSON LOW, MARSTON, & Co., Fetter Lane, Fleet Street, E.C.

London.

## MATHEMATICS (Pure and Applied).

Wanted, Advanced work, Schools, Coaching, Examinations, Research. Access to British Museum Reading Room. Good testimonials. Permanent work preferred. Address—LADY GRADUATE, 10 Matheson Road, West Kensington, W.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

## ENTRANCE SCHOLARSHIPS.

The Henry Tate Scholarship in Science, annual value £50; a Proffer Scholarship in Science, annual value £48; a Reid Scholarship in Arts, annual value £31. 10s.; all tenable for three years, will be awarded on the results of the Examination to be held at the College on June 26th and 27th. Candidates must be under 19 years of age on the first day of the examination.

For further information apply to the PRINCIPAL.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS.

SALUSBURY ROAD, BRONDESBUARY, LONDON, N.W.

Principal—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

## THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEPIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

## TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

## KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

—This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University, Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## THE ANSTEY PHYSICAL TRAINING COLLEGE

OFFERS a professional Training in Swedish Gymnastics (both educational and medical) to Ladies of good education.

The Course begins in September, and lasts two years. Age of admission, 18 to 30. The work is particularly interesting and healthful, and is remunerative, there being more openings for trained teachers than can be filled.

Apply, for illustrated prospectus, to THE PRINCIPAL, The Leasowes, near Halesowen, Worcestershire.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## THE JOINT AGENCY FOR MEN TEACHERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Agencies for Assistant-Masters and Tutors hitherto conducted by the College of Preceptors, the Teachers' Guild, and the Assistant-Masters' Association, have been amalgamated and placed under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c. &c.

The rates of Commission charged to Assistant-Masters are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

## SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

No extras. Resident Governesses.

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

## ARMY SCHOOLMASTERS.—There

are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Committee of Council on Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

## EPPS'S COCOA.

GRATEFUL. COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in ½-lb. and ¼-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.

BREAKFAST.

SUPPER.

## EPPS'S COCOA.

London University Examinations.



**UNIVERSITY TUTORIAL COLLEGE,**  
Red Lion Square, Holborn, W.C.

**Revision Classes**

FOR  
**MATRICULATION, JUNE, 1900,**  
COMMENCE ON MONDAY, MAY 21, 1900;  
AND FOR  
**INTER. ARTS, SCIENCE,**  
AND  
**PRELIM. SCI. (M.B.), JULY, 1900,**  
ON TUESDAY, JUNE 12, 1900.

Biological, Chemical, and Physical Laboratories.

Prospectus and further particulars may be had from

**THE VICE-PRINCIPAL,**  
University Tutorial College,

**32 Red Lion Square, Holborn, W.C.**

**MR. H. A. NESBITT** (joint-author of "The Science and Art of Arithmetic," by A. SONNENSCHIN and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.

**FOR SALE.**—Ladies' old-established prosperous DAY SCHOOL in the N.W. district. It bears a high reputation for its successes in the different public examinations. 28 pupils at good terms. The Principal, who is retiring after 16 years, wishes to find an efficient successor to carry on her work. Price for goodwill, school furniture, household fixtures, and one piano, £190. Household furniture optional. Address—PRINCIPAL, Office of "Educational Times," 89 Farringdon Street, E.C.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.  
(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR  
**MATRICULATION,**

**B.A., & B.SC.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,  
BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

**CORRESPONDENCE TUITION,**

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-**

KEEPING, by SINGLE and DOUBLE ENTRY: with Practical Explanations and Exercises on the most useful forms for Business. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors.

LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS, SCIENCE, and PREL. SCI., B.A., and B.Sc. EXAMINATIONS. Day and Evening Classes. New Term starts in May.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, B.U.I., &c.

Papers Corrected for Schools.

Private tuition for all Examinations.

Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class, Classical Honours, Editor of "Phydo," "Pro Plancio," &c.

**SUCCESSSES.**

1892-1899.—London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**

**M.A., 2 (1898 and 1899).**

**Diploma Correspondence College.**

The ONLY College that coaches SOLELY for

**A.C.P.,**  
**L.C.P., AND F.C.P.**

SUCCESSSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**THE SHEFFIELD SCHOOL**

BOARD requires at the Central Higher School, a Gentleman to teach German (Elementary and Advanced), with good qualifications and experience in teaching. He should be also able to take part in other work if necessary. Forms of application may be obtained from JNO. F. MOSS, School Board Offices, Sheffield. Clerk to the Board. March 20th, 1900.

Tenth Edition. 12mo, price 3s. 6d.

**THE ILLUSTRATED PUBLIC**

SCHOOL SPEAKER AND READER, based on Grammatical Analysis, comprising a choice Selection of pieces for Reading and Recitation, annotated for Expression, Emphasis, and Pauses, and illustrated by Diagrams and Figures exhibiting to the eye the appropriate gestures and positions, to which is added a selection of Greek, Latin, French, and German Extracts, suitable for "Speech Days" at Public Schools. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors. LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

**FREE GUIDE TO THE CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE TUTORIALS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.,

281 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1899, 56 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

**CAREY'S "GRADUS AD PARNASSUM,"**

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, Price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

**EXAMINATION PAPER**

AS USED BY THE COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets... per Ream, 2s. 6d.

" " 960 " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

**HEWARD & SHELBOURNE, Wholesale and Retail Stationers,**  
63 HIGH HOLBORN, LONDON, W.C.

**JOSEPH GILLOTT'S** Gold Medals, Paris, 1873, 1889.

Numbers for Use in Schools—  
381, 382, 383, 404, 729, 303,  
170, 168, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing);  
and (for Vertical Writing) 1045, 1046.

**STEEL PENS.**



## SHORT FRENCH EXAMINATION PAPERS (110),

Each containing Six Idiomatic Sentences to render into French.  
Price 2s. 6d., cloth.

Many of the grammatical questions are taken, by permission, from the Oxford and Cambridge Local Examinations, from those of the College of Preceptors, the London Matriculation, the Oxford and Cambridge Joint Board, and from the Cambridge Higher Local Examinations.

"A very useful set of questions."—*Modern Language Quarterly*.  
"The English idioms for translation into French are well chosen. It is a useful little book."—*University Correspondent*.  
"The exercises in the use of idioms are specially good."—*Bookman*.  
"Will be found serviceable for rapid drill in the hands of a judicious teacher."—*Educational Times*.

"Would afford useful practice for intending candidates."—*Education*.  
"We noticed at the time of its appearance this very useful collection of test papers, and need only here add that the key is full and accurate save for some obvious misprints and one or two slips that we have noticed."—*Journal of Education*.

"We are great advocates of abundant exercises; hence our immediate approval of this book."—*School Guardian*.

"We have much pleasure in recommending this useful collection of papers in grammar and idiomatic sentences. It will save the teacher many an hour of labour, and would be valuable for a class entering for an examination to work through steadily."—*Educational Review*.

A KEY, issued to Teachers and Private Students only, can be obtained from the Publishers. 6s. net. (A list of errata is issued with this.)

By H. R. LADELL, M.A., F.R.G.S.

## THE PUBLIC SCHOOL SPELLING CARD.

*Thirtieth Thousand. Price 6d. By the same Author.*

Containing nearly 1,000 words (in which actual mistakes have frequently been made, as collected from Dictations, Essays, Examination Papers, &c., during a period of more than fifteen years), with Rules.

Also, in Book Form, "HOW TO SPELL AND SPEAK ENGLISH." Third Edition. Price 1s.

This also embodies most of the errors in the sentences set for correction in the Examination Papers of the London Matriculation, the Oxford and Cambridge Locals, the College of Preceptors, &c.

## French Essentials and French Conversation Sentences.

Second Edition. Price 2s. cloth; 1s. 6d. boards. By the same Author.

"This short grammar is compiled by a master who knows his business. The type is good, the arrangement good, and there is nothing superfluous."—*Journal of Education*.

"Students preparing for examination in French grammar and composition will know the worth of this little book. The colloquial sentences at the end are a useful addition."—*Bookman*.

London: RELFE BROTHERS, Ltd., 6 Charterhouse Buildings, Aldersgate, E.C.

*Seventh Edition.* With an Appendix of Easier Exercises.

Fcap. 8vo, cloth, price One Shilling.


## HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

 Headmasters should apply for

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

## DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## W. & A. K. JOHNSTON'S School Wall Maps

Are the most accurate, the most carefully printed, and the mounting is superior to any others.

Three Series—Imperial, 21s.; Large Wall, 12s.; Small Wall, 6s.

100 Maps in all. A Handbook is given free with each Map.

Published under the auspices of the Navy League.

## THE NAVY LEAGUE MAP OF THE WORLD,

Illustrating British Naval History, and dedicated to the Children of the British Empire.

The publishers are pleased to announce the completion of this important Map. The size, 72 by 63 inches, gives ample scope for the work to be boldly treated, so as to be effective even in a very large room. The Map shows distinctly:—

The British Empire boldly Coloured in Red.  
Naval Stations Named and Outlined in Red.  
Wealth and Social Condition of the British Empire.  
European Navies and Commerce.  
Facts relative to British Territory, &c., &c.

Price, on Cloth, Stained Rollers, and Varnished, £1. 1s.

NEW EDITION.

## THE HOWARD VINCENT MAP OF BRITISH EMPIRE.

For Schools, Public Libraries, &c. Size, 72 by 63 inches. With Handbook gratis. Adopted by the London School Board.

£1. 1s., on Cloth, Rollers, and Varnished.

For full details of our Atlases, Wall Maps, Wall Illustrations, Object Lesson Pictures, Terrestrial and Celestial Globes, Scientific Works, &c., &c., see our Catalogue, which is posted gratis to any address.

W. & A. K. JOHNSTON (Established 1825),

Geographers to the Queen, Educational and General Publishers,

EDINA WORKS, EASTER ROAD, AND 20 SOUTH ST. ANDREW STREET, EDINBURGH  
5 WHITE HART STREET, WARWICK LANE, LONDON, E.C.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.  
By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.  
Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."

By JOSEPH B. CASEY, Tutor, University College, Dublin.  
Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."

Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

### ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.

Containing an account of its most recent Extensions, with numerous Examples.  
New Edition. Crown 8vo.

### A TREATISE ON

### ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

### PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples.

Crown 8vo. Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

### SPHERICAL TRIGONOMETRY,

AND ITS APPLICATION TO GEODESY AND ASTRONOMY.

With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN,  
LONDON: LONGMANS & CO.

**Now.**

**Now.**

**GILL'S**  
**"CARTOGRAPHIC"**  
**WALL MAPS**  
**FOR SECONDARY SCHOOLS.**

*Edited by GEORGE GILL, F.R.G.S.*

Size,  
80 × 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Price 16s.

\*ENGLAND AND WALES.

\*IRELAND.

INDIA.

ASIA.

\*SCOTLAND. WORLD (MERCATOR).

\*EUROPE.

\*AFRICA.

\*N. AMERICA.

\* The Set Geography for the Examinations for 1900.

**Special Class Text-Books for College of Preceptors' Examinations, 1900.**

<p><b>Luke</b> ..... MARSHALL ..... <i>s. d.</i> 1 6  <b>Acts of the Apostles</b>..... .. 2 6                  Or, in Two Parts ..... .. each 1 6  <b>Church Catechism</b> ..... .. 1 6  <b>Exodus (nearly ready)</b> ..... .. 1 6  <b>Genesis (nearly ready)</b>..... .. 1 6  <b>Preparation Papers on Luke and Acts</b>..... .. each 0 8</p> <p><b>Practical Book-keeping</b> ..... SARLL ..... 1 0  <b>Double Entry Book-keeping</b> ..... .. 2 0  <b>Exercises in Double Entry Book-keeping</b>..... .. 1 0  <b>Arithmetic</b> ..... GILL ..... 1 0  <b>Tests in Arithmetic</b> ..... .. 1 0</p> <p><b>Cæsar VI.</b> ..... NEW ..... 1 0  <b>Æneid VI.</b> ..... .. 1 0  <b>Cicero de Senectute</b> ..... .. 1 0  <b>Eutropius I., II.</b> ..... SQUIRE ..... 1 0  <b>Latin Preparation Papers</b> ..... PRESTON ..... 0 8  <b>French Preparation Papers</b> ..... .. 0 8  <b>Commercial French Correspondence</b> ..... SOLEIL ..... 1 0</p>	<p><b>As You Like It</b> ..... MARSHALL ..... <i>s. d.</i> 1 6  <b>Macaulay.—Lays</b> ..... .. 1 6  <b>Grammar</b> ..... BROOKE ..... 1 0  <b>Preparation Papers in Grammar</b> ..... PRESTON ..... 0 8  <b>History</b> ..... MONGAN ..... 2 6  <b>History</b> ..... .. 1 0  <b>History Outlines and Dates</b> ..... GUNNIB ..... 1 0</p> <p><b>Euclid (complete)</b> ..... MARSHALL ..... 2 6  <b>Euclid I.—IV.</b> ..... .. 1 0  <b>Algebra</b> ..... JONSON ..... 1 6  <b>Cambridge Local Algebra Papers</b>..... CUDWORTH ..... 0 8  <b>Cambridge Local Arithmetic Papers</b>..... .. 0 8</p> <p><b>Student's Europe</b> ..... GILL ..... 2 6  <b>Student's Africa</b> ..... .. 1 1  <b>Canada</b> ..... .. 0 8  <b>British Isles</b> ..... .. 1 6  <b>Junior Geography</b> ..... .. 1 0  <b>West Indies</b> ..... .. 0 4</p>
---	---

**General Publications for the Examinations and Class Use.**

<p><b>The Student's Geography</b> ... .. <i>s. d.</i> 4 6  <b>The O. and C. Latin, Part I. (Accidence)</b> ... .. 1 0  <b>The O. and C. Latin, Part II. (Exercises)</b> ... .. 1 0  <b>The O. and C. Latin, Part III. (Translations)</b> ... .. 1 0  <b>The O. and C. French, Parts I. &amp; II.</b> ... each 1 0  <b>The O. and C. Geography</b> ..... .. 1 0  <b>The O. and C. Genesis</b> ..... .. 1 0  <b>Physical Measurements</b> ..... .. 2 6                  or in Three Parts ..... .. each 0 9  <b>Elementary Physics</b> ..... .. 2 6  <b>Applied Mechanics</b> ..... .. 2 6  <b>Mechanics of Solids</b> ..... .. 2 0  <b>Mechanics of Fluids</b> ..... .. 2 0  <b>Magnetism and Electricity</b> ..... .. 2 6  <b>Physiological Charts</b> ..... .. Set of Three 21 0</p>	<p><b>Imperial Geography</b> ..... .. <i>s. d.</i> 2 6  <b>Chemical Laws and Problems</b> ..... .. 2 6  <b>Chemistry of Common Objects</b> ..... .. 2 6  <b>Chemistry Notes</b> ..... .. 1 0  <b>Imperial Theory of Music</b> ..... .. 2 6  <b>Normal Copy Books. In 12 Numbers</b> ..... each 0 2  <b>French Accidence</b> ..... .. 0 6  <b>The O. and C. Euclid</b> ..... .. 1 0  <b>Elementary Chemistry</b> ..... .. 2 6  <b>Science and Art Geometry. Parts I. and II.</b> each 1 4  <b>The School of Art Geometry</b> ..... .. 1 0  <b>Theory of Music. Part I.</b> ..... .. 1 0  <b>Theory of Music. Part II.</b> ..... .. 1 6  <b>Phædrus, Books I. and II.</b> ..... .. 1 0  <b>Long Tots and Cross Tots</b> ..... .. each 0 3</p>	<p><b>Victoria Atlas</b> ..... .. <i>s. d.</i> 1 0  <b>Chart of the Ox</b> ..... .. 7 6  <b>The Metric Chart</b> ..... .. 10 6  <b>Physical Map of England</b> ..... .. 5 0  <b>Advanced Hygiene</b> ..... .. 3 6  <b>Imperial French Primer</b> ..... .. 2 6  <b>The Admission Book</b> ..... .. 2 0  <b>The Roll Book</b> ..... .. 1 6  <b>Class Mark Book</b> ..... .. 2 0  <b>Pupil's Report Book</b> ..... .. 0 3  <b>Pupil's Mark Book</b> ..... .. 0 3  <b>Time Table Forms</b> ..... .. per packet 1 0  <b>Termly Report Forms</b> ..... .. 1 0  <b>New Government Drawing Copies</b> ..... .. 1 4  <b>South Kensington Demonstration Sheets</b> the set 15 0</p>
---	---	---

**GILL'S MILITARY DRILL.**

ARRANGED IN FOUR PARTS.

2/6 Part I.—Squad Drill. Part II.—Company Drill. Part III.—Physical Drill. 2/6  
 Part IV.—Manual Exercise for Rifle, and Bayonet Exercise.

WITH CHORAL MARCHES EASILY AND SIMPLY ARRANGED.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# JACKSON'S COPY BOOKS

STILL AT THE TOP.

**“A VERY WONDERFUL TRIUMPH.”**

**Jackson's System**

OF

**UPRIGHT PENMANSHIP**

IN RELATION TO

**“GREAT THOUGHTS” HANDWRITING COMPETITION.**

The **recent Competition** instituted by the proprietors of “Great Thoughts” gives the most surprising and decisive testimony to the inherent merits and unapproached superiority of Upright Penmanship. The fact that this Competition was open to all without favour or distinction, and that it was absolutely independent in its character, only emphasises the contrast and enhances the success of the **Vertical Writers**. It is hardly necessary to state that Mr. Jackson was not connected in any way whatever with this Competition, the promoters and adjudicators of which are utterly unknown to him.

SIX PRIZES, only, were offered to the three girls and the three boys who produced the best written transcriptions of a prose passage chosen by the Editor. THOUSANDS of competitors of both sexes sent up their work, and the report states that the task of adjudication was a most difficult one. FIVE out of the SIX PRIZE WINNERS came from five separate schools, and EACH ONE OF THOSE SCHOOLS adopted the Jackson System of Upright Penmanship many years ago, with the most gratifying results. The Winning Schools, as given in “Great Thoughts,” are here subjoined, together with their achievements in Vertical Handwriting. THE COINCIDENCE IS UNIQUE IN THE HISTORY OF PENMANSHIP.

1ST PRIZE (GIRLS).

**SIR JOSIAH MASON'S ORPHANAGE, BIRMINGHAM.**

(Grand Silver Challenge Shield-Holder for 1899-1900, and Winner of 399 Prizes and Certificates in Jackson's Imperial Competitions since 1894.)

1ST PRIZE (BOYS).

**SEAHAM HARBOUR NATIONAL SCHOOL.**

(Grand Silver Challenge Shield-Holder for 1897-8, and Winner of 766 Prizes and Certificates in Jackson's Imperial Competitions since 1889.)

2ND PRIZE (GIRLS).

**NORMA SCHOOL, WATERLOO, LIVERPOOL.**

(Grand Silver Challenge Shield-Holder for 1898-9, and Winner of 234 Prizes and Certificates in Jackson's Imperial Competitions since 1894.)

2ND PRIZE (BOYS).

**SOUTH HETTON BOYS' SCHOOL.**

(Winner of 413 Prizes and Certificates in Jackson's Imperial Competitions since 1891.)

3RD PRIZE (GIRLS).

**LADIES' SCHOOL, 21 ST. MICHAEL'S ROAD, WALLINGTON.**

(Winner of 90 Prizes and Certificates in Jackson's Imperial Competitions since 1888.)

**The above-named Schools also secured 51 out of the 247 Certificates of Merit awarded.**

NOTE.—The Winner of the Boys' 3rd Prize was 13 years old, had left School, and did not write in the Vertical Style.

For Prospectus, Prize List, Specimen Books, and all particulars of Jackson's System of Upright Penmanship, apply to the Publishers,

**SAMPSON LOW, MARSTON & CO., Ltd., St. Dunstan's House, London, E.C.**

# MR. EDWARD ARNOLD'S LIST.

**German Without Tears.** An Edition in German of Mrs. HUGH BELL's "French Without Tears." With Illustrations. Book I. now ready. Price 9d.

**French Without Tears.** A Graduated Series of French Reading Books, arranged to suit the requirements of quite Young Children beginning French. With Humorous Illustrations and a Vocabulary. By Mrs. HUGH BELL, Author of "Le Petit Theatre des Enfants." Book I., 9d. Book II., 1s. Book III., 1s. 3d.

## SIMPLE FRENCH STORIES.

An entirely new Series of easy Texts, with Notes and Vocabulary, prepared under the General Editorship of Mr. L. VON GLEHN, Assistant-Master at Merchant Taylors' School. Price of each Volume, 9d.

**Un Drame dans les Aïrs.** By JULES VERNE.

**Pif-Paf.** By EDOUARD LABOULAYE.

**La Petite Souris Grise; and Histoire de Rosette.** By Madame DE SÉGUR.

**Monsieur Le Vent et Madame la Pluie.** By PAUL DE MUSSET.

*Others in rapid preparation.*

**Geographical Pictures.** Edited by W. L. WYLLIE, A.R.A. Eight splendid Pictures of Famous Landmarks of Geography. Size 30x20 inches. Unmounted, 1s. 6d. each net; post free, 1s. 10d. Mounted on linen and varnished, with rollers and tapes for hanging, 2s. 6d. each net; post free, 2s. 10d. Handsomely framed, unglazed, 5s. net. Framed and glazed, 7s. 6d. net.

**An Illustrated School Geography.** By ANDREW J. HERBERTSON, M.A., F.R.G.S., Lecturer in Geography in the Heriot-Watt College, Edinburgh; and formerly in the Owens College, Manchester, and ALEXIS E. FRYE. With sixteen pages of Coloured Maps, about fifty Outline and Photographic Relief Maps, and nearly seven hundred magnificent Illustrations and Diagrams. Large 4to (about 12 by 10 inches), 5s.

**English History.—For Juniors.** By E. S. SYMES, Author of "The Story of London," "The Story of Lancashire," &c. With Illustrations and Maps. Crown 8vo, cloth, 2s. 6d.

**England in the Nineteenth Century.** By C. W. OMAN, M.A., Fellow of All Souls' College, Oxford; Author of "A History of England," "The Art of War in the Middle Ages," &c. One Vol., crown 8vo, 3s. 6d.

**A History of England.** By CHARLES OMAN, M.A., Fellow of All Souls' College, Oxford; Author of "Warwick the Kingmaker," "A History of Ancient Greece," "A History of Europe, A.D. 476-928," &c.

New and Revised Edition, fully furnished with Maps, Plans of the Principal Battlefields, and Genealogical Tables. 760 pp., crown 8vo, cloth, 5s. Also, in Two Parts, each part complete, with Index, 3s. Part I.: From the Earliest Times to 1603. Part II.: From 1603 to 1885.

**Africa as seen by its Explorers.** Containing Extracts from the Writings of more than Fifty Explorers, from the time of Herodotus to the present day. Edited by E. J. WEBB, B.A. With Illustrations. Crown 8vo, cloth, 2s.

**The King Alfred Readers:** An entirely New Series of Literary Readers, in Eight Volumes, beautifully Illustrated in Colour and Black and White. Books I. to VII. now ready, prices 8d. to 1s. 6d. An Introductory Reader is in the press.

**Passages for Dictation:** Selected from the Works of the best Prose Writers for Advanced Students. They are arranged in Two Parts, and will be found useful to candidates for the Teachers' Examination, Civil Service, and other Competitive Examinations. In limp cloth, price 10d.

## ENGLISH TEXT-BOOKS FOR LOCAL EXAMINATIONS.

**As You Like it.** Edited by S. E. WINBOLT, B.A., Assistant-Master at Christ's Hospital. Cloth, 1s. 3d.

**Scott—Marmion.** Edited by G. TOWNSEND WARNER, M.A., Assistant-Master at Harrow School. Cloth, 1s. 6d.

**Milton—Paradise Lost.** Books III. and IV. Edited by J. SARGEANT, M.A., Assistant-Master at Westminster School. Cloth, 1s. 3d.

**Scott—Lay of the Last Minstrel.** Edited by G. TOWNSEND WARNER, M.A. Cloth, 1s. 3d.

**Macaulay—Lays of Ancient Rome.** (Including *Ivry* and *The Armada*). Edited by R. L. A. DU PONTET, M.A., Assistant-Master at Winchester College. Cloth, 1s. 6d.

A COMPLETE EDUCATIONAL CATALOGUE WILL BE FORWARDED POST FREE ON APPLICATION.

London: EDWARD ARNOLD, 37 Bedford Street, Strand.

# Blackwoods' Literature Readers.

Edited by JOHN ADAMS, M.A., B.Sc., F.C.P., Rector of the Free Church Training College, Glasgow.

*The Series consists of Four Volumes.*

**Book I.** 228 pp. ... Price 1s. | **Book III.** 303 pp. ... Price 1s. 6d.  
**Book II.** 275 pp. ... Price 1s. 4d. | **Book IV.** 381 pp. ... Price 1s. 6d.

"The volumes, which are capitally printed, consist of selected readings of increasing difficulty, to which notes and exercises are added at the end. The selected pieces are admirably chosen, especially in the later books, which will form a beginning for a really sound and wide appreciation of the stores of good English verse and prose."  
*—Athenaeum.*

"The selected readings... are interesting, and possessed of real literary value. The books are well bound, the paper is excellent, and the unusual boldness and clear spacing of the type go far to compensate for the entire absence of pictorial illustrations."  
*—Guardian.*

"A very excellent gradus to the more accessible heights of the English Parnassus. The appendices on spelling, word-building, and grammar are the work of a skilful, practical teacher."  
*—Pall Mall Gazette.*

"If we had the making of the English Education Code for Elementary Schools, we should insert a regulation that all boys and girls should spend two whole years on these four books, and on nothing else."  
*—Bradford Observer.*

## BLACKWOODS'

## ILLUSTRATED CLASSICAL TEXTS.

General Editor—H. W. AUDEN, M.A., Assistant-Master at Fettes College.

NOW READY.

**Cæsar—Gallic War. Books IV., V.** By ST. J. B. WYNNE WILLSON, M.A., Assistant-Master at Rugby. *With or without Vocabulary.* 1s. 6d.

*(Prescribed for the Oxford Local, London Matriculation, and College of Preceptors Examinations, 1900.)*

"Mr. Willson has certainly succeeded in giving boys all the information and the help they could possibly desire for translating Cæsar, and we may say that a thorough acquaintance with the contents of this volume would be a considerable step towards a knowledge not only of Latin, but of Roman history and antiquities in general. The notes are copious and accurate; while an appendix of proper names, with historical and geographical notes, is a good feature."  
*—Journal of Education.*

"The grammatical notes, which in the early part are intentionally numerous, are clear and often suggestive. The edition is evidently the work of a practical schoolmaster."  
*—Educational Times.*

"A very attractively edited volume, with some quite successful pictures and good notes which reach a really high level of merit."  
*—Guardian.*

"We wonder how it can be done at the price."  
*—Public School Magazine.*

**Virgil—Georgics. Book IV.** By J. SARGEANT, M.A., Assistant-Master at Westminster. 1s. 6d.

*(Prescribed for the Cambridge Higher Local Examinations, 1900, 1901.)*

"The editing of the specimen before us is thoroughly competent; the notes are brief and interesting, and the introduction and the appendices are of more than average merit. The price of the book is remarkably low."  
*—Educational Times.*

"The book is the best we have seen of the new type of school-book. If Messrs. Blackwood keep up to this standard, their series will stand high."  
*—Literature.*

"There is a pleasing freshness about this volume."  
*—Athenaeum.*

READY IMMEDIATELY.

**Cicero—In Catilinam. Books I.—IV.** By H. W. AUDEN, M.A., Assistant-Master at Fettes College.

**Ovid.—Metamorphoses (Selections).** By J. H. VINCE, M.A., Assistant-Master at Bradford.

**Demosthenes.—Olynthiacs I.—III.** By H. SHARPLEY, M.A., formerly Assistant-Master at Marlborough.

**Xenophon.—Anabasis. Books I., II.** By A. JAGGER, B.A., Hymer's College, Hull.

**Cæsar.—Gallic War. Books I.—III.** By J. M. HARDWICH, M.A., Assistant-Master at Rugby.

*Other Volumes in preparation.*

## BLACKWOODS' ENGLISH CLASSICS.

With Frontispieces. In fcap. 8vo volumes, cloth.

General Editor—J. H. LOBBAN, M.A., Editor of "English Essays," formerly Examiner in English in the University of Aberdeen.

*The following Volumes have been arranged for:—*

**Milton.—Paradise Lost. Books I.—IV.** By J. LOGIE ROBERTSON, M.A., First English Master, Edinburgh Ladies' College. [*Immediately.*]

**Cowper.—The Task, and Minor Poems.** By ELIZABETH LEE, Author of "A School History of English Literature." [*Immediately.*]

**Johnson, Lives of Milton and Addison.** By Prof. J. W. DUFF, M.A., the Durham College of Science, Newcastle-upon-Tyne. [*Immediately.*]

**Macaulay.—Essay on Johnson.** By D. NICHOL SMITH, M.A., Editor of "King Henry VIII." (Warwick Shakespeare). [*Immediately.*]

**Goldsmith.—Traveller, Deserted Village, and other Poems.** By J. H. LOBBAN, M.A., formerly Assistant-Professor and Examiner in English, University of Aberdeen. [*Immediately.*]

**Milton.—Lycidas, L'Allegro, Il Penseroso, Comus, Arcades.** By C. J. BATTERSBY, M.A., Grammar School, Bradford.

**Scott.—Lady of the Lake.** By W. E. W. COLLINS, M.A.

*Other Volumes to follow.*

WILLIAM BLACKWOOD & SONS, Edinburgh and London.

# CAMBRIDGE UNIVERSITY PRESS.

READY MAY 1ST. — NEW WORK BY SIR JOSHUA FITCH. Crown 8vo, 5s.

**EDUCATIONAL AIMS AND METHODS.** Lectures and Addresses by Sir JOSHUA FITCH, M.A., LL.D., late Her Majesty's Inspector of Training Colleges, and Author of "Lectures on Teaching," "The Arnolds and their Influence on English Education."

The forthcoming volume consists of lectures and addresses given in Cambridge, or before the Teachers' Guild and other bodies of teachers in England and in America. Its general aim is to direct attention to various aspects of educational theory and of practical work; and it includes several monographs on the lives of distinguished and representative teachers.

BY THE SAME AUTHOR.

**LECTURES ON TEACHING.** Delivered in the University of Cambridge in the Lent Term, 1880. Crown 8vo, New Edition, 5s.

NEARLY READY.—THIRD EDITION OF "OEDIPUS COLONEUS."

**SOPHOCLES.—THE PLAYS AND FRAGMENTS,** with Critical Notes, Commentary, and Translation in English Prose, by R. C. JEBB, Litt.D., M.P., Regius Professor of Greek in the University of Cambridge. Demy 8vo.

Part II. **OEDIPUS COLONEUS.** Third Edition. 12s. 6d. Nearly ready.

Part III. **ANTIGONE.** Third Edition. *In the press.*

Part VIII. **THE FRAGMENTS.** *In the press.*

*Classical Review.* "Of the 'Sophocles' as a whole we can only add our mite to the general verdict of scholars, who place it in the first rank of extant editions of the classics."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Lecturer on Education in Victoria University.

ADAPTED FOR USE OF CANDIDATES FOR CERTIFICATE EXAMINATIONS OF EDUCATION DEPARTMENT.

**THE EDUCATION OF THE YOUNG IN THE REPUBLIC OF PLATO.** Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo, 2s. 6d.

**THE MAKING OF CHARACTER:** some Educational Aspects of Ethics. By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, 2s. 6d.

*Literature.*—"An acute and thoughtful book."

*Leeds Mercury.*—"A volume which deserves to be not merely read, but studied by all practical educationalists."

*Scotsman.*—"It cannot but prove both helpful and stimulating to those who have to teach teachers, and to those pupil-teachers and candidates for certificates for whose use this able series has been prepared."

SPECIALLY SUITED FOR CANDIDATES FOR QUEEN'S SCHOLARSHIP EXAMINATIONS, DECEMBER, 1900, AND CERTIFICATE EXAMINATIONS, JULY, 1900.

**A SHORT HISTORY OF THE EXPANSION OF THE BRITISH EMPIRE, 1500-1870.** By W. H. WOODWARD, Christ Church, Oxford; now the Principal of the University (Day) Training College, Liverpool, and Lecturer on Education in Victoria University. With Seven Maps, crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenaeum.*—"Thoroughly to be recommended."

*Manchester Guardian.*—"Mr. Woodward has produced a volume which has set a high standard for the series. . . . A workmanlike and scholarly piece of historical study."

*Educational Times.*—"Mr. Woodward tells the story *in usum scholarum* in an altogether admirable manner."

## COLLEGE OF PRECEPTORS' EXAMINATIONS, JULY AND DECEMBER, 1900.

### CAMBRIDGE MILTON FOR SCHOOLS.

*Guardian.*—"This edition will, we feel sure, long continue to be the standard school text of 'Paradise Lost.'"

**Paradise Lost, Books III. and IV.** Edited, with Introduction and Notes, by A. W. VERITY, M.A. 2s.

### PITT PRESS SERIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Macaulay	Days of Ancient Rome (with Ivory and The Armada)	J. H. Flather	1 6
	<i>School World.</i> —"In thorough keeping with the other volumes of this series, an evidence of patient labour, and no mean tribute to Macaulay himself. . . . The notes are brief and pointed, and two useful maps are appended. The introduction is brief, but exceedingly well done."		
Scott	Marmion	J. H. B. Masterman	2 6
	<i>Guardian.</i> —"Far and away the best school edition of the poem we have seen; and it will be difficult, probably impossible, to improve on it."		
Scott	Lay of the Last Minstrel	J. H. Flather	2 0
	<i>Guardian.</i> —"It is one of the very best edited school-texts ever placed before the public."		
Caesar	De Bello Gallico, Books IV.-V. (Subject, Book V.)	A. G. Peskett	1 6
"	De Bello Gallico, Book VI.	"	1 6
Cicero	De Senectute	J. S. Reid	3 6
Horace	Odes, Book III.	J. Gow	2 0
Livy	Book XXII.	M. S. Dimsdale	2 6
Vergil	Aeneid, Books VI. and XII.	A. Sidgwick	each 1 6
Euripides	Medea	C. E. S. Hoadlam	2 6
Lucian	Menippus and Timon	E. C. Mackie	3 6
Xenophon	Anabasis, Books III. and V.	A. Pretor	each 2 0

### THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

**As You Like It.** 1s. 6d. With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge.

*Guardian.*—"Mr. Verity, the editor, has provided material for all sorts of students. For the beginner we have the notes and a reprint of Charles Lamb's outline of the story. For older readers we have copious extracts from Lodge's 'Roslynde.' For the examinee, the etymologist, and the curious student, we have the glossary, the index of the important words and phrases, and the notes on metre and on the date and sources of the play. All of these aids evince patient research, accurate scholarship, and thoughtful judgment."

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*School Guardian.*—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars; their names are a guarantee of their work. These text-books will find their way into numberless preparatory schools and lower forms of public schools; they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary: the student, however elementary his knowledge, needs only the book in hand and a simple grammar."

The following editions have COMPLETE VOCABULARIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Caesar	De Bello Gallico, Books V. and VI.	E. S. Shuckburgh	each 1 6
Vergil	Aeneid, Books VI. and XII.	A. Sidgwick	" 1 6
Xenophon	Anabasis, Books III. and V.	G. M. Edwards	" 1 6

\*. Cambridge Editions of Caesar, Vergil, and Xenophon.—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the Pitt Press Series and the Cambridge Series for Schools and Training Colleges. The Editions in the Cambridge Series for Schools and Training Colleges have Complete Vocabulary. If, in ordering, the Edition required is not specified, the Pitt Press Edition, without vocabulary, will be sent.

### PITT PRESS SERIES.—NEW VOLUMES.

**Cicero.—Pro Lege Manilia.** Edited, with Introduction and Notes, by J. C. NICOL, M.A., Trinity Hall, Master of Portsmouth Grammar School. 1s. 6d.  
*Glasgow Herald.*—"A very scholarly piece of work."  
*School World.*—"This edition is to be recommended to those who want their forms to exercise common sense and learn something of the genius of the Latin language, as well as to 'get up' the translation and allusions."

**Hauff.—Der Scheik von Alessandria und seine Sklaven.** Edited, with Notes and Vocabulary, by W. RIPPMMANN, M.A., Professor of German at Queen's College, London. 2s. 6d.  
*Educational Times.*—"This is a welcome addition to the elementary reading books available for schools, the 'Karavane' having become almost too buckneyed, and Mr. Rippmann's name is sufficient guarantee for good editing."



CONTENTS.

	Page		Page
Higher Elementary Schools .....	201	Forecasts and Comments:—Fixtures .....	211
Frances Mary Buss .....	202	Education Gossip .....	212
Notes .....	204	Appointments and Vacancies.....	212
Summary: The Month .....	204	Literary Gossip.....	213
Universities.....	206	Commercial Education in Secondary Schools. By A. Kahn, M.A. Paper read at the Evening Meeting of the College of Preceptors .....	213
On Vocabulary Making .....	206	Two Hundred Years Ago .....	216
The Prussian Academy .....	207	Meeting of the Council of the College of Preceptors .....	217
Correspondence .....	207	Reviews.....	217
Practical Use of Phonetics; Elementary- <i>cum</i> -Secondary Schools; Paris International Assembly.		Two Histories; Nimium in Parvo; A New Cyclopædia; Books for Teachers; The Greek Lyre; Aristotle; Semitic Civilization.	
		General Notices .....	221
		Mathematics.....	223

The Educational Times.

Higher Elementary Schools.

THE Board of Education is at work, and, so far as elementary education is concerned, it is beginning to show its hand. Such of us as are interested mainly in higher and secondary education must be content to wait a little longer, until the Departmental Committee, appointed last July, has had time to make its final report. On November 2 the Duke of Devonshire stated officially that "the Committee will have regard, in their recommendations, to the provisions of the Board of Education Act relating to secondary schools, and the undertaking of the Government to establish a third branch of the Education Office to deal therewith." On February 12, in answer to a question in the Commons, Sir John Gorst said: "The Committee have made already two interim reports. The final report is shortly expected." On March 8 Sir John Gorst said, in answer to Mr. McKenna: "The arrangements for establishing a third branch of the Board of Education are still under consideration." Now it is May; Parliament has reassembled after the Easter recess, but, at the moment of writing, we are not aware that the third branch is established, or that the Consultative Committee is appointed. The first members of this Committee, our readers will remember, are to be "appointed by Order in Council," without the advice of the Universities and other educational bodies, and "subsequent members in such manner as the Order in Council may direct." That is how we stand at present—in an attitude of indecision and expectancy. The President and Vice-President of the Board must not think us unduly inquisitive. The Act of 1899 is not remotely connected with secondary education. It is the outcome of secondary zeal, of secondary Conferences, of a secondary Royal Commission. We have no desire for raw haste; but secondary teachers will doubtless be glad when the work of registration is put in hand, and when the third branch is organized under an Assistant-Secretary who understands the recent developments and present needs of secondary education.

Meanwhile, as we have said, the Board has made a beginning of its new work. The Committee of Council never saw fit to regularize the position of the higher-grade schools, which were in their origin an irregular encroachment by the elementary School Board on the secondary domain. The Board of Education,

with its ampler powers, has decided that such schools shall be conducted by the Board (with separate registers and separate accounts) for pupils up to the close of the year in which they attain the age of fifteen, and with State grants for each pupil on the following scale:—

	Fee Grant.	Principal Grant.		Practical Work Grant.	
		Higher Scale.	Lower Scale.	Higher Scale.	Lower Scale.
First year.....	10s.	27s.	25s.	8s.	6s.
Second year...	10s.	35s.	33s.	12s.	10s.
Third year ...	10s.	47s.	40s.	18s.	15s.
Fourth year...	10s.	65s.	55s.	25s.	18s.

That is to say, when the Inspector is satisfied, and when provision is made for "practical work," the State will find fees varying from £2. 5s. to £5. There is nothing in the Minute from which we are quoting to show who is to build and maintain the edifice of the Higher Elementary schools, but we presume that in this respect the precedent set in the higher-grade schools will be followed—that is to say, that the premises will be provided out of the rates.

This, of course, is secondary education, supplied by the State up to an outside age limit of sixteen, in competition with private enterprise and endowment. But there are two saving clauses:—(1) The schools are to be exclusively continuation schools, for pupils who have been at least two years in an ordinary public elementary school (Board or Voluntary); and (2) "The school must be shown, to the satisfaction of the Board, to be necessary in the locality." The latter of these guarantees is vague, inasmuch as "the satisfaction of the Board" is indeterminate. The former is an absolute guarantee as far as it goes, but it is quite possible that some of the pupils in the new schools (which may be multiplied indefinitely) will be diverted from endowed and private schools. We have, however, always anticipated that continuous education on Board-school lines would be systematized under the new organization. The State was bound to make provision for it, and though a large number of the pupils in the Higher Elementary schools will be under the old elementary age-limit, and all of them will be transferred from the ordinary elementary schools, we need not

be so doctrinaire as to complain that this first step of the Board of Education perpetuates the overlapping of elementary and secondary provisions.

*Frances Mary Buss.*

In the history of the recent changes in girls' education, once more brought to public notice by the jubilee of the North London Collegiate School, whose existence exactly coincides with the last half-century, there are few elements more interesting than the personality of Miss Buss. She marks a distinct change in the type of headmistress. Instead of aiming at appearances, accomplishments, and mere show of any kind in her pupils, she substituted solid acquirements, common sense, and modest demeanour. "Be visible through and through" she would say to them, and certainly she lived up to the maxim herself. After insisting on being trained for her work before beginning it, she set herself a clear task, namely, to plan a scheme of religious and liberal education, and to bring it within reach of the great middle class. Her first prospectus boldly appealed to "professional gentlemen of limited means, clerks in public and private offices, and persons engaged in trade and other pursuits." This dominant note has been maintained throughout the fifty years of the life of the school, and, even looking at the many University honours gained by the pupils, we consider that none of them so truly redound to the glory of the institution as its absolute lack of that snobbishness which has become such a blot on our boys' public schools. Its *esprit de corps* even has been free from all exclusiveness, so that last month's jubilee seemed more like that of the whole field of education than that of a single school, started as a private venture in a London suburb, amid all the prejudices of the early Victorian period.

With regard to Miss Buss's general management we have only met with one adverse criticism—as to her tendency to over-organization. Notoriously bad as were the results of the old-fashioned ladies' schools, with their innocence of time-tables and system generally, there is a distinct, if subtle, danger in the opposite extreme. Under Miss Buss's *régime* the girls were forced willy-nilly to be methodical and business-like. Rules punctuated every step they took, time was mapped out so that not a moment was lost—a very little margin was left for individual judgment and the wise exercise of liberty. Was an action right or wrong? "Multiply the results" was the touchstone Miss Buss would apply. Thus there was a rule that no girl must put her hand on the banister, for, if some four hundred did so, the banister would be soiled. And rules of this type were innumerable. Logically there should have been a prohibition of sneezing, for, if the whole school had sneezed at once, the result might have been dire. In girls of a weak character this excess of rules dealing with trifles has a tendency to make them weaker still, by checking the power of initiative, while in the case of the nervous and over-conscientious more serious results are possible. And we are disposed to conclude that the typical "North Londoner," with her prompt and orderly habits, is what she is in virtue of the general tone of the school, and in spite of the excessive amount of regulations laid down for her well-being.

The school authorities have printed a "Jubilee Magazine" with illustrations and articles describing the history of the school. A paper by Mrs. Bryant on its development from the earliest days, with an account of the achievements of

pupils in examinations, deserves preservation in some more permanent form. It shows how a consistent ideal of intermediate education has been maintained throughout the school's career. More might easily have been done to make the number of value as a commemorative record. An analysis of the school registers as to numbers, ages of entrance, average length of a pupil's school life, social origin, whether any changes were observable in later years as due to the Elementary Education Act of 1870, with some account of the actual organization of the school for teaching and games, might well have been included. Instead, we have a smart, pleasantly written analysis of the characteristics of the "new girl," and a learned disquisition on the doings of the "old girl" from the days of Clytemnestra to those of Miss Frances Power Cobbe. We may add that some of the "Memorabilia" or personal anecdotes of Miss Buss she herself would have cut out with a ruthless hand. The following, which does not appear, is very characteristic:—"I was once in church," she told the present writer, "with a pewful of girls, and saw symptoms of a fainting fit in one of them; I leant across and whispered in her ear: 'You dare faint!' This completely restored her." Those who knew Miss Buss will readily believe that it did.

## NOTES.

FOLLOWING close on the reorganization of the Education Department and the constitution of the Board of Education, it was announced that Mr. W. Tucker, C.B., a Principal Assistant-Secretary to the Board of Education, had retired from the service on reaching the age of sixty-five. Mr. J. White (Assistant-Secretary) has been promoted to be Principal Assistant-Secretary; Mr. F. R. Fowke (assistant-director for science); Mr. H. W. Hoare, Mr. W. I. Ritchie, and Mr. H. M. Lindsell (senior examiners) to be Assistant-Secretaries. It will be remembered that Mr. Tucker was a member of the Reorganization Committee, and that he was appointed as the first Principal Assistant-Secretary for Elementary Education at Whitehall under the new Board. Sir George Kekewich has notified that communications relating to Elementary Education should be addressed to "The Secretary, Board of Education, Whitehall," and those relating to Science, Art, and Technical Education to "The Secretary, Board of Education, South Kensington." How and where are we to address communications relating to Secondary Education—when it is neither science nor art, nor technical instruction?

PRESENTATION DAY at London University falls on Wednesday, May 9, when it is hoped that the Prince of Wales will be able to preside. The ceremony will be held at the new home of the University, at South Kensington, to which most of the effects of the University have now been removed. An effort is being made to retain the buildings at Burlington Gardens for the use of the University; though it is feared that the Treasury has already destined these buildings to a different purpose. The old lecture-theatre in Burlington Gardens could doubtless be put to very good use by the London Senate, which within the next few years will widely extend the sphere of its operations. More room, as we have always said, must soon be found for the metropolitan University, but for this and other

purposes we ought now to look to the munificence of private donors.

A good example of the complete misconception which exists on some School Boards as to their proper sphere of work is afforded by the letter of the Chairman of the Cardiff School Board in the *Times* of April 24. He there complains that, by the limitations of the new Minute issued by the Board of Education, it will be impossible to train their pupils in future for the Trinity College, Cambridge, scholarships. He is proud of the fact that last year one of their pupils secured a £100 scholarship at Trinity. This only shows how misguided much of the educational enthusiasm of the country is. Without pressing the technical objection that it is not within either the letter or the spirit of the Elementary Education Acts that the rates should be used for such lines of education, it is self-evident that the work can only be done at the expense of the real work of "higher elementary" schools. This should be technical and commercial, preparatory to the technical school proper, while it is the function of the secondary school to prepare for the Universities.

THE discussion on the subject of "Our Educational Organization" at the conference of the National Union of Teachers at York indicated a general unanimity with regard to the formation of the future Local Educational Authorities. The conference suggested that the Authorities should be elected on the parochial register, for the same areas as the County Councils, and should be responsible for primary, secondary, technical, and commercial schools within such areas. The scheme, doubtless, has the merit of simplicity, and in educated constituencies it is probable that fit representatives would be chosen. Such Authorities, however, would have a large spending power, and it would be difficult to prevent the election of members being affected by political and mere local considerations. No special aptitude for the work to be done could be assured, and the duties might just as well be performed by the existing County Councils. The ideal Authority is, however, still undiscovered. When are we to have the Government's promised Bill?

A LITTLE to our surprise, the grievances of the assistant-masters of our secondary schools found voice in a recent Socialist conference. The circumstance shows a growing appreciation of the importance to the State of the well-being of the scholastic profession. The inadequate salaries of assistant-masters in secondary schools was fully admitted, and complaint was made of the high salaries paid to headmasters in comparison with those paid to their assistants. What is most required is a levelling up; for, except in, perhaps, half-a-dozen schools, headmasters are by no means overpaid. It is certainly true that headmasters in both public and private schools are often overworked; but, as overwork involves a violation of the eight hours' day gospel, they must not expect any Socialist sympathy.

It would appear, from the Archbishop of Canterbury's speech at the meeting in support of the National Society held at Canterbury, that the Society contemplates an extension of its activity into the area of secondary education. Dr. Temple

found a tendency in certain quarters to exclude religion as much as possible from such education owing to the inextricable network of conflicting interests involved. To avoid such a calamity he would give parents everywhere the right of choosing for themselves the kind of religious instruction to be given to their children. This is somewhat vague, and, taken literally, sounds an impossible solution if religious instruction is to form part of the school curriculum. There would, we suspect, be differences even among Church people as to the scope and character of such instruction. The common-sense view of the matter is one we have already expressed in these columns—that the Board of Education, in dealing with secondary schools, should pursue its course as if no religious question existed. Thus, it will not require the watchful attention of the National Society now advised by the Archbishop. When the religious bodies are agreed upon a scheme, it will be a simple matter to pass it into law.

THE Franco-English Guild, which enjoys the patronage of the French Minister of Public Instruction, the English Education Department, and the American, as well as the English, Ambassador, bids fair to enlarge its activities this notable Exhibition year. The history of the Guild has, indeed, been one of steady growth; and it has done much to give practical expression to the *entente cordiale* that has so long—may we not say always?—marked our relations with our neighbours in matters educational. And this is not surprising seeing that the classes, the reunions, and the monthly meetings organized by the Committee afford opportunity for much pleasant intercourse. Occasional lectures of more than usual interest are also given, and some well known English names appear on the lists. Thus, some months ago, Mrs. Henry Sidgwick (Principal of Newnham College) addressed the members on "The Place of University Education in the Life of Englishwomen"; some time after Mrs. Wynford Philipps (foundress of the Women's Institute) dealt with "Women's Work in London." Lately, too, other characteristic sides of club-life (the reading-room, the tea-room, the library, &c.), have been developed—these, it may be noted, are far less familiar to the French than to the English "working woman"—and the present *local* is situated in the Rue de la Sorbonne, the very centre of academic life and interests. The Guild has now passed into its tenth year of existence, and it numbers with the American contingent over three hundred members, of whom more than two-thirds are French. A Franco-Polish section has just been affiliated at the request of some of the Polish residents in Paris.

AMONGST the many difficult problems which confront those who administer our English Poor Law there is probably none more serious than that of dealing with the children who, through no fault of their own, are brought within the circle of its operation. In the past, evil has too often resulted from early contact with the workhouse, but there are many signs which point to better things to come. Most persons are agreed that to take the children out of the workhouse atmosphere is the first and most imperative duty of those responsible—to set them in a new place, and give them a chance of developing healthily and normally. At Styal, in Cheshire, there is a happy and well

managed colony of such children living in separate homes under the care of foster-mothers. Nobody who sees the children at work or play can doubt the wisdom of the Guardians of the Chorlton Union, who are responsible for the Styal Colony. In Whitechapel a somewhat different experiment is about to be tried. Semi-detached cottages are to be the homes of the children here, and the number of children under the care of one foster-mother is not to exceed ten. This is a smaller number than the Styal mothers look after, but it is quite large enough. At Whitechapel also the boys and girls will be mixed in the different homes as they are under normal conditions, and this is as it should be, though it is unusual in such institutions. The children are to go to a neighbouring elementary school, and there will be no distinctive dress or badge to mark them off from their schoolfellows. A lady superintendent, who is to be a trained nurse, will have the general control and government of the children, and to her the various foster-mothers will be able to turn in any doubt or difficulty which may meet them in their work. How *Oliver Twist* would have stared could he have been transported by the time-machine to Whitechapel, and the foster-mother in the semi-detached cottage; and how Charles Dickens would have rejoiced to see the walls rising for the buildings which are intended to be real *homes* for these London children!

The Society of Experimental Fish Culture is getting to work at the Crystal Palace, which is to be its headquarters. Its museum, speaking in a wide sense, will include specimens of living fish and the creatures on which they feed. The general public will soon have an opportunity of adding to their knowledge, and the proposed system of detailed labels should help them considerably. It would be better if we bore in mind more than we do the definition of a great authority, who said that "a museum is a collection of labels illustrated by suitable specimens." The full value of our public natural history collections has never been properly recognized from an educational point of view. Professor Flower did much at the British Museum in Cromwell Road, and his teaching is making itself felt in those institutions which have left the days of rare-shows behind. Educational series of plants and animals are considered a necessary adjunct to the collections from the country which it is the aim of local museums to get together. In individual cases the whole museum became educational, and natural history made one subject among a number. Many existing collections might be made more interesting and capable of imparting knowledge in a direct way by the expenditure of a little trouble and money. The Buckland Museum of Economic Fish Culture has long been a standing example; but perhaps no better instance could be taken than the Zoological Society's Gardens in Regent's Park. Here the labels tell nothing further than the name, sex, locality, and donor of the animal. The visitor learns nothing further unless he obtains the printed guide, which is totally inadequate, and he must get some naturalist of his acquaintance to go with him if he really wants to know the interesting points about the creatures before him, which appeal all the more strongly to him, being, as they are, alive. Some lecturers on natural history have used the Society's collection to supplement museum work, but the task of doing so is by no means easy under the existing conditions.

## SUMMARY.

### THE MONTH.

On April 3 a service was held in St. Paul's Cathedral in commemoration of the founder and benefactors of the Frances Mary Buss Schools. While the opening hymn—"All people that on earth do dwell"—was being sung, a procession, headed by more than a hundred lady graduates, passed up the centre aisle. Representatives of schools and educational associations followed, and behind them representatives of colleges and University authorities, administrative City Companies, school authorities, and, last of all, the Bishop of London and the Archbishop of Canterbury. The form of service included a commemoration of the founder and benefactors, which was said by the Bishop of London, the congregation standing. This was succeeded by two thanksgivings, one for "the foundation and progress of the Frances Mary Buss Schools," and the other "for all benefits to the education of women during the half century."

Taking as his text the words, "Who can find a virtuous woman? for her price is far above rubies," the Archbishop remarked that one of the first things said of the woman spoken of in the chapter from which these words were selected was that she could be trusted because she had been educated to be a woman in reality. If women were to be educated as they should be, there was no faculty which they possessed, no impulse, no affection, no quickness of wit, no delicacy of conscience, which did not demand to be cultivated to the highest point. She should be developed into a real woman, just as a man should be developed into a real man. The utilitarian view of education must not be pushed too far. A woman would render all the duties she owed to her place in God's system more efficiently if her whole mind were trained than she would otherwise do. In many ways their education must differ from that of men, but whatever power they had ought to be cultivated to the very utmost. How were they to determine what the education of women should be? The answer was that it must be determined by experience. Let women choose for themselves, pursue any study for which they had a natural desire, because, as a rule, it would be found that for that they had a natural aptitude. If left to themselves to study how and what they wished, it would be found more and more that the great principle on which women's education had to be guided would be visible to women themselves, and, without any restraint from men, they would follow that which suited the whole sex best and would become real women—the most blessed gift of God.

On April 5 a meeting of old pupils was held at the Clothworkers' Hall, kindly lent for the occasion by the Worshipful Company of Clothworkers. Mr. Cronin, Master of the Company, who presided, welcomed the gathering to the hall, and in a speech pointed out the paramount value of education as a training for life. Subsequent speakers, all of whom, in the course of personal reminiscences of the school, bore testimony to the great influence for good exercised by Miss Buss in the life and training of the scholars, and also to her constant efforts in regard to the education of women, included Miss Emily Davies, founder of Girton College, Cambridge, who spoke of the time when public examinations were first opened to women; Miss Woodward, Headmistress of Gloucester High School; Mr. Latham, Q.C., Chairman of the school and Past Master of the Clothworkers' Company, who described the way in which the Brewers' Company and the Clothworkers' Company came to assist the school; Miss Burstall, Headmistress of Manchester High School; and Mrs. Bryant, the present Headmistress of the school, who said that the co-operation in those jubilee celebrations of all the schools, colleges, and Universities, without exception, throughout the country was due to the feeling that honour was due to the schools as pioneers in the higher education of women. On the motion of Miss Clara Collett, seconded by Mrs. Septimus Buss, a vote of thanks was accorded to the chairman and the Clothworkers' Company.

The new Board of Education issued on April 6 a Minute—to quote its own words—"establishing higher elementary schools," commonly known as higher-grade schools. A public elementary school may be recognized by the Board as a higher elementary school under the following conditions:—The school must be organized to give a complete four years' course of instruction, approved by the Board; no child shall be admitted into a higher elementary school unless he has been under instruction at a public elementary school, other than a higher elementary school.

for at least two years, and has been certified by an inspector of the Board to be qualified to profit by the instruction offered in the higher elementary school. Attendances may not be recognized in a higher elementary school for any scholar who is upwards of fifteen years of age, and no scholar may remain in a higher elementary school beyond the close of the year in which he or she is fifteen years old. The school must be shown, to the satisfaction of the Board, to be necessary in the locality, and the premises must be recognized by the Board as suitable for the purposes of a higher elementary school. The grant varies from 25s. to 65s., with extra grants for practical work. It may be reduced at the rate of not more than 10s. per annum for every unit of annual average attendance above the number for which the school staff is recognized by the Board. No member of the teaching staff may undertake duties not connected with the school which may occupy any part whatever of the school hours. No scholar may attend a higher elementary school who is attending an evening school or class under the regulations of the Board.

THE annual meeting of the National Association for the Promotion of Technical and Secondary Education was held on April 6 at the offices of the Association, Queen Anne's Gate. Sir W. Hart Dyke, M.P., presided, and there were present, among others, Sir F. S. Powell, M.P., Mr. H. Hobhouse, M.P., Sir C. Kay-Shuttleworth, M.P., Sir H. Roscoe (Hon. Secretary), Mr. W. Bousfield, and Sir P. Magnus. The Chairman regretted the absence of the President of the Association, the Duke of Devonshire, who had found it impossible to attend. With regard to technical and secondary education, and especially technical education, he said that the advance had been steady during the past ten years; and in no part of the country could it be said that there was a retrograde movement. The report of the Association upon the question was one of the best documents of the kind which he had ever perused.

THE Government some time ago set about obtaining particulars as to the provision made for the University teaching of Roman Catholics—first in foreign countries and again in the British Colonies. The inquiry was suggested by the demand of Irish Roman Catholics for a State-aided University. It appears from the printed returns that there is no direct precedent in Protestant countries for an endowed Roman Catholic University. The Prussian Universities are mainly supported by the State, which has assumed control over all the medieval foundations, and has deprived them of every vestige of ecclesiastical government. Their general character in regard to secular and religious education is in many respects similar to that of the older English Universities, except that the State, in its impartiality provides for Roman Catholic faculties of theology, conditionally on their acceptance of State control. The consequence is that friction exists between the Minister of Education and the Roman ecclesiastics, who assert their authority over the faculties, as at Breslau and Bonn, whilst they do all in their power to promote independent colleges and academies, both in and out of Germany, under the control of their Church. They patronize in this way a number of Free Catholic Universities in Belgium, France, and Italy. It has been argued that "this more or less compulsory education of German Catholic students, theological or otherwise, outside of Germany, is a source of weakness to the State, which might be avoided if the Roman Church were allowed to control one or more State-aided Universities within the Empire."

In Switzerland the general rule is one of undenominational equality. At Fribourg there is a faculty of Roman Catholic theology, which was for a time much resorted to by German Catholics. Fribourg is a State University, supported and controlled by the Federal Government, and perhaps it comes nearest of all Universities in Europe to the type of a Roman Catholic University provided under a secular and undenominational system. Under a concordat with the Federal Government the Holy See has absolute control over the theological faculty. Fribourg is at this moment subject to something like a boycott on the part of the German New Catholics; and it need hardly be said that the German Government in no way recognizes the foreign Universities to which German Catholic students resort. In the United States there is a large number of Roman Catholic Universities and University colleges. These are for the most part under the control of the Roman episcopate or con-

gregations; but they are incorporated under the laws of the various States and territories, so as to secure recognition for the degrees which they confer. There are as many as sixty-one institutions of this kind in the United States, out of a total of 484; but, in common with the colleges of other denominations, they are debarred from public endowments, whether federal or municipal.

ROMAN CATHOLICS clearly fare better within the Empire than in foreign countries. In the Australian Colonies and at the Cape, higher education is open to all without distinction. In Malta 99 per cent. of the people are Roman Catholics. "The instruction imparted in the University and in all Government educational institutions in this colony is based on Roman Catholic principles." The Government grant for this Roman Catholic University, with its *lycée*, amounted last year to £4,245. 17s. 4d. "The wishes of his Grace the Archbishop of Rhodes, Bishop of Malta, are met to the extent that changes contemplated in the curriculum of the Faculty of Theology are submitted to him for approval before their adoption; and the professors occupying chairs in that faculty, as well as the examiners, are appointed by the Governor of Malta, after communicating with his Grace." The conditions in Malta are governed, no doubt, by the overwhelming preponderance of Roman Catholics in the population; still, it has been pointed out that we have the British Government paying public money (over and above the amount of the original endowments of the Jesuits) for the direct propagation of the Roman creed.

In Canada the Roman Catholics number about two millions out of more than five. In Quebec alone they were at the last census 1,000,000 out of a total of 1,400,000—that is, five-sevenths, as compared with about three-quarters in Ireland. St. Boniface College, Winnipeg, is affiliated to and shares in the State endowment (and only) of the University of Manitoba. St. Francis Xavier's College and St. Anne's, in Nova Scotia, are both Roman Catholic Universities. St. Anne's has a small grant from the local Government. Laval University, which has buildings both at Quebec and at Montreal, was founded in 1852 by the Seminary at Quebec, receiving a Charter from the Queen in the same year. "In 1876 Pope Pius IX. recognized it by a Bull. Under the Royal Charter the Roman Catholic Archbishop of Quebec for the time being is named as Visitor, and the Superior of the Seminary as Rector. Under the Pope's Bull, the Cardinal-Prefect of the Propaganda is named as Patron. Here, again, the Roman Catholics rely on their own efforts. The State sanctions the University, but does not endow it, and the consequence is that the professors and lecturers teach for a bare subsistence. On the other hand, the Montreal Branch University (Succursale), an offspring from the University at Quebec, receives an annual grant of twenty thousand dollars from the Provincial Legislature—a direct State endowment of Roman Catholic education within the British Empire."

THE National Union of Teachers opened its Easter Conference at York on April 16. Mr. Marshall Jackman, President for the year, confined his address to the subject of security of tenure for teachers, which, as he said, has more importance than ever, in view of the new superannuation scheme. After dwelling on the injustice of leaving teachers without appeal in case of dismissal, he gave some useful information as to the guarantee of security in other countries.

In Belgium the teacher could appeal against his dismissal to the equivalent of our Education Department, and even to the King himself. In Sweden he could appeal to the King's Supreme Court. In France there was a careful and elaborate system of appeal to prevent the capricious dismissal of teachers, the final Court of Appeal being the Conseil Supérieur de l'Instruction Publique. In Austria and Holland the final appeal was to the Minister of Education. Compared with England, Hungary presented, perhaps, the most interesting study from the tenure point of view. In Switzerland there was no appeal, but the teachers were appointed in most cantons for a certain number of years by the parents of the scholars. Unless the teacher broke his contract, he cannot be dismissed. A special Court of Appeal existed in Wurtemberg. In Prussia the public schools were all denominational. The teacher was appointed by the school committee, and must be of the same religious denomination as that with which the school was connected. His salary was paid by the committee, but a subsidy, as in this country, was received from the State. As in this country also, the State pensions the teacher. When once appointed, he could not be dismissed, unless he changed his religion, when he might not only be



dismissed, but, with his dismissal, came the loss of his pension. He had not seen any return which gave the number of cases of dismissal in Prussia. The teacher was given the right of appeal against dismissal in Queensland to the Governor in Council; in South Australia to the Minister of Public Instruction; in New Zealand to a special Court of Appeal; and in Tasmania the teacher could only be removed by the Minister, with the consent of the Local Boards of Advice. In Quebec and Manitoba there was an appeal to the Courts of Law in case of unjust dismissal.

ON the concluding day the Conference passed the following amongst other resolutions:—

1. That this Conference hereby gives a hearty welcome to the important reform instituted in the Day School Code for 1900, whereby (a) detachment of the instruction from the monetary considerations which were almost inseparable from the old system of cumulative grants; (b) variety and elasticity in school work, and freedom to adopt curricula suited to the circumstances and capabilities of the various schools, with the consequent opportunities for the brightening of children's lives; and (c) the manifestation of greater intelligence in teaching and learning are at length secured. In the opinion of Conference, this reform continues a series of other changes in the right direction, instituted during the last ten years; and Conference calls upon members of the Union to demonstrate, by increased educational effort, the loyalty and gratitude with which they receive the New Code.

2. At the same time Conference strongly deprecates the principle of initiating financial improvements in the conditions of some schools, wholly or in part, at the expense of others.

3. In the opinion of this Conference, the official recognition of higher elementary education which is given by the Minute of the Board of Education, dated April 6, 1900, marks an important stage in the progress of popular education, and deserves the hearty welcome of all concerned. Conference, however, records its emphatic opinion that due provision should be made for similar education by means of suitable grants to higher classes in public elementary schools where such classes are established, with the consent of the Board of Education. Conference is also of opinion:—(a) That the article in the Minute which states that no child may remain in a higher elementary school beyond the close of the year in which he or she is fifteen years old should be withdrawn; (b) and that the Minute should permit of children, upon admission, taking that stage of instruction for which they are most suited.

The second of these resolutions evidently stultifies the first.

THE Clothworkers' Company have just made the first award of an annual free studentship established by them a short time ago at the Datchelor Training College. The studentship entitles its holder to a year's residence at Datchelor House, and to a year's training in the College, together with preparation for the examinations of the Cambridge Teachers' Training Syndicate, or for the Teaching Diploma of the London University. It has been awarded to Miss Emily Humphreys, B.A. Lond., who was for a time a student at Holloway College.

#### UNIVERSITIES.

(From our Correspondents.)

A MEETING of the Court of the University of Wales was held at Wrexham on April 26, under the presidency of the Senior Deputy Chancellor, Dr. Isambard Owen. In the absence of the Treasurer of the University, Sir James Hills-Johnes, V.C., who has gone to South Africa, Mr. Cadwaldr Davies, Junior Counsel to the University, has been Acting-Treasurer. The members of the Court were entertained to luncheon by the Mayor of Wrexham (Councillor Thomas Jones). The Central Welsh Board for Intermediate Education held a meeting on April 27, at Carnarvon. Among the questions under consideration was that of holding the annual examination of the schools at Easter instead of in July, as at present.

The Guild of Graduates of the University of Wales met this year at Cardiff. The reports of the Literary and Welsh Dialect Sections of the Guild were adopted. At an open meeting of the Guild the Warden (Prof. J. E. Lloyd, M.A.) delivered his presidential address, and a paper on "University Settlements" was read by Mr. J. G. Davies, M.A., Headmaster of the County School, Neath. A society, consisting mainly of professors, lecturers, and past students of the Welsh University Colleges, will probably be formed to consider the possibility of doing work in the large towns of Glamorganshire and Monmouthshire similar to that done by University Settlements elsewhere. Profs. Burrows

and Chapman, of the University College, Cardiff, are among the leading promoters of the movement.

A considerable sum of money has been recently bequeathed to the University of Wales by the late Mr. Pierce Davies, of Leeds, for the purpose of founding scholarships tenable at the University Colleges of Aberystwyth and Bangor.

Principal J. Viriamu Jones, F.R.S., who is still at Geneva, is said to be making steady progress towards complete recovery from his recent severe illness, and it is hoped that he will be able to resume his duties at the beginning of next session. In the meantime Prof. Thompson, M.A., Professor of Chemistry, has been appointed by the Council of the College as Acting-Principal. Principal Reichel, M.A., of Bangor, is also acting as Pro-Vice-Chancellor.

#### ON VOCABULARY MAKING.

THE composing of vocabularies is a profession that lacks a distinctive title; but, as the poets are divided by those who do not write poetry into major and minor, so you, reader, may, with convenience, speak of our vocabulary manufacture as the profession of Minor Lexicography. Dr. Johnson himself, a major lexicographer, declared that the making of dictionaries was dull work—yet is his "Dictionary" no dull reading; but with minor lexicography it is otherwise. The pursuit is exciting enough; but, as light literature, the finished work is not ranked high. The perfect minor lexicographer is not more frequently produced by Nature than is the major poet. London went near to yielding one in the late Dr. Hubert Holden; but we can point to errors even in his vocabularies. We believe, however, that there is one of these rare beings now living at Cambridge. But most minor lexicographers have the failings of men, and leave out words. Their friends always discover the omissions, and worry about them; but the minor lexicographer, if he be wise, is not greatly impressed by their grief.

Minor lexicography is not a very lucrative profession. Lord Macaulay writes that in the reign of Charles the Second its members wore threadbare coats; but nowadays it is possible for a good scholar, by unremitting industry, to earn quite fourpence in an hour. We have known one minor lexicographer who became a rich man by the following ingenious device. He had the presence of mind to drop the little earnings won in his profession into the drains of Buenos Ayres at a moment when they were at ditch-water level; and after the lapse of but a few weeks the shrewd fellow managed to float out on the top when they had risen prodigiously. But it has been said, with truth, that wealth lightly gained is seldom well spent. Our poor friend ran through almost all that his successful speculation had brought him in a pathetic attempt to invent a new kind of rhubarb; and on a day when he had but a few pounds remaining, and fancied that he had almost succeeded, he chanced to receive a catalogue from an eminent firm of horticultural practitioners—and, behold, he had been anticipated! We lost sight of him for some years after that dreadful misfortune, but at length lighted on him in Mayfair, dressed as a one-armed organ-grinder. He then said that he was doing fairly well, and had no intention of returning to his earlier profession.

Minor lexicography is an art to be won only by long practice and close observation. It is, therefore, of little use to set down a recipe for making a vocabulary, because, as Izaak Walton says of his own art of angling: "You then have my fiddle, but you have not my fiddlestick." Nevertheless, we will here declare the system which we, now risen, as we believe, to the very top of our profession, and about to be admitted by the good offices of a grateful reader into the gifts or almshouses at C—, have, through a long life passed in close study, brought at length well nigh to perfection. First, then, you will make sure that you have a pen that is fine at the points, but yet glides fluently, so that your writing may not be checked, and the words may fall quickly from your hand. You must be at the expense, too, of providing yourself with many sheets of large paper, which may be of any size between royal and double crown. You will require one column for every page of your author, and you may, with convenience, put four columns on every page. You will then write out all the words without any attempt to classify them; for you are to observe that classification, which some members of our profession practise, is not only a hindrance to dispatch, but is very apt to cause attacks of spleen and even frenzy. When all the words are thus written down in columns, you shall sort out all those whose initial is A, and then you shall arrange

with great care and circumspection according to their true alphabetical order, and write them out fair, with their meanings and all that your reader will need to know concerning them. Every word, as he finds his proper order of precedence, in the vocabulary, you shall cross off in the column. And thus you shall proceed through the whole gamut of the twenty-six letters until you come at length to *Zed* and the end of your columns. This method is by far the most expeditious yet discovered, and, though at first you will experience many checks and failures in the application of it, yet, if you do but persevere, it shall at length yield you the round sum of fourpence in the hour, as we have declared above.

There is little glory to be won in this profession of minor lexicography. Therefore, if you adopt it, good reader, you must follow it for the sake of gain, for, truth to tell, the bookseller that employs you will scarcely follow the example of Milton's stationer, and herald your works into the world as deathless and never-to-be-blasted laurels. Yet, if their life be short, there is the consolation that it will be passed amid a goodly company of orators, poets, generals, and philosophers, whose society they will be permitted to share, and whose books they will have the honour of interpreting. It is the habit of industrious scribes that have not made much of a figure in the world to publish, in their old age, those bulky Reminiscences, Memories, Memoirs, or what not, from which you are to learn, if you please, that the author was intimate with the great So-and-so, was a frequent guest at the dinner table of the famous What-d'ye-call-em, and was admitted into the *salon* and knew the secrets of Madame Thingumbob. It is not often possible to test the writer's veracity, and it is seldom possible to avoid a suspicion that he has magnified the part he bore in the transactions that he describes. To the gentleman who played the Cock in "Hamlet" there remained, in his old age, but the unsubstantial recollection of that one triumphant crow, for his name was not on the bill. But we have at hand, and shall bequeath to posterity, unimpeachable evidence that we were clothed in the same cloth as Virgil and Cicero—nay, as the elder Pliny himself, that prince of compilers. Here is, at least, an honour that none can wrest from you, none can dispute. For the rest, it is well to embrace the tenets of Epicurus, and, having the means to gain a competence, to trouble not about glory.

We will conclude this paper with an expression of hope that in days to come the black races may be admitted into the profession of minor lexicography. The tomahawk is now but rarely seen, and the assegai is fast disappearing before the beneficent progress of our arms. But the tamed savage, disgusted at the collapse of the ancestral business, has, in some parts of our Empire, not taken kindly to those forms of labour that we have hitherto offered him in its place. We minor lexicographers are not an exclusive race; and, when the time is ripe, there will doubtless be many members of the profession who will readily accept appointments as teachers and professors in schools founded for the training of our black fellow-subjects. They will then be able to employ their pupils in the work which, of course, will still be put into the hands of the professors in the first instance. The professors also will receive the fees from the booksellers, and, retaining the one-half, more or less, as their rightful commission, will pay over the residue to the coloured scribe. It may be anticipated that the endowment of such lectureships and professorships will greatly raise the status of the minor lexicographer, and will provide posts at once pleasant and lucrative for those who, like ourselves, have worn out their strength in the pursuit of this honourable calling.

### THE PRUSSIAN ACADEMY.

MISS MARY C. DAWES, who was present at the bicentenary festival of the Prussian Academy, to which we referred last month, sends us the following description:—

"Memorable indeed was this extraordinary concourse of learned and distinguished men, to whom their various robes and decorations gave a rarely picturesque setting of colour and form. Amongst the most conspicuous were the rich velvet rectorial robes, those of the University of Leipzig being still further embellished by a border of ermine; there were also the Paris "Immortels" in their green embroidered robes; whilst an element of pleasant variety was supplied by the various forms—triangular, square, and round—of the academic 'caps.'

"After the performance of a sixteenth-century sonata, by Giovanni Gabrielli, for six trombones, cornet, and violons, conducted by Dr. Joachim, Prof. Vahlen, the President, opened the meeting. The

assembly was thereupon addressed by the distinguished Berlin theologian Adolf Harnack. In an eloquent speech of an hour's duration, the renowned Church historian sketched in broad and clear outline the history of the Academy, dwelling more especially on the brilliant epoch under Frederic the Great, and on the present, and concluded with the following peroration:—"Science constitutes neither the sole nor the highest task of humanity. Those, however, to whom her interests are committed should devote themselves with their whole heart and their whole strength to her cause. However various the phases assumed by different scientific epochs, the fundamental task remains one and the same—to preserve a keen and lively appreciation of truth, and to convert the kosmos of forces, under which form this world is presented to us, into a kosmos of ideas. May it be the lot of our Academy, during this its third century, to continue to assist in furthering this work of humanity, and may powers of darkness keep at a distance, whilst the Light, which was in the beginning, illumines its way, and the Word, which was in the beginning, enlightens its spirit!" Jubilant applause greets the speaker, and the conspicuous figure of the great Roman historian Theodor Mommsen, whose silvery age is still buoyed up with the elasticity of youth, steps forward and shakes hands with the theologian.

"Then followed the reception of deputations in groups. The first of these included the Royal Societies of Göttingen, Leipzig, Halle, Munich, and Vienna; the foreign Academies—three from Paris, one from London, St. Petersburg, and Rome respectively; Trinity College Dublin, represented by Prof. Mahaffy; Helsingfors; Turin; the Società Reale of Naples, represented by Mommsen, and Christiania by Nansen. The last was greeted with vociferous applause, and much merriment was caused by his presenting to the President, instead of the congratulatory address, his *chapeau claque*! A second group embraced the twenty-two German Universities; as also the German Universities of Austria and Switzerland; while the Prussian Provincial Associations constituted a third. These groups were followed by representatives of the remaining Berlin academies and high schools, as well as of various art institutes, corporations, companies, and societies. Congratulatory telegrams were also received from the Grand Duchess of Baden and King Oscar of Sweden, who is a corresponding member of the Academy. After fitting words of warm thanks from the various secretaries, the proceedings were brought to a worthy close by the singing of Stadler's fine hymn, 'Grosser Gott, allmächtiger Gott.'

"The founder of the Academy was the Kurfürst Frederic III., whose keen appreciation led him thus to embody the conceptions of Leibnitz. Frederic the Great added to the lustre of the academic annals by his zealous participation in its work; whilst Frederic William III. and Emperor William I. showed their interest and favour as reformers. From the present Emperor the Academy receives a support worthy of the traditional patronage that the Prussian rulers have bestowed on science. One of the chief modern developments has been the founding, in autumn last, of the International Association, the idea of which is to be traced back, it appears, to the original scheme projected by Leibnitz, which is said to have had in view a union of all European Academies. Amongst the numerous decorations we may mention the awarding of the Order of the Red Eagle, First Class, to Dr. Theo. Mommsen, and the same of the Fourth Class to Dr. Ad. Harnack. Amongst those elected to honorary memberships is Prof. Max Müller, of Oxford; whilst in the list of corresponding members we find, for the branch of anatomy and physiology, Burdon Sanderson, of Oxford; for that of classical philology, Frederic Blass, of Halle, and Geo. Hatzidákis, of Athens; and for that of history, Fred. Kenyon, of London, and John P. Mahaffy, of Dublin."

## CORRESPONDENCE.

### PRACTICAL USE OF PHONETICS.

To the Editor of the Educational Times.

SIR,—Some people swear by phonetics; some only swear *at* phonetics. For a long time the too alluring promises of eager phoneticians acted as a deterrent to the wary. May I put forward a plea in favour of phonetics, not as a panacea—Figaro said more than a hundred years ago: "Il n'y a point de remède universel"—but as a help, a valuable help, to the teacher of French?

Whilst writing a French book for beginners, I was endeavouring to guide in their pronunciation the many teachers who teach French, as well as many other subjects, and who have not resided eight or ten years in France, and who therefore cannot be certain of their pronunciation. I looked in vain for symbols of any real value. Of course, English equivalents are ridiculous. *Boolon, mongseer*, &c., we are sick of. The symbols of the International Phonetic Association are wonderfully adapted to render French sounds, with all their shades. The *ə* (*e* upside down) is the half-pronounced *e* in *le, de, me*; the *ö*, or *ø*, is the *eu* long, as in *peu, creux*; the *œ* is the *eu* short, as in *peur, seul*;

j is the German j, as in *ja* (English *y*, as in *yes*); there is a short *a*—i.e. *a*; a long *a*—i.e. *ā*; a short *o*—i.e. *o* (half an *o*); and a long *o*—i.e. *ō*, &c. These symbols—of which very few are hard, and which are very quickly learnt—enable the hardest words to be easily transcribed. *Monsieur* is *məs̄jō*; *feuille* is *fəj*; *queue* is *kū*; &c.

Of course these symbols by themselves will give no one a correct pronunciation. But, whereas no foreigner who has not resided eight or ten years in France can read quite correctly a page of French without having an experienced French scholar at his elbow, once he has mastered, by the aid of a Frenchman, the proper value of the phonetic symbols on the list (a matter of half an hour's work), he can read by himself any page in phonetic transcript with a correct pronunciation, and perfect himself in his speech by reading aloud *correctly*.

The International Phonetic Association has published many books which, notwithstanding several serious defects, are most useful. I would strongly recommend to colleagues for their own use and for that of their pupils "L'Écriture Phonétique," by Paul Passy (Association Phonétique, Bourg-la-Reine, Seine, France).

On the value of learning and teaching the production of the sounds, I will venture upon no expression of opinion, having met but one practical and successful teacher who believed in it. But it is surely well worth the while of all French teachers who do not feel absolutely certain of their speech to learn the few symbols in the phonetic alphabet in order to make sure of a correct pronunciation. It is very quickly learnt, and the time and trouble expended are amply repaid. I may add that I have tried it with many pupils during the past half-year, with results as satisfactory to themselves as they are to me. The time saved is enormous. The transcript enables a whole class to get up correctly the pronunciation of two whole pages at home, the only time taken up in class being when the teacher reads and divides the words into groups.—Yours faithfully,

VICTOR SPIERS.  
King's College, London.

#### ELEMENTARY-CUM-SECONDARY SCHOOLS.

To the Editor of the Educational Times.

SIR,—If one should be in doubt as to the boundary-line separating a neighbour's land from one's own, experience has shown that it is best to hoe up the ground in broad daylight to the utmost limits suggested by one's own way of thinking on the matter. The Board of Education, at the very outset of its career, gives us a good example of such breezy courage. Hitherto, the higher elementary schools, which some School Boards had established, were, it was thought, recognized by the Education Department, *sub rosa* only, as experiments and stop-gaps. It was, indeed, assumed that the Elementary Education Act of 1870 did not authorize the expenditure of public money in establishing what were practically secondary schools. The new Board has, by a minute recently issued, boldly given official recognition to such schools. By what authority this is done we know not, for there is nothing in either the Elementary Education or the Board of Education Act to justify the departure.

If the power exists, there seems to be nothing to prevent any deficiencies in the supply of secondary education being made good through the instrumentality of School Boards. This is certainly not what the country contemplated; and the very point was raised a short while ago by the County Council, in reference to the action of the London School Board; but it has not been pressed to a decision.—Yours faithfully,

A. E. H.

#### PARIS INTERNATIONAL ASSEMBLY.

To the Editor of the Educational Times.

SIR,—The Paris International Assembly is receiving the cordial support of many well known men here and across the Channel, and generally throughout Europe and America. Its primary purpose is to make the Exhibition, and the Congresses (nearly 150 in number) in connexion with it, as useful as possible to those who will visit Paris this summer. The idea took shape at the meeting last year of the British Association and the Association Française. Its President is M. Léon Bourgeois, ex-Premier of France, and for England the Vice-Presidents are the Right Hon. James Bryce, M.P., and Sir Archibald Geikie, F.R.S. Already French, British, and American Committees of influential character are working well together. The plan of the Assembly is, first of all, to arouse a keen interest in the Exhibition and the Congresses; then to guide people to such of the Congresses and portions of the Exhibition as they may most wish to visit. To this end special assistance will be given to the different classes of visitors, and particularly to the more serious-minded. There will be courses of lectures on special and general subjects, rendezvous, information bureau, expert guidance, private hospitality, means of visiting the different educational institutions, and excursions to the many points of interest in the city and surroundings. All this is but a brief outline of the Assembly's programme, and any further information of it, or of the Congresses and Exhibition, will be gladly given.—Faithfully yours,

5 Henrietta Street, Covent Garden.

T. R. MARR,  
Assistant-Secretary.

## A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd. ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

### THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

#### REVIEWS:—

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."

*Daily Telegraph*.—"Julius Caesar" "... is invaluable as an aid to the study of the play."

*South Africa*.—"What a handy 'book of the play' they form!"

*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."

*Athenæum*.—"Essentially books for students."

*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

*AS YOU LIKE IT	...	...	...	...	...	2 0
*CORIOLANUS	...	...	...	...	...	2 6
*HAMLET	...	...	...	...	...	2 6
*HENRY V.	...	...	...	...	...	2 6
*JULIUS CÆSAR	...	...	...	...	...	2 0
*KING JOHN	...	...	...	...	...	2 0
*KING LEAR	...	...	...	...	...	2 0
*MACBETH	...	...	...	...	...	1 6
*MERCHANT OF VENICE	...	...	...	...	...	1 6
*MIDSUMMER NIGHT'S DREAM	...	...	...	...	...	2 0
*RICHARD THE SECOND	...	...	...	...	...	1 6
*TEMPEST	...	...	...	...	...	2 0
*TWELFTH NIGHT	...	...	...	...	...	1 6

\* For Current Examinations.

### BACON.

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

### MILTON.

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation." s. d.

\*PARADISE LOST. Books 1 and 2. (Just published.) 2 0

SAMSON AGONISTES ... 2 0

\*COMUS ... 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENNEROSO 1 4

\* For Current Examinations.

### SCRIPTURE.

Edited by R. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

### FRENCH.

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... 2 6

### GERMAN.

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.  
Works: Johnson's Court, Fleet Street.



# OXFORD UNIVERSITY PRESS.

## Clarendon Press Classics.

### LATIN

### AND

### GREEK.

LATIN		PRICE.	GREEK.		PRICE.				
AUTHOR.	EDITOR.	s. d.	AUTHOR.	EDITOR.	s. d.				
CAESAR—Gallic War (Books I, II)...	Charles E. Moberly	2 0	AESCHYLUS—Agamemnon.....	Arthur Sidgwick	3 0				
— Gallic War (Books III.-V.) .....	"	2 6	— Choephoroi .....	"	3 0				
— Gallic War (Books VI.-VIII.) .....	"	3 6	— Eumenides .....	"	3 0				
— Civil War .....	"	3 6	— Prometheus Bound.....	A. O. Prickard	2 0				
CATULLI VERONENSIS .....	Robinson Ellis	3 6	ARISTOPHANES—The Acharnians.....	W. W. Merry	3 0				
CICERO—Selections (in 3 Parts) .....	Henry Walford	each 1 6	— The Birds .....	"	3 6				
— De Amicitia .....	St. George Stock	3 0	— The Clouds .....	"	3 0				
— De Senectute .....	L. Huxley	2 0	— The Frogs .....	"	3 0				
— Pro Cluentio .....	W. Ramsay and G. G. Ramsay	3 6	— The Knights .....	"	3 0				
— Pro Marcellio .....	W. Y. Fausset	2 6	— The Wasps .....	"	3 6				
— Pro Ligario .....			A. B. Poynton	2 6	CEBES—Tabula (School Edition) .....	C. S. Jerram	1 6		
— Pro Rege Deiotaro .....					St. George Stock	3 6	DEMOSTHENES—Orations against	Evelyn Abbott and P. E. Matheson	3 0
— Pro Milone .....							Philipp. Vol. I: Philippic I; Olyn-		
— Pro Roscio .....	thiacs I.-III. ....								
— Select Orations (for Schools) .....	Vol. II: De Pace; Philippic II; De Chersoneso; Philippic III. ....								
— In Q. Caecilius Divinatio .....	J. R. King	2 6	— Philippics only .....	"	2 6				
— In C. Verrem Actio Prima .....	"	1 6	— Speech on the Crown .....	"	3 6				
— Philippic Orations I, II, III, V, VII .....	"	3 6	EURIPIDES—Alcestis .....	C. S. Jerram	2 6				
— Speeches against Catilina .....	E. A. Upcott	2 6	— Bacchae .....	A. H. Cruickshank	3 6				
— Selected Letters (for Schools) .....	C. E. Prichard and E. R. Bernard	3 0	— Cyclops .....	W. E. Long	2 6				
— Select Letters. Text .....	Albert Watson	4 0	— Hecuba .....	C. H. Russell	2 6				
HORACE—Odes (Book I.) .....	E. C. Wickham	2 0	— Helena .....	C. S. Jerram	3 0				
— Selected Odes .....	"	2 0	— Heracleidae .....	"	3 0				
JUVENAL—Thirteen Satires .....	C. H. Pearson and Herbert A. Strong	9 0	— Ion .....	"	3 0				
LIVY—Books V.-VII. ....	A. R. Cluer and P. E. Matheson	5 0	— Iphigenia in Tauris .....	"	3 0				
— Book V. ....	"	2 6	— Medea .....	C. B. Heberden	2 0				
— Book VII. ....	"	2 0	HERODOTUS—Book IX. ....	Evelyn Abbott	3 0				
— Books XXI.-XXIII. ....	M. T. Tatham	5 0	— Selections .....	W. W. Merry	2 6				
— Book XXI. ....	"	2 6	HOMER—Iliad (Books I.-XII.) .....	D. B. Monro	6 0				
— Book XXII. ....	"	2 6	— Iliad (Books XIII.-XXIV.) .....	"	6 0				
— Selections for Schools (in 3 Parts). .....	H. Lee-Warner	each 1 6	— Iliad (Book I.) .....	"	1 6				
NEPOS .....	Oscar Browning and W. R. Inge	3 0	— Iliad (Book III.) .....	M. T. Tatham	1 6				
— Selected Lives .....	J. B. Allen	1 6	— Iliad (Book XXI.) .....	Herbert Hailstone	1 6				
OVID—Selections (for Schools) .....	W. Ramsay and G. G. Ramsay	5 6	— Odyssey (Books I.-XII.) .....	W. W. Merry	5 0				
— Tristia (Book I.) .....	S. G. Owen	3 6	— Odyssey (Books I. & II, separately) .....	"	each 1 6				
— Tristia (Book III.) .....	"	2 0	— Odyssey (Books VI. & VII.) .....	"	1 6				
PLAUTUS—Captivi .....	Wallace M. Lindsay	2 6	— Odyssey (Books VII.-XII.) .....	"	3 0				
— Trinummus .....	C. E. Freeman and A. Sloman	3 0	— Odyssey (Books XIII.-XXIV.) .....	"	5 0				
PLINY—Selected Letters (for Schools) .....	C. E. Prichard and E. R. Bernard	3 0	LUCIAN—Vera Historia .....	C. S. Jerram	1 6				
QUINTILIAN—Institutionis Oratoriae Liber X. ....	W. Peterson	3 6	LYSIAS—Epitaphios .....	F. J. Snell	2 0				
SALLUST .....	W. W. Capes	4 6	PLATO—The Apology .....	St. George Stock	2 6				
TACITUS—The Annals (Books I.-IV.) .....	H. Furneaux	5 0	— Crito .....	"	2 0				
— The Annals (Book I.) .....	"	2 0	— Meno .....	"	2 6				
TERENCE—Adelphi .....	A. Sloman	3 0	— Selections .....	John Purves	5 0				
— Andria .....	C. E. Freeman and A. Sloman	3 0	— Selections (2 Vols.) .....	B. Jowett and M. J. Knight	12 0				
— Phormio .....	A. Sloman	3 0	PLUTARCH—Lives of the Gracchi .....	G. E. Underhill	4 6				
TIBULLUS and PROPERTIUS—Selections .....	G. G. Ramsay	6 0	SOPHOCLES (2 Vols.) .....	Lewis Campbell and Evelyn Abbott	10 6				
VIRGIL (2 Vols.) .....	T. L. Papillon and A. E. Haigh	ea. 3 6	— Oedipus Rex (Dindorf's Text) .....	Basil Jones	1 6				
— Aeneid (Books I.-III.) .....	"	2 0	THEOCRITUS (for Schools) .....	H. Kynaston	4 6				
— Aeneid (Books IV.-VI.) .....	"	2 0	THUCYDIDES (Book I.) .....	W. H. Forbes	8 6				
— Aeneid (Books VII.-IX.) .....	"	2 0	XENOPHON—Selections (for Junior Classes) .....	J. S. Phillpotts and C. S. Jerram	3 6				
— Aeneid (Books X.-XII.) .....	"	2 0	— Selections (for Schools) .....	J. S. Phillpotts	3 6				
— Bucolics and Georgics .....	"	2 6	— Anabasis (Book I.) .....	J. Marshall	2 6				
— Bucolics .....	C. S. Jerram	2 6	— Anabasis (Book II.) .....	C. S. Jerram	2 0				
— Georgics (Books I, II.) .....	"	2 6	— Anabasis (Book III.) .....	J. Marshall	2 6				
— Georgics (Books III, IV.) .....	"	2 6	— Anabasis (Book IV.) .....	"	2 0				
— Aeneid I. ....	"	1 6	— Anabasis (Books III, IV.) .....	"	3 0				
— Aeneid IX. ....	A. E. Haigh	1 6	— Anabasis (Vocabulary) .....	"	1 6				
	In Two Parts	2 0	— Cyropaedia (Book I.) .....	C. Bigg	2 0				
			— Cyropaedia (Books IV. and V.) .....	"	2 6				
			— Hellenica (Books I, II.) .....	G. E. Underhill	3 0				
			— Memorabilia .....	J. Marshall	4 6				

NOW READY.

ARISTOPHANES.—PEACE. With Introduction and Notes by W. W. MERRY, D.D.

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.

## MAGMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

**EIGHT AYSGARTEH SCHOOL SERMONS.** By C. H. BOUTFLOWER, Chaplain to the Bishop of Durham. Fcap. 8vo, 2s. 6d.

### ENGLISH.

#### MACMILLAN'S ENGLISH CLASSICS—New Volumes.

**FROM BLAKE TO ARNOLD.** Selections from English Poetry (1783-1853). With Introduction, Critical Essays, and Notes, by C. J. BRENNAN, M.A. Edited by J. P. PICKBURN, B.A., LL.B., and J. LE GAY BRERETON, B.A. Globe 8vo, 2s. 6d.

**DRYDEN.—THE HIND AND THE PANTHER.** With Introduction and Notes by W. H. WILLIAMS, M.A., formerly Scholar of Trinity College, Cambridge, Professor of Classics and English Literature in the University of Tasmania. Globe 8vo, 2s. 6d.

*Schoolmaster.*—"A skillfully written introduction of some dozen pages gives a clear and concise enunciation and criticism of the animal fable which the poem is in form. . . . The notes which follow the text are, as far as we have tested them, accurate and full."

### FRENCH.

#### Latest Additions to Stepmann's Elementary French Series.

**NORMAND.—L'ÉMERAUDE DES INCAS.** Par CHARLES NORMAND. Adapted and Edited by the late F. ASTON BINNS, M.A. Balliol College, Oxford. Globe 8vo, 2s.

**DAUDET.—LA TOUÉ DES MAURES.** Par ERNEST DAUDET. Adapted and Edited by A. H. WALL, M.A., Assistant-Master at Marlborough College. Globe 8vo, 2s.

WORD AND PHRASE BOOK. Sewed, 6d.

*Educational News.*—"Deserves the highest commendation."

**VERNE.—LE TOUR DU MONDE EN QUATRE-VINGTS JOURS.** Par JULES VERNE. Adapted and Edited by LOUIS A. BARBE, B.A., Headmaster of the Modern Language Department in the Glasgow Academy. Globe 8vo, 2s.

WORD AND PHRASE BOOK. Globe 8vo, sewed, 6d. KEY, 2s. 6d. net. *Academy.*—"An excellent and amusing class-book. . . . The notes are satisfactory, and so is the vocabulary."

### CLASSICS.

#### MACMILLAN'S CLASSICAL SERIES.—New Volumes.

**EURIPIDES.—THE ANDROMACHE.** With an Introduction and Notes by A. R. F. HYSLOP, M.A., Assistant-Master in Harrow School. Fcap. 8vo, 2s. 6d.

**GREEK MELIC POETS.** By HERBERT WEIR SMYTH, Ph.D. Göttingen, Professor of Greek at Bryn Mawr College, Pennsylvania. Fcap. 8vo, 7s. 6d.

**DEMOSTHENES.—ON THE PEACE, SECOND PHILIPPIC, ON THE CHERSONESUS, AND THIRD PHILIPPIC.** Edited, with Introduction and Critical and Explanatory Notes, by JOHN EDWIN SANDYS, Litt.D., Fellow and Tutor of St. John's College, and Public Orator in the University of Cambridge. Fcap. 8vo, 5s. *Literature.*—"The edition is thoroughly satisfactory."

### COMMERCE.

**HINTS ON THE CONDUCT OF BUSINESS, PUBLIC AND PRIVATE.** By Sir COURTENAY BOYLE, K.C.B., Secretary to the Board of Trade. Crown 8vo, 3s. 6d. *Westminster Gazette.*—"The work of such an authority is sure to be eagerly welcomed and widely read."

### PHYSIOLOGY.

New and Enlarged Edition.

**LESSONS IN ELEMENTARY PHYSIOLOGY.** By THOMAS H. HUXLEY, LL.D., F.R.S. Enlarged and Revised Edition. Globe 8vo, 4s. 6d.

### MAY NUMBER NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### LEADING CONTENTS.

**Form-Masters and Specialists.** By F. E. KITCHENER, M.A.—**Secondary School Libraries.** By JOHN J. OGLE.—**Pioneers in Education.** V. Immanuel Kant; Philosopher, Educationist. By Prof. FOSTER WATSON, M.A.—**How to Use the Raw Material of History.** By F. BEATTY.—**The Study of "As You Like It."** II. The Characters. By J. A. NICKLIN, B.A.—**Experimental Chemistry.** (Illustrated.) IV. The Halogens; Hydrochloric Acid and Chlorides; Ammonia; Nitrous and Nitric Oxides, Nitric Acid, and Nitrates. By Prof. J. B. COLEMAN, A.R.C.S., F.I.C.—**Notes for Lantern Lectures.** III. The Tale of Troy; with special reference to Virgil, Æneid I., II. By Prof. W. C. F. ANDERSON, M.A.—**Teachers' Notes on English History, 1603-1716.** VI. The Protestant Succession, 1689-1715. By C. S. FEARENSIDE, M.A., and L. J. MCNAIR, B.A.

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.

## CASSELL'S EDUCATIONAL LIST. IMPORTANT ISSUES.

A New Work by H. O. ARNOLD-FORSTER, M.P.  
READY SHORTLY.

About 300 pages, Crown 8vo. Strongly bound in cloth, price 1s. 9d.

### Our Great City; or, London, the Heart of the Empire.

Splendidly Illustrated with Full-page Pictures.

CHEAP SIXPENNY EDITION  
of MR. ARNOLD-FORSTER'S Recent Work.

### The Coming of the Kilogram.

A Simple and Complete Explanation of the Metric System.

N.B.—The Teaching of the Metric System is rendered compulsory by the New Code.

CHEAP EDITION, 2s. 6d.,

OF

### "Scarlet and Blue."

THE BEST COLLECTION OF PATRIOTIC SONGS.

Edited by JOHN FARMER, of Oxford.

### RECENT PUBLICATIONS.

New and Revised Edition.

**CASSELL'S LESSONS IN FRENCH.** Parts I. and II., 2s. each; complete in One Vol., 3s. 6d.

This work (which reached a sale of 141,000 copies in its original edition) has been Revised by Mr. JAMES BOÏELLE, B.A., Examiner in French Language and Literature in the University of London. It is now in all respects suitable for the Oxford and Cambridge Local Examinations and the College of Preceptors Examinations.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS. 256 pp. Extra crown 8vo, prettily bound in cloth. With Four Coloured Plates and numerous Illustrations. Price 1s. 8d.; or, handsomely bound as Prize Book, 2s. 6d.

**IN DANGER'S HOUR; or, Stout Hearts and Stirring Deeds.** A Reading Book for Upper Standards. With Introduction by H. O. ARNOLD-FORSTER, M.P. With Coloured Plates and numerous Illustrations. Prettily bound in blue cloth, 1s. 8d.; or handsomely bound, cloth gilt, 2s. 6d.

**A PRACTICAL METHOD OF TEACHING GEOGRAPHY.** Book I. England and Wales. Book II. Europe. By J. H. OVERTON, F.C.S. Twenty-two Maps, interleaved with tracing paper. 6d. each.

### The Best and Cheapest Dictionaries.

**CASSELL'S FRENCH DICTIONARY.** (French-English and English-French.) 555th Thousand. Revised and Corrected from the Seventh and Latest Edition of the Dictionary of the French Academy. 1,150 pages, cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S GERMAN DICTIONARY.** (German-English and English-German.) 222nd Thousand. 1,120 pages, demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 102nd Thousand. Thoroughly Revised and Corrected and in part Re-written by J. R. V. MARCHANT, M.A., Master of St. Paul's School, and formerly Scholar of Wadham College, Oxford; and J. F. CHARLES, B.A., Assistant-Master of the City of London School. Cheap Edition, 3s. 6d.; half-morocco, 5s.

Cassell's Educational Catalogue will be sent post free on application.

CASSELL & COMPANY, LTD., LUDGATE HILL, LONDON, E.C.



# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

SUITABLE BOOKS IN THE  
**University Tutorial Series.**

## SPECIAL SUBJECTS.

- Caesar.—Gallic War. Books V., VI.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. each. Vocabulary. 1s. each.
- Cicero.—De Senectute.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Homer.—Odyssey. Books XI., XII.** By J. H. HAYDON, M.A., and F. G. PLAISTOWE, M.A., Lond. and Camb. Text and Notes. 2s. 6d.
- Horace.—Odes. Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book II.** By A. H. ALLCROFT, M.A. Oxon., and T. R. MILLS, M.A. Oxon. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Shakespeare.—As You Like It.** By Prof. W. J. ROLFE, D.Litt. 2s.

# SCIENCE AND ART DEPARTMENT EXAMS.

SUITABLE BOOKS IN THE  
**Organized Science Series.**

## FOR THE ELEMENTARY STAGE. 2s. each Vol.

- Practical Plane and Solid Geometry.** [In preparation.]
- Machine Construction and Drawing.** [In preparation.]
- Building Construction.** [In preparation.]
- First Stage Mathematics.** Containing all the Algebra and Euclid required. [In preparation.]
- First Stage Mechanics (Solids).** By F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- First Stage Mechanics of Fluids.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- First Stage Sound, Heat, and Light.** By JOHN DON, M.A.
- First Stage Magnetism and Electricity.** By R. H. JUDE, M.A. Cantab., D.Sc. Lond. *Second Edition.*
- First Stage Inorganic Chemistry (Theoretical).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WILLIAM BRIGGS, M.A., F.C.S.
- First Stage Botany.** By A. J. EWART, D.Sc. [In the press.]
- First Stage Physiography.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.
- First Stage Hygiene.** By R. A. LESTER, B.Sc. [In the press.]
- Price 1s.
- First Stage Inorganic Chemistry (Practical).** By F. BEDDOW, Ph.D., D.Sc. *Second Edition.*
- Price 1s. 6d.
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

## FOR THE ADVANCED STAGE. 3s. 6d. each Vol.

- Second Stage Mathematics.** Being the Additional Algebra and Euclid with the Trigonometry required for the Second Stage. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*
- Advanced Mechanics.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. I., DYNAMICS. Vol. II., STATICS.
- Advanced Heat.** By R. W. STEWART, D.Sc. Lond. *Second Edition.*
- Advanced Magnetism and Electricity.** By R. WALLACE STEWART, D.Sc. Lond.
- Advanced Inorganic Chemistry.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*
- Price 2s.
- Advanced Inorganic Chemistry (Practical).** By R. WALLACE STEWART, D.Sc., and WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S.
- Price 1s. 6d.
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for London University (including the Special Subjects for 1901), Cambridge and Oxford Local, College of Preceptors', Science and Art Department, and other Examinations, free on application.

THE UNIVERSITY TUTORIAL PRESS  
(University Correspondence College Press).

LONDON: W. B. CLIVE, 13 BOOKSELLERS ROW, LONDON, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	24 10 0	Position	25 10 0
Half Page	12 10 0	"	12 10 0
Quarter Page	6 10 0	"	6 10 0
For inch in broad column (half width of page)	0 7 0	"	0 7 0
Narrow Column (one-third page)	2 0 0	"	2 0 0
Half Column (one-sixth page)	1 2 6	"	1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 8s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—50 words or under, 2s.; each additional 10 words, 6d. (For 1s. extra. Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

May 1, 1900.

The next Monthly Evening Meeting of members Fixtures. of the College of Preceptors will be held on Wednesday, May 16, when Dr. Wormall will read a paper on "Unsettled Questions of Method in the Teaching of Elementary Science."

\* \* \*

The British Child-Study Association holds its annual meeting at Manchester this year on May 3 and 4. The members of the Association will have an opportunity of studying the "child" from the concrete and practical point of view, as there are to be model lessons and educational exhibits in the High School for Girls, Dover Street, of which Miss Burstall is Headmistress. The Council of Owens College is to entertain the members at a conversazione in the new buildings of the Christie Library.

\* \* \*

A COURSE of six evening lectures on "The Poetry of Robert Browning," by the Rev. A. Stopford Brooke, begins at University College, London, on Thursday, May 3.

\* \* \*

ON May 4 Prof. Oscar Montelius will give the first of six free lectures on "Prehistoric Chronology," on the Yates foundation, at University College.

\* \* \*

MR. H. J. MACKINDER, M.A., began on April 24 a course of six lectures at the London School of Economics and Political Science on "The Geographical Conditions of the Great Powers."

\* \* \*

MAY 9 will be Presentation Day at the University of London. It is hoped that the Prince of Wales may be able to preside over the ceremony in the Senate House of the University at South Kensington.

\* \* \*

MR. AUGUSTINE BIRRELL, Q.C., M.P., is to begin his Quain lectures at the University College on May 14, when he will treat of the "Marriage Laws within the British Empire."

\* \* \*

At the Summer Meeting of the Cambridge University Extension, to be held at Cambridge next August, from the 2nd to the 27th, the subject chosen is "Life and Thought in the Nineteenth Century," and the courses of lectures are being arranged so as to present in broad outline a view of the more remarkable movements and events of the century and its distinctive contributions to our social and political life. The most important section of the meeting will be that on National Development, in which Prof. A. V. Dicey, Dr. Augustus Jessop, the Master of Trinity, and others will lecture. There will be lectures on "Educational Progress in the Century," intended primarily for teachers, and a small Educational Exhibition will be organized for illustrative purposes.

\* \* \*

The Board of Education have decided, at the suggestion of the Council of the Society of Arts, to open, on or about November 1, an Exhibition of Modern Illustration in the Victoria and Albert Museum, South Kensington. The Exhibition will consist of works in black and white intended for book, periodical, and newspaper illustrations, and will be confined solely to modern examples of typographical work executed since 1860. This limit covers the time during which photo-

graphy has been available for reproductive purposes, and during which consequently the original drawings have been preserved, and are available for exhibition. The Board will be assisted in the selection and arrangement of the drawings by an influential committee, with some additional members, which had already been organized by the Society of Arts.

THE Management Committee of the Birmingham University scheme have received the Report of the Advisory Committee appointed to consider the best means of utilizing the endowments of Mr. Carnegie and an anonymous donor for scientific and commercial training respectively, and to visit the United States and Canada for the purpose of inspecting various educational institutions. The document is long and important. Its recommendations point to the necessity of raising the endowment fund to a total of something like half a million sterling.

A COMMITTEE has been appointed to consider the organization of the Royal College of Science at Dublin, consisting of Sir William Abney, K.C.B., Chairman, the Secretary of the Department, and the Assistant-Secretary for Technical Instruction, the Commissioner of Valuation for Ireland, and Mr. S. E. Spring-Rice, C.B. The reference is as follows:—"To consider and report on the future position and functions of the Royal College of Science for Ireland with reference to technical instruction as related to industries and agriculture in that country; to report on the requirements of the college as regards staff and organization; and to make recommendations as to the arrangement and nature of the new college buildings."

It is said that the number of female students, Frenchwomen and foreigners, in the Paris faculties, including the Faculties of Science and Medicine, has increased so much during the last five years that some young Frenchwomen, Russians, and Roumanians have proposed to form themselves into the nucleus of a female association analogous to the General Association of the male students. The *Lancet* says that the object of this new association will be to make the female students better acquainted with one another, to give assistance to those who are in need of it, and to provide something of the nature of a family circle, especially for those who, having come from far and not possessing the means of frequently returning home, lead a solitary existence in Paris during the long weeks of the vacations, when study is necessarily interrupted. Only one of the female students of medicine in Paris is English.

THERE are now fourteen day training colleges in England and Wales—viz., Aberystwyth, Bangor, Birmingham, Bristol, Cambridge, Cardiff, Leeds, Liverpool, London (King's College), Manchester, Newcastle, Nottingham, Oxford, and Sheffield. Of these, four (Cambridge, Liverpool, London, and Oxford) have men students only, while Bristol is the only one exclusively for women students. The others all make provision for both men and women.

At the last half-yearly meeting of the General Council of the University of Glasgow Professor Ramsay commented on the resolution of the Court to discontinue the junior classes in Latin and Greek. The degree of M.A., he pointed out, could be taken without Greek, and he was sorry to say that the class of all others in the University who most availed themselves of the option of taking any subject instead of Greek was the schoolmaster class—the very men to whom they looked for the teaching of Greek throughout the country.

RECENT changes in foreign currencies call for the attention of teachers of commercial arithmetic. On February 27 last the American Senate and Congress arrived at an agreement as to a gold currency, which is now in use. The unit is the gold

dollar of 25<sup>s</sup>/<sub>10</sub> grains, and nine-tenths fine. The greenbacks and Treasury notes are called in.

On January 1 of the present year the Austrian currency reform, which has been in progress since the year 1892, reached its final stage. The *krone* (divided into 100 *heller*) now definitely replaces the old *gulden*, as the exclusively legal currency of the Empire. The abbreviations sanctioned are for the *krone* the letter *k.* (in distinction from the Scandinavian *kr.*), and for the *heller* the letter *h.* The Austrian exchange, as given in English newspapers, has accordingly been quoted since the commencement of this year in *kroner* and *heller* instead of *gulden* and *kreuzer*. The pound sterling exchanges at par for 25 *kroner*. All the text-books of commercial arithmetic now in use require alteration in these respects.

ACTIVE steps are now being taken for the establishment of Commercial Universities at Marseilles, Hamburg, and Berlin. The advance of commercial education is very marked in Japan. The establishment of an Imperial High School of Commerce at Tokio has had such satisfactory results that a like school is now in contemplation for Osaka, and the creation of a degree of Doctor of Commercial Science (*Shogyogakushi*) is under discussion.

THERE are four grades of commercial schools in the Japanese Empire. In schools of the second and third grades, designed for youths who have completed their fourteenth year and will devote three to five years to special study, amongst the subjects taken up we find ethics, Japanese, Chinese, and English (or other foreign language), mathematics, geography, history, economics, commercial legislation, bookkeeping, commodities, principles of commerce, business practice, and gymnastics, together occupying respectively thirty and thirty-three hours a week, with a five years' course. In the third grade correspondence and commercial arithmetic figure as additional subjects, and the whole course is more extensive.

A MOVEMENT is in progress to establish a Chair of Mining in the Welsh University, in connexion with the University College of Bangor. Wales, of course, is pre-eminently a mining country, and the idea of the new professorship seems to be popular in the north of the Principality.

THE Governors of Porth Intermediate School some months ago gave the Headmaster (Mr. Samuels) six months' notice to terminate his agreement as Headmaster. This came to the notice of the Welsh Central Board and the Charity Commissioners, with the result that the Commissioners pointed out that the resolution of the Governors to dismiss the Headmaster was invalid. We learn that another inquiry will be held by the Central Board at an early date into the alleged breach of the Glamorgan scheme for intermediate education by the Porth Governors.

On the urgent request of the Council of St. John's Hall, Highbury, the office of President (in succession to the late Lord Harrowby) has been accepted by the Rev. Alfred Peache, who was, with the late Miss Peache, the munificent founder of the college. In spite of the many changes recently made in the staff of St. John's Hall, it is stated that the number of men at the college is decidedly increasing. For a few years, possibly owing to certain regulations imposed by the Bishops on non-graduate candidates for Holy Orders, there had been a decrease. Those regulations, the *Guardian* says, the Bishops have now, to some extent, modified.

THE death is announced of Prof. W. R. Herkless, LL.D., of St. Mungo's College.

\* \* \*

THE Chair of English Literature in the University of Glasgow has been vacated by the resignation of Prof. Bradley. Mr. Edmund Gosse has been mentioned as one of the candidates for the vacant post.

\* \* \*

MR. J. MACLEAN, M.A., of Fortrose Academy, has been appointed Headmaster of Strachan School.

\* \* \*

MISS CONSTANCE E. ASHBURNER has been selected out of ninety-three candidates as Headmistress of the Lincoln Girls' High School.

THE Literary Section of the Welsh Guild of Literary Graduates has had a good sale for the first volume of its reprints of old books, which contains the works of Morgan Llwyd o Wynedd, edited by the late Warden of the Guild. The second volume will include the three earliest Welsh tracts — "Oll Synnwyf Pen Kembero" (1547), "Yn y Llyfyr hwnn" (1546), and "Ben wedy i dynny o Gyfraith Howel dda" (1550). This volume is to be edited by Mr. Gwenogvryn Evans and the Secretary. The third volume is "Drych y Prif Oesoedd," edited by Mr. Samuel J. Evans, M.A., Headmaster of Llangefni County School. This book will be ready for publication before the end of the summer. Mr. Evans is keeping in view the needs of the intermediate schools, and the book will contain notes and a comprehensive preface in the English language.

\* \* \*

THE Secretary of the Dialect Section (Prof. E. Anwyl, M.A., Aberystwyth) reported to the last meeting of the Guild that the vocabulary of dialect words and expressions which he has arranged in alphabetical order was steadily increasing. It now amounts to over 1,700 words and expressions. Some progress had also been made in tracing out the boundaries of the various Welsh dialects. The Secretary said he hoped to be able to study closely the information which he had accumulated, and to prosecute further inquiries on points of difficulty.

\* \* \*

At the last meeting of the Royal Historical Society, Mr. W. J. Corbett, Fellow of King's College, Cambridge, read a very interesting paper on "The Tribal Hidage in the Seventh Century." Mr. Corbett pointed out that the list of tribal hidages is made up of multiples of 12,000. This enables him to make a complete rearrangement of the kingdoms under the Heptarchy. Altogether the kingdoms at one time (some twelve in number) contained 144,000 hides or families; though some were treble or double kingdoms, and others half a normal kingdom of 12,000 hides or even less. So, with the hundreds of England, some are larger than others. The date of the list and its origin were assigned by the author to the Peterborough chroniclers in the middle of the seventh century. In the discussion which followed, Mr. Harrison, Dr. Seebohm, and others acknowledged that they were deeply impressed by the paper, but reserved a final opinion until the papers and maps had been published in the Society's *Transactions*.

\* \* \*

IN the new number of the *English Historical Review* Mr. Thomas Bateson has a diverting paper on "Defoe and Harley," which pillories anew the ingenious and unscrupulous writer to whom all succeeding generations have owed so much literary satisfaction. Harley and Defoe seem to have made quite a fine art of their secret and mysterious communications. To our modern ideas, Harley placed an excessive value on Defoe's venal pen. There can be no doubt that the *Review* was a vastly interesting paper in its day. Mr. Bateson somewhat cruelly says:

With its secret policy of upholding Harley, unflinchingly maintained for near ten years; its vigorous discussions of trade, politics, and

finance; its letters of threat and approval, sent by interested readers, and from time to time inserted by Defoe; its columns of small talk, which became so popular that for a while they were issued in a separate supplement; and its puffs of foul quacks and enterprising merchants, the *Review* contained every essential part of the modern newspaper, whose progress from it is simply one of specialization.

We hope that this is not quite so historical as the rest of Mr. Bateson's paper.

\* \* \*

*Literature* gives some particulars of the father of the late Miss Buss, and incidentally suggests what may have been a contributory motive for the foundation of the now famous school in Camden Town.

During the late forties he experienced a severe struggle for a livelihood, and his wife and daughter came nobly to his assistance, by establishing in 1850 a seminary for girls, then called the North London Collegiate School for Girls, which was the origin of the present foundation. Buss not only became its professor of drawing, but (sic) teacher of science, too, having first acquired the necessary knowledge of chemistry, botany, physiology, mechanics, &c., making his own models for demonstrating the latter science. In 1874 he issued (privately) a profusely illustrated volume on "English Graphic Satire," in the preparation of which he was aided and encouraged by his daughter. An excellent portrait of the artist, painted by himself in the "Pickwick" days, hangs upon the walls of the North London School.

\* \* \*

It is interesting to notice the English books set as subjects of examination for the *Brevet Supérieur*, and also for admission to certain French training colleges. The latest decree issued by the Minister of Public Instruction gives the following selection, which is to stand for a period of three years from 1900:—Wordsworth's "Ode to Duty," "Michael," "The Old Cumberland Beggar," "Jarrow Visited," "Jarrow Re-visited," "Daffodils," "The Small Celandine," "The Solitary Reaper," "The Nightingale," "The Cuckoo," "The Skylark," "A Highland Girl," and "The Green Linnet"; Dickens' "The Christmas Carol"; Froude's "Oceana"; Goldsmith's "The Traveller" and "The Deserted Village."

\* \* \*

THE list of German books to be studied for the same purpose perhaps shows a more characteristic choice, including, as it does, Goethe's "Faust" and "Egmont," Schiller's "Thirty Years' War," short poems by both these masters, together with selections from Heine and Bürger.

\* \* \*

Nor the least interesting sight to the English visitor at the Paris Exhibition will be the books sent by eminent London publishing houses, under the auspices of the Publishers' Association, which will be shown in the British Section. Many of the books submitted have been rejected by the British Commissioners owing to the lack of space; and the selected books have now been catalogued and forwarded to Paris.

### COMMERCIAL EDUCATION IN SECONDARY SCHOOLS.

ON April 4 Dr. WILLIAM GARNETT, Secretary to the Technical Education Board of the London County Council, took the Chair at a joint meeting of the College of Preceptors and the Assistant-Masters' Association, when Mr. A. KAHN, M.A., of University College School, read the following paper on "Commercial Education in Secondary Schools":—

The question of commercial education opens up at once the whole problem of the curriculum. Thirty years ago the grammar-school master was scarcely conscious of the existence of such a problem. To him, classics in the morning and mathematics in the afternoon were the dumbbells and bars by which the constituent parts of the mind were best developed. The faculty psychology alone was the basis of the curriculum. The pupil was by mental gymnastics to be made adaptable for all the duties of life.

Then there came a race of schoolmen who were driven to confess that knowledge itself, knowledge of the world, was a necessary equipment for life. True, they said, it is the function of education to develop all the faculties; we must have mental gymnastics; but,

*ceteris paribus*, those subjects of study are to be preferred which not only serve as disciplines, but also impart useful knowledge. Indeed, certain knowledge is so indispensable that the curriculum must find room for it, even in the absence of "disciplinary value." Thus the subjects of study came to be regarded as (a) educational and useful; (b) educational but not useful; (c) useful but not educational.

In such a view of the curriculum the mind is looked upon as consisting of a number of communicating departments—memory, imagination, observation, judgment, reasoning, emotions, will—the efficiency of each department increasing with its employment. Now experience shows that the trained powers are not transferable from one field of mental activity to another. You may be a good judge of a horse, but a bad judge of pictures; and yet the process of judging is the same in the one case as in the other. The keenness of observation and sagacity of inference of the horse-expert are powers only as long as they are exercised on horses. That a man may reason well in space-relations and badly in matters of human conduct is a phenomenon of daily experience. We may be able easily to recall mathematical formulæ without being able to recall melodies and colours. Poetic imagination does not carry with it scientific imagination. The emotions of the epicure are excited by the sight of a festal banquet, whilst poverty and suffering may leave him untouched. My point, then, is this: that the powers of the mind are confined to the spheres of ideas in which they have been developed. And, if this be conceded, it follows that in the determination of the curriculum we have to consider not only what powers, but also what concepts, will contribute to the attainment of the end of education.

There seems no meaning, therefore, in the distinction between educational and useful subjects. The distinction applies more correctly to method. A number of isolated facts strung together without system form an appendage; they are mere impressions of sound and sight; but, if the facts are acquired by the processes of thought and the ideas are woven into one pattern, the treatment of the subject is *educational*, and power is developed for apperceiving new ideas in the same field. A common instance of uneducational method is to be found in the teaching of elementary algebra, which contents itself with securing manipulation of symbols without aiming at an extension of the concept of number.

The curriculum, I have tried to show, must stand in direct relation to life itself. It is the teacher who must make the curriculum educational; that is to say, it is the teacher who must develop power and cultivate interest in the fields of thought and activity that are covered by the curriculum. Now a large portion of life consists of the work necessary for our maintenance, and education must therefore be incomplete if it does not concern itself with the preparation for the sphere of work which the pupil is to enter. Neither from the ethical nor from the psychological point of view can there be any distinction in kind between that portion of education which prepares him to perform his share of labour with efficiency and that portion which does all the rest to prepare him to live the life of a good citizen of his country and of the world.

If education, then, is to be a complete equipment for life, it must include technical education. I wish to consider this evening the special education demanded by commercial life, and how far secondary schools should supply this demand. In dealing with this subject one experiences the difficulty of differentiating the technical from the general, because the qualifications of the ideal man of commerce, as a man of commerce, coincide in a large measure with those which we associate with the ideal citizen. The commercial man is placed in the turmoil of life itself; his operations are by their very nature always shared by others. The whole commercial fabric is based on trust and good faith, and honesty and integrity of character must be from first to last the distinguishing feature of the ideal business man. Preparation for commerce will therefore insist with special force on all those elements in education which are closely bound up with the formation of character. Again, much of the knowledge and skill which the man of business requires is furnished by the course of studies planned irrespective of the exigencies of commerce. Arithmetic, English composition, foreign languages, are all subjects of a general curriculum, and at the same time are of direct utility in the office and on the exchange.

Now, we cannot take a survey of the commercial community without being struck with the general ignorance that pervades it. I would suggest the following questions to be put to an average clerk, as a test of his commercial intelligence:—

1. What is the effect of writing "not negotiable" across a cheque?
2. Explain the functions of the Clearing House.
3. Say all you know about a bill of lading, a charter party.
4. Explain the currency systems of France, Germany, Austria, and the United States.
5. Since when have we had free trade in England? Are there any other European countries at the present day with the free trade system?
6. What has been the effect of the closing of the mints in India upon Chinese trade?

You would, I am afraid, get very little comfort from the answers. The public generally has an exaggerated idea of the training afforded

by business life itself. The ordinary parent believes strongly in taking away his boy from school at fifteen, or even fourteen, and sending him to the office to earn 6s. a week. There is a very large demand for this cheap labour; and headmasters of London schools will tell you that they are continually receiving applications for smart boys who can write neat hands and are quick at figures. But, while the supply of boy labour is scarcely equal to the demand, there is always a crowd of candidates for a clerkship worth 25s. to 30s. a week. The office training has made an unskilled labourer of the boy who wrote a neat hand; and his labour is a glut on the market. But the potentiality of British commerce offers almost infinite room for men possessed of knowledge and skill, and the problem, therefore, that presses for solution is how to replace the ignorance of to-day by commercial intelligence and power of to-morrow. Let me say at once that I believe that experience itself must always supply an important factor in the equipment for commercial life; but, under modern conditions, the commercial probationer is his own teacher, and the value of his experience will depend upon the adequacy of his preparation. The inefficiency of the commercial assistant must, therefore, be traced to a deficiency in his education.

I tried to point out at the beginning of my paper that intelligence and interest in a particular pursuit must be developed by disciplines that bear upon the pursuit. This pedagogical principle has found confirmation, if not expression, in the creation of modern schools and modern sides; but, unfortunately for commerce, there have been influences at work which have disturbed the balance of the curriculum of these schools, and made but light matter of literary studies. These are of double importance to commerce, for not only do they stand in intimate relation to the training of a morally directed will, but they form a large and essential part of the basis of knowledge directly applicable to commercial questions. A comparison of the English second-grade secondary school with the German *Realschule*, for instance, reveals at once the far higher importance that the latter attaches to the literary side of the curriculum. Taking one of the authorized programmes of the Prussian *Realschule*, I find that, on the average, throughout the school the humanities take up more than twice as much time as is allotted to mathematics and the natural sciences. Prussia has no South Kensington and no schools of science. The debt that German commerce owes to education is due largely to the admirable German secondary school system, in which the modern schools take a prominent place. And I would lay stress also on the excellence of the teaching that is characteristic of German schools. The teacher of the *Realschule* is trained for his work; his tenure is secure; he is adequately paid; and provision is made for his old age. Look for a moment at the question of modern-language teaching. The Report of the Commercial Education Committee of the Technical Education Board tells us: "We are strongly of opinion that modern languages should be taught, as far as possible, as *spoken* languages." With this we shall all agree. But where are we to get the teachers who are themselves fluent linguists? The German modern-language master spends a year in England and a year in France. He has every encouragement given him to prolong his training. The English secondary-school master has no inducement held out to him to spend time and money abroad after the completion of his University course. I hope I may be pardoned for referring to so commonplace and mean a thing as money. I do not find it mentioned in reports of conferences on commercial education that have from time to time been held; and the Chamber of Commerce, that has issued elaborate schemes, and offers large prizes and scholarships, seems never to have given a thought to the improvement in the lot of the teacher.

Although the *Realschule* has done much for German commerce, there is a growing feeling that it does not take sufficient cognizance of branches of knowledge that have an immediate bearing on the conduct of business and commercial development. There is an increasing tendency in Germany to establish schools with a greater commercial bias or to add commercial departments to existing schools. In Bavaria, for instance, there are now ten *Realschulen*, in which a modification of the ordinary curriculum is introduced in the last two years of the school course for pupils preparing for commercial life. If it is true of the German modern school that it does not sufficiently cultivate an interest for commerce and higher commercial studies, then it is ten times true of the English modern school, with its strong industrial bent. In our modern secondary schools, then, I would urge a bifurcation during the last year, or the last two years, into a commercial and an industrial section. In the smaller schools many of the subjects might, of course, be taught in common to the two departments. The course of study that I have in my mind for the commercial department would consist of English literature and composition, history including a survey of the great periods of the world's history, geography with special regard to its economic side, one or two modern languages, commercial knowledge including descriptive economics, commercial arithmetic and algebra, geometry and mensuration, chemistry to lead up to the examination of merchantable products, book-keeping. Subjects like shorthand and typewriting I would make optional.

An understanding of the share that commerce contributes to the world's well-being will implant respect for commercial work, and will counteract that baneful and immoral conception of commerce that

makes it a mere synonym of money-making. I have before spoken of the paramount importance of character in the business man. I cannot but believe that a right appreciation of the economic nature of his vocation will do something to guard him against the temptation to derive gain by unscrupulous means. We must show that commerce is not gambling, and that it does not consist of giving or receiving illicit commissions. "Economics," then, should find its place in the commercial department; and I would include its study in lessons on general commercial knowledge, which would give some idea of commercial organization, legislation, and technique. With this subject of "commercial knowledge" should be co-ordinated a large portion of the arithmetic. Thus, a discussion on *Capital* would lead to questions on interest; with the chapter on *Companies* should go the arithmetic of shares. *Bills of Exchange* would lead in their train questions on discount and on exchange. With *Insurance* we should have questions on premiums and annuities. *Contracts* would lead to calculations in which enter all, or some, of the elements of commission, insurance premium, freight, and exchange. *Telegraph Codes* would take us to questions on combinations and permutations; and so on, and so on.

Commercial arithmetic suffers at present from a want of textbooks that are in touch with the actuality of transactions. Take, for instance, the little book on "Commercial Arithmetic" by Mr. Taylor, of Nottingham. It has run to a third edition, and is evidently extensively used. The book contains four examples on the finding of simple interest. The first has a period of 3½ years, the second 12 years, the third 57 years, and the fourth 8½ years. If the writer had had any notion of commercial operations, he would, of course, have turned his years into days. Then, again, in nearly every example of compound interest we have the absurdity of interest being payable yearly, while the whole amount is made due before the expiration of the year. An example on stocks puts "Goschens" (2½ per cent.) at 96½; and in a question on exchanges the price of silver is quoted at 5s. per ounce. (The date of the edition before me is 1896.) There is a point in this connexion which deserves special mention. We have no decimal coinage, but we can make one for the purposes of arithmetic. Facility in decimalizing money and evaluating the decimal is the secret of the commercial ready reckoner. Strange to say, the books that make commercial arithmetic a speciality have all, to my knowledge, failed to grasp the simplicity of the little problem, although as long ago as 1870 Messrs. Sonnenschein and Nesbitt showed that the number of farthings is equal to the number of thousandths of a pound + ¼ of ¼ of that number.

I need not insist on the important part which modern languages must play in the curriculum; but I must part company with those who believe that the teaching of French and German should be mainly occupied with the translation of business letters. This practice in correspondence generally amounts to nothing more than words, words, words. It arouses neither enthusiasm nor interest; it is utterly barren. To sacrifice to this stuff a knowledge of some of the great French and German masterpieces is a cruel injustice to the boys. What I should do, if time permitted, would be to give through the medium of French and German a systematic account of the commercial methods, machinery, and important laws of France and Germany.

In the conduct of a commercial form I do see a danger—the danger that its course of studies may degenerate into mechanical routine work. Care would have to be taken that general culture and those disciplines that are the bases of higher commercial studies received their due share; and equal care would have to be taken that the commercial department was not made an asylum for the outcast.

So far I have had in my mind second-grade secondary schools only. A system of commercial education will also include evening instruction, first-grade schools, and commercial institutions of University rank. The title of my paper precludes me from dealing with the functions of evening classes or of the University; but I shall not have completed my subject if I do not say a few words on the higher commercial education suitable for a boy who does not enter business before the age of eighteen. I confess that higher commercial education appeals neither to the average merchant nor to the average parent. It is something, however, that touches the whole nation, its commercial security, and commercial development. For you will surely agree with me that in a country like England, with a democratic Government, it is a matter of the greatest concern that the commercial community shall have as leaders men capable of considering questions of currency, tariffs, taxation, treaties, and of inquiring into the commercial conditions of other countries, their policies, and their methods. A proposal has often been made to establish a commercial institute with a two or three years' course. The London Technical Education Board recommends as a substitute the formation of commercial departments in first-grade schools. The advantages that must accrue to a commercial school that is conducted as part and parcel of an efficient public school are obvious; but this association will at the same time weaken the support from other schools. The experiment is being made. With the assistance of the London Technical Education Board, we have established a Commercial Department at University College School. To put before you its aim and character I cannot do better than read to you our programme:—

## UNIVERSITY COLLEGE SCHOOL,

## COMMERCIAL DEPARTMENT.

The minimum age of admission is fifteen. Attainments must be of standard required for passing one of the following examinations (one modern language being included among the subjects):—Cambridge or Oxford Local Senior Pass or Junior Honours; London University Matriculation; C.O.P. First Class. Intermediate L.C.C. scholars will be admitted to the course if they can show a satisfactory knowledge of French or German.

The aim is to prepare (1) for the higher branches of commercial life, (2) for an institution of University rank in the higher branches of industry and commerce. The course is two years in length. At the end of the first year an examination will be held for admission to the second year's course. At the end of the second year's course, the pupils will present themselves for a leaving examination conducted by the Technical Board, on the result of which examination certificates will be granted. The examinations will be partly oral.

## COURSE OF STUDY.

English literature and composition, commercial science, economics, commercial arithmetic, commercial history, commercial geography, book-keeping, mathematics.

Two of the following languages:—French, German, Spanish, Latin.

Optional: chemistry, shorthand, typewriting, drawing, higher mathematics.

English.—Selected works of English literature, e.g., Bacon's Essays, Burke, Arthur Helps. Essay writing, précis writing, practice in speaking, debates on commercial topics.

Mathematics (first year only).—Algebra: progressions, permutations and combinations, logarithms, annuities, and compound interest. Geometry: Euclid III., IV., VI. Trigonometry: elements up to and including solution of triangles, with special reference to the processes of surveying.

Arithmetic (first and second year).—Rapid addition, abridged methods of multiplication and division, rapid decimalization of money; application of arithmetic to percentage, proportion, calculation of averages; interest, discount, commission, calculation of present value, C.I.F.; foreign weights and measures, exchange, banking operations, international stock exchange transactions, sinking funds, conversion of loans. Frequent practice in mental arithmetic and casting up of profit and loss.

History.—(1) Short sketch of the industrial and commercial history of antiquity. (2) Commercial and industrial history of the middle ages; centres of commerce; divisions of society in England; Peasants' revolt and economic effects. (3) From the discovery of America up to the invention of the steam engine; special study of the development of England's foreign trade. (4) The industrial revolution.

Geography (first and second year).—Physical geography; elements of geology, especially as regards coal and metals; agricultural, industrial, and commercial geography of the world; British colonies.

Economics (second year only).—Nature, scope, and methods of economic science; production and distribution, labour, capital, division of labour, values; free trade and protection; equilibrium of demand and supply; money; credit; wages; relation of State to labour and trade.

Commercial Knowledge (second year only).—The machinery of business. Merchant, trader, &c.: principal, agent, partners; companies, company law, syndicates and trusts; employers' liability; transit by land and water, navigation law; tariffs, banking, bills of exchange and other negotiable instruments; insurance, hypothecation; chambers of commerce and consulates; patents and trade marks; contracts, telegraph codes. To be illustrated by (a) reference to actual reports of commerce and current newspapers, (b) visits to docks and large commercial and industrial houses, banks, &c.

Modern Languages.—French and German: Reading of works of travel and industry, economical treatises, descriptive economics; commercial condition of foreign countries taught in the foreign language; commercial correspondence, essays—the foreign language to be used as the vehicle of teaching as far as possible; deciphering of foreign handwriting.

Spanish, Italian: reading, elementary grammar, conversation.

Chemistry; Shorthand (Pitman's or Script); Drawing: Freehand, drawing to scale.

We have uphill work before us, because we have to convert the parent, the merchant, and perhaps also the schoolmaster.

Mr. BAKER said that a large proportion of the boys in the school of which he was headmaster would enter commercial houses in the City on leaving school, and these boys would be better fitted for their work if a good scheme of commercial education could be adopted for the fifth and sixth forms. But at present there was little inducement to boys to remain at school in order to undergo this training, as at the end of it they could not secure a better position than they might have done without the training eighteen months earlier. Merchants, in fact, did not appear to require the services of well



educated lads, and in some cases they positively discouraged efforts on the part of their employees to acquire knowledge which might be of use to them in business. It had been said that commercial education suffered from a lack of efficient teachers, and he was afraid that this state of things would continue so long as the position of teachers in this country contrasted so unfavourably as it did with that of teachers on the Continent. In France and Germany teachers were encouraged to acquire the necessary knowledge, and were sure of adequate remuneration when they had completed their training. If similar inducements were offered here, there would no doubt be an ample supply of properly qualified teachers. He thought that the lecturer had somewhat exaggerated the reluctance of headmasters to let their boys enter special commercial schools. Every teacher would naturally prefer that a promising boy who had been for some years under his care should complete his school career with him; but no headmaster would object to a boy entering another institution if by so doing he would receive special training which the school curriculum did not provide for.

Mr. PATON thought it was very hopeful for the new venture that it was in the hands of a man who thoroughly believed in the humanities, and who was going to treat commercial education, not as the education of a machine, but as a branch of liberal education. Up to the age of thirteen or fourteen, in fact, it differed in no essential respect from ordinary school education. It was undesirable that special commercial schools should be established in which the curriculum should be confined to commercial subjects, because in teaching such subjects utilitarian methods must almost necessarily predominate, with the result that both mind and character would be dwarfed. It was commonly said that a boy who was clever was too good for business, but he held, on the contrary, that there was no better field for the development of a man's intelligence than a large commercial establishment. It was important that commercial education should not be begun too early, as otherwise, although efficient clerks might be produced, they would not be men capable of adapting themselves to new conditions, able to plan and able to grapple with the real problems of commercial life. That there was need of such men was shown by consular reports, from which it appeared that English trade was being ousted from one market after another.

Mr. G. BROWN said the new Commercial Department was fortunate in having the support of the Technical Education Board, and in starting with a selected set of pupils of London schools. But, if it was to prove a success, it would be necessary to convince the heads of commercial firms that the training given would be really serviceable. At present there was little demand for higher commercial education. It was true that it was requisite for the few who were to become pioneers of commerce, but for the great majority of men employed in business houses all that was required was rapidity of calculation, ability to write a letter and spell well, and ordinary tact and intelligence. Then, too, the prospects offered were hardly such as to warrant the expenditure of much time and money in special preparation. The average commencing salary was from eight to twelve shillings a week, and for a large proportion of employees there was small prospect of advance beyond fifty pounds a year. He was opposed to the conversion of ordinary secondary schools into commercial training institutions. A wisely arranged school curriculum should provide for the proper general training of boys intended for commercial life as well as for those who were to follow other pursuits, and it was useless for boys to commence to specialize until their future career had been definitely decided upon. The success of Germans in commercial enterprise was largely due to the high level of their general education, and this was assisted by the encouragement and support given by the German Government to their teachers—a support which was unfortunately entirely lacking in the case of secondary-school teachers in this country. The Technical Board were doing something to supply this deficiency, and he felt sure that any money they might spend in this way would be well spent. He could not agree with a previous speaker that England was far behind other nations in commercial progress. On the contrary, he thought this country was fully maintaining the position it had won. The reason for this was to be found, not in the training obtained at commercial institutions, but in the character of Englishmen. Tact, determination, power of taking pains, willingness to work through periods of pressure, and eagerness to advance—these were the qualifications required for commercial men, and these were the qualities that teachers should try to develop in boys who were to make their way in the world of commerce.

Mr. SHIPHAM questioned whether it would be wise to give to a school with such a liberal curriculum as that sketched by Mr. Kahn the title of a commercial school, as in the event of the school proving successful an impetus would be given to the demand for an education of a utilitarian and inferior type.

Mr. SONNENSCHNIG said it was true that at present English commerce was ahead of that of other nations; but it was doubtful whether it would remain so, considering the great progress made by Germany during the last hundred years. He hoped that an English Minister of Commerce would be appointed, as such a Minister might remedy many of the things that shackled our trade, and could promote commercial education far more effectually than the Technical

Board could do. Amongst other things, a Minister of Commerce might arrange for the introduction of the metric system and its adaptation to English trade, a change which could be introduced with very little disturbance of our present methods. The reason why employers preferred German clerks was that they were better educated than English ones, and it followed that, if this state of things were altered, the German clerk would no longer find employment in England. He agreed with the lecturer that it was undesirable to restrict the reading of French and German to commercial letters. This kind of reading did not afford the culture which was to be derived from the study of general literature, and which was so necessary to the formation of character.

Mr. LANGLER supported Mr. Barker in refuting the accusation made against teachers, which seemed to involve unwillingness on their part to promote the welfare of the boys under their charge.

Mr. KAHN having replied to the various speakers, a vote of thanks to the lecturer concluded the proceedings.

## TWO HUNDRED YEARS AGO.

It is easy to take our educational privileges and blessings as a matter of course, and without very much thought or gratitude. But these things have not been always so; indeed they are startlingly new, as one realizes in reading any book of biography or social custom earlier than the middle of the present century. Seventeenth-century England looked with very little favour on learned women. In Mrs. Earle's recent book on "Child Life in Colonial Days" there is plenty of evidence that colonial opinion on this question was even more conservative. In that book Mrs. Earle gives us a graphic picture of the life of the wives and daughters of the men who had left these shores to settle beyond seas, and build up a new life for themselves and their families. That the colonial women of the seventeenth century were "notable housekeepers" there is not a shadow of doubt. One stands amazed before the chronicle of their labours and accomplishments. They were the clothiers of the community; spinning and weaving, dyeing and bleaching, cheese-making and soap-boiling—these were only some of the numerous duties they performed. Needlework of the most fantastic and intricate kind, lace-making, and the most wondrous quilting, occupied the spare moments of these industrious housewives, and it is no wonder if they had little leisure to spare for intellectual pursuits properly so called.

Mrs. Earle gives a typical day's work of a young eighteenth-century girl, who lived in Connecticut, and kept a diary. Here is Abigail Foote's record:—"Fix'd gown for Prude. Mended mother's riding-hood. Spun short thread. Carded tow. Spun linen. Worked on cheese-basket. Hatchelled [combed] flax with Hannah: we did 51 lbs. apiece. Pleated and ironed. Read a sermon of Doddridge's: spored a piece. Milked the cows. Spun linen and did fifty knots; made a broom of guinea wheat straw. Spun thread to whiten. Set a Red dye. Had two scholars from Mrs. Taylor's. I carded two pounds of whole wool and felt *nationly*. Spun harness twine. Scoured the pewter."

A pretty good record, too, and varied! Is it not, perhaps, a little humbling to modern readers? There are some curious items in the day's account, which set us wondering. The sudden appearance of Dr. Doddridge's sermons in the list is unexpected. After such a hard morning's work something lighter would have been allowable for Abigail's reading. But she was clearly a serious-minded maiden, and naturally betook herself to sermons. Then there is the mention of the two scholars from Mrs. Taylor's. Can it be that Abigail added the profession of teaching to her other employments! It is impossible to decide. Then comes the final confession, "*felt nationly*," the meaning of which word is not clear, but it seems to imply a sense of satisfaction over a well spent day; and, if that is a true interpretation, surely Abigail Foote was entitled to the feeling. We should have felt not only *nationly*, but absolutely exhausted, in her place.

In Governor John Winthrop's "History of New England" (1646), there is an instructive paragraph bearing on the subject of girls' education. "A godly young woman of special parts" is said to have "fallen into a sad infirmity, the loss of her understanding and reason, which had been growing upon her divers years by occasion of giving herself to reading and writing"; and it is further alleged that she "had written many books." "If she had attended to her household affairs, and such things as belong to women, and not gone out of her way and calling to meddle in such things as are proper for men, whose minds are stronger, she had kept her wits, and might have improved them usefully and honestly."

It was, in fact, well understood that a woman's education was domestic and industrial. If a girl learnt to read and write, that was sufficient. Sometimes arithmetic was added, but in a good many cases the girls were left without any instruction at all, even in the "three R's." No doubt in the pioneering days of colonial life it was for the ultimate good of the community that the women should devote their energies mainly to such employments as sustained the life of their households, from the making of cheese and the spinning of flax to the manufacture of brooms and harness.

From that picture it is interesting to turn to the words of a seventeenth-century Englishman, who had visions of a new era in the education of women. In an essay printed in 1697, Defoe writes as follows:—"I have often thought of it as one of the most barbarous customs in the world, considering us as a civilized and Christianized country, that we deny the advantages of learning to women. We reproach the sex every day with folly and impertinence; while, I am confident, had they the advantages of education equal to us, they would be guilty of less than ourselves. . . . One would wonder indeed how it should happen that women are conversible at all; since they are only beholden to natural parts for all their knowledge. Their youth is spent to teach them to stitch and sew or make baubles. They are taught to read indeed, and perhaps to write their names or so, and that is the height of a woman's education. If knowledge and understanding had been useless additions to the sex, God Almighty would never have given them capacities, for he made nothing useless. . . . Besides, I would ask such what they can see in ignorance that they should think it a necessary ornament to a woman; or how much worse is a wise woman than a fool? . . . Shall we upbraid women with folly when 'tis only the error of inhuman custom that hinders them from being wiser?"

After this chivalrous defence of women's capacities, Defoe proceeds to state what they might fitly be taught, and it is noteworthy that he dwells much on the effect of education in improving the conversation of women. That, of course, implies much beside, and behind. "They should be taught all sorts of breeding, suitable both to their genius and quality. And, in particular, music and dancing, which it would be a cruelty to bar the sex of, because they are their darlings. But besides this they should be taught languages, and particularly French and Italian; and I would venture the injury of giving a woman more tongues than one.

"They should be taught to read books, and especially history; and so to read as to make them understand the world, and be able to know and judge of things when they hear of them." But even this is not the limit of Defoe's visionary scheme of education. He goes further still, and adds, in a burst of enthusiasm and generosity: "To such whose genius would lead them to it I would deny no sort of learning, but the chief thing in general is to cultivate the understandings of the sex that they may be capable of all sorts of conversation, that, their parts and judgments being improved, they may be as profitable in their conversation as they are pleasant."

In conclusion, after another profession of faith and further argument, Defoe declares that "all the world are mistaken in their practice about women. For I cannot think God Almighty ever made them so delicate, so glorious creatures, and furnished them with such charms, so agreeable and so delightful, and with souls capable of the same accomplishments with men, and all to be only stewards of our houses, cooks, and slaves. Not that I am for exalting female government in the least, but, in short, I would have men take women for companions, and educate them to be fit for it."

That was written rather more than two hundred years since, but even yet there linger some who find themselves more in sympathy with Governor Winthrop than with Daniel Defoe. M.S.

### MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held at the College, Bloomsbury Square, on April 7. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Baumann, Rev. J. O. Bevan, Mr. Bidlake, Mr. Brown, Mr. Butler, Mr. Charles, Mr. Chettle, Miss Crookshank, Mr. Eve, Rev. Dr. Hiron, Mr. Millar Inglis, Mr. Montgomery, Mr. Pinches, and Dr. R. P. Scott.

The minutes of the last meeting were read and confirmed.

The report of the Finance Committee was adopted.

The Rev. J. O. Bevan was appointed to represent the College at the Educational Congresses organized by the Association Internationale in connexion with the Paris Exhibition.

The following persons were elected members of the College:—

Mr. G. W. Dolbel, A.C.P., Oxford Road, Basford, Stoke-on-Trent.

Miss A. G. Doré, 50 Gladsmuir Road, Highgate, N.

Miss M. E. Gutteridge, A.C.P., Baynard Castle, Gravesend.

Mr. T. Hay, M.A. Camb., B.Sc. Lond., A.C.P., 15 Broomfield Road, Chelmsford.

The following books had been presented to the Library since the last meeting of the Council:—

By E. ARNOLD.—Arnold's Geographical Pictures.

By G. BELL & SONS.—Murray's Graded Exercises and Examination Papers in Book-keeping.

By BLACKIE & SON, LTD.—Annandale's Concise English Dictionary; Laming's Eutropius, Books I. and II.; Ryland's Pope's Essay on Criticism.

By C. J. CLAY & SONS.—MacCunn's The Making of Character; Rippmann's Hauff's Der Scheik von Alessandria.

By W. B. CLIVE.—Briggs and Stewart's Advanced Practical Inorganic Chemistry; Thompson and Mills' Lysias' Eratosthenes and Agoratus.

By MACMILLAN & CO.—Berthon's Specimens of Modern French Prose; Binns' Normand's L'Emeraude des Incas; Hyslop's Euripides' Andromache; Wall's Daudet's La Tour des Maitres.

Calendar of King's College, London.

Calendar of Royal University of Ireland, and Supplement.

Year Book of the Joint Scholarships Board, 1899-1900.

## REVIEWS.

### TWO HISTORIES.

- (1) *Sir W. Smith's History of Greece, from the Earliest Times to the Roman Conquest.* New Edition. Revised by G. E. Marindin. (Murray.) (2) *History of Greece.* By Evelyn Abbott. Part III. *From the Thirty Years' Peace to the Fall of the Thirty at Athens.* (Longmans.)

(1) It is nearly half a century since Smith's "Greece" appeared. The interval has been singularly rich in archaeological discoveries and in scholarly criticism of the Greek classics, and has even been distinguished by "finds," like the Odes of Bacchylides and Aristotle on "The Constitution of Athens." Nor has it been less marked by the growth of a keen interest, on the part of a considerable section of the public, in Greek literature and antiquities. The investigations of Dr. Schliemann, Prof. Ramsay, and their fellow-workers, and University and public-school representations of Greek plays, have appealed to a constantly increasing circle. It was time, therefore, that so useful a manual, which, based as it was on Grote's great work, embodied the best knowledge of the time, should be brought up to date. It would have been difficult to find a more competent editor than Mr. Marindin, the scholarly colleague of Mr. Wayte in the production of the new "Dictionary of Antiquities." The present edition reproduces for the most part the *ipsissima verba* of Sir W. Smith's "History," but certain portions have been practically rewritten. This is especially the case with the chapter on Greek Art and with the whole of the First Book (the Mythical Age.) Recent discoveries and speculations have added so much to our knowledge of the period that this was absolutely necessary, and we only wish Mr. Marindin had drawn even more freely on his stores of information. The chapter on the Homeric Poems is rather hard reading; it assumes too much knowledge on the part of the reader, and introduces perhaps inevitably, a good many qualifications of the view which the writer on the whole prefers.

The revision of other parts of the book seems done with care and judgment. Take, for example, the battle of Marathon and the fate of Miltiades. The map of the district is better, and the topographical particulars clearer, the result, no doubt, of more recent investigations (eastwards, by the way, is accidentally put for westwards); the more rhetorical part of the description of the conditions under which the battle was fought is slightly abridged; the question of the guilt of Miltiades and his treatment by the Athenians is dealt with in a more judicial way; and an interesting parallel between his case and that of Sir Walter Raleigh is suggested. It is not easy to say whether the editor's adherence to the lines and the proportions of the original book is justified; nearly half of it is still occupied by the history of the fifth century B.C., and no attempt has been made to deal with Greek life after the heroic age, or with the Hellenizing of a considerable part of the world, both subjects excluded from Smith's "Greece." Probably the object is still to supply a sound and trustworthy handbook for the classical student rather than a popular history appealing to the general reader. The illustrations are somewhat less numerous than in the earlier editions, but are all to the point, and admirably engraved. More than half of them are new.

(2) Twelve years have passed since Mr. Abbott printed the first part of his "History of Greece." His notes in the present volume are full of proofs that he has contrived to keep pace with the rapid growth of materials; and it says much for his enthusiasm that after all that he must have endured he declares that Greek history in the fifth century B.C. has an interest that is inexhaustible.

Holm's valuable work, which is on much the same scale as Mr. Abbott's, is in our judgment a far more interesting book. There is, of course, much more in it that is original, and the dissertations and notes are as entertaining as they are learned. But it cannot be denied that Holm is of little use to the beginner. His History appeared in the same series as Mommsen's great Roman History; and facts are grouped and inferences interwoven with facts after the method made familiar by the earlier book. We have found that students cannot make much of Holm unless they have previously endured a course of Oman; and we have often had reason to sympathize with the knowing candidate for a Bible Clerkship at All Souls who observed that the style of Herodotus is marked by the exquisite simplicity of Oman. Mr. Abbott's History comes somewhere between Holm and Oman, and is a likely book for sixth forms and University students.

The difficulties that encounter modern historians of ancient Greece are countless. On very many matters it is simply impossible to arrive at certainty. The Greek historian, whatever purpose he set before himself in writing, never undertook to supply a complete chronicle of passing events. He would select some department of past or contemporary history—perhaps of both—and everything that did not lie within that compartment he would deliberately omit. To censure Thucydides, for example, as Prof. Mahaffy censures him, because “he passes in contemptuous silence over all the artistic development of Athens, is, we hold, beside the mark.

It has been pointed out again and again that the writing of history did not in ancient times mean what it means nowadays; and the broad effect of the difference of theory is that our modern writers on antiquity are too often left by their ancient authorities wholly or partially in the dark. Over the countless difficulties thus caused Mr. Abbott passes lightly, with the single exception that he enters in an appendix into the discrepancies between the accounts of the rule of the Four Hundred at Athens given by Thucydides and Aristotle. He is very properly chary of accepting anything that rests on uncertain conjecture or doubtful combination. We do not understand how he can still hold that the election of the Athenian generals took place in May. About the meaning of a passage in which Thucydides asserts that Pericles did not hold an ecclesia during the first invasion of Attica, we do not see that there need be any question. We know that there was but one regular meeting in each prytany, and that this meeting was held on widely different dates in different prytanies. When we remember that the invasion lasted but a month or so, it is not much to suppose that Pericles, standing in the high position in which he then stood, was able to arrange that the regular meeting that would, perhaps, have taken place during the invasion should be postponed.

Of Pericles Mr. Abbott is not an enthusiastic admirer. He blames him strongly for not providing shelter and drainage for the population that was crowded into Athens during the invasion of Attica, and seems to hint that he was responsible for the awful epidemic that made the city desolate, and carried off the statesman himself and his two sons. Upon his strategy he is as severe as Pflugk-Hartung. What is possible for a power almost exclusively naval, and exposed to the attacks of a great combination of land forces, is a question that might well tax the professed strategist. “Between the seizure of Plataea,” says Mr. Abbott, “and the invasion of Attica there was an interval of nearly three months, in which . . . a blow might have been struck at Bœotia, or measures taken to secure the passes over the Isthmus of Corinth.” This is merely a repetition of Duncker’s criticism, except that Mr. Abbott ought, of course, to add “and the passes into Bœotia.” It would have been of little use to lock up the Athenian army in the passes over the Isthmus, and to have left Cithæron and Parnes open. However, Mr. Abbott gives a reference to Delbrück; and, in regard to these plans of operations, we can only say that we do not think Mr. Abbott has sufficiently considered Delbrück’s reply to Duncker (pages 89 *et seq.*).

It is very hard to write Greek history without becoming involved in an “intellectual difficulty” on which Mr. Herbert Spencer has laid stress. “Measuring other people’s actions by the standards our own thoughts and feelings furnish” is an error to which the historian of Greece is peculiarly liable. The reason is, perhaps, that we moderns feel a sympathy with the Athenian genius such as we are not capable of feeling with the haughty spirit of Rome. Greek thought dominates our schools, and we are apt to imagine that, when we take to thinking, we think like the Greeks. So we sometimes censure or praise a Pericles for reasons that would never have occurred to a Greek of the fifth century before Christ. To the era of Tory Mitford and Radical Grote there has succeeded the era of modernizing historians—the school of which Müller-Strübing was once so conspicuous an ornament, and in which Prof. Mahaffy is now a distinguished teacher. Mr. Abbott, so far as we remember, does not quote either Müller-Strübing or Prof. Mahaffy; but he occasionally thinks as they might think.

The volume closes with a useful compilation entitled “Literature, Art, Society, &c.” We note with interest that Mr. Abbott follows Mr. Haigh’s views on the production of tragedies, and we think it would have been well to point out that the statements in Gardner and Jevons’s “Manual” are, in some cases, at variance with Mr. Haigh’s opinions.

## NIMIUM IN PARVO.

*A Brief History of Eastern Asia.* By J. C. Hannah, M.A. (Fisher Unwin.)

Mr. Hannah has essayed a sufficiently formidable task. In the compass of 274 pages he has compressed the history of China, Japan, Tartary, Burmah, Siam, and India, from the semi-mythical Hwangti, who regulated weights and measures in 2332 B.C., to the occupation of the Philippine Islands, in 1898, by the forces of the United States. Evidently, then, the field is an enormous one, and the author would, perhaps, protest against any but technical criticism, against the merest hint that the result of his labours is neither interesting nor illuminative. He would say that his book is, of necessity, an outline only, an affair of dates, of battles, of conquests, and of dynasties; and that no one would think of criticizing the cheerful occupants of the cases in a surgical museum because they do not compete in beauty with the Venus of the Louvre. There is, of course, a good deal to be urged in favour of such a plea; and we may say at once that, if any one desire a handy compendium of names and dates referring to the Far East, no better volume can be found than Mr. Hannah’s. The perpetual forays and raids (rather than wars) of Tartar tribes, the feuds of Kiptchak and Uzbeg, the battles fought by Huns and Turks, the rise of Chang and the fall of Wong—all such matters may be found briefly set down, dated, and indexed. As a skeleton, then, the “Brief History” is very well; and the student who likes to regard the great epic of the East in a “bony light” will find his account in possessing Mr. Hannah’s book.

But, from the standpoint of true education, how thin it all is! Dr. Johnson, we know, liked history to be composed of hard facts, with reliable dates attached; he laughed at the “painted style,” as he called it. But these axioms were certainly delivered in the most drowsy moments of our good old Homer. For what does it come to, after all, this succession of names, barbarous and outlandish, this dry roll of massacres of savages by savages, this recitation of emperors whose titles sound like gongs beaten out of tune? It is simply an elaborate variant of the great dictum of Mr. F.’s aunt: There are milestones on the Dover road—an insignificant catalogue of events, which lie like useless lumber in the cells of the memory, keeping out far rarer store. The history of man, whether Asian or European, is surely something far more than a litany of battle, and murder, and sudden death. The inhabitants of India have always fought one tribe with another. Doubtless; and what does that matter? The prerogative facts in Indian history are surely, not the bloody brawls which Indians indulged in, in common with all peoples of the earth; but rather Indian art and Indian thought—those marvellous hill temples that stand in the wastes of Ceylon, making Coleridge’s opium vision seem but a literal history; the vast metaphysics which still keeps its secrets, and smiles calmly at the “yea” and “nay” of the young physical science of the West. And there are the great *décor* of Indian life, the wonders of its sacred cities, all the colour and glow of the swarming streets, the splendour of temple and palace, the suggestion, always present, of myriads who lead a life quite secret and remote from anything that we have dreamed of in the West, who have lived that hidden life age after age, unchanged and unchangeable. To tell of these things, surely, is to tell the history of India; to realize such things is to be “educated” in Indian history, since it is to understand all that is significant in the life of Indian men and women.

Of course the historical skeleton is necessary; but it is, emphatically, a skeleton to be kept in a cupboard, to be glanced at now and again, and immediately to be decently hidden from view. The human mind is a vessel of strictly limited capacity, an instrument of strictly limited powers, so that Darwin, who had turned his intellect into a fact-grinding machine, could relish Shakespeare no more, and the youth who excels as a lightning calculator is not likely to appreciate Keats or to rival him. There was a time, of course, when the dynasty of Gradgrind reigned, and ideas were nothing accounted of, but this furious and barbarous Tartar race has been dispersed, and we are generally agreed that facts are not of the slightest consequence save as the embodiment of ideas. It will be admitted that it is highly desirable that English boys and girls should understand a little of the East and the Easterns, and to this end we would recommend an agreeable compilation known as the “Arabian Nights,” with certain of the works of Mr. Rudyard Kipling. The study of Mr. Hannah’s “Brief History” is for those of riper years.

## A NEW CYCLOPEDIA.

"The Temple Cyclopaedic Primers."—(1) *A History of the English Church*. By the Dean of Gloucester. (2) *Ethnology*. By Dr. Michael Haberlandt. (3) *Dante*. By Edmund G. Gardner, M.A. (4) *The History of Language*. By Henry Sweet, M.A. (5) *A History of Politics*. By Edward Jenks, M.A. (6) *A History of South Africa*. By W. Basil Worsfold. (J. M. Dent & Co.)

We have here a very promising new series of neat little volumes, which lay the foundation of a library of condensed information by competent writers on great subjects. As the titles of the first six volumes testify, the selection of subjects is, so far, judicious and comprehensive, and the manuals—which may not inaptly be described as finger-and-thumb books—are such as will specially appeal to the scholar and the student.

(1) We must very cordially congratulate Dean Spence on the manner in which he has condensed the history of the English Church—a great subject—into the modest limits of a primer. It is just possible to infer from the tone of the book rather than from any distinct pronouncement that the author's sympathies go with the party which calls itself Evangelical, but not the most resolved of Catholics could deny the very admirable impartiality with which Dr. Spence tells the story of the *Ecclesia Anglicana*. There is, perhaps, a tendency to insist overmuch on the peculiar merits of Celtic Christianity—always rather a beautiful spirit than an organized body—but this is, after all, an amiable weakness, akin to the famous literary *cultus* of "Celtic glamour." We may question again whether the author's depreciation of plainsong is well considered, since there are many who would maintain that in the Gothic church and for the Gothic rite there can be no more fit or more splendid accompaniment than the grave and sonorous Gothic melody; but these are but trifles which interfere little, if at all, with the excellence and the usefulness of an admirable little book.

(2) Dr. Haberlandt has given an excellent outline of ethnology, and the value of his primer is largely due to the fact that he holds the one key to the understanding of the human enigma. He has grasped the fact that man is what he is by reason of his desire of the unknown, or in other words, through the influence of religious emotion. Tobacco, as the author points out, was originally incense; clothes were, in the first place, vestments; and the list might be indefinitely extended. Language, for example, has long been considered the *differentia* of man, and this is true, but only true if we go back to language in its beginnings when it was a solemn chant used in the lyric of incantation. And, no doubt, the first tools were ritual knives, the first roast meats were burnt offerings; nay, was not the fire itself originally a great symbol of adoration? Dr. Haberlandt, as we have said, has grasped this most important principle, and the recognition of it has enabled him to write a very striking sketch of human beginnings. It is to be regretted that he does not quite appreciate the *nuances* of the English language; there is certainly an invocation to laughter in such a sentence as: "this poverty of sentiment made his art productions rude and plump."

(3) Mr. Gardner's "Dante" is a compact introduction to the life, times, and works of the great Florentine. Only one chapter out of four treats of the "Divina Commedia"; so that the book does not tread a well beaten path, but is faithful to its title. The student who will read and master it will have a right henceforth to speak of Dante, and need not be afraid of taking his name in vain.

(4) Mr. Sweet gives us a scholarly compendium on comparative philology. No one is more competent to do so. As we read it the "science of language" assumes clearness, proportion, and attractiveness. We do it less than justice by merely mentioning its good qualities; but our mention must at least be adequate. We will, therefore, say that this is the best introduction to the subject (considering its compass) with which we are acquainted. The chapter on the "Affinities of Aryan" is excellent. Its boldness will certainly not set a single discerning reader against it.

## BOOKS FOR TEACHERS.

(1) *The Nervous System of the Child: Its Growth and Health in Education*. By Francis Warner, M.D. (Macmillan.) (2) *The Making of Character: Some Educational Aspects of Ethics*. By John MacCunn, M.A., LL.D. (Cambridge University Press.) (3) *Early Childhood*. By Margaret McMillan.

The first two books on our list may be taken as contributions to that somewhat vague domain—the library of a training college. *Nihil alienum* is apparently the motto of those who are training

our teachers. The idea is perhaps pressed too far, considering the short space of time usually allotted to a teacher to prepare for his work. However, every one will admit that the brain of a child is *par excellence* the subject that he should study, and curiously enough there are very few works dealing with it that he can easily utilize. Vague outpourings on child-study we have in all copiousness, but definite instructions and generalizations to guide the observer are the great desideratum, and to these Dr. Warner's book is a welcome contribution. Lecturers in training colleges will find it exceedingly useful to read and expound in connexion with definite experiments and observations on the children in the practising schools, and also for the students to refer to in drawing up time tables, and in arranging hours for sleep, games, and meals. Although minute details are furnished for observation, a notable warning is given that "the less a child is conscious of his own body the better," and the teacher's work is to be carried out simply and naturally without attracting the child's attention to what is being observed about him. Teachers will be glad to find a doctor emphasizing the fact that regular and moderate brain activity is as important to general health as fresh air, food, and exercise, and still more to note his insistence on the bad economy of giving girls too many written exercises, and of over-working the teacher, who, if he uses his scant leisure in reading for an examination, in over-much correction and preparation of lessons, or even in too earnest self-development, is apt to lose the spontaneity and geniality of demeanour so important in the class-room. Unfortunately, in its present state this book can only be used for reference, and hardly as a manual. With a little more clearness and conciseness it might easily have been an excellent text-book on the subject.

(2) "The Making of Character" stands at the other extreme. Written in an easy, flowing style, divided and subdivided, and provided with a marginal analysis, it aims at giving a philosophical and poetical flavour to the prosaic work of the training college. It touches lightly on such subjects as Heredity, Friendship, Citizenship, Self-development, with copious quotations from the poets, chiefly Wordsworth, and writers of text-books on psychology, chiefly Prof. James. Much of the earlier part indeed may be described as Prof. James diluted. Now he does not need dilution, and a reference to his excellent books would have been more appropriate. Neither do we need in our present stage of educational literature yet another refutation of Mr. Spencer's doctrine of natural reactions. The chapters in which the author breaks more or less fresh ground, such as that on Casuistry, are very interesting, and there is a great deal of suggestive thought throughout. The book will be a godsend to students who are troubled in writing their periodical essay. How far such essays contribute to a sound grasp of the subject is, of course, another question; but it must be owned that verbosity and vagueness are fatally easy in psychological discussion, and anything that fosters mere talk should be rigidly kept under.

(3) Miss McMillan's book is a little gushing, and a trifle socialistic; but it is a good book nevertheless. It is the outcome of close observation and a sympathetic mind, and we gladly commend it to mothers and impressionist teachers and tenders of children.

## THE GREEK LYRE.

*Greek Melic Poets*. By H. W. Smyth, Professor of Greek at Bryn Mawr College, Pennsylvania. (Macmillan.)

The text of this book is substantially a selection from Bergk's "Poetae Lyrici Graeci," with additions from the recovered poems of Bacchylides and the fragments obtained by Messrs. Grenfell and Hunt. Prof. Smyth has a remarkably wide knowledge of the literature bearing on the subject, and he has produced a book every page of which is a monument of his erudition. That the work is suited to occupy a place in the red series of "School Class Books" we cannot think. It is altogether over the heads of any school-folk with whom we ever came in contact. Thus Prof. Smyth does not stop to explain the Greek lyric metres. He writes of the complicated metrical systems as if his schoolboy knew all about the greater Schmidt and Westphal, and understood them too. He makes passing reference to the modes as to familiar things that boys might whistle on their way to school. Can he be conscious that vast numbers of people are wholly unable to grasp the most elementary principles of *stress* and *accent*; and that no less a student than Southey gave "Wellington" for a *dactyl* and "Nelson" for a *spondee*? Again, Prof. Smyth prints without a word of explanation the fragments of music discovered in recent years at Delphi. These things are duly set

forth in *five-eight* time, and sliced up into bars; and the English reader, if he is capable of plumbing the lesser mysteries of *five-eight* time, presently finds himself in the fathomless abyss of the method that controls musical accent, word accent, and syllabic quantity in Greek. It is surely startling to a beginner to find how completely word accent is disregarded in Greek music when so much attention is paid to length of syllable; because it comes to this, that the musical stress accent throws a *falae* stress accent on to an unaccented long or short syllable whenever, as constantly happens, there is no accented syllable in the *thesis* (according to the Greek usage) of the foot. This might not seem a necessary assumption were it not that the performers danced as they sang. Otherwise it would not be necessary to assume that there was a musical stress-accent placed on the *thesis* when the syllable or syllables of which it consists are without accent. To take a familiar modern instance. Every one knows that singers begin the great *aria* "He was despised" in the "Messiah" by making a strong stress accent on the word "was," merely because "was" comes first in the bar. But Madame Sainton-Dolby used to phrase the passage correctly by accenting the *anacrusis* "He"; but such a device seems to become impossible when dancing is combined with singing. We only mention this problem as one of many which Prof. Smyth passes over in silence; and the result is that a book in many ways admirable is, to a great extent, barely intelligible even to the fairly advanced scholar. Even the notation employed is not a matter of common knowledge among young persons; but, of course, such a trifling matter is here assumed to be as familiar as the alphabet.

It is a further objection to the book as a class-book that many of the passages printed cannot be explained with any certainty. It is bad enough to have to tackle the choruses of the "Agamemnon" with a class; but it would be simply intolerable to go through fragment after fragment that, as far as its setting and application goes, is merely a convenient vehicle for a display of ingenuity and learning. Let Prof. Smyth severely prune his text, alter the character of his commentary, and take nothing in the region of Greek metrical systems and Greek music as known, and he may then turn out a book that will be of real value in our schools and colleges.

We greatly regret that we are forced to write thus unfavourably of a book by an American scholar so able and so learned; and it is a pleasure to qualify our remarks with an assurance that the one error consists in dressing up this work as a school-book. It is, in reality, an advanced edition, suitable to be used by scholars who have travelled some considerable distance in the ways of Greek lyric poetry. Even for such, there is very much to be learned from Prof. Smyth's introduction and commentary; and we hope that the editor will secure for his work a wider circle of readers, by adopting our suggestion that he should issue a smaller and more elementary book, adapted from the volume under notice.

#### ARISTOTLE.

*The Ethics of Aristotle.* Edited by John Burnet. (Methuen.) This new edition of the "Ethics" of Aristotle contains within the compass of a single convenient volume all that University students will require. Sir Alexander Grant's commentary—the permanent value of which is acknowledged by Prof. Burnet—is naturally no longer abreast of Aristotelian scholarship. Sir Alexander Grant was a pioneer: he cleared the road for others to tread, and his work was finished. For the student of the present day the essays prefixed to that edition retain their use; but the commentary is out of date. The edition that replaced Sir Alexander Grant's at Oxford was Prof. Stewart's—an admirable work of great erudition, but suited rather to the doctor than the disciple. "Greats" candidates will welcome in Prof. Burnet's more modest work a commentary brief, but, for the most part, adequate. Conflicting views are sufficiently indicated in the notes; but lengthy discussion is avoided.

Nevertheless, it would be unfair to Prof. Burnet to imply that his work has no importance except as a manual for the schools. The fact is he has very definite views on the origin and nature of the Nicomachean Ethics, and he sets out his views with clearness and ability. He holds that all the books are the genuine work of Aristotle, substantially in the condition in which he left them; though he admits that they bear traces of editing. "In particular," he says, "many of the summaries and transitions break the argument in a way that can hardly be attributed to Aristotle himself, and which we do not observe in his more finished works. But this does not detract seriously from the integrity of the text." "The theory of 'duplicate passages,' advocated in this country

by Prof. Cook Wilson, he rejects on the ground that the repetitions may be accounted for by the fact that the "Ethics" is dialectical, not scientific. Several solutions, therefore, are offered of the same problem, and Aristotle must not be tied down to any one solution. It will be gathered that Prof. Burnet believes the central books, so often ascribed to Eudemos, to be genuine. As for the Eudemian Ethics, he points out that the undoubted work of Eudemos differs only from its undoubtedly "Nicomachean" counterpart in matters of detail; and he believes that Eudemos is nothing more than a commentator—the most authoritative, no doubt—on Aristotle.

This view of Eudemos has a most important bearing on Prof. Burnet's commentary. Taking Eudemos as the arch-commentator, he prints the text of Eudemos under the passages of the Nicomachean Ethics with which it corresponds; and he accepts the presumed interpretation of Eudemos as the interpretation of an oral witness, and therefore far superior in authority to all other Aristotelian commentators, ancient or modern. If this view of the matter is correct, it is clear that the Eudemian Ethics acquire an importance much greater than has hitherto been attributed to them. We think, however, that it would have been well to give a summary of the arguments by which Sir Alexander Grant and others have supported the opinion that the Nicomachean Ethics V.–VII. are in reality the Eudemian Ethics IV.–VI.; because, while we allow the force of Prof. Burnet's argument, we do not see that he has disposed of the reasons put forward by those who champion their Eudemian origin. In view of the immense effect which Prof. Burnet's belief has on his edition, we require to be entirely satisfied as to the soundness of his doctrine. As he leaves the matter, he gives us only a new theory of the relations between the text of Aristotle and the text of Eudemos; and the student will require still to acquaint himself with the older theory, and will probably be unable to decide between the two. No doubt this reticence is largely due to a desire to be brief—the reason why many great controversies are dismissed in the commentary in a few lines, with a mere "I am convinced," "I have always held." But this reticence is not wholly counterbalanced by a mere *ipse dixit*. Even the student will desire to know a little more in detail the grounds of the faith that Prof. Burnet has in him; and we think that Aristotelian scholars will rise and bombard him with questions to which he will have to reply with a more lengthy counterblast.

#### SEMITIC CIVILIZATION.

"The Semitic Series." Edited by Prof. J. A. Craig.—*Babylonians and Assyrians: Life and Customs.* By the Rev. Prof. A. H. Sayce. (Nimmo.)

The editor of this new series very justly says that, among the early peoples who have contributed to the ideas which underlie our modern civilization, there is none to whom we owe a greater debt than that which we owe to the Semites. Greece and Rome, no doubt, are young in history as compared with the Hebrews, Sumerians, Babylonians, and Assyrians. Classical studies, says Prof. Craig, of Michigan, no longer enjoy a monopoly of attention in our Universities—and, for that matter, they never did, for the Universities have never been without their Hebraistic studies, in history and customs, if not in language and archaeology. So, the editor goes on to say, the time saved by the diminished stress on Greek and Latin is, in many instances, and might be more frequently, given to the study of Semitics:—

It is here that we find the earliest beginnings of civilization historically known to us; here that early religious ideas, social customs and manners, political organizations, the beginnings of art and architecture, the rise and growth of mythological ideas that have endured and spread to Western nations, can be seen in their earliest stages; and here alone the information is supplied which enables us to follow them most successfully in their development.

The series, then, is intended to carry out these views as to the value of the earlier historical and documentary records, and to provide a number of Semitic handbooks by competent writers for the use of students, theologians, and intelligent readers. The order of issue is not to be chronological, nor in accordance with the arrangement of subjects in the prospectus. Mr. Sayce's volume is the sixth of the nine already promised, and assigned to authors of established repute in Europe and America. The present volume is excellent in itself, and serves to commend the series beforehand. It is full of narrative interest, and is distinguished by remarkable fullness of detail on the various aspects of Assyrian and Babylonian life. After a general description of the land of Babylonia and its inhabitants, Mr. Sayce depicts for



us many features of the family life of Sumerians and Semites, their education, the relations of freemen and slaves, the government, religion, law, the army, trade, land-tenure, money, wages, and prices, with many incidental customs. The story is one of very considerable interest, and it is written in a manner well calculated to attract the general reader with no pretension to scholarship. On the whole, it seems reasonable to conclude that these volumes of the "Semitic Series" will contribute much to the better knowledge and systematic study of the earliest mundane civilizations.

## GENERAL NOTICES.

### CLASSICS.

*A Textual Commentary upon the Holy Gospels.* By Edward Miller. (Bell.)

We welcome the first part of Prebendary Miller's important work on the text of the New Testament. The commentary is compiled in great part from the materials left by Dean Burgon. Mr. Miller's qualifications as a collaborator and editor in this branch of Biblical studies are too well known to need insistence here. It is enough to say that the recognized leaders of textual criticism have united in welcoming the work. As for the manuscripts, Mr. Miller starts "from the results reached by Tischendorf in his eighth edition." But important additions have been made to the apparatus by the inclusion of many collations made by English scholars. The Patristic evidence has been very extensively added to as the result of Dean Burgon's labours. The quotations of the Fathers were under his direction copied and bound up in sixteen large volumes, which, after his death, were acquired by the British Museum. Mr. Miller has had a copy made of these quotations so far as they concern the Gospels. We sincerely trust that Mr. Miller will be enabled to complete his task. The volume before us contains the introduction and the first fourteen chapters of St. Matthew.

*Lysias, Eratosthenes and Agoratus*, edited by J. Thompson and T. R. Mills (Clive), is competently done, and will meet all the needs of those readers for whose use it is intended. The grammatical notes are brief, but clear, and the introduction gives in a small compass just what is required for the understanding of the speeches.

*Livy, Book V.*, edited by A. F. Hort (Rivingtons), may be commended as an unpretending and scholarly edition. There are no pictures—which is possibly a loss, and no fine writing—which is certainly a gain. The editor has acted on the principle that "over-completeness is a vice in a school edition"; the notes meet most of the real difficulties a schoolboy encounters in a straightforward way. Perhaps they hardly do enough to add brightness to his work. We should be disposed to object to the rendering of *ex malignitate praeidae partitae* (chapter xx.), "out of jealousy at the division of the booty." Opposed as the phrase is to *ex prodiga largitione*, the meaning "niggardliness" seems more appropriate for *malignitas*.

*Eutropius, Books I. and II.*, edited by W. C. Laming (Blackie), is printed in good large type, and has plenty of illustrations. The notes are useful, but somewhat long. Probably it is desirable in dealing with such a succinct narrative as that of Eutropius to add some historical details; but it seems scarcely necessary to give nearly half a page to Julius Cæsar and Augustus, who are mentioned incidentally. The book concludes with a number of exercises for retranslation. It ought to increase the popularity of Eutropius as an elementary reading-book.

### SCIENCE.

*The Frog: An Introduction to Anatomy, Histology, and Embryology.* By the late A. Milnes Marshall, M.A., M.D., D.Sc., F.R.S. Edited by G. Herbert Fowler, B.A., Ph.D. (David Nutt.)

The late Prof. Milnes Marshall put much of that straightforwardness which was but one feature of his attractive personality into the books he wrote for students. His works on the practical anatomy of animals are in many ways the best of their kind in our language. The clear directions as to methods of procedure printed in italic, and the paragraphs devoted to each of the structures to be studied, with all their names in heavy type, appeal alike to those new to the work or only familiar with more involved text-books like Huxley and Martin's "Practical Biology." Marshall and Hurst's "Practical Zoology" covers the animal side of the last-mentioned work with the exception of the frog, to which Milnes Marshall devoted a special book. It is the seventh edition of the latter, edited by Dr. Herbert Fowler, which is now before us. Dr. Fowler's continuous working knowledge of the book since its first issue has suggested but little in the way of addition or alteration in the subject-matter. Perhaps the greatest change is to be found in the substitution of original illustrations of the metamorphosis and development for those which, as the editor says, have done duty in various text-books for a hundred and fifty years. This is a step which every one will welcome, and Miss Mabel Green's diagrams are most clear and useful. The way in which her drawings of the

tadpole stages are reproduced on the double plate between pages 98 and 99 is, however, not at all to be commended. The "process" blocks, referred to under the heading of "woodcuts" in the preface, are badly made and but poorly printed. It seems strange that the publishers of a scientific book should be satisfied with work that would not pass muster in a popular illustrated paper. One thing those who have much to do with this and similar text-books would like to see altered is the system of describing the figures. It would be infinitely better if the parts were labelled with their names instead of letters referring to a description below or on another page. More space would be necessary and less detail could be introduced into any one diagram; but the advantages would, without doubt, quite outweigh the difficulties of securing them.

### MODERN LANGUAGES.

*Charles Normand's L'Émeraude des Incas.* Edited by the late F. Aston Binns, M.A. (Macmillan.)

This is one of the "elementary texts" in Mr. Siepmann's popular series, and it is well suited for, say, a fourth form. The story will be new to most teachers; it is full of incident, partly humorous, partly sensational. Both the notes and the vocabulary show careful work on the part of Mr. Aston Binns and Mr. T. H. Bayley, of Loretto, who undertook to finish the work left incomplete by Mr. Binns's death. The text is accurately printed, the only slip we have found being *saississant* on page 30. There are three appendices, with words, sentences, and passages for retranslation.

*E. Daudet, La Tour des Maures.* Edited by A. H. Wall, M.A. (Macmillan.)

This is also one of Mr. Siepmann's elementary texts. The story is of rather an exciting nature, and is well suited for rapid reading. The notes are brief, but sufficient. The vocabulary requires revision. On the first page we tested there were eight words not to be found in the vocabulary.

*Specimens of Modern French Prose.* Edited by H. E. Berthon. (Macmillan.)

Mr. Berthon has already given us a little volume of selections of French poetry. The present book shows the same happy discrimination and the same conscientious editing. It contains ten short stories by as many different authors, averaging about twenty pages in length. It will prove particularly useful to teachers who prefer to prepare their pupils for unseen translation rather than for a set book. The biographical and historical notes are distinctly good; the renderings of difficult passages are in most cases thoroughly idiomatic.

*A Modern French Grammar.* By J. U. Ransom. (Relfe Brothers.)

On the whole a careful piece of work, following the time-honoured arrangement of rules and sentences for translation from and into French. The rules are usually well expressed, but we take exception to some, for instance, to this: "After *si*, if, use the pres., imp., ind., or imp. and plup. subj. tenses; *s'il vient*, if he comes; *si on l'eût prié*, if they had requested him." A better way of putting the rule is: "After *si* (if) use any tense of the indicative except the future and conditional, and no tense of the subjunctive except the pluperfect."

(1) *Spanisches Lesebuch für höhere Handels- und Realschulen.* By Dr. S. Gräfenberg. (2) *Italienisches Lesebuch, u.s.w.* By Dr. Luigi Forte. (Frankfurt: Carl Jürgels Verlag.)

These two volumes complete a series, the English, French, and German parts of which have already been noticed in these columns. They follow the same plan, which is to use as material those topics of commercial science, especially under the head of Products, which find special illustration in the countries respectively concerned in each volume. Thus, in the Spanish part, we find sections on the orange, coffee, vine culture, tobacco, and cork; in the Italian, like selections for marble, sulphur, cream of tartar, olives. In like manner the economic history and geography of each country are represented by readings derived from standard writers. The appearance of such books marks the rapid advance made in the practical study of languages. They should command the attention of teachers in the commercial schools, now arising amongst us, as aids of the best description to such instruction in foreign languages as is required of their institutions.

### MISCELLANEOUS.

*Elementary Physiography.* By Ernest Young. (Educational Supply Association.)

This book is primarily intended to meet the requirements of the Science and Art Department in elementary science, and is clearly printed and satisfactorily illustrated. We have, however, noticed several inaccuracies and slipshod statements which are inexcusable. The definition of matter as "that which has weight" is very unsatisfactory. In the chapter on gravitation it is stated that, if a hole went through the centre of the world to the other side, and a stone were allowed to fall, it would fall faster and faster till it reached the centre, and there it would stop and fall no further. The motion would clearly be an oscillation of diminishing amplitude. Again, what is the meaning of "Heat is a quantity," and "The specific gravity of warm bodies is less than that of cold bodies"? With careful revision the book would make a satisfactory elementary text-book for the purpose aimed at.

*Story Lessons on Character Building (Morals) and Manners.* By Lois Bates. (Longmans.)

This is a collection of some seventy little incidents from child life, illustrative of good and bad conduct, from "Honesty" to "How not to clean a slate." Teachers who have not yet acquired the enviable gift of "making up" will find the book quite a boon in dealing hour after hour with little children who are always ready for a story. Some of the lessons are perhaps too trivial to have been included, and the blackboard summaries might well have been left to the teacher's ingenuity.

*The Pictorial Geographical Readers.* Books I.-III. (Longmans.)

Talks about places and lively descriptions of natural phenomena have, with most teachers, wisely taken the place of the old learning of definitions and lists of counties, with poring over meaningless maps. The present series of text-books will be found helpful to a teacher in preparing his notes for such talks, while the intelligent illustrations and diagrams will suggest work for the blackboard. As Readers we hardly consider them so successful. The old artifice of intelligent son and ever-willing-to-inform father is resorted to, with no freshness to recommend it, and it must be remembered that children of the present day are not to be captivated by Sandford and Merton dialogues introducing solid subjects. There are some slight vaguenesses here and there; for instance, we are told that the earth's crust consists of land and water, when children are only too prone to fancy that the land stops where the sea begins. The third book of the series is free from these blemishes, is more original in subject-matter, and a more substantial aid to the teacher. Some of the lessons, such as that on the formation of the Union Jack, are not made the most of, and, as is frequent in such manuals, the order of the lessons is unsatisfactory.

*Secondary Education: a Handbook of the Board of Education Act, 1899.* (Knight & Co.)

This is a serviceable collection of documents and materials relating to elementary, secondary, and technical instruction. It includes a good historical introduction, the text of the Act of 1899, the recommendations of the Secondary Commission (1895), and the return of the Department on secondary schools (1898), with notes, and an appendix of other secondary and technical Acts.

*From Blake to Arnold: Selections from English Poetry (1783-1853).*

With Introduction, Critical Essays, and Notes by C. J. Brennan, M.A. (Macmillan.)

A very good piece of work, hailing from Sydney. The title-page is muddled, for after the name of Mr. Brennan come the names of J. P. Pickburn and J. Le Gay Brereton as "editors," and immediately after that is a preface by "the editor." The introductions are fresh and perspicacious, and the selections are generally admirable.

*A Book of Courtesy.* By H. E. Norton. (Macmillan.)

Mr. Norton writes a well intentioned and useful book. It is, in a sense, didactic, because it begins with the undoubted truth that Englishmen are amongst the worst-mannered people in the world, disliked by other nations for their rude and overbearing ways; and it goes on to show what courtesy means, to commend it by every means, to quote authorities, and to tell many stories in illustration of its precepts. It is a good book for boys.

*Morison's Chronicle of the Year's News, 1899.* Compiled by George Eyre-Todd. (Glasgow: Morison Bros.)

A serviceable diary and epitome of events now in its second year. The system of the compiler is to extract each day the leading facts and information recorded in the daily papers, and to guide the reader to what he wants by a subject-index at the end. This is a very serviceable publication.

*The First Elements of Science, arranged as Observation Lessons, and correlated with Drawing.* Parts I.-III. Written by George Ricks, B.Sc. Lond.; illustrated by Alfred Wilkinson. (Macmillan.)

This is a very careful and artistic, and, at the same time, a very simple and graphic, series of picture lessons, calculated, as the title sets forth, to combine first instruction in natural science with the training of observation and the practice of freehand drawing. The illustrations are drawn in white outline on a black ground, and they are quite large and clear enough for blackboard and class work. The text is concise, and will help the teacher to make useful and interesting lessons.

*Macaulay's Essay on Lord Clive.* Edited, with Introduction and Notes, by John Downie, M.A. (Blackie & Son.)

Macaulay's "Clive" is still the best account we have of one of the main founders of our Indian Empire. The Essay has often been edited for schools, but Mr. Downie's edition may claim to be considered amongst the rest before a selection is made. The notes are adequate, and to the point.

"The New English Series." Edited by E. E. Speight, B.A.—(1) *The New English Poetry Book.* (2) *The Adventures of Beowulf.* (3) *Selections from the Poetry of Tennyson.* (Marshall & Son.)

(1) This is an excellent selection from English poems and ballads, from Spenser to Swinburne. The choice has been made with much taste, and there are very few poor or indifferent entries. We have rarely seen a more judicious and yet catholic selection. The volume ends with

a brief glossary. A teacher in want of a literary recitation-book may be recommended to take this one into consideration.

(2) The story of Beowulf has been paraphrased by Miss Thomson in a pleasant simple style. It does not profess to be an exact translation, nor to be quite complete. It is intended for children, and seems well adapted to its end.

(3) Miss A. J. Cooper supplies a short preface to a selection of twenty of Tennyson's poems. There are no notes—which to many will be a recommendation.

*Key to the Apocalypse, or the Seven Interpretations of Symbolic Prophecy.* By H. Grattan Guinness, D.D. (Hodder & Stoughton.)

Bacon, with his usual politic caution, carefully excluded Divine prophecies from his sweeping assertion "that they ought all to be despised, and ought to serve but for winter talk by the fireside." Such an exclusion is, from a scientific standpoint, logical; because the objection to belief in Divine prophecy is included in a disbelief of miracles, and his conclusion merely negatives the suggestion that there can be a natural faculty in man enabling him to foresee future events. The very region of mystery which Bacon had no wish to probe exercised, however, the greatest fascination over the mind of Sir Isaac Newton, who probably expended more time in worthless exposition of Biblical prophecy than in writing his "Principia." Such researches have long ceased to attract either learned scientists or theologians. Dr. Guinness's plan of operations is, indeed, simplicity itself. The teaching of Scripture is consistent: Daniel has expounded his own prophecies: therefore the same relation must exist between Daniel's prophecies and those of St. John as between the figures of speech and representation used by them. So by a simple proportion sum the Apocalypse is expounded. The result is not comforting to the Church of Rome. The Douai Version makes the answer to the proportion sum come out as pagan Rome.

(1) *The Paris Exhibition of 1900, a Practical Guide.* (2) *Pocket Guide to Paris.* (Paris and London: Conty.)

Fortified with these two handy little guides, the English visitor to the Paris Exhibition, whose name will be legion, in spite of every temptation to "stop away," will find himself well prepared for his wanderings through the labyrinth. The guides are in English, clearly printed and profusely illustrated.

*The Tempest; As You Like It.* Edited by R. Brimley Johnson. (Blackwood.)

The notes to this edition are of a very simple character. There are no allusions to alternative readings of the text and no quotations from other plays or authors. They are confined to brief interpretations of difficult words and passages, and there are no philological explanations either in the notes or glossary. Whether it be wise in teaching Shakespeare to exclude all questions of literary criticism and all references to the history of language, is much disputed. Those who think that it is will find in this edition just what they want. An introduction on the style and date, the sources and "moral" of the play, covers the usual ground.

Amongst Readers we have Book IV. of Messrs. Longmans' "Pictorial Geographical Series"; and Books I. and II. of the same publishers' "Domestic Economy Readers." The latter publication promises well for a simple, well printed introduction to the subject. In Messrs. Chambers's "Continuous Series" we have a selection from Tennyson's poems, with a few simple notes of explanation, such as would come better from the teacher.

We have on our table a number of volumes on book-keeping and business operations. Amongst the best of these are *Worked Studies and Questions in the Theory and Practice of Book-keeping and Advanced Accounts (Banking and Exchange)*, by Alfred Nixon (Longmans); *Graduated Exercises and Examination Papers in Book-keeping*, by P. Murray (Bell & Sons); *Advanced Book-keeping* (Pitman & Sons); and *Business Terms and Phrases, with Equivalents in French, German, and Spanish, and Facsimile Documents* (Pitman & Sons).

We have received from Messrs. W. & A. K. Johnston two series of hanging charts on rollers, devoted respectively to *Cooking and Sewing and Knitting Diagrams*, for Standards I. to VII. They are clearly designed and coloured, and should be very useful for purposes of ocular demonstration. From the same publishers we have a similar series of "Pictures for Object-Lessons"—those submitted to us being a boldly drawn collection of *Plants of Commerce*.—Messrs. Blackie & Son send us a large portfolio of twenty-four sheets of *Shaded Drawings of Models and Ornaments for Class-Teaching*, designed by Lewis R. Crosskey, which will be found serviceable as copies, and especially useful in assisting a practical teacher of drawing.—From Messrs. Nelson & Sons we have a series of "Pictures and Diagrams" on hanging sheets, connected by a top-roller, illustrating *Animal Physiology*.—Similar in form is a "Royal Wall Atlas," comprising seven maps of *Bible Lands*.—Messrs. Ruddiman Johnston publish a series of six coloured oleographs of Scripture scenes. They are well framed and glazed, and are sufficiently attractive to adorn a wall as well as to illustrate a lesson and fix the eye of a pupil. The enterprise of the publishers in providing these framed pictures deserves encouragement.

**MATHEMATICS.**

**14295.** (N. M. W.)—Solve the simultaneous equations  
 $(x+y)(ax-by) = a(a-b)(a+b)^2$  ..... (i, ii).  
 $(x-y)(ay-bx) = b(a+b)(a-b)^2$

*Solution by* CONSTANCE I. MARKS, B.A.

Put  $ax-by = X, ay-bx = Y$ ;  
 therefore  $(a-b)(x+y) = X+Y, (a+b)(x-y) = X-Y$ .  
 Hence  $X(X+Y) = a(a-b)^2(a+b)^2$  ..... (iii).  
 $Y(X-Y) = b(a+b)^2(a-b)^2$  ..... (iv).

Put  $Y = vX$ ; then  
 $X^2(1+v) = a(a-b)^2(a+b)^2, vX^2(1-v) = b(a+b)^2(a-b)^2$ ;

therefore  $\frac{1+v}{v(1-v)} = \frac{a(a+b)}{b(a-b)}$ ,  
 $b(a-b) + v\{b(a-b) - a(a+b)\} + v^2a(a+b) = 0,$

or  $b(a-b) - v(a^2+b^2) + v^2a(a+b) = 0$ ;

therefore  $\{b-av\} \{(a-b) - (a+b)v\} = 0.$

[The rest in Volume.]

**14265.** (R. F. DAVIS, M.A.)—If O be the centre of inversion (constant =  $\kappa^2$ ), investigate the formula of transformation tangent from point P to the circle C

=  $\lambda$  (tangent from inverse point P' to inverse circle C'),

and show that  $\lambda = OP$  (or  $\kappa^2/OP'$ ) / tangent from O to C'.

Apply this to Quest. 13801. (See *Mathematical Reprint*, Vol. LXX., p. 73.)

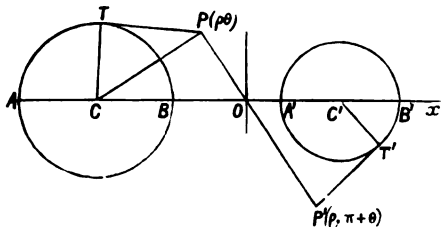
*Solution by* E. W. REES, B.A.

$OP = \rho, OP' = \rho',$   
 $OC = a, OC' = a',$   
 $CA = r, C'A' = r'.$

Take O for origin and line CC' for axis of x.

PT<sup>2</sup>  
 $= \rho^2 - 2a\rho \cos \theta + a^2 - r^2$   
 $= (\kappa^4/\rho'^2) - 2a(\kappa^2/\rho') \cos \theta$   
 $+ a^2 - r^2$ ;  
 $P'T'^2$   
 $= \rho'^2 - 2a'\rho' \cos \theta + a'^2 - r'^2.$

[The rest in Volume.]



**14459.** (R. TUCKER, M.A.)—PQAR is a conormal circle of a parabola (A being the vertex), and AP, QR, cut in p; AQ, RP in q; and AR, PQ in r. Show that the circle pqr is given by the equation

$$x^2 + y^2 + 2ax + \frac{2S_4 + \mu^2}{4\mu} ay + \frac{1}{2}S_2a^2 = 0.$$

Also the orthocentre of pqr is  $(S_2 + 8) \frac{1}{4}a, \frac{1}{4}\mu a$ ; and  $\Delta PQR = 4 \Delta pqr$ . [For notation, &c., cf. Quest. 13730, *Reprint*, LXIX, p. 57.]

*Solution by the* PROPOSER.

Equation to AP,  $m_1y - 2x = 0$ ; to QR,  $m_1y + 2x + 2am_2m_3 = 0$ ; hence  $x_p = \frac{1}{2}(-am_2m_3), y_p = -am_2m_3/m_1.$

Analogous results for  $(x_q, y_q), (x_r, y_r)$ , whence the given result is easily verified.

(Tangent)<sup>2</sup> from A =  $\frac{1}{2}S_2a^2$ ;  
 $\Sigma$  (tangents)<sup>2</sup> from P, Q, R =  $2\Sigma [m_1^4 + 6m_1^2 + \{(2S_4 + \mu^2)/2\mu\} m_1 + \frac{1}{2}S_2] a^2$   
 $= 2(S_4 + 6S_2 + \frac{1}{2}S_2) a^2 = (2S_4 + 15S_2) a^2$   
 $= (S_2^2 + 15S_2) a^2.$

Equation to qr is  $m_2m_3y + 2m_1x = a\mu$ ;  
 therefore perpendicular from p on qr is

$$2m_1y - m_2m_3x = (\frac{1}{2}m_2^2m_3^2 - 2m_2m_3) a,$$

whence &c.

Again,  $\Delta pqr = (\frac{1}{4}a^2) \Pi (m_1 - m_2) = \frac{1}{4} \Delta PQR.$

**14225.** (Professor NEUBERG.)—Eliminer  $x, y, z$  entre les équations  
 $(x-y)(x-z) = ayz, (y-x)(y-z) = bzx, (z-x)(z-y) = cxy.$

*Solution by* R. F. DAVIS, M.A.; G. D. MUGGERIDGE, B.A.; Professor A. GOLDENBERG; and many others.

From the identity

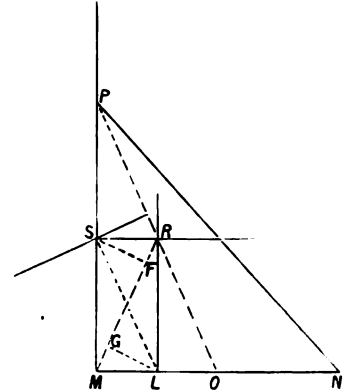
$$(y-z)(z-x)(x-y) + yz(y-z) + zx(z-x) + xy(x-y) = 0,$$

we get  $1/a + 1/b + 1/c = 1$ ; which is the required elimination.

**14363.** (Professor NEUBERG.)—Trouver le lieu des foyers des paraboles qui ont une corde normale commune MN.

*Solutions* (1) by Professor A. DROZ-FARNY; (2) by H. W. CURJEL, M.A.

(1) La tangente en M à la parabole sera perpendiculaire à MN. Soit P un point quelconque de cette perpendiculaire. P sera le pôle de MN par rapport à une des paraboles; O étant le milieu de MN et R celui de PO, cette dernière droite sera un diamètre de cette parabole qui la coupe en R et la parallèle à MN par R sera la tangente en ce point à la courbe. Cette tangente rencontre PM en S, et comme les deux tangentes SR et SM sont orthogonales, S est un point de la directrice et MR est sa polaire par rapport à la courbe. On aura donc le foyer F en abaissant SF perpendiculaire sur MR. Dans le triangle isocèle MRO, la perpendiculaire abaissée de R sur la base MO divise cette dernière en L en deux parties égales; donc la droite LR est fixe. Si enfin de L on abaisse LG perpendiculaire à MR, on a évidemment  $MG = FR.$



Le lieu de F est donc une cissoïde d'axe ML, d'asymptote LR, et dont le point de rebroussement est en M.

[The rest in Volume.]

**14216.** (R. KNOWLES, B.A.)—S, H are the foci of an ellipse; from S perpendiculars SY, SZ are drawn on tangents to the ellipse from the same point O. Prove (1) that HO and YZ are at right angles; and (2) show that this is also true of the parabola.

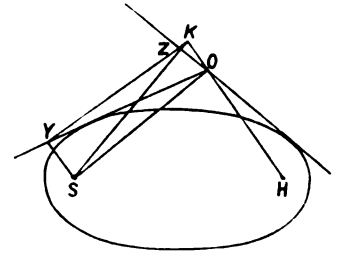
*Solution by* LIONEL E. REAY, B.A.; R. TUCKER, M.A.; F. L. WARD, B.A.; and others.

(1)  $\angle KOZ = \angle SOY = \angle SZY,$  since SO, ZY are concyclic.

Therefore, since SZ is perpendicular to OZ, YZ is perpendicular to OK.

(2) In the parabola, YZ becomes the tangent at the vertex, and OK—that is, HK—is parallel to the axis.

Therefore YZ is perpendicular to HK.



**14206.** (R. F. DAVIS, M.A.)—If AP bisect the angle BAC of a triangle and be a mean proportional between AB, AC, then  $BP^2 = 2 AB \cdot DP$  and  $CP^2 = 2 AC \cdot DP.$

*Solution by* C. JOSS, M.A.

From the data,  $\Delta BP$  and  $\Delta PC$  are similar. Draw CE parallel to DP, meeting BP in E.

Then  $\frac{AB}{AP} = \frac{BP}{CP} = \frac{PE}{CP}$

and  $\angle CPE = \frac{1}{2} \angle A.$

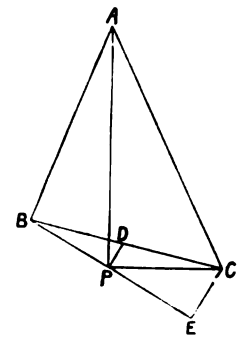
Therefore  $\Delta PEC$  is also similar. Therefore

$$CE \cdot AB = BP \cdot PE,$$

$$2DP \cdot AB = BP^2;$$

and  $CE \cdot AC = CP^2,$

$$2DP \cdot AC = CP^2.$$



**6387.** (R. A. ROBERTS, M.A.)—Prove that the inflexional tangents of a plane cubic may be arranged in twelve sets of six, each of which touches a conic.

*Solution by* R. P. PARANJPYE, B.A., and H. G. GHARPUREY.

The equation of a cubic can be always reduced to the form  $x^3 + y^3 + z^3 + 6mxyz = 0.$

(SALMON, *Higher Plane Curves*, § 217.)

The inflexions are the intersections of this curve with the Hessian, viz.,  $-m^2(x^3 + y^3 + z^3) + (1 + 2m^2)xyz = 0;$

therefore the inflexions are obtained from the equation of the curve and  $xyz = 0.$  Therefore the inflexions are

$$x = 0, y = -z; \quad x = 0, y = -\omega z; \quad x = 0, y = -\omega^2 z;$$

$$x = -z, y = 0; \quad x = -\omega z, y = 0; \quad x = -\omega^2 z, y = 0;$$

$$x = -y, z = 0; \quad x = -\omega y, z = 0; \quad x = -\omega^2 y, z = 0.$$

The tangents at these points are easily found. For the inflexions in the first two rows they are

$$\begin{aligned} -2mx + y + z &= 0; & \text{therefore} & -2mx + y + z = 0; \\ -2m\omega^2x + y + \omega z &= 0; & \text{therefore} & -2mx + \omega y + \omega^2z = 0; \\ -2m\omega x + y + \omega^2z &= 0; & \text{therefore} & -2mx + \omega^2y + \omega z = 0; \\ \dots & \dots & & x - 2my + z = 0; \\ \dots & \dots & & \omega x - 2my + \omega z = 0; \\ \dots & \dots & & \omega^2x - 2my + \omega z = 0. \end{aligned}$$

[The rest in Vol.]

**14290.** (D. BIDDLE.)—In a plane triangle, the square of the distance from the incentre to any vortex is in inverse proportion to the difference between the square of the inradius and the product of the segments into which the point of contact divides the opposite side.

I. Solution by A. F. VAN DER HEYDEN, B.A., and many others.

With the usual notation, we have

$$\begin{aligned} IA^2(r^2 - BD \cdot DC) &= \{r^2 + (s-a)^2\} \{r^2 - (s-b)(s-c)\} \\ &= r^4 + r^2 \{ (s-a)^2 - (s-b)(s-c) \} - \{ \Delta^2 (r-a) \} / s \\ &= r^4 + \frac{1}{2} r^2 \{ (s-a)^2 - 2(s-b)(s-c) + a^2 - s^2 \} \\ &= r^4 + \frac{1}{2} r^2 \{ (s-a)^2 + (s-b)^2 + (s-c)^2 - s^2 \}. \end{aligned}$$

The symmetry of this expression demonstrates the required result.

II. Solution by W. H. SALMON, B.A.

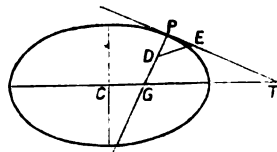
With usual notation

$$\begin{aligned} 1/\{r^2 - (s-b)(s-c)\} &= 1/\{r^2 - r^2 \cot \frac{1}{2} B \cot \frac{1}{2} C\} \\ &\propto (\sin \frac{1}{2} B \sin \frac{1}{2} C) / \sin \frac{1}{2} A \propto \operatorname{cosec} \frac{1}{2} A \propto AI^2. \end{aligned}$$

**14378.** (F. H. PRACHELL, B.A.)—P is any point on  $x^2/a^2 + y^2/b^2 = 1$ ; two points, D, E, are taken along the inward-drawn normal and tangent at P, respectively, such that PD = half the ordinate, PE = half the abscissa. Prove that DE cuts the axis at  $\tan^{-1} \{ (-2ab)/(a^2 + b^2) \cot 2\phi \}$ , where  $\phi$  is the eccentric angle of P.

Solution by K. G. PANCHAPAGESA AYYAR.

PD =  $\frac{1}{2} b \sin \phi$ , PE =  $\frac{1}{2} a \cos \phi$ .  
The equation to the normal PG is  $ax \sec \phi - by \operatorname{cosec} \phi = a^2 - b^2$ ;



therefore G is the point  $\{(a^2 - b^2)/a \cdot \cos \phi, 0\}$ .  
PG =  $b/a \sqrt{a^2 \sin^2 \phi + b^2 \cos^2 \phi}$ .

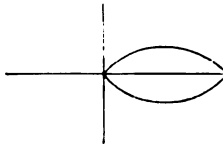
Again, the equation to the tangent at P is  $x/a \cos \phi + y/b \sin \phi = 1$ ;

therefore T is the point  $(a/\cos \phi, 0)$ ;  
therefore PT =  $\tan \phi \sqrt{a^2 \sin^2 \phi + b^2 \cos^2 \phi}$ .  
[The rest in Vol.]

**14414.** (I. ARNOLD.)—Find the centre of gravity of a loop of the lemniscate of JAMES BERNOULLI whose polar equation is  $r^2 = a^2 \cos 2\theta$ .

Solution by Rev. T. ROACH and G. D. WILSON, B.A.

The limits of the first loop are  $\theta = 0, r = a$ ,  $\theta = \frac{1}{2}\pi, r = 0$ ; and it is symmetrical with regard to the axis of  $x$ . Therefore



$$\begin{aligned} \bar{x} &= \iint r^2 \cos \theta \, d\theta \, dr / \iint r \, d\theta \, dr \\ &= \frac{2}{3} a \int_0^{\frac{1}{2}\pi} (\cos 2\theta)^{\frac{3}{2}} \cos \theta \, d\theta / \int_0^{\frac{1}{2}\pi} \cos 2\theta \, d\theta = \frac{2}{3} a \cdot 2 \int_0^{\frac{1}{2}\pi} (1 - 2 \sin^2 \theta)^{\frac{3}{2}} \, d \sin \theta. \end{aligned}$$

Let  $2 \sin^2 \theta = \sin^2 \phi$ ; then

$$\begin{aligned} \bar{x} &= \frac{4a}{3\sqrt{2}} \int_0^{\frac{1}{2}\pi} \cos^3 \phi \, d \sin \phi = \frac{a}{3\sqrt{2}} \int_0^{\frac{1}{2}\pi} (1 + \cos 2\phi)^2 \, d\phi \\ &= \frac{a}{3\sqrt{2}} \left\{ \frac{1}{2}\pi + \frac{1}{2}\pi \right\} = \frac{\pi a}{4\sqrt{2}}. \end{aligned}$$

**14471.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—(Suggested by Quest. 14145.) (1) Show that

$$q^x \equiv 1 \pmod{p}, \text{ where } x = 2^{2Q-3}, Q = q^2, p = Q \cdot 4^Q + 1 \text{ prime.}$$

(2) Show that

$$q^x \equiv 1 \pmod{p}, \text{ where } x = 2^{4Q-4}, Q = q^4, p = Q \cdot 16^Q + 1 \text{ prime.}$$

Solution by the PROPOSER.

(1) If  $q = 1$ , then  $Q = 1, p = 5$ , and  $q^x \equiv 1 \pmod{p}$ , obviously; and, if  $q = 2$ , then  $Q = 4$  and  $p = 4 \cdot 4^4 + 1 = 1025$ , which is not prime; so that in what follows  $q$  is taken  $> 2$ .

Now  $(p-1)/8Q = \frac{1}{8} \cdot 2^{2Q} = 2^{2Q-3} = x$ ; and  $\frac{1}{2}x$  is even, since  $q > 2$ .

Also  $Q \cdot 4^Q \equiv -1 \pmod{p}$ ; therefore  $Q^{2^x} \cdot 4^{4^Q} = (-1)^{2^x} \equiv +1 \pmod{p}$ ;

therefore  $q^x \cdot 2^{2^Q} \equiv +1 \pmod{p}$  ..... (A).  
But  $p = (2^Q \cdot q)^2 + 1$ , wherein  $2^Q$  is always a multiple of 16 (since  $q > 2$ ), so that 2 is an 8-ic residue of  $p$ , when  $p$  is prime (see *Messenger of Mathematics*, Vol. xxv., p. 18), i.e.,  $2^{2^Q} = 2^{2^x} \equiv +1 \pmod{p}$ .

This reduces (A) to  $q^x \equiv +1 \pmod{p}$ .

[The rest in Volume.]

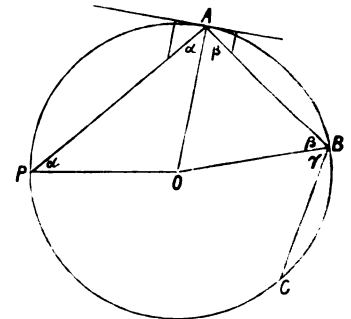
**14397.** (Professor U. C. GHOSH.)—A ball, projected from any point on the rim of a circular ring resting on a smooth horizontal table, comes back to the point of projection after  $n$  impacts with the ring. Determine the inclination of the line along which the ball is projected to the radius of the ring through the point of projection, and show that, if  $n = 3$ , this angle is  $\tan^{-1}(\epsilon^{\frac{1}{2}})$ ,  $\epsilon$  being the coefficient of restitution.

Solution by J. H. TAYLOR, M.A.; and H. W. CURJEL, M.A.

Let P be the point of projection, and PA, AB, BC the first, second, and third chords of the path described by the ball. Let  $\angle OPA$  be  $\alpha$ ,  $\angle OAB$  be  $\beta$ ,  $\angle OBC$  be  $\gamma$ , &c. Then

$$\begin{aligned} \tan \beta &= 1/\epsilon \tan \alpha \\ &\text{(after one reflection),} \\ \tan \gamma &= 1/\epsilon \tan \beta = 1/\epsilon^2 \tan \alpha, \\ &\dots \dots \dots \\ \tan \nu &= 1/\epsilon^n \tan \alpha \\ &\text{(after } n \text{ reflections).} \end{aligned}$$

Also  $\angle POA = \pi - 2\alpha$ ,  
 $\angle AOB = \pi - 2\beta$ ,  
 $\angle BOC = \pi - 2\gamma$ ,



and so on.

[The rest in Volume.]

QUESTIONS FOR SOLUTION.

**14540.** (Professor G. B. MATHEWS, F.R.S.)—Prove that, if

$$Q = \sum_{-\infty}^{+\infty} q^{i(3n+1)^2} + \sum_{-\infty}^{+\infty} q^{3n^2}, \text{ then } Q^{12} = \frac{\lambda^3 \lambda' (1 + \lambda')^4}{256 \kappa \kappa'},$$

where  $\lambda, \lambda'$  are the moduli into which  $\kappa, \kappa'$  are transformed by the change of  $q$  into  $q^3$ .

**14541.** (JOHN C. MALET, F.R.S.)—If the roots  $x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8$  of the equation  $x^8 - p_1 x^7 + p_2 x^6 - p_3 x^5 + p_4 x^4 - p_5 x^3 + p_6 x^2 - p_7 x + p_8 = 0$  are connected by the relations

$$x_1 + x_2 + x_3 + x_4 = x_5 + x_6 + x_7 + x_8 \text{ and } x_1 x_2 x_3 x_4 = x_5 x_6 x_7 x_8,$$

(a) prove  $p_7 = \sqrt{p_8} (p_2 - \frac{1}{2} p_1 p_2 + \frac{1}{2} p_1^3)$ ,  
 $(Q_2 p_7 - 2 p_5 \sqrt{p_8} + 2 p_1 p_3)^2 = (Q_2^2 - 4 Q_4) (p_7^2 - 4 p_8 Q_6)$ ,

where  $Q_2 \equiv p_2 - \frac{1}{2} p_1^2, Q_4 \equiv p_4 - p_1 p_2 / (2 \sqrt{p_8}) - 2 \sqrt{p_8}, Q_6 \equiv p_6 - \sqrt{p_8} Q_2$ ;

(b) solve the equation.

**14542.** (Professor E. LEMOINE.)—Dans un triangle ABC soient G le barycentre; L, M, N les milieux de BC, CA, AB; l, m les milieux de AG, BG; D le point situ  sur LN au tiers de LN   partir de N. Pour trouver le centre de l'hyperbole de KIEPERT, il suffira de prendre le point I o  l'M recoupe le cercle des neuf points; de prendre le point H o  lD recoupe ce cercle; Hm recoupera le m me cercle au centre T cherch .

**14543.** (Professor MORLEY.)—The greatest number of regions into which  $n$  spheres can divide space is  $2n + \frac{1}{2}n(n-1)(n-2)$ .

**14544.** (Professor A. DROZ-FARNY.)—Une droite coupe une spirale logarithmique. Quel est le lieu des centres de courbure correspondants aux divers points d'intersection ?

**14545.** (Professor K. J. SANJ NA.)—Eliminate  $r$  and  $a$  from

$$\begin{aligned} x &= r (\cos a + \sin a), \quad y = 2a \cot 2a - r (\cos a - \sin a), \\ \text{and} \quad 2r &= a \{ \sec a + \operatorname{cosec} a - (2 \sec a \operatorname{cosec} a)^{\frac{1}{2}} \}. \end{aligned}$$

Hence find the locus of the centre of a circle touching a parabola and two variable perpendicular tangents. [See Vol. LXIV., p. 56.]

**14546.** (Professor NEUBERG.)—Si les angles des triangles ABC, A'B'C' v rifient les  galit s  $A + A' = \pi, B = B'$ , les c t s sont li s par la relation  $aa' = bb' + cc'$ .

**14547.** (Professor LANGHORNE ORCHARD, M.A., B.Sc.)—Show that, if  $n$  be any positive integer greater than unity,

$$\begin{aligned} 1^3 + 2^3 + 3^3 + 4^3 + \dots + n^3 - (1^5 + 2^5 + 3^5 + 4^5 + \dots + n^5) &= 4, \\ (1 + 2 + 3 + 4 + \dots + n)^3 - (1^5 + 2^5 + 3^5 + 4^5 + \dots + n^5) &= 4. \end{aligned}$$

**14548.** (Professor COCHEZ.)—Courbe  $\rho \sin \frac{1}{2}\omega + 2\rho + 1 = 0$ .

**14549.** (J. A. THIRD, M.A., D.Sc.)—K is a conic circumscribed to a triangle ABC; P is a point on it; Q is the isogonal conjugate of P with respect to the triangle; R is the point where PQ meets K again; L, M, N are the points where AR, BR, CR meet BC, CA, AB respectively; X, Y, Z are variable points, Y lying on QM and Z on QN, such that the pairs AY and AZ, BZ and BX, CX and CY are equally inclined

to the bisectors of the angles A, B, C respectively. Prove that the locus of X is QL, and that the locus of the point of concurrence of AX, BY, CZ is K.

The construction usually given for KIEPERT'S hyperbola (see CASEY'S *Analytical Geometry*, p. 442) is a particular case of the foregoing.

**14550.** (Professor U. C. GHOSH.)—A ball projected from a focus of an immovable elliptic ring, which rests on a smooth horizontal table, along a line making an angle  $\theta$  with the major axis, will rebound from the ring after one impact with it along a line inclined to the major-axis at an angle equal to  $\tan^{-1} \frac{\sin \theta [e(1-\epsilon) \cos \theta + \epsilon - e^2]}{e(\epsilon-1) \cos^2 \theta - \epsilon(1+\epsilon^2) \cos \theta + (\epsilon+1)e}$ ;

$\epsilon$  being the coefficient of restitution. Determine for what values of  $\theta$  the ball will cross the major axis after having only one impact with the ring, and obtain the equation of the envelope of the lines of rebound of the ball after one impact with the ring.

**14551.** (Professor N. BHATTACHARYA.)—If  $f(x)$  represent the coefficient of a number  $x$ , prove that

$$1 + \frac{1}{f(abc\dots)} = \left\{ 1 + \frac{1}{f(a)} \right\} \left\{ 1 + \frac{1}{f(b)} \right\} \dots,$$

when  $a, b, \dots$  are prime to one another. Prove also that the converse of this proposition is true.

**14552.** (D. BIDDLE.)—It being given that  $N = 150809$ ,  $\Delta = 7$ ,  $N = 2\Delta M + 1$ , and that its factors are of form  $2\Delta m + 1$ , prove the validity of the method of factorization employed in the adjoining example, the rule being as follows:—Take, as first divisor ( $D_1$ ), the number next below  $\sqrt{N}$  of proper form, say  $2\Delta m_1 + 1$ ; and take, as first dividend,  $M - m_1$ . These yield, as quotient and remainder,  $Q_1$  and  $R_1$ . Since divisors patently composite can be discarded, take, in succession,  $D_n = D_{n-1} - 2\Delta\mu_n$ , where  $\mu_n = 1$  or other small digit that does not carry  $D_n$  beyond the next prime (of the particular form) in descending order. Next, utilize  $(2\Delta\mu_n Q_{n-1} + R_{n-1} + \mu_n)/D_n = \kappa_n$  with  $R_n$ ; also  $\kappa_n + Q_{n-1} = Q_n$ . When  $R_r = 0$ ,  $N = D_r(2\Delta Q_r + 1)$ . [In the example, two divisors are tried which might have been excluded, namely,  $323 = 17 \cdot 19$  and  $253 = 11 \cdot 23$ ; but the final result is unaffected thereby.]

$N = 150809$	$\Delta = 7$
$10745 (\mu)$	$(\kappa) (Q) (R)$
379	28 133
337 3	3 31 301
323 1	2 33 90
281 3	5 38 74
253 2	4 42 128
239 1	3 45 0
	$2 \cdot 7 \cdot 45 + 1 = 631$ ;
	$\therefore N = 239 \cdot 631$ .

**14553.** (R. TUCKER, M.A.)—AP, AQ are vertical vectors of a parabola, and PQ is a focal chord. The circle APQ cuts the curve in A. The conormal point (of PQR) lies on a parabola, as also does the circum-centre of APQ. The intersections of (AP, QR) and of (AQ, PR) lie on the same cubic, and PR touches a semi-cubical parabola. AR, PQ intersect on a parallel to the directrix.

**14554.** (R. F. DAVIS, M.A.)—Given a conic and a circle having double contact, prove that the envelope of a variable circle, whose centre lies on the first and which intersects orthogonally the second, consists of two fixed circles.

**14555.** (G. H. HARDY, B.A.)—Discuss the distribution of the zeroes of the integral function  $\phi(z) \equiv \sin z - z = \sum_{n=1}^{\infty} (-1)^n \frac{z^{2n+1}}{2n+1}!$

in the plane of the complex variable. Prove that those which lie in the positive quadrant approach asymptotically, as their moduli increase, to the points  $a_n = (2n + \frac{1}{2})\pi + i \log \{ (4n + 1)\pi \}$ ;

i.e., that, if we surround each of the points  $a_n$  with a circle of arbitrarily small radius  $\rho$  (less than, say,  $\frac{1}{2}\pi$ ), we can determine a finite quantity  $R$ , such that all the zeroes of  $\phi(z)$  in the quadrant whose moduli are  $< R$  lie in the circles  $\rho$ , each circle containing one of them, and only one.

**14556.** (R. P. PARANJPEE, B.A.)—Trace the curve  $(x/a)^n + (y/b)^n = 1$  when  $n$  is an infinite positive integer, distinguishing the cases when it is odd or even.

**14557.** H. MACCOLL, B.A.)—Let  $\alpha =$  "If A is true, then, if B is true, C is true." Let  $\beta =$  "If A and B are both true, C is true." Show (1) that  $\alpha$  formally implies  $\beta$ , but that  $\beta$  does not formally imply  $\alpha$ . Give (2) a concrete example in which  $\alpha$  is false and  $\beta$  true. Give (3) an example in which *two-thirds* is the chance that  $\alpha$  is true, and *three-fourths* the chance that  $\beta$  is true. Definition:—The conditional "If A is true B is true" means "The chance that A is true and B false is zero." [The Proposer wishes to point out that at the end of Quest. 14498 A and B are misprints for  $\alpha$  and  $\beta$ .]

**14558.** (Rev. J. CULLEN.)—Show that the method of Quest. 14506 can be used to determine the prime or composite character of all numbers of the form  $4n + 1$  of eleven figures (or under). Apply the method to express  $3 \cdot 2^{30} + 1$  as the sum of two squares and to determine if this partition is unique.

**14559.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Solve  $s_n = s_a \cdot s_y, s_a \cdot s_x = s_a \cdot s_y, s_a \cdot s_p \cdot s_y \dots s_x = s_a \cdot s_b \cdot s_c \dots s_y$  where  $s$  denotes a sum of successive integer cubes.

**14560.** (ROBERT W. D. CHRISTIE.)—A gentleman's garden had Of  $a$  yards long and  $c$  yards broad.

A walk of equal width all round  
He made that took one-fourth the ground.  
Ye skilful in geometry,  
Tell me how wide the walk must be.  
*All fractions discard and integers use,*  
Or time and trouble you'll certainly lose.

**14561.** (J. J. BARNIVILLE, B.A.)—Having  $u_{n+1} + u_{n-1} = 8u_n$ , prove that

$$\begin{aligned} \frac{1}{1+1} + \frac{1}{7+1} + \frac{1}{55+1} + \frac{1}{433+1} + \dots &= \frac{\sqrt{5}}{2\sqrt{3}}, \\ \frac{1}{1+7} + \frac{1}{7+7} + \frac{1}{55+7} + \frac{1}{433+7} + \dots &= \frac{\sqrt{5}}{6\sqrt{3}}, \\ \frac{1}{5+7} + \frac{1}{29+7} + \frac{1}{227+7} + \frac{1}{1787+7} + \dots &= \frac{\sqrt{15}+1}{42}, \\ \frac{1}{11+7} + \frac{1}{83+7} + \frac{1}{673+7} + \dots &= \frac{\sqrt{15}-1}{42}, \\ \frac{1}{1+1} + \frac{1}{4+4} + \frac{1}{31+4} + \frac{1}{244+4} + \dots &= \frac{2\sqrt{15}+3}{30}, \\ \frac{1}{\sqrt{5}+\sqrt{2}} + \frac{1}{\sqrt{5}+4\sqrt{2}} + \frac{1}{\sqrt{5}+31\sqrt{2}} + \dots &= \frac{\sqrt{5}+\sqrt{3}-\sqrt{2}}{6}. \end{aligned}$$

**14562.** (J. W. MELLOR, B.Sc.)—A vessel contains equal numbers ( $n$ ) of red, white, and black balls, which have the power of disposing themselves in sets of three, such that the only possible combinations are two red and one black, two white and one black, or one each of red, black, and white. What is the probability of the occurrence of each set, (1) assuming that the black ball has an equal degree of attraction for each of the other balls, (2) assuming that the black ball exerts an equal degree of attraction for a red and a white ball, but that a black *with* a red ball has  $r$  more degrees of attraction for a white than for a red one, and similarly a black *with* a white ball has  $s$  times more attraction for a differently coloured ball?

**14563.** (R. KNOWLES.)—From a point T tangents TP, TQ are drawn to the parabola  $y^2 = 4ax$ . Prove that when the circle TPQ touches the parabola the locus of T is the parabola  $y^2 = 4a(2a-x)$ .

**14564.** (R. CHARTRES.)—If ABC be a triangle, P and Q random points, find the mean value of the  $n$ th power of the triangle PAQ (1) when P and Q are confined to the base BC, (2) when P and Q can be anywhere in the triangle. Also find the same when ABC is a sector of a circle, centre A; and deduce the former results from these.

**14565.** (SALUTATION.)—AB, CD are diameters, perpendicular to each other, of the circle ACBD; P is a point on the circumference between A and C; and, with centre A and radius AP, the arc PQR is described, meeting the circle again in R, and having CQ tangential to it. Prove that the arc PQR bisects the circle, when the radius of the latter bears to that portion of its circumference which lies between P and B the same ratio that subsists between  $CQ^2$  and the area (of the circle) lying outside the rectangle APBS.

**14566.** (R. J. DALLAS, M.A.)—If we have a set of  $n-1$  equations,  $a(1+x_r^2 x_{r+1}^2) - b(x_r^2 + x_{r+1}^2) + c x_r x_{r+1} = 0$  ( $r = 1, 2, \dots, n-1$ ), these cannot coexist with the equation  $a(1+x_n^2 x_1^2) - b(x_n^2 + x_1^2) + c x_n x_1 = 0$  unless a certain relation holds between  $a, b, c$ , when the equations are indeterminate. Find these relations for the cases  $n = 3, 4, 5, 6$ .

**14567.** (H. W. CURJEL, M.A.)—Construct with ruler and compasses a harmonic pencil O (AC, BD); the angles AOD, BOC being given.

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

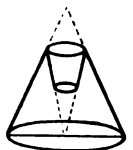
**6543.** (W. J. C. MILLER, B.A.)—If P, Q, R, S be random points, taken one in each of the sides of a quadrilateral ABCD, find (1) the average area of the quadrilateral PQRS, and (2) the probability that the area of such a random quadrilateral will be less than a given area.

**6544.** (CHRISTINE LADD, M.A.)—Four points A, B, C, D are selected at random on a sphere, all points being equally probable, and two small circles are drawn, the one passing through B and having A for a pole, and the other passing through D and having C for a pole. Prove that the chance that they cut each other is  $\frac{1}{16}\pi^2$ .

**6558.** (A. MARTIN, M.A.)—If an experiment succeeds in three trials out of four, show that the chance that  $n$  consecutive trials there are never three consecutive successes is  $(\frac{3}{4})^{n+1} (2 + a^{n+1} + \beta^{n+1})$ , where  $a$  and  $\beta$  are the roots of the equation  $3x^2 + 2x + 1 = 0$ .

**6573.** (ELIZABETH BLACKWOOD.)—If the four coefficients of a complete cubic equation be each taken at random between 1 and -1, find the chance (or the nearest attainable limits of the chance) that the roots of the equation will be imaginary.

**6576.** (R. TUCKER, M.A.)—An inkstand is formed of two conical frusta, placed as in the annexed cut; the vertex of the inner frustum being at the centre of the base. Given the radii of the three sections to be  $a, b, c$ , and the slant sides  $l_1, l_2$ , find (1) how much ink the bottle will hold, so that, if it be inverted, no ink will be spilt, taking as a numerical example the radii  $1, \frac{1}{2}, \frac{1}{4}$  inches, and the slant sides 2, 1 inches respectively; and (2) given the sum of the slant sides constant, construct the inkstand of maximum capacity.





**6587.** (W. E. WRIGHT, B.A.)—From a point on a curve of the second degree tangents are drawn to another curve of the second degree. Find the envelope of their chord of contact.

**NOTICE TO CORRESPONDENTS.**

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

**THE LONDON MATHEMATICAL SOCIETY.**

Thursday, April 5, 1900.—Lt.-Col. Cunningham, R.E., V.P., in the Chair. Twenty members present.

Mr. F. W. B. Frankland, B.A., Fellow of Clare College, Cambridge, was elected a member.

The Misses B. M. and F. E. Cave Browne Cave and Mr. R. W. H. T. Hudson were admitted into the Society.

The senior Secretary read a letter from Mrs. J. J. Walker thanking the Society for its vote of condolence with her on the death of her husband.

The following communications were made:—

"On the Addition Theorem for the Bessel Functions," Mr. H. M. Macdonald.

"The Orthoptic Loci of Curves of a given class," Mr. A. B. Basset.

"Proof of the Uniform Convergence of Fourier's Series," Prof. Love.

"An Extension of Orthogonal and Boolean Covariants," Major MacMahon.

A paper was also received from Mr. Bromwich on "Weierstrass's Canonical Reduction of a 'Schaar' of Bilinear Forms."

Messrs. Macaulay, R. W. Hudson, Whittaker, and the Chairman spoke to one or more of the papers.

The Chairman reminded members that the May meeting would be made "special" as announced at the March meeting and subsequently by printed circular.

The following papers are promised for the May meeting:—

"The Differential Equation whose solution is the ratio of two solutions of a Linear Differential Equation," Mr. M. W. J. Fry.

"A Congruence Theorem relating to Eulerian numbers and other Coefficients," Dr. Glaisher.

**JUST PUBLISHED**

**SHADED DRAWINGS  
OF  
MODELS AND ORNAMENT  
FOR CLASS TEACHING.**

Drawn under the Superintendence of

**LEWES R. CROSSKEY,**

DIRECTOR OF THE DEPARTMENT OF INDUSTRIAL ART, THE GLASGOW AND WEST OF SCOTLAND TECHNICAL COLLEGE; ART MASTER, ALLAN GLEN'S SCHOOL, GLASGOW; AUTHOR OF "ELEMENTARY PERSPECTIVE."

Twenty-four Sheets. Superfine heavy paper, 28 inches by 32 inches. Enclosed in strong cloth-backed portfolio. Price 31s. 6d.

A NEW SERIES of Sheets of Shaded Drawings of Models and Ornament for use in Elementary, Secondary, and Science Schools, and in preparing Students for the Elementary and Advanced Model Drawing in Light and Shade Examinations of the Science and Art Department. The Sheets will be found of service in the class-room as exercises, preceding or accompanying the instructions given in Drawing from the actual objects both in Outline and in Shading. They may also be used for copying in Outline only, and for this purpose will be found of value as a means of training the Students to realize the appearance of objects in perspective, as well as conveying a knowledge of light and shade and a correct method of working.

\* \* Detailed and Illustrated Prospectus post free on application.

LONDON: BLACKIE & SON, LIMITED, OLD BAILEY.

**MESSRS. BELL'S LIST.**

**BELL'S HANDBOOKS TO THE GREAT  
PUBLIC SCHOOLS.**

Crown 8vo, Profusely Illustrated, 3s. 6d. net each.

Under the above title MESSRS. BELL are publishing a series of historical and descriptive handbooks, dealing with the principal Public Schools of England. They are intended to give a short account of the foundation and history of each school, a description of the growth and present condition of the buildings, a trustworthy account of the method and routine of the educational system, and, lastly, accurate information as to the games, amusements, and non-scholastic interests which may prevail in the school.

FIRST VOLUMES OF SERIES.

**CHARTERHOUSE.**

By A. H. TOD, M.A., late Scholar of Trinity College, Oxford; Assistant-Master at Charterhouse. With 58 Illustrations, chiefly from Photographs by L. MARSHALL, Assistant-Master at Charterhouse.

[Ready.]

**RUGBY.**

By H. C. BRADBY, M.A., Assistant-Master at Rugby. With numerous Illustrations.

[Ready.]

**ETON.**

By A. CLUTTON-BROCK, New College, Oxford.

[In the press.]

**Bell's Science Series.**

EDITED BY PERCY GROOM, M.A.,  
AND PROF. G. M. MINCHIN, M.A., F.R.S.

New Volume. Crown 8vo, Illustrated. 288 pages, 4s. 6d.

**AN INTRODUCTION TO THE STUDY OF THE  
COMPARATIVE ANATOMY OF ANIMALS.**

By GILBERT C. BOURNE, M.A., F.L.S., Fellow and Tutor of New College Oxford; University Lecturer in Comparative Anatomy.

VOL. I. ANIMAL ORGANIZATION. THE PROTOZOA AND CŒLENTERATA.

In this introduction to the study of the Comparative Anatomy of Animals, the author has necessarily been guided by the requirements of the elementary examinations at the leading Universities of Great Britain. Having found by experience that beginners find great difficulty in apprehending the full meaning of the cell-theory at the commencement of their studies, he has departed from the course usually pursued in lectures and practical instruction, and, instead of beginning with the study of cells, he has taken the common frog as a type of animal organization. The general anatomy of the frog is first described in some detail: the microscopic structure of its organs and tissues is next explained, and then the cell-theory and the phenomena of the cell-division are dealt with. In this way the student is led gradually from familiar to new and unfamiliar conceptions.

In Two Parts. Crown 8vo, 4s. 6d. net each.

**GREGOROVIVS' HISTORY OF THE CITY OF ROME  
IN THE MIDDLE AGES.**

Translated by Mrs. HAMILTON.

VOL. VII. THE FIFTEENTH CENTURY.

Crown 8vo, 2s. 6d. PART I., separately, 1s.

**GRADUATED EXERCISES AND EXAMINATION PAPERS  
IN BOOK-KEEPING.**

FOR NATIONAL, INTERMEDIATE, AND PRIVATE SCHOOLS,  
BUSINESS COLLEGES, AND CIVIL SERVICE ACADEMIES.

By P. MURRAY, F.S.S.S., F.Sc.S. (Lond.), Lecturer in Book-keeping and Commercial Knowledge, Business and Civil Service College, Belfast; Author of "First Principles in Book-keeping," "Book-keeping for Competitive Examinations," "Business Book-keeping," "Advanced Arithmetical Examination Papers," "Business and Civil Service Tot Book," &c.

LONDON: GEORGE BELL & SONS, York Street, Covent Garden.

# MESSRS. BELL'S LIST.

COMPLETE CATALOGUE POST FREE ON APPLICATION.

Part III., now ready. 4to, 9s. net.

## CORPUS POETARUM LATINORUM

a se aliisque denuo recognitorum  
et brevi lectionum varietate instructorum, edidit

JOHANNES PERCIVAL POSTGATE, Litt.D.

### CONTENTS.

EDITOR.		EDITOR.	
Grattius . . .	J. P. Postgate.	Ætna . . .	Robinson Ellis.
Manilius . . .	Malvin Bechert.	Persius . . .	W. C. Summers.
Phædrus . . .	James Gow.	Lucan . . .	W. E. Heitland.
Valerius Flaccus . . .		Edited by J. B. Bury.	

Pott 8vo, with Vocabulary, 1s.

**First Exercises in Latin Prose Composition.** By E. A. WELLS, M.A., Highfield School, Southampton.

"A neat little Latin book, original, and withal practical. A boy well drilled in its methods cannot fail to get a reasonable hold on Latin idiom."—*School Guardian*.

## BELL'S CLASSICAL TRANSLATIONS.

### New Volumes.

**Æschylus.—The Suppliants.** Translated by WALTER HEADLAM, M.A., Fellow of King's College, Cambridge.

"It is a distinct help to the understanding of a difficult and corrupt play."—*Literature*.

**Thucydides. Book VI.** Translated by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School.

**Thucydides. Book VII.** Translated by E. C. MARCHANT, M.A.

"Judging from this specimen, we think that he succeeds in being more literal than Jowett and more accurate and idiomatic than Dale."—*School World*.

"We can congratulate Mr. E. C. Marchant on a scholarly and readable version of Thucydides VI. . . . His version is better than Dale's and more correct than Jowett's."—*Literature*.

**Livy. Book XXI.** Translated by J. BERNARD BAKER, M.A., Tutor of Non-Collegiate Students, Oxford.

**Livy. Book XXII.** Translated by J. BERNARD BAKER, M.A.

**Livy. Book XXIII.** Translated by J. BERNARD BAKER, M.A.

## BELL'S ILLUSTRATED CLASSICS.

Edited by E. C. MARCHANT, M.A.

Pott 8vo, with numerous Illustrations, Maps, and Plans,  
1s. 6d. each.

The volumes may be had with or without Vocabularies.

### NEW AND FORTHCOMING VOLUMES.

**Cæsar. Book I.** By A. C. LIDDELL, M.A., High School, Nottingham.

**Cæsar. Book V.** By ARTHUR REYNOLDS, M.A., Merchant Taylors' School.

**Cæsar. Book VI.** By J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley.

**Horace's Odes. Book III.** By H. LATTER, M.A., Cheltenham College. [*In the press.*]

**Vergil's Æneid. Book I.** By the Rev. E. H. ESCOTT, M.A., Dulwich College.

**Vergil's Æneid. Book III.** By L. D. WAINWRIGHT, M.A., St. Paul's School.

**Vergil's Æneid. Book VI.** By J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. [*May.*]

**Vergil's Æneid. Selections from Books VII.—XII.** By W. G. COAST, B.A., Fettes College. [*May.*]

**Ovid.—Tristia. Book III.** By H. R. WOOLRYCH, M.A., Headmaster of Blackheath School. [*May.*]

**Cicero.—Speeches against Catiline. I. and II.** (1 Vol.) By F. HEBBING, M.A., Blundell's School, Tiverton. [*Shortly.*]

**Cicero.—Selections.** By J. F. CHARLES, B.A., City of London School. [*Shortly.*]

**Phædrus.—A Selection.** By Rev. R. H. CHAMBERS, M.A., Headmaster of Christ's College, Brecon. [*In the press.*]

**Stories of Great Men.** By Rev. F. CONWAY, M.A., Merchant Taylors' School. [*Shortly.*]

**Xenophon.—Anabasis. Book I.** Edited by E. C. MARCHANT, M.A. [*Shortly.*]

**Xenophon.—Anabasis. Book II.** By E. C. MARCHANT, M.A. [*In the press.*]

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the Illustrated Classics.

Price 1s. each.

**Scala Prima.** Simple Stories and Fables for Translation, with Notes and Vocabulary. By J. G. SPENCER, B.A., St. Paul's Preparatory School.

**Scala Media.** Extracts from Eutropius and Cæsar. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A.

ILLUSTRATED PROSPECTUS OF THE SERIES ON APPLICATION.

# THE ROYAL SCHOOL SERIES.

Splendid New Wall Pictures for Schools.  
**ARTISTIC. EFFECTIVE. CHEAP.**

**JUST ISSUED**

IN NELSON'S ROYAL PORTFOLIO  
(GEOGRAPHICAL SERIES)

## PICTURES OF THE EMPIRE.

A Series of Beautiful Pictures of Striking Scenes in the British Empire.  
PRINTED IN FULL COLOURS. Size of Sheet, 28 in. by 21 in.

**NOW READY.**

The Houses of Parliament, Westminster.

The Taj Mahal, Agra.

Valetta Harbour, Malta.

The Suez Canal.

Gibraltar, from near Algeciras.

Jamaica—Sugar Plantation.

Kimberley Diamond Mine.

\*\* Other Subjects in hand, will follow shortly. List on application.

These Illustrations are true pictures, the originals painted by well known Water-Colour Artists. They are specially suited for School Decoration, and at the same time may be used as a basis for vivid Geographical instruction.

Nothing better for Geographical Object Lessons could be provided.

**PRICES.**

Unmounted, 1s. each net. With Metal Mounts at top and bottom, 1s. 6d. net.

Mounted on thick Cards, eyeleted and varnished, 2s. net.

Mounted on Linen, with Wooden Rollers, and varnished, 2s. 6d. net.

### NELSON'S SUPPLEMENTARY READERS.

Price 3d. each; or, limp cloth, 4d.

*ILLUSTRATED.*

1. Story of the North-East Passage.
2. Story of the North-West Passage.
3. Richard the Lion Heart.
4. Animal Stories. (Stds. III. & IV.)
5. Gulliver's Travels in Lilliput.
6. The Settlers at Home.
7. Nelson on the Nile.
8. Old Greek Stories.
9. Little Nell (DICKENS).

### THE ROYAL CROWN READERS.

With Beautiful

**COLOURED ILLUSTRATIONS.**

Standard O. 7d. Book III. ... 1s.  
Book I. ... 8d. Book IV. ... 1s. 3d.  
Book II. ... 10d. Book V. ... 1s. 6d.  
Book VI., 1s. 6d.

With **PRIMERS, INFANT READERS,  
WALL SHEETS, and  
WORD-BUILDING SHEETS.**

### THE ROYAL SCIENCE READERS.

*A Graded Series of  
Object Lessons.*

**BEAUTIFULLY ILLUSTRATED.**

Book I., 8d.; Book II., 10d.;  
Book III., 1s.

*Teacher's Book for the Series, 1s. 6d.*

### THE ROYAL SCIENCE READERS WALL SHEETS.

*Illustrations for the Lessons in the  
ROYAL SCIENCE READERS.*

Now Ready.—THREE SERIES, for  
Books I., II., and III. 10s. 6d.  
each Series of 20 Sheets; or, separately,  
1s. each Sheet.

Size of Sheets, 21 in. by 21½ in.

*List on application.*

**JUST PUBLISHED.**

### FIRST LESSONS IN ENGLISH GOVERNMENT.

An Easy Introduction to the Law and Custom of the Constitution. With many Illustrations, cloth boards, price 1s. 6d.

This is a Citizen Reader of the best type, well arranged, well worked out on the historical method, and written in a simple and interesting style. It is capitally illustrated, and is furnished with a Glossary of Technical Terms. The book is admirably suited for Evening Continuation students, candidate Pupil Teachers, the highest class in the Elementary School, or lower forms of the Secondary School.

"A delightful exposition of the subject."—SCHOOL TIMES.

### GREEK AND ROMAN HEROES.

Selections from Plutarch's Lives, adapted for Class Reading by H. SPENSER, LL.D., Classical Master in the Edinburgh Academy. With Illustrations. Cloth boards, price 2s.

"We have in this both interesting matter and good literature."—EDUCATIONAL TIMES.

\*\* Fuller particulars in Nelson's School Catalogue, or School Circular, post free on application.

THOMAS NELSON & SONS, 35 & 36 Paternoster Row, London, E.C.; Parkside, Edinburgh; and New York.

*New Number of Nelson's Royal Wall Atlases.*  
**BIBLE LANDS.**  
Being No. IV. of Nelson's Royal Wall Atlases.

Seven Sheets, 41½ in. by 31 in. Full Coloured, Mounted on One Roller, price 15s.

This Atlas contains on a large scale all the Maps required to Illustrate Old and New Testament History. Such Aids to Teaching the Geography required for an understanding of the Bible Lesson have not hitherto been available.

**LIST OF MAPS.**

1. The Ancient World.
2. Canaan.
3. Dominions of David and Solomon.
4. Palestine.
5. Galilee.
6. St. Paul's Journeys.
7. Persian and Roman Empires.

*Just issued in Nelson's*

Royal Portfolio of Pictures and Diagrams.

### ANIMAL PHYSIOLOGY.

Printed in FULL COLOURS, on dark background, on strong Manilla paper. Size 3½ in. by 30½ in. Mounted on roller to turn over.

Price 20s. the Set.

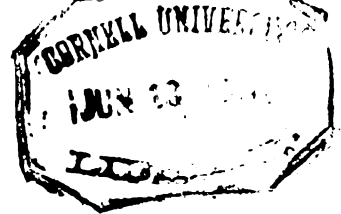
1. The Skeleton.
2. The Muscles.
3. The Teeth
4. The Organs of Digestion.
5. The Circulation of the Blood.
6. The Organs of Respiration.
7. The Kidneys: The Skin.
8. The Nervous System.
9. The Eye.
10. The Ear.

**NOW READY.**

### NEEDLEWORK AND KNITTING DRILLS FOR INFANTS.

With Music in both Notations. By ALICE MORROW. With Introduction by Miss SOPHY LOCH. Illustrated. Cloth. Price 1s.

This is the work of a practical teacher who has used its methods with great success.



# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 470.

JUNE 1, 1900.

{ Price to Non-Members, 6d.  
{ By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, JULY AND DECEMBER, 1900.

Notice is hereby given that at the above Examinations the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book VI., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

**PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.**—The COLLEGE of PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.  
Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

### EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

(Bloomsbury Square, W.C.)

The next Monthly Evening Meeting of the Members will take place on Wednesday, the 13th of June, when R. P. Scott, Esq., M.A., LL.D., will read a Paper on "The Inspection of Secondary Schools: Of what tests ought it to consist?"

The Chair will be taken at 7.30 p.m., and a discussion will follow the reading of the Paper.

Members have the privilege of introducing their friends.

C. E. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.

### THE CALENDAR FOR 1900

is now ready, and may be obtained from Mr. F. Hodgson, 89 Farringdon Street, E.C. Price, free by post,

To Members of the College ... 1s. 6d.

To Non-Members ... 2s. 6d.

The Calendar contains, in addition to the Lists of Members, and of Schools sending in candidates to the Certificate Examinations, the Regulations respecting the Examinations to be held in 1900, &c., and the

### EXAMINATION PAPERS

set at the Certificate, Junior Forms, Professional Preliminary, and Diploma Examinations held in 1899.

### UNIVERSITY DIPLOMA FOR WOMEN.

**THE UNIVERSITY OF ST. ANDREWS** grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

**MR. H. A. NESBITT** (joint-author of "The Science and Art of Arithmetic," by A. SOMMERSCHAFFIN and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.

## LONDON COLLEGE OF MUSIC.

(Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FORMUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in July (June for Scotland and Ireland), when certificates will be granted to all successful candidates. Last day for entry, Friday, June 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## CORRESPONDENCE TUITION,

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

# University Correspondence College.

# FREE GUIDES

TO

# LONDON UNIVERSITY EXAMS.

FREE GUIDE TO MATRICULATION

(Postage 1d.).

INTER. ARTS, INTER. SCIENCE, B.A., OR

INTER. LAWS EXAMINATION.

Any one of the above Arts or Science Guides, Prospectus, and further particulars will be sent post free on application to

**THE SECRETARY,**

(Univ. Corr. Coll., London Office.)

32 Red Lion Square, London, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

*Principal*—H. R. REICHEL, M.A.

The Session began October 3rd, 1899. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (beginning September 19), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One-half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
*Secretary and Registrar.*

## THE ANSTEY PHYSICAL TRAINING COLLEGE

**OFFERS** a professional Training in Swedish Gymnastics (both educational and medical) to Ladies of good education.

The Course begins in September, and lasts two years. Age of admission, 18 to 30. The work is particularly interesting and healthful, and is remunerative, there being more openings for trained teachers than can be filled.

Apply, for illustrated prospectus, to THE PRINCIPAL, The Leasowes, near Halesowen, Worcestershire.

## SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

*No extras. Resident Governesses.*

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

*Principal*—Miss M. R. WALKER. This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

**ABERYSTWYTH COUNTY SCHOOL.**—Wanted, ASSISTANT-MASTER, to teach Classics and Foreign Languages. Must have University Degree and teaching experience. To commence duties in September. Salary, £130 per annum. Applications, stating age and qualifications, with no more than six testimonials, to be sent by June 23rd, 1900, to JOHN EVANS, 6 Portland Street, Aberystwyth.

**NUCLEUS OF GIRLS' DAY SCHOOL** for disposal, in a rapidly growing neighbourhood, North London; 23 pupils. Apply—MISTRESS, 118 Queen's Road, Peckham.

## Modern Languages Holiday Courses.

Organized by the Teachers' Guild.

## ELBEUF, LISIEUX, AND TOURS. 1900.

*Commencing on August 2nd.*

Preliminary Programme gratis.

Handbook, giving full particulars, price 6d. by post, from the Offices of the Guild, 74 Gower Street, London, W.C.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

### ENTRANCE SCHOLARSHIPS.

The Henry Tate Scholarship in Science, annual value £50; a Pfeiffer Scholarship in Science, annual value £48; a Reid Scholarship in Arts, annual value £31. 10s., all tenable for three years, will be awarded on the results of the Examination to be held at the College on June 26th and 27th. Candidates must be under 19 years of age on the first day of the examination.

For further information apply to the PRINCIPAL.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

*Principal*—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS.

SALSBURY ROAD, BRONDESBURY, LONDON, N.W.

*Principal*—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

## THE DATCHELOR TRAINING COLLEGE.

CAMBERWELL GROVE, S.E.

(In connexion with the Datchelor Collegiate School for Girls.)

Governing Body—The Worshipful Company of Clothworkers of the City of London.

*Principal*—Miss RIGG.

*Mistress of Method and Lecturer*—Miss CARPENTER.

Assisted by other Teachers and Lecturers.

This College provides a full course of professional training for Women Teachers, together with abundant opportunity for regular class teaching in a school of over 400 pupils. Special provision is made for instruction in Physiology and Hygiene, Elocution, Drawing, and Ling's Swedish Drill.

Students are prepared for the Examination of the Cambridge Teachers' Training Syndicate.

Fees moderate.

A COLLEGE HALL OF RESIDENCE is provided for Students in the Training College. Terms moderate.

A Free Studentship (Training and Residence) will be awarded in September. For conditions apply to the SECRETARY.

THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARH ROAD, WEST KENSINGTON, LONDON, W.

*Chairman of the Committee*—Mr. W. MATHER.

*Treasurer*—Mr. C. G. MONTEFIORE.

*Secretary*—Mr. ARTHUR G. SYMONDS, M.A.

TRAINING COLLEGE FOR TEACHERS.

*Principal*—Madame MICHAELIS.

*Mistress of Method*—Miss E. E. LAWRENCE.

KINDERGARTEN AND SCHOOL.

*Headmistress*—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

*Address*—74 GOWER STREET, LONDON, W.C.

*Registrar*—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## JOINT AGENCY FOR ASSISTANT-MASTERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

*Registrar*—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.

Incorporated Association of Headmasters.

College of Preceptors.

Teachers' Guild.

Welsh County Schools' Association.

Private Schools' Association.

Association of Headmasters of Preparatory Schools.

Association of Headmasters of Roman Catholic Schools.

Assistant-Masters' Association.

Association of Technical Institutions.

&c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

## WANTED.—A Certificated FEMALE

TEACHER for Girls' Industrial School. Salary £45, with board and lodging. Answers by 2nd June, to Mr. BANNERMAN, Free St. Leonard's Manse, Northbank, Perth.

Tenth Edition. 12mo, price 6d.

**A FIRST BOOK OF ENGLISH GRAMMAR, GEOGRAPHY, AND ENGLISH HISTORY.** With Arithmetical Tables, Dates, &c. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors.

LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

New Edition. 12mo, price 9d.

## THE COLLEGE AND SCHOOL

EXAMINER IN EUCLID, containing the Enunciations of all the Propositions in the College and School Editions, Questions on the Definitions, Arithmetical and Algebraical Demonstrations of the Propositions in Books II. and V., and a large collection of Geometrical Problems for Solution. Designed for Class and Self-Examination, and adapted to all Editions of Euclid. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors.

LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

## EPPS'S COCOA.

GRATEFUL.

COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 1-lb. and 1/2-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homœopathic Chemists, London.

BREAKFAST.

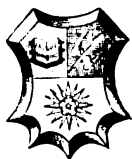
SUPPER.

## EPPS'S COCOA.



**LONDON UNIVERSITY EXAMINATIONS.**

Recapitulation and Vacation Classes.



**INTERMEDIATE SCIENCE AND PRELIM. SCI. (M.B.).**

A Recapitulation Class, commencing Tuesday, June 12th, is held covering the important parts of the whole Course, theoretical and practical.

Fees:—All subjects Inter. Science, £8. 8s.; single subjects, £3. 3s. Material for Zoology, 7s. 6d.

A Last Week Class in Practical Physics meets daily during the week preceding the July Examination.

**INTERMEDIATE ARTS.**

Oral Recapitulation Classes are held during the four weeks immediately preceding the Examination, commencing Tuesday, June 12th. The Classes include daily lectures in each subject.

The above fees are reduced to students of University Correspondence College, and to students who have previously worked at University Tutorial College.

**Summer Vacation Classes**

are also held for B.Sc., Inter. Science, and Prelim. Sci. (M.B.)

Prospectus and further particulars may be had from

**THE VICE-PRINCIPAL,**  
University Tutorial College,

**32 Red Lion Square, Holborn, W.C.**

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.).

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,  
BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS, SCIENCE, and PREL. SCI., B.A., and B.Sc. EXAMINATIONS. Day and Evening Classes.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, &c.

Papers Corrected for Schools. Private tuition for all Examinations. Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class, Classical Honours, Editor of "Phaedo," "Pro Plancio," &c.

**SUCCESSSES.**

1892-1899.—London Matric., 71; Inter. Arts. Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**

**M.A., 2 (1898 and 1899).**

**Diploma Correspondence College.**

The ONLY College that coaches SOLELY for

**A.C.P.,**

**L.C.P., AND F.C.P.**

SUCCESSSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

**Dr. KNIFE, Dip. Corr. Coll., Fishponds, Bristol.**

GERMAN TEACHER, speaking English fluently, fond of walking, requires the company of an ENGLISH MASTER for a three weeks' holiday trip to Ireland in August.—A. H., 22 Cambridge Terrace, Islington, London, N.

**EDUCATIONAL WORKS BY A. K. ISBISTER, M.A., LL.B.**

(LATE DEAN OF THE COLLEGE OF PRECEPTORS.)

Sixteenth Edition, with Map. 12mo.

**CÆSAR'S COMMENTARIES on the GALLIC WAR.**

BOOKS I.-V. With Notes Critical and Explanatory, a Vocabulary of all the Words in the Text, and Easy Reading Lessons for Beginners ..... price 3s. 6d.

BOOKS I.-VII. do. do. do. 4s. 6d.

Do. (without the Reading Lessons) ..... 4s. 0d.

Twenty-fifth Edition.

BOOK I. (with Vocabulary, Reading Lessons, &c.) ..... 1s. 6d.

Fourteenth Edition. 12mo, price 3s. 6d.

**XENOPHON'S ANABASIS, Books I. to III.** With Notes, Vocabulary of all the Words in the Text, and a Series of Easy Reading Lessons for Beginners. Designed as a First Greek Reading Book in Schools.

Ninth Edition. 12mo, price 1s.; or, with Answers, 1s. 6d.

**UNITARY ARITHMETIC.** Embodying the First Book of Arithmetic of the Irish National Board. With numerous additional Examples, and selections from recent Examination Papers; and a full exposition of the "Unitary" System, or Method of Working Arithmetic without rules.

\*\* In this Edition, Questions in Proportion, Practice, Interest, Stocks, Partnership, Profit and Loss, &c., are, by the "Unitary" Method, solved by a single rule.

Fifteenth Edition. 12mo, price 2s. 6d.

**THE SCHOOL EUCLID: Comprising the First Four Books.**

With Questions, Geometrical Exercises, &c.

THE SCHOOL EUCLID, Books I. & II. With Questions, Exercises, &c. 12mo, price 1s. 6d.

THE SCHOOL EUCLID, Book I. With Questions, &c. 12mo, price 1s.

Sixth Edition. 12mo, price 3s. 6d.

**THE COLLEGE EUCLID:** Comprising the First Six and portions of the Eleventh and Twelfth Books read at the Universities. Chiefly from the Text of Dr. SIMSON. With a new arrangement of the Figures and Demonstrations; the Enunciations of the Propositions separately for Self-Examination, apart from the Text; Notes and Questions on each Book; and a Series of Geometrical Problems for Solution, from the most recent University Examination Papers.

Fifth Edition. Two Quarto Copy Books, price 6d. each.

**THE GEOMETRICAL COPY-BOOK.** Arranged for writing out the Propositions of Euclid in the Abbreviated and Symbolical Form adopted in the Universities and Public Schools.

Third Edition. 12mo, price 1s. 6d.

**FIRST STEPS TO EUCLID:** Comprising the Propositions of Book I., prepared for writing out, with a recapitulation of the steps of the Demonstration appended to each. Forming a Text-book for the above.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-KEEPING,** by SINGLE and DOUBLE ENTRY; with Practical Explanations and Exercises on the most useful Forms for Business.

4to, 1s. each.

**ENGRAVED ACCOUNT BOOKS.** Ruled and Interleaved for Copying, adapted to the above.

No. I. Business Forms. 1. Bills of Parcels and Book Debts. 2. Invoices. 3. Account Sales. 4. Receipts. 5. Promissory Notes and Drafts. 6. Bills of Exchange.

No. II. Day-Book and Cash-Book.

No. III. Ledger, Index, and Balance Sheet.

FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**  
BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

281 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1899, 56 with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P.**, **L.C.P.**, and **F.C.P.**

**NOTICE.**

VERE FOSTER'S  
**National Competition**

IN  
**WRITING AND DRAWING.**

*Thirtieth Season, 1900.*

Books intended for this Season's Competition must be sent to Mr. VERE FOSTER, care of BLACKIE & SON, LTD., 89 Talbot Street, Dublin, on or before June 30 next.

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.


**HINTS ON FRENCH SYNTAX.**

By F. STORB,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

 Headmasters should apply for

**EYRE & SPOTTISWOODE'S**

ILLUSTRATED CATALOGUE OF

**DRAWING INSTRUMENTS,**

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens,  
Drawing Boards, Set-squares, T-squares, Drawing  
Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons,  
&c., &c.

**BOXES OF WATER AND OIL COLOURS,**

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

**JOSEPH GILLOTT'S** Gold Medals,  
Paris, 1878,  
1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 728, 803,  
170, 166, 8, 6, 292, 293,  
291 (Mapping), 659 (Drawing),  
and (for Vertical Writing) 1048, 1046.

**STEEL PENS.**

**SCHOOL PRIZES.**

BICKERS & SON have the largest and most varied stock in London of BOOKS handsomely bound in Calf and Morocco, suitable for SCHOOL PRIZES.

They have had more than fifty years' experience, and have long had the reputation of being one of the best Bookbinding Firms in England.

*Catalogues post free.*

School Books supplied at 25 per cent. discount,  
and a Term's credit.

BICKERS & SON, LEICESTER SQUARE, LONDON, W.C.

**EXAMINATION PAPER**

AS USED BY THE

**COLLEGE OF PRECEPTORS.**

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets ... per Ream, 2s. 6d.  
" " 960 " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.  
*Remittance should accompany Order.*

HEWARD & SHELBOURNE, Wholesale and Retail Stationers,  
63 HIGH HOLBORN, LONDON, W.C.

**CASEY'S EUCLID.**

**THE ELEMENTS OF EUCLID.**

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI.  
Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious  
Annotations and Numerous Exercises.  
By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland,  
Vice-President, Royal Irish Academy, &c., &c.  
*Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.*

**A KEY TO THE EXERCISES**

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."  
By JOSEPH B. CASEY, Tutor, University College, Dublin.  
Second Edition. Small 8vo, price 6s.

**A SEQUEL TO THE**

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."  
Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

**A TREATISE ON THE**

**ANALYTICAL GEOMETRY**

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.  
Containing an account of its most recent Extensions, with numerous Examples.  
New Edition. Crown 8vo.

**A TREATISE ON**

**ELEMENTARY TRIGONOMETRY.**

With numerous Examples and Questions for Examination.

Third Edition. Small 8vo, 148 pp., price 3s.

**KEY TO THE EXERCISES**

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.  
With numerous Examples and Questions. Second Edition. Price 3s.

**A TREATISE ON**

**PLANE TRIGONOMETRY.**

Containing an account of Hyperbolic Functions, with numerous Examples.  
Crown 8vo. Second Edition.

Crown 8vo, price 5s.

**A TREATISE ON**

**SPHERICAL TRIGONOMETRY,**

AND ITS APPLICATION TO GEODESY AND ASTRONOMY.  
With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.  
LONDON: LONGMANS & CO.

**New.**

**GILL'S**

**New.**

**"CARTOGRAPHIC"**

# WALL MAPS

**FOR SECONDARY SCHOOLS.**

*Edited by GEORGE GILL, F.R.G.S.*

**Size,**  
80 × 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

**Price 16s.**

\*ENGLAND AND WALES.

\*IRELAND.

INDIA.

ASIA.

\*SCOTLAND.

WORLD (MERCATOR).

\*EUROPE.

\*AFRICA.

\*N. AMERICA.

\* The Set Geography for the Examinations for 1900.

## Special Class Text-Books for College of Preceptors' Examinations, 1900.

<b>Luke</b> .....	MARSHALL .....	<i>s. d.</i>	1	6	<b>As You Like It</b> .....	MARSHALL .....	<i>s. d.</i>	1	6
<b>Acts of the Apostles</b> .....	" .....		2	6	<b>Macaulay.—Lays</b> .....	PRESTON .....		1	6
Or, in Two Parts .....	" .....	each	1	6	<b>Grammar</b> .....	BROOKE .....		1	0
<b>Church Catechism</b> .....	" .....		1	6	<b>Preparation Papers in Grammar</b> .....	PRESTON .....		0	8
<b>Exodus (nearly ready)</b> .....	" .....		1	6	<b>History</b> .....	MONGAN .....		2	6
<b>Genesis (nearly ready)</b> .....	" .....		1	6	<b>History</b> .....	" .....		1	0
<b>Preparation Papers on Luke and Acts</b> .....	" .....	each	0	8	<b>History Outlines and Dates</b> .....	GUNNIS .....		1	0
<b>Practical Book-keeping</b> .....	SARLL .....		1	0	<b>Euclid (complete)</b> .....	MARSHALL .....		2	6
<b>Double Entry Book-keeping</b> .....	" .....		2	0	<b>Euclid I.—IV.</b> .....	" .....		1	0
<b>Exercises in Double Entry Book-keeping</b> .....	" .....		1	0	<b>Algebra</b> .....	JONSON .....		1	6
<b>Arithmetic</b> .....	GILL .....		1	0	<b>Cambridge Local Algebra Papers</b> .....	CUDWORTH .....		0	8
<b>Tests in Arithmetic</b> .....	" .....		1	0	<b>Cambridge Local Arithmetic Papers</b> .....	" .....		0	8
<b>Cæsar VI.</b> .....	NEW .....		1	0	<b>Student's Europe</b> .....	GILL .....		2	6
<b>Æneid VI.</b> .....	" .....		1	0	<b>Student's Africa</b> .....	" .....		1	1
<b>Cicero de Senectute</b> .....	" .....		1	0	<b>Canada</b> .....	" .....		0	8
<b>Eutropius I., II.</b> .....	SQUIRE .....		1	0	<b>British Isles</b> .....	" .....		1	6
<b>Latin Preparation Papers</b> .....	PRESTON .....		0	8	<b>Junior Geography</b> .....	" .....		1	0
<b>French Preparation Papers</b> .....	" .....		0	8	<b>West Indies</b> .....	" .....		0	4
<b>Commercial French Correspondence</b> .....	SOLEIL .....		1	0					

## General Publications for the Examinations and Class Use.

<b>The Student's Geography</b> ... ..	<i>s. d.</i>	4	6	<b>Imperial Geography</b> ... ..	<i>s. d.</i>	2	6	<b>Victoria Atlas</b> ... ..	<i>s. d.</i>	1	0
<b>The O. and C. Latin, Part I. (Accidence)</b> ... ..		1	0	<b>Chemical Laws and Problems</b> ... ..		2	6	<b>Chart of the Ox</b> ... ..		7	6
<b>The O. and C. Latin, Part II. (Exercises)</b> ... ..		1	0	<b>Chemistry of Common Objects</b> ... ..		2	6	<b>The Metric Chart</b> ... ..		10	6
<b>The O. and C. Latin, Part III. (Translations)</b> ... ..		1	0	<b>Chemistry Notes</b> ... ..		1	0	<b>Physical Map of England</b> ... ..		5	0
<b>The O. and C. French, Parts I. &amp; II.</b> ... ..	each	1	0	<b>Imperial Theory of Music</b> ... ..		2	6	<b>Advanced Hygiene</b> ... ..		3	6
<b>The O. and C. Geography</b> ... ..		1	0	<b>Normal Copy Books, In 12 Numbers</b> ... ..	each	0	2	<b>Imperial French Primer</b> ... ..		2	6
<b>The O. and C. Genesis</b> ... ..		1	0	<b>French Accidence</b> ... ..		0	6	<b>The Admission Book</b> ... ..		2	0
<b>Physical Measurements</b> ... ..		2	6	<b>The O. and C. Euclid</b> ... ..		1	0	<b>The Roll Book</b> ... ..		1	6
or in Three Parts ... ..	each	0	9	<b>Elementary Chemistry</b> ... ..		2	6	<b>Class Mark Book</b> ... ..		2	0
<b>Elementary Physics</b> ... ..		2	6	<b>Science and Art Geometry, Parts I. and II., each</b> ... ..		1	4	<b>Pupil's Report Book</b> ... ..		0	3
<b>Applied Mechanics</b> ... ..		2	6	<b>The School of Art Geometry</b> ... ..		1	0	<b>Pupil's Mark Book</b> ... ..		0	3
<b>Mechanics of Solids</b> ... ..		2	0	<b>Theory of Music, Part I.</b> ... ..		1	0	<b>Time Table Forms</b> ... ..	per packet	1	0
<b>Mechanics of Fluids</b> ... ..		2	0	<b>Theory of Music, Part II.</b> ... ..		1	6	<b>Termly Report Forms</b> ... ..		1	0
<b>Magnetism and Electricity</b> ... ..		2	6	<b>Phædrus, Books I. and II.</b> ... ..		1	0	<b>New Government Drawing Copies</b> ... ..		1	4
<b>Physiological Charts</b> ... ..	Set of Three	21	0	<b>Long Tots and Cross Tots</b> ... ..	each	0	3	<b>South Kensington Demonstration Sheets</b> the set		15	0

# GILL'S MILITARY DRILL.

ARRANGED IN FOUR PARTS.

2/6 Part I.—Squad Drill. Part II.—Company Drill. Part III.—Physical Drill. 2/6  
Part IV.—Manual Exercise for Rifle, and Bayonet Exercise.

WITH CHORAL MARCHES EASILY AND SIMPLY ARRANGED.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# Blackie & Son's New Books.

## Art.

### BLACKIE'S SOUTH KENSINGTON DRAWING SHEETS.

POYNTER'S South Kensington Drawing Books are well known for the artistic beauty of the models they present. In response to a frequent demand, selected subjects from this series are being issued in the form of Wall Sheets. The Sheets are printed on fine, smooth cartridge paper, 28 x 20 inches, are eyeletted, and done up in strong portfolios. The series consists of six sets of twenty sheets each. Sets I. and II., price 10s. each; Sets III., IV., V., VI., price 12s. 6d. each.

- |  |                                    |
|--|------------------------------------|
| 1. Curves and Simple Objects—Outline only.     | 4. Ornament (elementary)—Coloured. |
| 2. Common Objects, more advanced—Outline only. | 5. Ornament (advanced)—Coloured.   |
| 3. Geometric and Simple Forms—Coloured.        | 6. Plant Forms—Coloured.           |

Reduced Specimen (coloured) post free on application.

### POYNTER'S SOUTH KENSINGTON DRAWING BOOKS.

THIS Series of Drawing Books has been issued under the direct superintendence of Sir E. J. POYNTER, P.R.A. The Examples are selected, for the most part, from objects in the South Kensington Museum. Care has been taken to select objects interesting in themselves, and the best specimens of their class, so as to cultivate taste, while they at the same time afford useful and instructive Drawing Lessons. Each book has fine cartridge paper to draw on. *Illustrated Prospectus on application.*

#### SOME OPINIONS OF THE PRESS.

*The Journal of Education* says: "In execution, accuracy, and beauty, these copies have no rivals."

*The Academy* says: "Probably the best series of the kind yet published."

*The Graphic* says: "The outlines are perfect, and the descriptive letterpress all that can be desired."

*The Educational Times* says: "The work is magnificently printed on beautiful paper."

### SHADED DRAWINGS OF MODELS AND ORNAMENT.

For Class-Teaching. Drawn under the superintendence of LEWES R. CROSSKEY, Director of the Department of Industrial Art, the Glasgow and West of Scotland Technical College. 24 Sheets on superfine heavy paper, 28 by 32 inches, in portfolio. Price 31s. 6d. per set. *Prospectus on application.*

Each sheet gives a shaded drawing of some model or ornamental cast, and is intended to assist the pupil in drawing from actual models by showing methods of shading, &c.

### CLASSIC ORNAMENT.

#### Photographic Reproductions of South Kensington Casts.

Specially prepared to meet the requirements of the Science and Art Department in "Freehand Drawing and Ornament in Outline." In 4 Books. Crown 4to, price 1s. 6d. each.

*Prospectus, showing Specimen Illustration, on application.*

## Wall Maps.

### BLACKIE'S STANDARD CLASS MAPS.

Beautifully printed in colours, on strong manilla paper, 28 inches by 37 inches, and eyeletted at the four corners. In strong leather-board box. Price 16s. per set. *Reduced facsimile on application.*

#### SET A.—England and Wales.

- |   |  |
|---|--|
| 1. England and Wales—Relief Map.                | 8. England—Fifteen Central Counties.       |
| 2. England and Wales—Physical Features.         | 9. Wales.                                  |
| 3. England and Wales—Counties and County Towns. | 10. England—Basin of Humber.               |
| 4. England—Six Northern Counties.               | 11. England—Basin of Thames.               |
| 5. England—Nine Eastern Counties.               | 12. England and Wales—Basin of Severn.     |
| 6. England—Five South-Eastern Counties.         | 13. England and Wales—Industrial Map.      |
| 7. England—Five South-Western Counties.         | 14. England and Wales—Railways and Canals. |

SET B.—Scotland and Ireland. *In preparation.*

## English.

**MACAULAY.—ESSAY ON CLIVE.** Edited by JOHN DOWNIE, M.A. Editor of "Macaulay's Essays on Milton and Walpole." 2s.

**DRYDEN.—ESSAY ON DRAMATIC POESY.** Edited by D. NICHOL SMITH, M.A., Editor of "Henry VIII." (The Warwick Shakespeare) and "Boileau's Art Poétique." 2s.

This is the most fully equipped edition of Dryden's famous Essay yet published. The Introduction discusses the circumstances which gave rise to the Essay, and ably summarizes it; the Notes are explanatory and critical; and an Appendix gives Sir Robert Howard's criticism of the Essay and Dryden's rejoinder.

**POPE.—ESSAY ON CRITICISM.** Edited by FREDERICK RYLAND, M.A. 1s. 6d.

**SHAKESPEARE.—KING JOHN.** Edited by G. C. MOORE SMITH, M.A. 1s. 6d.

This is the latest volume of the well-known "Warwick Shakespeare."

**MACAULAY.—ESSAY ON PITT.** Edited by C. J. BATTERSBY, M.A., Assistant-Master at Bradford Grammar School. [*Nearly ready.*]

## Blackie's Illustrated Latin Series.

Edited by Prof. R. Y. TYRRELL, Litt.D., D.C.L.

With interesting Introduction, Explanatory Notes, and Vocabularies; illustrated with Maps, Plans, and Drawings from Coins, Gems, Statues, and other objects of ancient art. Crown 8vo, cloth.

\* \* \* *Specimen copies on application.*

**CICERO.—THE FIRST CATILINE ORATION OF CICERO.**

Edited by C. H. KEENE, M.A., Professor of Greek, Queen's College, Cork. 1s. 6d.

**CICERO.—THE CATILINE ORATIONS OF CICERO. (COMPLETE.)** Edited by C. H. KEENE, M.A. 2s. 6d.

**EUTROPIUS.—BOOKS I. AND II.** Edited by W. CECIL LAMING, M.A., Classical Master in Edinburgh Academy. 1s. 6d.

This should prove the most attractive edition of this portion of Eutropius yet published. The text is printed in large type, and is lavishly illustrated with full-page and other pictures of a kind to explain the text and interest young pupils. The notes also are printed in a larger type than usual, and are very clearly and simply expressed. There is a complete vocabulary.

**LIVY.—BOOK V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.

**HORACE.—THE ODES. BOOKS I., II., III., IV.** Edited by STEPHEN GWYNN. 1s. 6d. each.

*The Academy* says:—"The distinguishing feature of this new series is the illustrations. Those in the present volume are interesting and appropriate, being taken nearly all from ancient sculpture and vases. Apart from this the work is well done, Mr. Gwynn's introduction is excellent, and shows independence of thought."

**TACITUS.—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS, M.A. 1s. 6d.

**VIRGIL.—AENEID III.** Edited by P. SANDFORD, M.A. 1s. 6d. [*Nearly ready.*]

**VIRGIL.—GEORGICS I.** Edited by S. E. WINBOLT, M.A. 1s. 6d. [*Nearly ready.*]

\* \* \* *Other volumes in preparation.*

## French.

**A SHORT HISTORY OF FRENCH LITERATURE.** By L. E. KASTNER, B.A., Lecturer in French at Gonville and Caius College, and H. G. ATKINS, M.A., Lecturer in Modern Languages at the Royal Naval College, Greenwich. 4s. 6d.

**LE SONGE D'OR, AND OTHER STORIES.** Edited by ERNEST WRECKLEY, M.A., Professor of French at University College, Nottingham. 1s. 6d.

**A FIRST FRENCH COURSE.** By J. J. BEUZEMAKER. 1s. 6d. *The Educational Times* says:—"It would be difficult to find a better French Primer."

**A SECOND FRENCH COURSE.** By J. J. BEUZEMAKER. 2s. 6d.

These well known French Courses have been provided with Keys, in response to requests from many teachers. *They are supplied to teachers only on direct application to the publishers.*

FIRST FRENCH COURSE. Post free, 2s. 6d.

SECOND FRENCH COURSE. Post free, 3s. 6d.

**MY FIRST FRENCH BOOK.** A Picture Reading Book. By MARGUERITE NINET. Printed in large type and fully illustrated. Crown 8vo, cloth, 1s.

*The Academy* says:—"Mlle. Ninet has laid the child-learners under a further debt."

*The Guardian* says:—"We can confidently recommend it."

## CONTENTS.

	Page		Page
"The Crown of the Primary" .....	235	Forecasts and Comments:—Fixtures .....	247
Notes .....	236	Education Gossip .....	248
Summary: The Month .....	237	Appointments and Vacancies.....	248
Universities.....	239	Literary Gossip.....	249
Unstable Questions of Method in the Teaching of Elementary Science. By Dr. Wormell. Paper read at the College of Preceptors.....	240	Astronomy as a Moral Force. By Alfred T. Story.....	249
Correspondence .....	244	Notes from Paris.....	250
What is Grammar?; Practical Use of Phonetics; Morton Luce Testimonial; The Paris Education Congress; "The Frog"; The National Home-Reading Union.		Meeting of the Council of the College of Preceptors .....	251
		Reviews.....	251
		Sir Joshua Fitch's Lectures; Gibbon Edited; The Oldest Aryan; New Problems for the New World; Revised Texts.	
		General Notices .....	254
		Mathematics.....	257

## The Educational Times.

We referred last month to the Board of Education Minute of April 6, establishing higher elementary schools, which was important as being the first contribution of the Board to a general reorganization of systematic and continuous education under State control. These higher elementary schools appeared to be satisfactory in themselves, although the Minute for the first time authoritatively prolonged the elementary-school age, and to that extent sanctioned a certain overlapping and competition of elementary and secondary education. But the new schools are to be governed by conditions which reduce this overlapping to a minimum, and leave no doubt as to their aims and limitations. In this respect they differ materially from the older higher-grade schools, which were originally an unauthorized outgrowth of the elementary schools, and became to all intents and purposes secondary schools.

On May 3 Mr. Jebb raised in the House of Commons a very interesting discussion on the new Education Code, which has a distinct bearing on the Minute. Referring to the objections which had been raised to the block grant, especially on the ground that it was inadequate for the maintenance of the higher-grade schools, Mr. Jebb said:

If the new Code stood alone, that objection would have force. But the new Code had been supplemented by the Minute of the Board of Education, issued on April 6. That Minute made provision for establishing a new type of higher-grade school, which must be organized to give a complete four years' course of instruction approved by the Board. That course would begin from a point represented by Standard V., but would thenceforth be on a higher plane than that of the ordinary elementary school. No scholar would be allowed to remain in such higher-grade school after the close of the school year in which he or she was fifteen years old. This Minute had nothing directly to do with secondary education. It created a type of school which was to crown our system of primary education.

On the question of the age-limit Mr. Jebb was very clear and precise. Elementary education, whether ordinary or higher, is planned for a leaving age of fifteen. In secondary education there are two main classes of schools, those in which the normal leaving age is sixteen or seventeen, and those in which it is eighteen or nineteen. The pupils of such schools take up the higher industrial employments, or commerce and business, or scientific and professional pursuits. They pass on to a technical college, a University college, or a University.

A child in an ordinary elementary school had, or should have, three choices open to him—(1) To stay in that school till he had completed the standards; (2) after passing Standard IV. to pass to a higher elementary school; (3) to pass to a secondary school at the same time break. Now the higher elementary school set up by the Minute answered to the second of these choices. It was to be a higher primary school, not a lower secondary school, and so its course was planned to end at the age of fifteen at latest.

Nothing could be plainer. Mr. Jebb knew what the Education authorities had been discussing and planning; and the words which we have quoted read as if the speaker knew that a logical decision had been deliberately taken by the Board of Education. But in the meantime the Board itself had been enlarging on its Minute. Replying (through the mediation of Mr. Chamberlain) to the inquiries of certain elementary teachers in Birmingham, the Board had said that there was nothing in the Minute of April 6 to compel any higher-grade school with a school of science attached to come under the operation of the Minute, and nothing to prevent those higher-grade schools "continuing their work as at present." They may conform to the Minute or leave it alone, as they please. To quote Mr. Jebb's speech again,

There is nothing in the Minute to prevent a School Board already giving higher elementary teaching in its ordinary schools from continuing to do so. The loss which some School Boards will suffer under the block grant can be made up by a very small addition to the rate. In Leeds, for example, that addition would be represented by one-third of a penny in the pound; in Manchester, by one-eighth of a penny; in London, by one-thirty-seventh of a penny. But it has been urged that the transference of a child from the ordinary elementary school to the higher elementary is an evil in itself, as involving a break in the continuity of school life. But such a break occurs in secondary education when, at much the same age, a pupil passes from a preparatory to a higher school, and it is not found to be injurious.

Standing by itself this interpretation of the Minute is disappointing and discouraging. We had supposed that the higher elementary were to be substitutes for the higher-grade schools—that the higher-grade schools, with their advanced secondary education and their practical absence of an age-limit and their irregular constitution, were either to conform to the new type or to square themselves with the Elementary Education Acts. We shall be told to wait and see what will come of the recent action of the Local Government Board auditor, who has made a stroke for legality, and has surcharged the School Board for certain sums granted to higher-grade schools: we are assured that a court of law will presently make the existing Acts plainly understood and respected. If the Board of Education is in harmony with the Local Government Board, if it knew



and intended the consequences of the block grant, if it holds that the higher-grade schools are illegitimate, and that the higher elementary must be the real "crown of the primary," why does it say that there is nothing in the Minute with which the higher-grade schools need concern themselves? We have quoted the Board's communication to Mr. Chamberlain, and Mr. Jebb's impressions in the House of Commons. In the same debate Sir John Gorst, a member of the Board, put the matter as frankly and as plainly as he could:—

It is a statement which has been made over and over again by the official representatives of the Education Department that no School Board has any legal right to expend the school funds upon secondary education. You have, consequently, this state of things. You have School Boards who have established excellent higher-grade schools, whose work I have always spoken of in terms of the warmest eulogy; and the School Boards are now supporting these schools in an illegal manner from the school funds. What, then, is to be done? This Minute affords the opportunity of placing these schools on a legal and legitimate footing, and although there may be some higher-grade schools which will stand out and take the chance of the Law Courts—the chance of the decision of the Court of Queen's Bench being contrary to the expressed opinion of the Education Department—yet I believe the great majority of those schools have hailed with satisfaction the publication of this Minute, and that they will convert themselves into higher elementary schools so as to place their proceedings on a proper and legitimate footing.

That being so, we may wait for the decision of the Court of Queen's Bench and for the obedience of the School Boards. The main fact—and it is a reassuring fact—is that the higher elementary schools are to be the crown and limit of education by the School Boards, and that for secondary education we are to have secondary authorities.

### NOTES.

THE knighthood which has been conferred on Mr. R. C. Jebb, M.P. for Cambridge University and Regius Professor of Greek in the University, may be regarded as a tribute to education. Sundry Oxford and Cambridge professors have been knighted in recent years, some as men of science, others as distinguished in history and letters. Mr. Jebb unites various qualifications, and our readers will not need to be reminded of the many services which he has rendered during the past few years to the cause of what we may call the political organization of education. He has done much to keep the politicians well informed as to the claims of higher and secondary education, and to bring the representatives of differing views and interests into line. It would be impossible to contest his right to figure in the list of Birthday honours, and, if he is as well satisfied to be called Sir Richard as plain Professor, everything is as it should be.

THE spectacle of a Cabinet Minister lecturing a Government Department on its red-tape dilatoriness is a charming novelty in Parliamentary debate. It is true that, in his criticism of the attitude of the Charity Commissioners towards the King Edward's School (Birmingham) Bill, the Colonial Secretary spoke merely as plain Mr. Chamberlain, the Member for Birmingham, but we do not think his words were any the more palatable on that account. Brutus was not much relieved by reflecting that Antony was only "a plain, blunt man." The Bill under discussion proposes to transfer the control of the endowment of King Edward's foundation from the Charity Commissioners to the Board of Education, and naturally the Commissioners question the advisability of change. It is not clear whether

they doubt the administrative capacity of the Board of Education; but, as Mr. Chamberlain pointed out, it is somewhat unusual to find the representative of a Department opposing a Bill which has the approval of the Government. Why it should have been necessary to proceed by Bill is hardly apparent, as the Board of Education Act, by Section 2 (2), provides for the transfer from the Charity Commissioners to the Board of Education of matters relating to education by means of an Order in Council. Such procedure would be far simpler than the carrying of a Bill through all its stages. It may be, however, that the Government is advised that the administration of an educational endowment is not a matter "relating to education" within the meaning of the subsection. Such a narrow construction is, of course, possible, and, if acquiesced in, must needs lead to a lot of piecemeal legislation in the near future. It would be well to amend the subsection.

ALTHOUGH criticisms on the character of the training which our Army officers receive have of late been plentiful, no attention has been given to the equally important preliminary education of Woolwich and Sandhurst cadets on which such training is based. Of all preparations for a professional career it is difficult to conceive one more unsatisfactory. We are speaking of the majority who enter Woolwich or Sandhurst after eighteen months' or two years' coaching at an Army crammer's, and not of the minority who enter straight from school. The war has shown that mere technical proficiency in an officer is useless unless united with self-reliance, alertness, and some degree of cultivated observation and imagination, enabling him to make a shrewd guess as to the working of minds very differently constituted as compared with his own. The rough and tumble of ordinary school life, if continued until the age of eighteen, affords a satisfactory means of cultivating such qualities. The average Army candidate, however, leaves school at fifteen from the fifth form, and his real education is at an end. With an Army coach he is exclusively engaged in working up subjects for marks, with reference solely to the form of questions set in previous examinations. Pent in town or in a suburb, with surrounding influences which promote neither moral nor intellectual health, and with few opportunities for open-air exercise, he develops a supercilious conceit and a narrow intellectual sympathy which choke the growth of his general intelligence. He has, of course, many good qualities, but they exist in spite of the "education" to which he is at present doomed.

THE London School Board has again, by one of its Committees, inquired into the question of school attendance. The period tested was the last quarter of the year 1898, during which 190,919 children, or over 33 per cent., failed to make a proper attendance, and there were over 120,000, or over 21 per cent., who missed school more than three times a week. The figures are serious, and the outlook is not made brighter by the information that matters are rather worse in non-Board schools. The Vice-Chairman of the Committee is glad that Sir John Gorst has introduced a Bill increasing the maximum penalty which may be inflicted on parents of absentee children from 5s. to 20s. It is, however, doubtful whether mere penalties will succeed in bringing over parents to the side of the school authorities. The figures above given are so enormous that they are not explained

by the natural desire of poorer parents to increase the earning capacity of their families. There is a feeling abroad among the working classes that the education given in the higher standards is unpractical, and, if such an idea has become general, the matter is explained. It is a mistake to assume that the working man has not the interest of his children at heart. Sir John Gorst's recent speech in the House of Commons fortunately shows that it has dawned on the Board of Education that children in elementary schools have an environment. It is a step towards discovery that the parent is the best attendance officer.

THE higher diploma of the Alliance Française, an association for the propagation of the French language beyond the French borders, is well worth the attention of those who wish to equip themselves as language teachers in their own countries. It certifies the holder as qualified to give lessons in French (language and literature) *à l'étranger*; and its value is due to the fact that no one can be admitted to the examination without making at least fifty attendances at the *cours* arranged, in two series, by the association. The subjects to be dealt with this year are, as before, historical grammar, difficulties in modern grammar, pronunciation, diction, phonetics, modern and classical literature, French institutions, and French art. The lectures begin in Paris on July 1 and last till the end of August; admission forms, with full particulars, can now be obtained from the Secretary, 45 rue de Grenelle. Last year 500 entries were received, of which 174 were from Germans, 89 from Americans, 60 from Russians, 50 from English, and the remainder from very miscellaneous nationalities. Ninety-one obtained the higher diploma. The Alliance received the formal approval of the Minister of the Interior as far back as January, 1884, and was officially *reconnue d'utilité publique* by the President of the Republic in October, 1886. Among its past presidents have been Monsieur Ferdinand de Lesseps and General Février, Grand Chancellor of the Legion of Honour. The president for the current year is Monsieur Foncin, Inspector-General of Public Education, and the director of studies is Monsieur Brunot, lecturer at the Sorbonne and at the Ecole Normale Supérieure. The holiday courses arranged by this same Alliance, at Caen, Nancy, and elsewhere, will be familiar to a large number of our readers.

THERE is a bright freshness in the list of subjects dealt with at the Parents' National Educational Union Conference, which shows the presence of no little originality in the Organizing Committee. "The Education and Training of the Ordinary Domestic Nurse," "The Educational Aspect of Gardening," and "The Virtues of Simplicity," are titles which, by themselves, would go far to make the Conference a success. Educational discussion in England has been in the past far too technical and professional, and we heartily welcome breezes of opinion and ideas which have their origin elsewhere than among the regular furrows of educational life. It is to be hoped that the Parents' Union will continue to be loyal to its unprofessional name and origin. Prof. Bryce, in his address on "The Influence of Parents," wisely urged that such influence should be principally devoted to the development of taste, logical thought, and religious feeling. The atmosphere and silent forces of home life are in such matters more powerful

than those of school. We have left behind us the days when schoolmasters were convinced that parents could not possibly know anything about their own children.

ONLY of late has the ethical value of athletics received any practical recognition in the French educational system. It is, therefore, the more interesting to notice that a premium has been officially put on this development in connexion with the Paris Exhibition. Last March the Minister of Public Instruction addressed to the heads of secondary and of higher primary schools all over the country a circular inviting them to use the opportunity for carrying out an athletic competition to be held on a large scale at Paris on Tuesday and Wednesday in Whitsun week. The following are the principal sections:—Flat races, obstacle races, tug-of-war, high, long, and pole jumps, putting the weight, throwing the disc. To afford some standard of comparison with our own arrangements it may be mentioned that the flat race length varies from 90 to 1,500 metres; the age limits are: for juniors under sixteen, for seniors under twenty-one. For the final contests, second-class railway fare will be allowed by the State to all who take first places (excepting only in the tug-of-war), and incidental expenses will be liberally met in various ways. A tennis tournament, double and single, has also been organized, but it is open to scholars from Paris alone, the game being comparatively little known in provincial schools. The *prix régionaux* are to be medals; at Paris medals and objects of art. The technical details of the competition are being carried out by a committee consisting entirely of members of the Union of the French Societies for Athletic Sports.

MR. ARMITAGE SMITH presided on May 19 over a meeting convened in the theatre of the Birkbeck Institute by the London Association of Art Masters. Attention was drawn by various speakers to the mischief of overlapping in science and art teaching caused especially by the State-aided classes of the London School Board, established in localities where technical institutes were already in existence. The institutes appear to have lost a considerable number of students—over six hundred in a single institute—through this cause. The Principal of the Goldsmiths' Institute urged that the self-respect of students was damaged by receiving free instruction and free materials. It is certain that the institutes which charge a small fee have suffered greatly by a competition artificially fostered. If the *gratis* teaching were better than that which is paid for, the public might shrug their shoulders at the complaints of the institutes; but, of course, it is not so. There is reason, however, to hope that the grievance complained of is now in a fair way of being remedied.

## SUMMARY.

### THE MONTH.

ON May 3 the House of Commons debated the Education Code of 1900. Mr. Jebb moved that: "The proposals contained in the Code of Regulations for Day Schools and in the Minutes of the Board of Education laid before Parliament during the present session are conducive to the interests of education." His object was to provide an opportunity for a general discussion, the Government having given a day for that purpose. Mr. Jebb touched first on the new Code, and then on the Minute recently issued by the Board of Education, and his aim was to bring out

the larger aspects of these proposed changes and the principles which underlay them. The great feature of the new Code was the block grant. The first merit of the block grant was that it delivered primary education from the influence of a mercenary motive. Under the old system of payment for individual subjects there was a strong inducement to turn a school into a machine for earning the largest possible grant, irrespectively of the true educational interests of the children. After considering the effects of, and objections to, the new system of grants, Mr. Jebb went on to discuss the new type of schools established by the Board. We have dealt with this subject in our leading columns.

Mr. A. HUTTON gave a more critical turn to the debate by moving, as an amendment, that the proposals of the Government contained "provisions that are not conducive to the best interests of education." His speech, with Mr. Mather's and others, was practically a plea for the School Boards which have developed the higher-grade schools in order to secure continuous education for their ablest pupils, without letting them slip out of their control; or because the parents would not agree to their being shifted into other (secondary) schools. Sir John Gorst answered for the Government. With part of his speech we have dealt in our leading columns. Mr. Mather had charged Sir John with striking at the higher-grade schools.

The first blow [he said] was delivered three years ago, when I was a party to applying a scheme to schools of science very much like the present one. I remember that occasion very well. Everybody had been crying out for this reform, but, as soon as it was made, I am sorry to say that the managers of the schools did what many of them have done in the present case. They sat down and made calculations as to how much grant they had got under the old system, and how much they would get under the new, and every manager who found that he would get one shilling less under the new system than under the old at once opposed the change, but those who found that they would get more held their tongues and said nothing. . . . All these schools of science are going on quite as comfortably as they went on before the change, just in the same way as all these higher elementary schools will go on perfectly comfortably after this Code has come into operation. . . . The second blow which I struck at the schools of science was that there was a provision put into the "Directory" which prevented schools of science from earning double grants—from getting one from the Education Department and another from the Science and Art Department, at the same time for the same work. It was an abuse which had grown up, and it was very properly put a stop to. The third blow which I struck, according to the hon. member, was that the Local Government Board auditor, over whom I have no more control than I have over the hon. member, had sat in a judicial capacity in London, and disallowed some expenditure of the London School Board—a matter which is now before a Court of Law, and which I have no more to do with than the hon. member himself.

As we went to press last month a letter was printed, too late for comment, from Mr. Chamberlain's private secretary to the Birmingham branch of the National Union of Teachers, who had written to the Colonial Secretary expressing alarm as to the operation of the Education Board's Minute of April 6. The letter, to which we refer elsewhere, was in the following terms:—

Dear Sir,—I am directed by Mr. Chamberlain to say that he has now received the following replies to your three questions from the Education Department: (1) There is nothing in the Minute which compels any higher-grade school, with a school of science attached, to come under the operation of the new Minute. (2) There is nothing in the Minute which makes it otherwise than permissible for those higher-grade schools to continue their work as at present, and the new scheme is one into which School Boards and school managers may come, if they please, and if they will fulfil the required conditions; but there is nothing in the Minute which compels them to transform their schools into the type of school laid down in the new Minute. (3) The new Minute does not state that the new type of school must necessarily be in a totally separate building from the ordinary elementary school, and, so far as the requirement of a separate head-teacher is concerned, this requirement already applies to the higher-grade schools, referred to above, as it exists in the day schools Code, which already makes it impossible for the head-teacher of an elementary school to have any duties in a school of science, even though this latter be attached to an elementary school. Mr. Chamberlain trusts that these answers will be satisfactory.—Yours, &c., J. WILSON.

MAY 9 was Presentation Day at London University, and the Prince of Wales was present. The *Times* reports that when the Prince entered, with a procession of dignitaries, "the scene became dazzling. His Royal Highness, the Earl of Kimberley, Earl Spencer, and Sir H. Roscoe were distinguished from everybody

else by black gowns of heavy watered silk, richly embroidered with gold, the Prince being so arrayed as Chancellor of the University of Wales." Lord Kimberley as Chancellor of London University, Sir H. Roscoe as Vice-Chancellor and Lord Spencer as Chancellor of the Victoria University. Among their supporters were Mr. E. H. Busk (Chairman of Convocation), Lord Davey, Lord James, Mr. Bryce, M.P., Sir U. Kay-Shuttleworth, M.P., Sir M. Foster, M.P., Mr. Jebb, M.P., Sir A. Rollit, M.P., Mr. J. A. Campbell, M.P., Bishop Barry, Mr. Armine Wodehouse, Mr. W. H. Dickinson (Chairman of the County Council), Dr. Collins, the Chief Rabbi (Dr. Adler), Sir Owen Roberts, and Sir R. Blennerhasset. Nearly five hundred of both sexes had won degrees and honours, and about three-fourths of them were present to receive their awards—the diplomas at the hands of the Chancellor, the medals from the Prince. After the ceremony the Prince of Wales said:

No one wishes more sincerely than I do happiness and prosperity to this University. From all we have heard from the Chancellor, I think this University is in a fair way to become one of great importance, and will hold its own, no doubt, with many of the others which are of ancient origin. I am glad to think that, as the result of some difficult and, I may say, some delicate negotiations, London University has now found a home in the Imperial Institute, one in which I know you all take deep interest. We, of the Institute, are very grateful to Her Majesty's Government for all they have done in this matter, and for having facilitated the arrangements, which I hope are now complete. It only rests for me to express a fervent wish that the London University will not regret having left its old home, and will find that it has ample room for all its requirements.

ON May 10 the Scottish Higher Education Bill was read a second time in the House of Lords, where it was the subject of a good deal of criticism. Lord Balfour expressed his gratitude to those who had brought before him points which had raised difficulties in their minds, because he would thus be enabled to consider them before the Bill reached the stage of Committee. There were three main provisions round which criticism had largely centred:—(1) The constitution of the Local Higher Education Committees and their relationship to the Scotch Education Department; (2) the proposal to have a rating power for higher education in future; and (3) the method of providing and distributing the central funds which were amalgamated for the purpose of higher education in Scotland.

THERE has been a great fuss over the Birmingham (King Edward the Sixth) Schools Bill—a private Bill which proposes to transfer to local governors certain of the powers exercised under statute by the Endowed Schools Commissioners. On May 16 Mr. J. A. Pease opposed the second reading. Mr. Grant Lawson, one of the Commissioners, supported Mr. Pease, and infused fire into the debate.

As some of the clauses of this Bill were more objectionable than others, it had been his duty to get those particular clauses defeated and deleted. He had to think how he should proceed, and he had adopted the course, which he thought he was compelled to adopt, of letting the bad parts go by in order that he might stop the worst parts. He knew that, if he, as the representative of the Charity Commission, had moved the rejection of the Bill *in toto*, the members for Birmingham would have fallen upon him fiercely. They were wise and honourable, and some of them right honourable; they felt very strongly, he understood, upon this Bill, and they would have joined vigorously in that debate as the representatives of the doctrine of Home Rule for Birmingham. . . . The Charity Commissioners did not object to this property being handed over to some other authority, but they did object to its breaking loose from all control whatever. If any other body would take it over, the Charity Commissioners would be glad to get rid of it.

MR. CHAMBERLAIN, as protagonist of Birmingham, accepted this challenge. He said they had been told that there was no precedent for this Bill. If there were not, then it was their business to make one; but, in fact, there was a precedent last Session, and the course now proposed was adopted in the case of the Mason College Bill. They were dealing here with a great foundation—one of the greatest in the United Kingdom—with an income of something like £37,000. Mr. Chamberlain said that the school had been reformed again and again, until now it gave thorough satisfaction to the people of Birmingham. Surely it was not a part of the Radical creed to come in and say, with regard to such an institution: "You will be opposed by three gentlemen and a number of clerks, who will interfere in every detail."

The school had been improved again and again, and was it to be supposed that they could not alter one of the details without going to

this precious Charity Commission, who would take about six months to investigate one subject? There was a proposal to improve the higher education of girls in Birmingham, and they proposed to arrange for a transfer of property to another charity. This involved the disposal of some rent-charges and a certain amount of Consols. From first to last, there was never the slightest doubt as to the propriety of the proposal. The Commission went through all the details with an amount of red tape which would have astonished a Government office. In the interval Consols fell from 112 to 103, so that the Charity lost a considerable sum of money, all owing to this utterly incompetent body. The people of Birmingham protested; they had seen enough of it. They did not know the Board of Education, but they did know the Charity Commission, and they did not want to know it any more. Therefore, they proposed under the Bill to go to the Board of Education, which could revise or refuse their proposal. It seemed to him that the Charity Commission wanted to make the Board of Education as bad as themselves. He thought the Board of Education would not thank them.

The Bill is going through.

ON May 22 the seventh annual meeting of the Association of School Boards was held at St. Martin's Town Hall, under the presidency of the Dean of Manchester. Dr. Maclure dealt with the functions of the Board of Education, and especially with the Minute establishing higher elementary schools, and said he thought it might be assumed that the Association was in accord with the main principles of the new Code. The principle of the block grant had met with almost universal approval on the part of those who were experts, or were interested in elementary education. The most important business before the meeting was a resolution to the effect: "That the Association draw the attention of the Board of Education to the urgent need for further training college accommodation, residential or otherwise. That this Association is of opinion that more college accommodation of an undenominational character, for the training of elementary school teachers, is urgently required." Mr. Lyulph Stanley gave the resolution his warm support, insisting, however, that it was only "one of the posts on the way." The Association, he declared, wanted more than they were at present asking, but by-and-by they would demand a great deal more; namely, a great extension of training-school accommodation open to all. Other resolutions were passed commending non-county boroughs, urban and district councils, and rural district councils, as affording the best local areas for secondary education authorities, and in favour of a Government grant in the case of defective and epileptic children.

THE Master of Trinity College, Cambridge, gave his inaugural address as President of the Teachers' Guild at the annual meeting of that body on May 24. Dr. Butler spoke of specialization as a "narrow-minded giant."

Such glorious tracts of knowledge as history, biography, literature, art, and poetry were left untraversed because "it would not pay," to pursue the less fertile paths labelled "Mathematics" and "Natural Science." It was certain that before long it would be necessary to reconsider methods. The tendency would be to give weight to examinations which tested general intelligence. We should choose for our college brotherhood men who may, or may not, come to the top of any particular Tripes, but men whom we can guarantee as educated gentlemen. The slight knowledge of English shown at present by a considerable number of selected candidates was appalling. There was no substance, no arrangement, no mind apparent in what was written.

Dr. Butler concluded by stating that an insight into the life of Greece and Rome should be the patrimony of all readers.

THE Gilchrist Trustees have given to Bedford College, London, the award of a travelling studentship, to be competed for by former students of the College who hold a Teachers' Diploma and have had two years' experience of teaching. The Council will shortly announce the subjects proposed for investigation. Applications should be made not later than December 1, as the award will be made at the end of that month. The following students were presented for degrees by the Principal of Bedford College, at the University of London, on May 9:—B.A.'s: Misses K. L. McArthur (Second Class Honours in English), M. H. Scott, J. A. Abraham, E. Curtis, W. B. Cuthbertson, N. E. Smith, E. M. Walrond, and E. L. Young. B.Sc.'s, First Division: Misses S. G. Hacking, E. Pearce, and R. M. Syer. Honours candidate recommended for a Pass: Miss A. M. Raisin. Two graduates who have obtained diplomas in the "Art, Theory, and History of Education"—Misses E. D. Bishop, B.A., and E. M. Odell, B.A.—were prevented from attending.

## UNIVERSITIES.

(From our Correspondents.)

THE Summer Term that is now half through has been uneventful, and is doomed already to a tame end. "Commem." is not to be; honorary degrees, functions, balls are all deemed unsuited to "the circumstances of the country"; the Encenia is to be banished to the Divinity School, and only attended by such as cannot escape it. The Australian delegates, who would else have been made Doctors with all due pomp, have been smuggled to Oxford, labelled, and smuggled off again, with as much secrecy as so many spies.

The Classical Moderations list was a long one, and has provoked the usual comments. Every one points out that a Second loses all value when so many attain it; and every one proposes as a remedy the substitution of four classes for three. This is all just enough, perhaps; but the case of the First Class is quite as unsatisfactory. Clearly something should differentiate the class of absolutely first-rate scholars from those who are thoroughly competent scholars, but are not first-rate. At present, nothing does. The gap inside the First Class between the best and the worst man in it must be nearly as great as that between the latter and the men who get "Gulfs." To some extent, this deficiency in the Schools is remedied by the University scholarships—the Ireland, the Hertford, and the three Cravens. But these are not numerous enough for the annual crop of really first-rate scholars; and the "mentions" which might supplement them are too capriciously varied in number. Thus, for the Hertford Scholarship there were in 1899 some half-dozen "mentions," while in 1898 there was not one; and yet there can be little doubt that 1898 was the better year. Perhaps the real remedy would be to look the facts in the face frankly, and bisect the First Class into Division A and Division B. This might restore to scholars some interest in the examination's results. And, if only some day it could be ordained to take place after, instead of before, "Greats," there might be interest in its work too. The suggestion sounds topsy-turvy, but is not a new one; and might really work wonders, in saving classical study at Oxford from being a mere iteration, blind and lifeless, of ideas learned at school.

The statute making degrees of B.C.L. and D.C.L. accessible to persons who, having obtained an Arts degree in other Universities, shall come to Oxford to study law, was approved by Congregation on May 1. The scheme, in furthering which Prof. Dacey has taken a leading part, may, therefore, be regarded as adopted. It is meant to have the effect of fostering in Oxford an advanced study of law.

Most of the year's University prizes have just been announced. The English Essay goes to the Hon. R. D. Denman, Balliol, who had previously the Stanhope to his credit. Mr. E. S. Bouchier, Exeter, won the Chancellor's Latin Essay. Mr. A. C. Carré, Balliol, already a Craven Scholar, won both the Latin and the English Verse—a feat not performed since the first quarter of the century. Of the two Gaisfords, that for Greek Prose fell to Mr. H. W. Garrod, Balliol, a Craven Scholar; and that for Greek Verse to Mr. J. V. Scholderer, Trinity. Every rose, unhappily, has its thorn; and, possibly, the prize-winners of this year will specially appreciate this truth. No one can envy them the task of reciting their compositions at an Encenia held without *éclat*, or even amusement, in the cheerless shades of the Divinity School.

On May 1 Congregation accepted the preamble of a statute instituting a Geography Diploma. This, with the establishment here of a School of Geography, should give a stimulus to a study which at Oxford wanted one. The actual statute, however, is likely to be amended a good deal, so that a discussion of it might be rather premature.

HERE in Cambridge summer games are being played amid wintry surroundings, and Mafeking bonfires are welcome to warm our fingers as well as to prove our patriotic enthusiasm. Just for once the sun shone on May 14, when we were honoured by a visit from the King of Sweden, who was the recipient of an honorary degree. The whole ceremony in the Senate House was a great success. The King delighted everybody by his geniality and courtesy; incomparably the finest and handsomest man in the whole assemblage, he seemed to enjoy the fun as thoroughly as the youngest undergraduate, while picking up the points of the Orator's speech a great deal quicker than any of the crowd of assembled scholars. A guard of honour selected from the University Volunteers was on duty in Senate House yard, and the King, nimbly getting

over the rail, informally inspected the men and had a cheery chat with the officer in command. The King, with his suite, was afterwards entertained at lunch in Trinity College Lodge, and in reply to the toast of his health made a charming reply in Latin, the *ipsissima verba* being given herewith.

Illustrissime Dux, Reverendissimi et Doctissimi Rectores et Professores, gratissima certe mente semper istam, ut præ ceteris creta notandum, diem commemorabo, in qua, faustissimo sane numine, huic præclarissimæ Universitati Cantabrigiensi Gradum honorificum Legum Doctoris in me conferre placuit. Præterea liceat mihi non solum gratias vobis sincerrimas referre, verum etiam vota facere pro gloria, per secula duratura, huius Civitatis Academicæ, nec non pro prosperitate et valetudine omnium Civium vestrorum. Dixi et concludo: Vivas, Floreas, Vigeas, Alma Mater Academica!

The relief of Mafeking was celebrated in a most unusual manner. Taught by experience, the authorities had determined to start a bonfire under official auspices; the leading undergraduates were solemnly enrolled into a committee, and Midsummer Common was chosen as the site of the fiery festivities. Anything more funereal can hardly be imagined: twenty thousand people watching a large bonfire, and getting out of the way of rushes made by the more turbulent spirits of the town and University. A few fireworks served to keep the crowd from the dreaded Market Place, and a strong force of imported constables guarded the place where tradition has decreed that great events shall be celebrated by unofficial bonfire builders. Nothing happened, and the Mayor must have felt glad that his ruse was successful. It should be stated, in honour of that functionary, that he went among the crowd, and was present when the Mayoress assisted in starting the conflagration.

The fact that very considerable numbers of men have gone to the front, or have accepted commissions in the regular forces, has had a very noticeable effect on University life. The energetic poll-man, who does not consume all his energy in the search after knowledge, has a very brightening effect upon the social side of our existence. The loss of nearly a hundred and fifty of our best men cannot fail to make itself felt. The military ardour of the nation nowhere shows itself in such a practical form as in Cambridge, where enthusiasm takes the form of actual military work rather than that of reading the newspaper in an armchair and doing nothing to help. It is possible that before long the University will establish an examination in military science, as an avenue to the B.A. degree. A proposal to do the same for agricultural science is practically unopposed, and the scheme for the "military special" has even stronger grounds for commending itself to the University.

The Special Board for Classics is again on the war path; having met with a decisive defeat in the attempt to reform the Classical Tripos last year, it now suggests the addition of three more papers to the existing schedule, with a view to requiring from the candidates a better knowledge of the subject matter of the classical writers. One suggested change consists in the introduction of a set-book in the philosophical part of the examination. It remains to be seen how this new proposal will commend itself to the Senate, but it is quite certain that there is no great general sympathy with the small body of classical scholars who are constantly trying to make the Cambridge Classical Tripos a feeble imitation of Oxford Greats.

The authorities of the Cambridge University Day Training College announce that a course of lectures will, if a sufficient number of students present themselves, be given during July and August. This course will, together with the Educational Section of the University Extension summer meeting, form a six weeks' course for teachers. Cambridge is always ready to welcome these summer guests, who come to learn but remain to teach.

The Examiners for the History Tripos have been the cause of another small storm in a tea-cup. The regulations under which they examine require them to place the candidates in each class in one or more divisions; they found strict obedience irksome, so ignored the regulation. The Senate were next asked to rescind the regulation which the Senate had ratified, but that long-suffering body, by forty-four votes to thirty-four, decided that the original regulation was made for the purpose of being observed and not of being placed under the table by any examiners, however eminent.

A sudden jump in the percentage of men plucked in one particular Law Examination from about 15 or 20 to over 50 per cent. has caused ominous mutterings, and the various nominating bodies are finding an occasional thorn in their rosy beds. The Board for Modern Languages is proposing a new oral examina-

tion in French and German to test the conversational powers of the candidates: this new test is to be entirely separate from the Tripos and Special, and will be a useful thing for schoolmasters who require to know whether candidates for masterships in modern languages have this very necessary qualification in addition to a scientific knowledge of a foreign language.

Through the munificence of the Rev. Dr. Wiltshire a University Prize is to be founded for proficiency in geology and mineralogy as tested by the class list in the first part of the Natural Science Tripos.

In the matter of Mr. Goudy's appointment, to which reference has been made in a previous letter, it may now be placed on record that the Senate has definitely ratified it by a majority of 149 votes against 106.

The following awards have been made:—Tyrwhitt Hebrew Scholarships: (1) C. T. Wood, B.A., Pembroke; (2) T. H. Hennessy, B.A., Jesus. Winchester Reading Prizes: G. F. Kelly, Trinity House, and J. A. Hubback, King's. Stewart of Rannoch Scholarships in Sacred Music: E. S. Roper, Corpus, and G. W. Brewster, King's. Adam Smith Prize: S. J. Chapman, Trinity.

DURING May there have been few events of importance in connexion with Welsh education. One was the opening of the County School, Llanfyllin, Montgomeryshire, when Principal Roberts, M.A., of Aberystwyth, was the principal speaker. It is hoped that the County School buildings at Blaenau, Festiniog, and at Barmouth will be opened at no distant date. Among recently opened buildings of the kind are those at Carnarvon, commanding beautiful views of the Snowdon range and of the Menai Straits. One of the most pleasing features of most of the new County School buildings is the excellent provision made in them for the teaching of science.

It is most gratifying to find what remarkable progress secondary education is making in Wales both on the literary and on the scientific side. Already the University Colleges are beginning to profit in a marked degree from the new order of things. From the point of view of Classics, however, it is regrettable that Greek is at present but little studied in the intermediate schools. This cannot be due to an attempt simply to meet modern commercial needs, otherwise the study of German would presumably be systematically promoted. However, these developments may possibly come later, when the schools have laid down a solid foundation of culture on the basis of a thorough knowledge of the languages which the majority of the children will require in their daily life.

The end of May was largely occupied with the University examiners' meetings. Each meeting consists of the external examiner, an internal examiner representing each college, and the Vice-Chancellor as chairman. On all questions of passing or failing, or the place of a candidate for Honours, the ultimate decision in the University of Wales rests with the external examiner. The examinations will begin in the second week in June.

The Aberystwyth College Old Students' Association have decided to commemorate the late Mr. T. E. Ellis, M.P., a former student of the college, by means of a medal to be awarded to past students of the college who have made original contributions to knowledge or rendered eminent public service.

### UNSTABLE QUESTIONS OF METHOD IN THE TEACHING OF ELEMENTARY SCIENCE.

At the Monthly Meeting of members of the College of Preceptors held on Wednesday, May 16, Dr. R. P. SCOTT in the Chair, Dr. R. WORMELL read a lecture on "Unstable Questions of Method in the Teaching of Elementary Science."

In the first attempt to give a title to my lecture, I placed it as "Unsettled Questions of Method." But this on second thought seemed ambiguous. Had the questions been settled and become unsettled? Were any methods of teaching ever settled. Alas! it is too true that we are very slow in fixing even the fundamental principles, even the foundations, of method in education. We have no firm grip of anything. Even when we have thought that—thanks to a Socrates or a Plato, a Pestalozzi or a Froebel, a Payne or a Quick, a Thring or a Fitch—we had been able firmly to cement a corner stone of the structure, the Vandals have come and loosened it. When we have tried our hardest to render a few points so set that we might safely build on them we have found them slipping from under us. We are told to prove all things and hold fast that which is good. The latter part of this injunction is much needed at present if we are justified in believ-



ing that there is really a science of education. "Hold fast that which is good"—this should be written on the walls and door-posts of our schools.

#### EDUCATION HAS A SCIENCE.

If there be a science of education, it must have the characteristics of all sciences. It deals with the laws of the development of human intelligence, and no limit can be placed to the possible expansion of human intelligence. Science has no standard of excellence. It is as infinite as the wisdom of God from whom it emanated, and, in this respect, the science of education maintains its claim to be called a science. A science is ever changing, since it constantly soars higher and higher; but it is also immutable, for it never loses contact with its base; that is to say, its fundamental laws. Because of its unlimited powers of expansion a science can always keep pace with and adapt itself to the ever changing claims and requirements of the age. Without rendering uncertain its first principles or holding them in a loose grip, education may likewise adapt itself to progressive conditions. I often think that one reason why we are not sufficiently tenacious of that upon which we have once agreed is the fear lest we should curtail its adaptability. But when we follow the analogy of other sciences we shall see that this fear is groundless. There might be found to-morrow a new method of decomposing water which would open up new industries; but this would not render the methods already used untenable. So it is with education.

Now, are there any laws which we can lay down as laws of Nature in education? A little reflection will show that there are such laws, and some of them have been formulated as clearly as were Newton's Laws of Motion. For instance, one of these is stated by Pestalozzi as follows:—"Nature," said he, "develops all the human faculties by practice, and their growth depends upon their exercise."

He bade us inquire what are the child's faculties, how they have been developed by Nature, to what extent they are still capable of development, and what is the Divine intention with regard to them. He bade us assist Nature by multiplying the exercises.

The natural theory of education starts with a few such principles as the following:—

1. Every child is capable of action, and surrounding material objects stimulate it to action.
2. The external stimulants act through the organs of sense.
3. The sensations are the fundamental elements of knowledge.
4. The development of the mind begins with the reception of sensations and proceeds by the formation of ideas.
5. Natural education is the action and reaction between the external stimulants and the mind's power, causing growth and development.
6. When Nature is the educator the laws of the learner's being govern the educator's action, and determine what he does and what he leaves undone. He ascertains, as it were, from the child himself how to conduct his education.

To these another important fundamental principle has been added by Prof. Payne:—

7. The learner's ideas must be incorporated with the learner's mind and become part of his being. Words are the conventional signs, the objective representatives, of ideas; and their value to the learner depends on his possession of the ideas they represent. The words without ideas are not knowledge to him.

Perhaps we should keep these laws the better in mind if we named them as they do in other sciences. We have Pascal's Law, Boyle's Law, Joule's Law: why not Pestalozzi's, Payne's, Scott's, or any other discoverer's law—for instance, Quick's law: "Education is a process of cultivation"? The horticulturist who has learnt by observation Nature's methods can assist the processes of growth and development, and sometimes even control them. So also can the educator. The giving of this assistance is the purpose of education. It is education—

#### YET LACKS EXACTNESS.

Now, you will at once recognize these rules as the foundation of Froebelian teaching, the backbone of the kindergarten; yet they are often set aside and forgotten at the next and subsequent stages. My purpose now is to show how they may be, and ought to be, preserved in the teaching of elementary science. The principles of education remain true in all stages, although they are often masked or hidden, and a more subtle search is required to find and expose them; yet they are to be revealed, and those who have had opportunities of following the growth of many pupils from childhood to maturity recognize the identity of the

principles which are applied, consciously or unconsciously, from without the pupil, or from within, at different stages. It is true, for example, all through the course of education that science which is merely bookish science is very useless, and yet few exercises work out Nature's method of teaching more perfectly than real experimental work—that is to say, continuous and systematic inquiries, the answers to which are found and tested by practical operations carried out by the student himself. The necessity for system in this work is, perhaps, referred to by Carlyle. He asks: "Does not the very fox know something of Nature? Exactly so; it knows where the geese lodge! The human reynard, very frequent everywhere in the world, what more does he know than this, and the like of this?"\*

#### MANY METHODS, YET NO INCONSISTENCY.

But my purpose to-night is to revive your interest in some methods having a bearing on the teaching of elementary science which you have heard of before, and some apparently very modern, and to show that each has its proper place and purpose, and that the discovery of new methods need not displace old friends.

#### THE SOCRATIC METHOD.

Perhaps one of the oldest methods of teaching is that method of sharpening the wits by cross-examination called "the Socratic method." In its pure form this method is applicable to two kinds of science, one which is based on operations and actions that are universally going on amongst men, and respecting which all persons—even the very young—have some knowledge. This is the science of conduct. It is that science upon which Socrates himself exercised his art of questioning. He could do this on such subjects as virtue, industry, thrift, &c., without providing any knowledge but what may be supplied by the mind of the student who seeks an answer to the question. We may still do the same with the same class of subjects.

The other subject to which the Socratic method in its pure and simple form is applicable is a certain stage of elementary science in which every question can be accompanied by a practical experiment from which the answer is derived by simple observation. But this method does not carry us far, and we soon find it defective.

#### THE HEURISTIC METHOD.

The Socratic method pure and simple is destructive, and we want a constructive addition to it. Recently this addition has received a name, if not a local habitation. One of the earliest recorded experiments in physics is that of Archimedes with the crown of Hiero. Every schoolboy knows the story of the problem about the crown, the revelation of the bath, and the excitement of the philosopher as he rushed through the streets shouting: "Eureka!"

Since then the word has been much used for advertising purposes as indicating discovery or experiment. For instance, enterprising haberdashers ask us to buy *ureaker* shirts. And now the same verb *εὑρίσκω*, ("I find out" or "discover") gives a name to a method of teaching chemistry and physics—the heuristic method. It is true this method is applicable to other subjects—to art, to geometry, to algebra, &c. Let me quote a passage from a recent text-book:—

Examples were given of these applications, and a practical exercise with a young pupil was done with a number of wooden cubes as follows, the answers being given by the pupil without aid from the questioner:—

Place one and say how many squares face you. Write down the number.— Answer: One.

Add as many as make a square larger. How many have you added?—3.

Write down the number. What is the total?—4.

Add as many as make the square. How many have you added?—5. And the total?—9.

What sort of numbers are 1, 3, 5?—Odd numbers.

And the numbers 4 and 9?—One even, the other odd.

But what numbers make up 4?—Two two's.

And 9?—Three three's.

What sort of numbers, then, are 4 and 9?—Square numbers.

Continue to build up squares. How many do you add next?—7.

Write down the number and say what are down altogether.—1, 3, 5, 7, and the total 16.

How many numbers?—4.

And the total the square of what?—4.

Then the mode of forming the successive additions was deduced, and the fact that  $1 + 3 + 5 + \dots + (2n - 1) = n^2$  was established, and, it may be said, was discovered by the pupil.

\* T. Carlyle, "Hero Worship," Lect. iii., page 167, second edition.

## THE HEURISTIC METHOD SUITABLE FOR CHEMISTRY AND PHYSICS.

There is, however, no subject that offers such scope for this method as chemistry and physics. An eminent chemist, in answer to an inquiry of mine as to his view of this question, and also as to the exact points of controversy, writes as follows:—

Elementary chemistry and physics are subjects admirably fitted to assist in educational development by heuristic methods, and very easy problems, such as "Why does iron rust?" "What happens to chalk when it is burnt?" may be put before the student, so that he may get some idea of the methods of discovery, and learn to help himself. A knowledge of the facts of a science, however interesting, will scarcely assist us in our everyday life. The controversy is between those who simply think that "knowledge is power" and those who hold that it is the knowledge of how to use knowledge that avails. Chemistry, to be of value educationally, must, according to the latter, be taught as are carpentering, cookery, and dressmaking—not by attendance at lectures (though these occasionally may be useful to students of such subjects), but by practical methods of investigation. Guide and assist the student by all means, they say, but let him depend as far as possible on himself.

The setting of little problems as here indicated is possible early in the teaching of science, but it is not quite the beginning. The first stage involves seeing and reasoning; the second doing, seeing, and reasoning.

Exercises in observation of experiments performed by the teacher must precede experiments in the hands of the pupil, or much will be lost. One of the most enthusiastic advocates of this method, and of what he calls "juvenile research," Prof. Armstrong, seems to recognize this point of order, for he says:

In practice, the only serious difficulty met with has been to induce students to give themselves the trouble to consider what information is gained from a particular observation; to be properly inquisitive, in fact. I cannot think that this arises, as a rule, from mental incapacity. When we consider how the child is always putting questions, and that nothing is more beautifully characteristic of young children than the desire to know the why and wherefore of everything they see, I fear there can be little doubt that it is one of the main results of our present school system that the natural spirit of inquiry, inherent to a greater or less extent in every member of the community, should be thus stunted in its growth, instead of being carefully developed and properly directed.

To maintain and develop that natural spirit of inquiry we must work with Socratic questioning and heuristic exercises mixed or alternating.

To exhibit this alternation a lesson was given by the lecturer to an intelligent school-boy from a neighbouring elementary school.

Experiment and question by the lecturer, followed by the answer of his "victim," constituted the lesson, and here and there a little heuristic problem was interposed to be worked out by the students individually. It is impossible to convey the whole effect, but the following sketch of the lesson will indicate the method.

## LESSON.

What is this?—A pair of scales.  
 What am I doing with it?—Weighing.  
 Why are the scales now steady?—Because the weights balance.  
 That word of yours gives a name to all appliances for weighing.  
 What can we call them all?—Balances.  
 What part of the balance is this?—The beam.  
 When I shake it what does the beam do?—Moves up and down.  
 Yes; we say, it "oscillates."  
 Look now at this U-tube. What does it contain?—Water.  
 I shake it. What does the water do?—It oscillates.  
 What does it remind you of?—The beam of the balance.  
 It is one; but tell me what is above it.—Air.  
 On which side?—Both sides.  
 What balances the air pressure on the right?—The air pressure on the left.  
 What forms the beam of this balance?—Water.  
 [Here is the place for a problem or problems to prove and give a general idea of the magnitude of the air pressure.]  
 PROBLEM.—Take a wide-mouthed bottle, such as is used for preserved fruit; also take a hard-boiled egg with the shell removed. Drop a burning piece of paper into the bottle, and keep the fire burning for a minute or two by adding other bits of paper. Then place the egg on the mouth of the bottle so as to act as a stopper. Wait and see what happens, and then explain it.  
 [The egg is forced into the bottle by air pressure. After some questions on the problem the lesson is resumed.]  
 I tilt the tube. What is driven out on the left?—Air.  
 And let in on the right?—Air.  
 I close the end on the left, with the finger, and place the tube

upright. Show me the beam of the balance now. What presses on the right?—Air.

And on the left?—Air and water.

On which side is the air pressure greater?—The right.

How do you know?—Because water is added to that on the left to balance that on the right.

What is this?—A glass U-tube.

And this?—A foot rule.

Take the foot rule, and measure the arms of the tube.—One is fourteen inches; the other rather less.

What do I pour in?—Mercury.

What length of tube does the mercury take up?—About two inches.

I now pour water into the longer arm. What happens?—The mercury rises in the other.

Now point to the mercury forming the beam. Measure the mercury above the beam on the one side.—It is one inch.

Measure the water on the other.—It is thirteen and a half inches.

What balances the thirteen and a half inches of water?—One inch of mercury.

What have you proved?—That thirteen and a half inches of water balance one inch of mercury.

Then which is the heavier?—Mercury.

How many times as heavy as water?—Thirteen and a half.

Measure this tube.—It is three feet long.

What difference is there between the two ends?—One is open and the other closed.

What am I pouring in?—Mercury.

I fill it, close it with my finger, invert it, put the end under the mercury in a cup, and then remove my finger. What happens?—The mercury sinks in the tube.

What signs are there that I am weighing something?—The mercury oscillates.

Show me the beam of this balance.—It is in the cup.

What is above the beam in the tube?—Mercury.

What outside?—Air.

Is there any air above the mercury?—No.

How do you know?—The tube was filled with mercury, and no air has got in since.

What are the two pressures which now balance?—That of the air and that of the mercury.

Measure the mercury.—It measures two feet five and a half inches.

Yes, nearly two and a half feet.

How many feet of water would balance that mercury?—Two and a half by thirteen and a half.

That is nearly what?—More than thirty-three feet—less than thirty-four feet.

[Then the siphon as an inverted balance is dealt with, and several heuristic problems with siphons of different forms are proposed for experimental solution.]

## TEACH NOT INDIVIDUAL SCIENCES AT FIRST.

There are other questions of method not yet as stable as they ought to be. For instance, let us ask with what sciences we shall begin. It is clear that, if we wish to classify any number of things—plants, animals, or sciences—we must have some knowledge of the characteristics of the things to be classified; hence we must have a science course preliminary to the prosecution of individual sciences. Huxley provided the preliminaries for one section when he created physiography; but that is not enough—we must carry the medley further, and teach at first a science of common things.

## RATE OF EFFICIENT WORKING.

The next question is one of rate of working—the horse-power of the average pupil. What constitutes a fair and reasonable year's work in science for scholars of ten, twelve, or fourteen years? My opinion is that we expect and attempt too much. We do not give our plants time to grow, and, as to our structures, we build too rapidly for them to endure. There is a very general want of patience in this work. It is of the same kind as that evinced by a maiden aunt who was present when her little nephew was learning to read. The governess wished him to get at the word by looking at it as a whole, and noting its leading consonants. The word was *p-e-n-c-i-l*. The lad was beginning to shape his lips for it, but aunt was impatient. "You stupid boy, what have you in your pocket?"—"A ball." "No, stupid. What do you write with?"—"A piece of chalk." Thus aunt's impatience wrecked the lesson.

## HUXLEY'S LAW ON TECHNICAL EDUCATION.

There is yet another law which seemed to be more stable a few years since than it does now. I call it the "Huxley Law on Technical Education." It was first promulgated at Manchester.

The workshop is the only real school for a handicraft. The education which precedes that of the workshop should be entirely devoted to the strengthening of the body, the elevation of the moral faculties, and

the cultivation of intelligence, and especially to the imbuing the mind with a broad and clear view of the laws of that natural world with the components of which the handicraftsman will have to deal; and the earlier the period of life at which the handicraftsman has to enter into the actual practice of his craft the more important is it that he should devote the precious hours of preliminary education to things of the mind that have no direct bearing on his branch of industry, though they be at the foundation of all realities.

#### THE BALANCE OF METHODS YET TO BE FOUND.

Now, a little reflection on these laws, methods, and principles will show that we have not found the right balance amongst them. We are apt to run one at a time to excess and to neglect others. Take, for instance, the heuristic method. As applied to mathematics, it is represented by problem work. Of this Prof. Chrystal has freely spoken as follows:—

The history of this matter of problems, as they are called, illustrates in a singularly instructive way the weak point of our English system of education. They originated, I fancy, in the Cambridge Mathematical Tripos Examination, as a reaction against the abuses of cramming book-work, and they have spread into almost every branch of science-teaching. At first they may have been a good thing. He who could work the most problems in three or two and a half hours was the ablest man, and, be he ever so ignorant of his subject in its width and breadth, could afford to despise those less gifted with this particular kind of superficial sharpness. But, in the end, it all came to the same: we prepared for problem-working in exactly the same way as for book-work. We were directed to work through old problem-papers, and study the style and peculiarities of the day and of the examiner.

But the fact is we may run any one of these principles to excess if we ignore the others. Let us take the heuristic method and consider its effect when applied in science, to the exclusion of social, religious, and literary influences. If I want to trace a curve of high order, I find assistance by running it to infinity, and seeing what it is like there—what are its branches; what its asymptotes. At infinity the method we are considering may exhibit a narrowing of human sympathies and enjoyments. For instance, the mind and soul of Cavendish were nourished exclusively by heuristic methods. This is how Cavendish is described by his biographer:—\*

He did not love, he did not hate, he did not hope, he did not fear; he did not worship as others do; he separated himself from his fellow-men, and apparently from God. There was nothing earnest, enthusiastic, heroic, or chivalrous in his nature, and as little was there anything mean, grovelling, or ignoble. He was almost passionless. . . . An intellectual head thinking, a pair of wonderfully acute eyes observing, and a pair of very skilful hands experimenting or recording, are all that I realize in reading his memorials. His brain seems to have been but a calculating engine, his eyes inlets of vision, not fountains of tears; his hands instruments of manipulation, which never trembled with emotion, or never clasped together in adoration, thanksgiving, or despair; his heart only an anatomical organ, necessary for the circulation of the blood.

This man, destitute of passions and of sympathies, during his body life, poured down light upon, without warming, the world. His discovery of the composition of water has given to industry a vitality and an intelligence the effects of which it would be difficult to exaggerate; yet it is clear that the race could not exist if all were developed into emotionless Cavendishes. There is room for much variety of methods and of implements in education, and what is now needed is that we should seek to give each its proper function.

#### NOW THE TIME TO CO-ORDINATE METHODS.

As I have said recently, the times seem ripe for the promotion of a better degree of proportion. A solvent has been found for that rigid aversion which literature and art for generations maintained towards science of all kinds. The tendency of some scientific societies and departments to retaliate and to detract from the importance of literary studies has disappeared. There is no danger now that the new Education Department will favour either at the cost of the other. It is an oft-repeated truism that to know one another better, to be able to dwell on similarities rather than on diversities, are the first steps towards a better understanding between two parties, and certainly this saying has no truer application than that to science and literature. To recognize the common growth of scientific and other instincts is a matter of prudence, lest in trying to root up weeds from among the wheat we should at the same time root up that which is as valuable as wheat. Considering the severance which formerly existed between literature and science, men could hardly wonder that when thrown together in the after-work of life they should

meet as strangers, or if the severe garb, the curious implements, and the strange wares of the latter should seem little attractive when contrasted with the light companionship of the former. In proportion as they are led to know each other in the minds of the young, in that proportion will the estrangement become impossible. Here, then, is our plea for a co-ordination of methods.

Method is better than impulse, deliberate purpose than erratic action, the clear glow of sunshine than irregular reflection, and definite utterances than an uncertain sound. In proportion as knowledge is better than surmise, proof than opinion, in that proportion will the teacher value a discrimination between the certain and uncertain, and a just estimate of the issues depending on the use of this method or on that. We should each accord to his neighbour full liberty to make his own experiments in his own way, but we should hold on firmly to the plans and implements which we ourselves have proved to be effective.

The CHAIRMAN agreed with the lecturer that the moral results of teaching, whether of science or any other subject, were the most important consideration. It was a common error to suppose that there was an antagonism between science and the humanities; they were, in fact, only complementary parts of a complete system of education, and neither could be properly left out. If it was true that some devotees of science were not very lovable men, it was also true that equally unlovable men were to be found among those who spent their lives in the pursuit of literature. Boys should not begin the formal study of science at too early an age, but should rather be taught that general kind of knowledge which the lecturer had called "the science of common things" before devoting special attention to a particular branch of science. Teachers would agree that the study of physics should precede that of chemistry. He would like to recommend to the attention of science teachers Dr. Hill's "Introduction to Science." He considered it extremely useful, as it dealt with the general principles and methods of science, as well as with the application of these to certain problems of the day.

Dr. MOODY remarked that the advocates of the heuristic method did not desire to see that method adopted to the exclusion of all others, but they objected to the method which consisted only of the learning of a number of facts, and claimed that at least a few hours a week should be given to the heuristic method. Science teaching could not be carried on in the same way as literature teaching. The pupils must be encouraged to help themselves. Far too much was attempted in school work, with the result that children only acquired superficial knowledge. He found that boys of eleven or twelve, who were supposed to have worked through two books of Euclid, for example, had very little capacity to deal with riders. Better results would be produced if the boys' attention were confined to a few problems and they were taught to approach these problems from all sides by means of a large number of exercises.

Mr. ORCHARD was of opinion that, though much relating to science teaching was still "unsettled," it was at least settled that the method styled "heuristic" had come to stay. The Socratic method, to which reference had been made, could scarcely be called an avenue of truth. Beyond showing a student how much—or, rather, how little—he knew, it could not be said to convey much information. The business of science was to interrogate Nature; take note of her responses and interpret them; then, by the discriminative and assimilative power of the mind, arrange and connect them into a systematic whole. This was certainly to a great extent effected by the heuristic method as expounded by the lecturer. The experiments should be undertaken under skilful and careful guidance, and at first should be very easy and confined to general principles, for which there should be some theoretic basis, so that the pupil might be aware of what he was driving at. Again, the problems ought to be suggestive—*e.g.*, consideration of the force of gravity might lead to the discovery that the weights of bodies are independent of their volumes, thus suggesting the important notion of mass. Undoubtedly, the learning of physics should precede that of chemistry. He entirely concurred with the lecturer's remarks as to patience being an indispensable science virtue, and as to the importance of preserving a due proportion in studies.

The Rev. J. O. BEVAN said the discussion of scientific method was interesting to all teachers, because there was no subject to which scientific method might not with advantage be applied. The evil results attendant on the neglect of scientific method were illustrated by the backwardness of some of our artisans as compared with those of Germany, with the necessary consequence that the Germans were securing trade which formerly was in the hands of the British. Another illustration was afforded by the course of the war in South Africa, which was influenced by the fact that very many of our officers had neglected to make an adequate study of the art of war. The value of the study of science lay not so much in the acquirement of knowledge of facts as in the mental discipline to be derived from the search after truth.

Dr. WORMELL having replied to the remarks of the various speakers, a vote of thanks to the lecturer concluded the proceedings.

\* "Life of Cavendish," by Dr. Wilson, page 185.

## CORRESPONDENCE.

## WHAT IS GRAMMAR?

To the Editor of the Educational Times.

SIR,—I have some remarks to make in reply to Mr. Douse's article on "Grammar." As to definition. Johnson defines grammar as "the art of using words properly." That which Mr. Douse sneers at, as at one time current in ladies' seminaries, is given by the celebrated Lindley Murray. Whether grammar be called a science or an art is not a very important matter. Like chemistry, it was studied, and its principles or laws of nature determined, while it retained the name of an art. The principles of grammar are, however, only indirectly laws of nature, it being properly part of the science of physiology.

Mr. Douse, while complaining of vague definitions, falls into the opposite error, excluding one half of his first chief division. The analogy between chemistry and grammar is given in Wilson's "Inorganic Chemistry," differing from that of Mr. Douse in being logically applied. The letters of the alphabet correspond to the chemical elements. Some of the chemical elements do not exist in Nature except in combination; parallel to this, some letters are not in themselves words. In one sense all the letters are words; they are sounds which convey a meaning, as in the sentence: "Do you spell your name with an S?"

The chemical element fluorine is remarkable as never having been observed, only known as a constituent of compounds, like a letter only to be sounded in combination.

In § 5 Mr. Douse speaks of letters as if they were merely written characters or symbols and not sounds. The examination of one or two grammar books will not fail to unfold a correct definition of orthography, namely, that division of grammar treating of the form and sound of letters and syllables. Mr. Douse takes up letters and syllables under the heading phonology, and appears to think the different name makes it a different subject. At the same time the term "phonology" is no more appropriate than "morphology"—the one relating to sounds, the other to symbols.

Concerning orthography, Milton speaks in his "Latin Grammar" as follows:—"Grammar, touching letters and syllables, is omitted as learnt before, and little different from the English spelling-book; especially since few will be persuaded to pronounce Latin otherwise than their own English."

And Lindley Murray: "The sentiments of a very judicious and eminent writer (Quinctilian) respecting this part of grammar may, perhaps, be properly introduced on the present occasion: 'Let no person despise as inconsiderable the elements of grammar because it may seem to them a matter of small consequence to show the distinction between vowels and consonants, and to divide the latter into liquids and mutes. But they who penetrate into the innermost parts of this temple of science will there discover such refinement and subtlety of matter as are not only proper to sharpen the understandings of young persons, but sufficient to give exercise for the most profound knowledge and erudition.' . . . Thus, to principles apparently the most trivial as a few plain elementary sounds we owe that variety of articulate voices which has been sufficient to explain the sentiments of so innumerable a multitude as all the present and past generations of men."

Mr. Douse will not find a parallel to his remarkable use of the terms "speech" and "language" in any science.

Though sounds precede written characters, yet in the case of words taken from, say, Latin and Greek into English their origin, so far as English is concerned, is from the written characters. The elements of grammar are sounds and symbols which, either by themselves or in combination, convey a meaning; like chemical elements which, either by themselves or in combination, form substances found in Nature.

Mr. Douse (§ 9) calls his second division morphology, and, following the name, treats of words as if always written; committing a similar error to that which he wrongly ascribes to grammarians in orthography. The illustrious grammarians of any age, not being members of the College of Projectors, did not set themselves the task of classifying words before they did anything with them. Mr. Douse's term "phonology" is as appropriate when treating of words as "morphology," having the same relationship to morphology as physiology has in the science of biology. "Etymology" is the proper name for the part of grammar treating of words, to quote from Milton: "Etymology teaches what belongs to every single word or part of speech."

Objection may very fairly be taken to prosody as a division of grammar, though authorities are not wanting for its inclusion. One part of it, orthoepy, may be very properly included in etymology.

In conclusion, the true elements of grammar are—(1) elementary sounds represented by symbols, and called "letters" and "syllables"; (2) elementary compound sounds represented by symbols, and called "words"; (3) sentences. The corresponding divisions are—(a) orthography, (b) etymology, (c) syntax.—Yours, &c. EDOM WHITE.

## PRACTICAL USE OF PHONETICS.

To the Editor of the Educational Times.

SIR,—Being deeply interested in the subject of phonetics, especially as applied to French, I was pleased to see a letter from Prof. Spiers on this important subject in your May number. I cannot, however, agree with all that Prof. Spiers says. Not for a moment would I venture to oppose Prof. Spiers on questions of French grammar or literature. I recognize as willingly as any one the high position he holds in the world of modern languages.

Prof. Spiers is, no doubt, a perfect master of French pronunciation; but one may be all that without comprehending the full use of phonetics. Let me illustrate my meaning. He says: "The  $\delta$ , or  $\phi$ , is the *eu long* in *peu, creux*; the  $\alpha$  is the *eu short*, as in *peur, seul*." Now the difference between  $\phi$  and  $\alpha$  ( $\delta$  is not the same as  $\phi$ ) is not one of length. Both sounds could be produced and kept on for half an hour if one only had sufficient breath. The difference is one of quality.  $\phi$  is closer than  $\alpha$ ; that is, the lips are more rounded, and the hole between them smaller or closer. Prof. Spiers goes on: "There is a short *a* ( $\alpha$ ) and a long *a* ( $\alpha$ )." Once again, the difference is not one of length. Indeed, it is possible to find words where the  $\alpha$  is long, e.g., *dard*, which is pronounced *da:r* (: means long), and *davantage* (third syllable), which is pronounced *davata:z*. Prof. Spiers might, perhaps, reply that he meant what is here indicated. Be that as it may, he has not explained the sounds properly; and one of the chief reasons why so much bad pronunciation exists is that words are used with meanings so vague.

Prof. Spiers, while implying doubt as to the efficacy of phonetics in ordinary classes, states that a teacher can, by the aid of a Frenchman, in half an hour acquire the power to use these symbols, and, by the help of them, read correctly henceforward. It seems to me that it is here where the error creeps in. If a teacher's pronunciation is faulty, it will require not half an hour with a Frenchman with the symbols, but many hours, to perfect it. The partisans of phonetics, in their anxiety to press the adoption of them, have always made this mistake. And the system is doomed to failure if the teacher has not had, at the least, some weeks' training.

Of what use, then, is the study of phonetics? First, it is an immense saving of time; and, secondly, it enables a foreigner to produce sounds which he would probably never succeed in producing without such a training. A man with a good ear, an excellent control of his vocal organs, a retentive memory, and a keen desire to excel, will acquire a fairly good pronunciation by residing in France from one and a half to two years, and all without the aid of phonetics. But, as far as pronunciation is concerned, I will venture to say that the same man will acquire an equally good result in three months under the tuition of a phonetic expert, such as M. Zundt-Burguet, of the Alliance Française.

Any one who has tried to learn French pronunciation from a Frenchman knowing nothing of phonetics, though speaking perfectly, cannot fail to have had some very trying experience. He has tried and tried again, with such encouragements as the following:—"Now you have it nearly." "Now try once more." "Not quite so good." "Now listen to me." "You have got it now." "No, you have lost it again." What does all this mean? It means that the Frenchman produces the sound perfectly from long usage; but he does not know exactly what he does with his tongue, jaws, and lips. Indeed, when he does try to explain, he often misleads rather than helps his pupil. Three-quarters of the labour can be saved by a careful study of the various positions of the jaws and tongue, and the part played by the nose. This preliminary training, however, requires not half an hour, but several months. The symbols are practically useless in themselves. Each of them represents a certain definite position of the organs of speech. In several cases this position can only be gained by long and painful practice. When one has become habituated to English the organs grow into certain ways of moving, which render it extremely difficult to put them readily into the new positions. So it is that some English people never acquire a really good pronunciation of a foreign language, even after many years spent in the country.

"L'Écriture Phonétique" is of little use to one who has not had some previous training in phonetics. The best English book on the subject is Prof. Rippmann's "Elements of Phonetics," but even this will appear terribly barren unless one has previously had some practical lessons by a master of the subject. Personally I only know of two in England—Prof. Rippmann, of Queen's College, and Dr. Baker, of the County High School, Isleworth.

In conclusion, I may say that I, in a humble way, have used the system with beginners at the Finbury Pupil-Teachers' School. The first month was spent entirely in the examination of sounds, English and French—in short, an elementary course of phonetics. This was continued, together with elementary French grammar. A little later I introduced the "First French Course," and at the end of six months most of the pupils could ask and answer questions of various kinds in a French altogether superior to that of the ordinary student at such a period.—Yours faithfully, B. DUMVILLE. Rouen.

MORTON LUCE TESTIMONIAL.

To the Editor of the Educational Times.

DEAR SIR,—We beg to ask your support to a testimonial which we and others of Mr. Morton Luce's friends desire to present to him. Mr. Luce, with whom we have been acquainted for several years, is, as you are doubtless aware, a gentleman of superior literary attainments, the author of an excellent manual for the study of Tennyson, and a well-known lecturer on English literature. The chief reason for offering Mr. Luce a testimonial at the present time is that a prolonged illness has compelled him to discontinue all work, both literary and educational, and that repeated premature attempts to resume such work have so seriously undermined his strength that, according to the opinion of his medical advisers, a lengthened period of rest and freedom from anxiety is essential to his recovery. These conditions cannot be secured by any means or effort of his own, his savings having already been greatly reduced by illness, and, on this account, we are confident that the proposed testimonial will receive the warm and liberal support of his friends and of the admirers of his work. Although Mr. Luce's literary work appeals to a comparatively limited number of people, we feel that his "Commentary on Tennyson" will win for him in his present difficulties sympathizers and friends from among all who inherit the language in which the poet was privileged to write. Apart from all considerations of the great personal worth of Mr. Luce, we believe there are many who, in contributing to the proposed testimonial, will, on Mr. Luce's resuming his literary work, recognize that they have rendered a public service, and will regard it as a privilege to be associated with such a testimonial.

The Hon. Treasurer, T. G. Jeffery, Esq., will receive all contributions. Other communications should be addressed to one of the Hon. Secretaries.—We remain, yours truly,

- EDWARD DOWDEN, Highfield House, Rathgar, Dublin.
- RICHARD GARNETT, 27 Tanza Road, Hampstead, London, N.
- J. CHURTON COLLINS, 51 Norfolk Square, London, W.
- C. LLOYD-MORGAN, 16 Canynge Road, Clifton, Bristol.
- STOPFORD A. BROOKE, 1 Manchester Square, London, W.C.
- GEORGE SAINTSBURY, 2 Eton Terrace, Edinburgh.
- J. E. SANDYS, St. John's College, Cambridge.

Hon. Treasurer,

T. G. Jeffery, Esq., Capital and Counties Bank, Redland Branch, Bristol.

Hon. Secretaries,

- B. Bevan-Petman, M.A., King's College, Cambridge.
- H. W. C. Smith, Esq., B.A., Stone House, Grove Road, Redland, Bristol.
- Edgar J. Masters, Esq., 70 Lancaster Road, Stroud Green, London, N.

PRELIMINARY LIST OF SUBSCRIPTIONS.

	£	s.	d.
Prof. Edward Dowden .....	5	0	0
Dr. Richard Garnett .....	3	3	0
Rev. Stopford A. Brooke.....	2	2	0
Prof. C. Lloyd-Morgan.....	0	10	6
The Right Honourable Sir Edward Fry.....	2	2	0
R. J. MacMordie, Esq., M.A., Belfast .....	5	5	0
Colonel C. R. Luce, Malmesbury .....	10	0	0
J. Wilson Swan, Esq., M.A., F.R.S.....	2	10	0
H. Richardson, Esq., M.A., Marlborough College .....	2	0	0
The Misses Rodham and Pupils, Quantock House School, Weston-super-Mare .....	22	0	0
The Misses Appleton, Ellenborough House, Clifton .....	5	0	0
Miss Bulkley, Duncan House, Clifton .....	5	0	0
Mrs. E. S. White, Tresilian, Clifton.....	3	5	0
Mrs. E. Portsmouth Fry, Rodney House, Weston-super-Mare.....	2	2	0
Dr. R. H. Luce, Derby .....	2	2	0
Miss E. E. Bartlett, Badminton House .....	1	1	0
Proceeds of "Tennyson Evening" at Caux, 277 francs 80 cents.....	11	2	3
Prof. Saintsbury .....	2	2	0
Mrs. Baines, West Hartlepool .....	2	2	0
Arthur M. Lee, Esq. ....	2	0	0

THE PARIS EDUCATION CONGRESS.

To the Editor of the Educational Times.

MONSIEUR,—Le Comité d'Organisation du Congrès international de l'Enseignement primaire a l'honneur de rappeler à toutes les personnes qui, en France et à l'étranger, s'intéressent aux questions d'éducation que ce congrès s'ouvrira à Paris, le jeudi 2 août, pour durer jusqu'au dimanche 5 inclusivement.

Il sera divisé en cinq sections, correspondant aux cinq questions mises à l'étude. I. L'éducation ménagère: sa définition, ses limites, son adaptation à chacun des degrés de l'enseignement primaire. II. De la fréquentation scolaire. III. De l'éducation morale: son objet, ses principes, ses méthodes et ses procédés. IV. De l'enseigne-

ment primaire supérieur: son objet, ses limites; moyens de l'adapter aux intérêts régionaux et locaux. V. Des institutions post-scolaires: cours d'adultes et lectures publiques, etc.

Le Comité se préoccupe d'assurer quelques commodités aux membres du Congrès, tant étrangers que Français. Pour le voyage, M. le Ministre vient de demander aux Compagnies de chemins de fer de leur accorder une réduction de 50% sur les prix du tarif ordinaire.

En ce qui concerne le séjour à Paris, le Comité peut déjà les prévenir que la carte qui leur sera délivrée par ses soins, conformément à l'art. 5 du règlement (1), leur donnera droit à l'entrée gratuite à l'Exposition pendant toute la durée du Congrès. Le règlement n'avait pu leur garantir cet avantage, qui n'a été accordé que par une mesure récente. En outre, le Comité fait des démarches en vue de leur préparer, soit dans des maisons particulières, soit dans des établissements d'instruction publics ou privés, une hospitalité économique; il espère pouvoir aussi leur désigner des restaurateurs qui se seraient engagés à leur faire les conditions les plus avantageuses. Un avis ultérieur fera connaître les mesures qui auront été définitivement prises à ce sujet.

Enfin, le Comité a constitué des commissions particulières pour la réception des adhérents, l'organisation des séances, des conférences, des fêtes, etc.

Il signale de nouveau à tous ceux qui doivent prendre part au Congrès, inspecteurs d'académie et inspecteurs de l'enseignement primaire, directeurs et directrices d'écoles normales et d'écoles primaires supérieures, instituteurs et institutrices, membres des comités des œuvres auxiliaires ou complémentaires de l'école, l'intérêt qu'ils auraient à se réunir pour étudier préalablement les questions mises à l'ordre du jour et à s'entendre pour désigner les personnes les mieux préparées à présenter, en des conclusions précises, le résultat des délibérations prises en commun. Les auteurs des mémoires sont invités à faire suivre leurs conclusions de projets de résolutions. Les mémoires devront tous être adressés, avant le 15 juin 1900, à M. Trautner, 20, rue Etienne-Marcel, Paris, secrétaire du Comité d'Organisation, qui les transmettra ensuite aux rapporteurs compétents.

Pour que cette transmission soit possible, il est nécessaire que chaque mémoire ne vise qu'une seule question. Pour être mieux guidé dans quelques-unes de ses démarches, surtout dans celles qui concernent le logement, le Comité serait heureux de connaître, avant le 10 juin, les noms des membres du Congrès. Les adhésions des collègues étrangers seront néanmoins reçues jusqu'au 1<sup>er</sup> août prochain.

G. JOST,

Le Secrétaire Général.

GRÉARD.

Le Président du Comité d'Organisation.

L. TRAUTNER,

Le Secrétaire.

"THE FROG."

To the Editor of the Educational Times.

DEAR SIR,—In the notice of "The Frog," by A. Milnes Marshall, seventh edition, by G. H. Fowler, the editor's statement in the preface that the new illustrations (pages 98-99) are woodcuts is challenged, and they are described as process blocks, poorly made and badly printed. Allow me to assure you that Miss Green's drawings were cut on wood by one of the few firms which still practise the craft, and that, so far from the publisher sparing expense, the cost of this series is about ten times as much as that of process blocks. Miss Green's very delicate and minutely realistic pencil drawings have been rendered by the wood-cutter with great skill. It is true they contrast with many of the other illustrations cut from the late Prof. Marshall's drawings; but that is because the latter are of a diagrammatic nature, and lend themselves to a bold black-and-white treatment, which is not possible in the case of the new drawings.—Faithfully yours, D. NUTT.

57-59 Long Acre, London, W.C., May 2, 1900.

[We regret that our reviewer (whilst speaking highly of Miss Green's drawings, as well as of Dr. Fowler's editing) mistook the woodcuts in question for process blocks.—EDITOR.]

THE NATIONAL HOME-READING UNION.

To the Editor of the Educational Times.

DEAR SIR,—May I ask the favour of your kind assistance in making known to teachers that the new Book List for the Young People's Section is now ready, and will be sent by return of post on receipt of the fee of 1s. 6d., which also covers the cost of the Magazine containing the articles upon the books, with suggestions and questions especially useful to teachers?

The Book Lists of the Union are not published, as a rule, until the 1st of October; but the Committee have made a special effort to issue this List early, in the hope that it will be useful to teachers who desire to requisition books and to plan out their work for the coming season.—I remain, yours faithfully, M. C. MONDY, Secretary. May 25, 1900.



A FEW OF THE PUBLICATIONS OF  
**MOFFATT & PAIGE, Ltd.**  
**ENGLISH CLASSICS.**

Edited by **THOMAS PAGE.**

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

**THE PLAYS OF SHAKESPEARE.**

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

**REVIEWS:—**

*Saturday Review.*—"Mr. Page has edited 'English Classics' in a manner to command approval."  
*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."  
*Daily Telegraph.*—"Julius Caesar" . . . is invaluable as an aid to the study of the play."  
*South Africa.*—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."  
*Athenaeum.*—"Essentially books for students."  
*Educational News.*—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

*AS YOU LIKE IT	...	...	...	...	...	2 0
*CORIOLANUS	...	...	...	...	...	2 6
*HAMLET	...	...	...	...	...	2 6
*HENRY V.	...	...	...	...	...	2 6
*JULIUS CESAR	...	...	...	...	...	2 0
*KING JOHN	...	...	...	...	...	2 0
*KING LEAR	...	...	...	...	...	2 0
*MACBETH	...	...	...	...	...	1 6
*MERCHANT OF VENICE	...	...	...	...	...	1 6
*MIDSUMMER NIGHT'S DREAM	...	...	...	...	...	2 0
*RICHARD THE SECOND	...	...	...	...	...	1 6
*TEMPEST	...	...	...	...	...	2 0
*TWELFTH NIGHT	...	...	...	...	...	1 6

\* For Current Examinations.

**BACON.**

*Schoolmaster.*—"The edition will stand as an exemplar."  
**BACON'S ESSAYS. Part 1** ... 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

**MILTON.**

*Practical Teacher.*—"Marked by those features of almost exhaustive annotation."

*PARADISE LOST. Books 1 and 2. (Just published).	...	...	...	...	...	2 0
*SAMSON AGONISTES	...	...	...	...	...	2 0
*COMUS	...	...	...	...	...	1 6
*LYCIDAS, L'ALLEGRO, and IL PENNEROSO	...	...	...	...	...	1 4

\* For Current Examinations.

**SCRIPTURE.**

Edited by **R. J. WOOD, B.A.**

*Educational Times.*—"One of the fullest and most conveniently arranged hand-books on the Gospel."

*MOFFATT'S GOSPEL OF ST. MATTHEW	...	...	...	...	...	1 6
*MOFFATT'S GOSPEL OF ST. MARK	...	...	...	...	...	1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

**FRENCH.**

<b>FRENCH COURSE.</b> By G. H. WILLIAMS, M.A.	...	...	...	...	...	2 6
---	-----	-----	-----	-----	-----	-----

**GERMAN.**

<b>GERMAN COURSE.</b> By G. H. WILLIAMS, M.A.	...	...	...	...	...	2 6
---	-----	-----	-----	-----	-----	-----

*Educational Times.*—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

**MOFFATT & PAIGE, Ltd.,**

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.

Works: Johnson's Court, Fleet Street.

**Oxford University Press.**

**Oxford Classical Texts.**

Now Ready. Crown 8vo.

**AESCHYLUS TRAGŒDIAE. CUM FRAGMENTIS.** A. SIDGWICK. Paper covers, 3s.; limp cloth, 3s. 6d.; on India Paper, 4s. 6d.

**APOLLONII RHODII ARGONAUTICA.** R. C. SEATON. Paper covers, 2s. 6d.; limp cloth, 3s.

**ARISTOPHANIS COMOEDIAE. TOM. I.** F. W. HALL and W. M. GELDART. Paper covers, 3s.; limp cloth, 3s. 6d.; on India paper, 4s. 6d.

**XENOPHONTIS OPERA. TOM. I (HELLENICA).** E. C. MARCHANT. Paper covers, 2s. 6d.; limp cloth, 3s.

Just Published. Pp. xcvi. + 378, crown 8vo, cloth, 7s. 6d.

**A COMMENTARY, WITH INTRODUCTION AND APPENDIX ON THE HELLENICA OF XENOPHON.** By G. R. UNDERHILL, M.A., Fellow and Senior Tutor of Magdalen College.

Adapted to Mr. MARCHANT'S Text (see above).

Just Published. Extra fcap. 8vo, pp. 112, with Two Maps, stiff covers, 1s. 6d.

**TALES OF THE ROMAN REPUBLIC.** Adapted from the Text of LIVY. With Notes, Vocabularies, and English Exercises by JOHN BARROW ALLEN, M.A., late Scholar of New College, Oxford; Author of "An Elementary Latin Grammar," "A First Latin Exercise Book," "A Second Latin Exercise Book," &c.

Just Published. Extra fcap. 8vo, cloth, 3s. 6d.

**ARISTOPHANES.—THE PEACE.** With Introduction and Notes by W. W. MERRY, D.D., Rector of Lincoln College, Oxford.

Just Published. Extra fcap. 8vo, stiff covers, 2s.

**IVANHOE.** By Sir WALTER SCOTT, Bart. Edited, with Introduction, Notes, and Glossary by C. E. THEODOPIUS, M.A., Worcester College.

**ADDISON.—SELECTIONS FROM PAPERS IN THE SPECTATOR.** With Notes. By T. ARNOLD, M.A. Twenty-second Thousand. Extra fcap. 8vo, 4s. 6d.

Just Published. Pp. lviii. + 225, fcap. 8vo, cloth, 4s. 6d.

**KING ALFRED'S OLD ENGLISH VERSION OF BOETHIUS.** A Translation. By WALTER JOHN SEDGEFIELD, M.A.

Pp. 180, crown 8vo, cloth, 3s. 6d. net.

**THE CHAUCER CANON.** With a Discussion of the Works associated with the name of Geoffrey Chaucer. By the Rev. WALTER W. SKERAT, Litt.D., Ph.D., Elrington and Bosworth Professor of Anglo-Saxon, and Fellow of Christ's College, Cambridge.

\* The subject of the present volume is an examination of the Chaucer Canon. All the pieces that have been at any time associated with his name are here considered; and various tests are given whereby his genuine works can be distinguished from the rest.

**HOMER.—ILIAD, BOOKS I-XII.** With an Introduction and a brief Homeric Grammar, and Notes. By D. B. MONRO, M.A. Fifth Edition. Extra fcap. 8vo, 6s.

Crown 8vo, cloth, pp. xxiv. + 204, 5s.

**SELECT FRAGMENTS OF THE GREEK COMIC POETS.** Edited, with Table of Subjects, Table of References, and brief Commentary, by A. W. PICKARD-CAMBRIDGE, M.A., Fellow of Balliol College, Oxford.

**PRIMER OF FRENCH LITERATURE.** By GEORGE SAINTSBURY, M.A. Fourth Edition, Revised. Extra fcap. 8vo, 2s.

ALSO PUBLISHED BY HENRY FROWDE.

Fcap. 8vo, pp. xii. + 145. Cloth, 2s. 6d.

**STUDIES IN JOHN THE SCOT (ERIGENA). A Philosopher of the Dark Ages.** By ALICE GARDNER, Lecturer and Associate of Newnham College, Cambridge.

London: HENRY FROWDE,

Oxford University Press Warehouse, Amen Corner, E.C.

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

SUITABLE BOOKS IN THE  
University Tutorial Series.

## SPECIAL SUBJECTS.

- Caesar.—Gallic War. Books V., VI.** By A. H. ALLCROFT, M.A., and W. F. MASOM, M.A. Text and Notes. 1s. 6d. each. Vocabulary. 1s. each.
- Cicero.—De Senectute.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Homer.—Odyssey. Books XI., XII.** By J. H. HAYDON, M.A., and F. G. PLAISTOWE, M.A., Lond. and Camb. Text and Notes. 2s. 6d.
- Horace.—Odes. Book III.** By A. H. ALLCROFT, M.A., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book II.** By A. H. ALLCROFT, M.A. Oxon., and T. R. MILLS, M.A. Oxon. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book VI.** By A. H. ALLCROFT, M.A. Oxon., and B. J. HAYES, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Vergil.—Aeneid. Book IX.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.
- Shakespeare.—As You Like It.** By Prof. W. J. ROLFE, D.Litt. 2s.

# SCIENCE AND ART DEPARTMENT EXAMS.

SUITABLE BOOKS IN THE  
Organized Science Series.

## FOR THE ELEMENTARY STAGE. 2s. each Vol.

- Practical Plane and Solid Geometry.** [In preparation.]
- Machine Construction and Drawing.** [In preparation.]
- First Stage Mathematics.** Containing all the Algebra and Euclid required. [In preparation.]
- First Stage Mechanics (Solids).** By F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- First Stage Mechanics of Fluids.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- First Stage Sound, Heat, and Light.** By JOHN DON, M.A., B.Sc.
- First Stage Magnetism and Electricity.** By R. H. JUDE, M.A. Cantab., D.Sc. Lond. *Second Edition.*
- First Stage Inorganic Chemistry (Theoretical).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WILLIAM BRIGGS, M.A., F.C.S.
- First Stage Botany.** By A. J. EWART, D.Sc. [In the press.]
- First Stage Physiography.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.
- First Stage Hygiene.** By R. A. LYSTER, B.Sc. Price 1s.
- First Stage Inorganic Chemistry (Practical).** By F. BEDDOW, Ph.D., D.Sc. *Second Edition.* Price 1s. 6d.
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

## FOR THE ADVANCED STAGE. 3s. 6d. each Vol.

- Second Stage Mathematics.** Being the Additional Algebra and Euclid with the Trigonometry required for the Second Stage. Edited by WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.*
- Advanced Mechanics.** By WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. I., DYNAMICS. Vol. II., STATICS.
- Advanced Heat.** By R. W. STEWART, D.Sc. Lond. *Second Edition.*
- Advanced Magnetism and Electricity.** By R. WALLACE STEWART, D.Sc. Lond.
- Advanced Inorganic Chemistry.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by W. BRIGGS, M.A., F.C.S., F.R.A.S. *Second Edition.* Price 2s.
- Advanced Inorganic Chemistry (Practical).** By R. WALLACE STEWART, D.Sc., and WILLIAM BRIGGS, M.A., F.C.S., F.R.A.S. Price 1s. 6d.
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for London University (including the Special Subjects for 1901), Cambridge and Oxford Local, College of Preceptors', Science and Art Department, and other Examinations, free on application.

UNIVERSITY TUTORIAL PRESS  
(University Correspondence College Press).

LONDON: W. B. CLIVE, 18 BOOKSELLERS ROW, LONDON, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	24 10 0	.....	Position	25 10 0
Half Page	2 10 0	.....	"	2 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 2s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words 5d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

June 1, 1900.

THE next Evening Meeting of the College of Fixtures. Preceptors will be held on Wednesday, June 13, when Dr. R. P. Scott will read a paper on "The Inspection of Secondary Schools: of what Tests ought it to consist?"

\* \* \*

MR. MACKINDER's course of three lectures on "The Economic Possibilities of South America" will begin on June 12. The lectures will be given at the London School of Economics, 10 Adelphi Terrace, on Tuesdays at 8.30 p.m.

\* \* \*

ON June 14 the American Ambassador, Mr. Choate, will present the prizes at the Leys School, Cambridge.

\* \* \*

THE REV. DR. MOORE will give a course of twelve free lectures on "Dante's Purgatorio," on the Barlow foundation at University College.

\* \* \*

THE Bradfield Greek play comes this year after an interval of two years instead of the usual three. Bradfield celebrates its jubilee this year, and the "Agamemnon" will be part of the celebration. The first performance is fixed for June 19.

\* \* \*

THREE entrance scholarships—the Reid in Arts, the Henry Tate and the Pfeiffer in Science—will be awarded on the results of an examination, to be held at Bedford College, London, on the last Tuesday and Wednesday in June. Forms of entry can be obtained on application to the Principal, and must be returned not later than June 15. The scholarships are all tenable for three years, and are of the annual value of £31 10s., £50, and £48, respectively.

\* \* \*

THREE free studentships, of the value of £46 annually, are offered by the trustees of the Reid Fund, jointly with the Council of Bedford College, to the female students taking the highest place in the First Division of the Oxford and the Cambridge Senior Local and the Honours Division of the London Matriculation. The free studentship offered on the result of the Cambridge Senior Locals is tenable for three years, and the others for two years. All further information about these scholarships may be obtained from the Reid Trustees, Bedford College.

\* \* \*

A GLADSTONE Memorial Prize, of books to the value of £5, will be offered for competition, for the first time, in the summer of 1901, and the subject of the essay, which must deal with history or political science, will be announced in a few weeks' time. The competition will be open to all present students of Bedford College, and to all students who have left the college not more than one year.

\* \* \*

As we have already announced, a meeting of University Extension students and others will be held at Cambridge, from August 2 to 27. The meeting will be divided into two parts. The first part will last from August 2 to 15, inclusive, and the second from August 15 to 27, inclusive. The meeting will be opened on the morning of August 2, at 12 o'clock, by the Right Hon. A. J. Balfour, M.P., who will deliver an inaugural address.

The general subject of the lectures throughout the meeting will be "Life and Thought in England in the Nineteenth Century." The lectures will present, in broad outline, a review of the more remarkable movements and events of the century which is drawing to a close. Its distinctive contributions to our national life will be discussed, as well as advances in scientific discovery. An attempt will be made to show how changed conditions have given rise to new problems, and what some of these problems are.

A FRENCH holiday course, under the direction of Prof. Louis Bascan, will be held at Luc-sur-Mer, near Caen, between August 3 and August 24. This course is specially intended for English teachers, and the inclusive cost, for the three weeks, will be £9. Prof. Bascan refers, for personal inquiries in this country, to Sir Joshua Fitch, Canon Daniel, and the Rev. G. W. Garrod.

THE demand for registration is a natural sequel to the growth of self-respect in any professional body. The position of Irish intermediate and elementary teachers has recently been improved in various ways. We are not surprised to hear that the Association of Intermediate and University Teachers of Ireland have passed a resolution in favour of registration, and are endeavouring to raise the subject in connexion with the Irish Intermediate Education Bill.

A MONSTER petition is being prepared by an "Imperial Protestant Federation" in Ireland against the endowment of a new Roman Catholic University, on the ground that the Dublin and Royal Universities already give Catholics all that they ought to desire. This statement, being examined, simply means that one man may define what another man is entitled to wish for—which is, at least, questionable.

OXFORD'S latest Chair is the Wykeham Professorship of Physics, in connexion with which the University is called on to provide a special laboratory. To meet this and other necessary expenditure, the colleges have once more been appealed to for contributions to the University chest.

THE DUKE OF DEVONSHIRE, as we all know, is ready with his Secondary Education Bill, but the Cabinet, as a whole, are dubious. The London correspondent of the *Manchester Guardian* assures us that the Duke's colleagues regard the prospect of the debates on such a bill with dismay. "They remember what happened in 1896, when clauses setting up a local authority for secondary education, were discussed. There is also another reason, which is summarized in a piece of advice given to a member of the Government, the other day, by one of its most distinguished rank-and-file supporters—'Now's your chance for a Secondary Education Bill, while Lord Cranborne is in South Africa.'" The Cabinet may dread the *odium theologium*, but that is not all packed up in the person of Lord Cranborne.

CAMBRIDGE has decided that the University of Tasmania be adopted as an institution affiliated to the University. The Bachelors of Arts, or Bachelors of Science, of the University of Tasmania, who have satisfied the examiners in Latin, one other language not being English, and mathematics, in any one or more of the three annual examinations required for their degree, will be entitled to be admitted to the privileges of affiliation.

PORTRAITS of the late Prof. Blackie and of Dr. George Macdonald have been added to the gallery of Old Aberdonians, in Marischal College, Aberdeen.

IN the case of educational endowments, at any rate, precedence must be accorded to those who give most. The Duke

of Northumberland recently informed the Northumberland County Council that he was prepared to build, and adequately maintain, at his own cost, with such assistance as might be derived from the Science and Art Department and County Council Grants, a secondary day school for boys in Alnwick, on a site of twelve acres, plans for which, at an estimated cost of some £10,000, had been already prepared.

THE pupil-teacher problem becomes more and more difficult of solution. For instance, Mr. T. S. Aldis, one of Her Majesty's chief inspectors on the schools in the West Central Division of England, reports that the dearth of pupil-teachers is becoming a matter of urgency, on account both of the immediate inconvenience and of the consequent dearth which it creates in the supply of teachers of a higher grade. The School Board in Birmingham require more than five hundred pupil-teachers, with a view to the future supply of qualified assistants; and they can only muster three hundred.

INCIDENTS in the higher education:—There were disorderly scenes in the streets of Oxford, arising out of a continuation of the rejoicings over the relief of Mafeking. Property was wrecked to supply fuel for bonfires, and the police were compelled to charge the mob several times with their batons to break up the crowds. The fire brigade, also, had to play upon the demonstrators, and this led to free fights. The house of Herr Hein, German Lecturer at Aberdeen University, who is suspected of pro-Boer tendencies, was mobbed by the students, and a number of windows were smashed. He was, also, roughly treated in his class-room. A special meeting of the Senatus has had to deal with a number of the students concerned in the affair.

BIRMINGHAM is now a University city. By the Royal Charter, "our trusty and well-beloved Councillor Joseph Chamberlain," together with some 226 others, forming the first Court of Governors, have been created "one body politic and corporate, with perpetual succession and a common seal, by the name and style of the University of Birmingham." At the present moment the University of Birmingham and Mason College are separate institutions, but they are to be united under the provisions of a Bill before Parliament, which, if passed in the present Session, should come into operation on the 1st of October, which will be the twentieth anniversary of the opening of the college.

#### Appointments and Vacancies.

THE REV. H. G. GREY, of the Lahore Mission of the Church Missionary Society in India, has accepted the post of Principal of Wycliffe Hall, vacated by Dr. Chavasse, now Bishop of Liverpool. Mr. Grey graduated from Wadham in 1873 with a Second Class in Greats. He was vicar of Holy Trinity from 1877 to 1885, and curate of St. James's, Clapham, for the two years following. In 1887 he offered himself to the Church Missionary Society, and has worked in succession at Quetta, St. John's College, Lahore, and Amritsar.

By consent of the University of Melbourne, Dr. J. W. Gregory has accepted the post of scientific director of the National Antarctic Expedition, which is to sail from England next year. It remains to fill the three other scientific posts which the committee have decided to attach to the expedition. It is understood that nothing will be settled in regard to these till Dr. Gregory's return to England in the autumn.

DR. F. T. ROBERTS and Mr. R. J. Godlee have been appointed to the Holme Professorships of Clinical Medicine and Surgery, respectively, at University College, London. Dr. G. Vivian Poore succeeds Dr. Roberts as Professor of the Principles and Practice of Medicine.

It is stated that Dr. Warre, of Eton College, will resign the Headmastership in the course of the present year.—Canon Fur-

neaux, Headmaster of Repton School, intends to retire in August from the position which he has held during the past eighteen years.—The Rev. J. T. Handford is resigning the Headmastership of St. Peter's School, York.

THE Professorship of Hebrew and Old Testament Exegesis at King's College, London, is vacated by the death of Prebendary Stanley Leathes.

THE REV. ARCHIBALD ROBERTSON, D.D., Trinity College, Principal of King's College, London, has been elected Bampton Lecturer for next year. The subject will be "The Kingdom of God in the History of Christian Thought." The estate now brings in £120 a year for each lecturer, but, owing to a debt of £650, it has been decided by Convocation at Oxford that no election shall be made to the office of Bampton Lecturer for the years 1902, 1904, 1906, 1908, and 1910. Thus there will be only five lectures during the next ten years.

AT Oxford, the Rev. Edward Moore, D.D., Principal of St. Edmund Hall, has been reappointed as Lecturer on Dante for a further period of two years.

EDINBURGH UNIVERSITY has elected Dr. John Wylie to succeed the late Sir T. G. Stewart in the Chair of Medicine. Dr. Wylie, who is fifty-six years of age, is a graduate of Edinburgh.

THE General Board of Studies at Cambridge will shortly proceed to the election of a University Lecturer in Physics, in connexion with the Special Board for Physics and Chemistry. The appointment will be for five years from Michaelmas, 1900, and the stipend will be £50 per annum.

THE University of Glasgow is about to appoint a new Lecturer in German. Owens College announces vacancies for Lecturers in Hebrew and Arabic. Bangor College has vacancies for Assistant-Lecturers in Electrical Engineering and Method. Mason College is also about to appoint a Master of Method.

AT Baroda College there is a vacancy for a Professor of English Literature.

AT the High School, Dundee, there are vacancies for a master of the Modern Language Department, for a lady superintendent of the girls' school, and for two mathematical masters.

THE Governors of the Fishmongers' Company have elected Mr. G. W. S. Howson, M.A., assistant-master at Uppingham, to the Headmastership of Gresham's School, Holt.

MR. J. CRICHTON, B.A., of St. Olave's, Southwark, succeeds Mr. A. P. Irwin as Headmaster of Foster's Endowed School, Sherborne; and Mr. L. M. Penn, M.A., has been appointed Headmaster of Victoria College, Congleton.

Literary Gossip. AN excellent suggestion was made by Mr. Flinders-Petrie at the Society of Arts a fortnight ago. He recommends the establishment of a national repository for science and art. We are not poor in museums and galleries, but we need more classification, which implies more room. For instance, the authorities of the British Museum are seeking power from Parliament to hand over large accumulations of printed books and papers to local authorities. There is a manifest disadvantage in dispersing printed documents which are not so worthless as to merit destruction. The documents now in the British Museum are of stone, metal, textiles, paint, and printers' ink. The theoretically best classification would keep all the printed documents together, even if other homes had to be found for the stone and metal.

It is good news for such as consult or borrow books from the London Institution that the authorities are contemplating the provision of an adequate catalogue. The one which exists is by no means a model of completeness or systematic arrangement, and good collections deserve good catalogues.

THE University of Chicago Press, which is developing into one of the chief educational publishing bodies in the United States, sends us the first three numbers of the *Elementary School Record*, to be completed in a series of nine parts. They contain an account of the working of the experimental school attached to the Pedagogical Department of the University, and give evidence of successful work in the manual training of children.

WE have received the Eights Week number of the *Oxford Magazine*, frivolous, ingenuous, with comic illustrations—a veritable *memento vivere*, addressed by the twenty-year-old students of our most ancient seat of learning to revive the faded memories of the generations which preceded them. This is how the youngsters describe themselves for the edification of their parents and schoolmasters, who pay their bills for them and who worked them up to scholarship pitch:—

Thrice happy, careless of our destinations  
And all the dark unseen;  
Our only care was thought of Moderations,  
Our only foe the Dean!

THE conclusion of the great work of the "Dictionary of National Biography" will be celebrated at the Mansion House on the 29th of June. The proprietor, editor, and some of the principal contributors have accepted invitations to lunch with the Lord Mayor on that day.

MORE federation of the Empire! Mr. Flavelle, who should be a French-Canadian, and who is in business at Toronto, has founded two travelling fellowships in the University of Toronto—of £150 a year each—the holders of which are to study modern history in Oxford for two years. They are to be selected from among the Toronto graduates who have taken a First Class, either in Classics or in Classics with English and History. The avowed object of the foundation is to train men for public life in Canada.

KING ALFRED's version of the "Consolations of Boethius," done into Modern English, with an introduction, by Mr. W. J. Sedgefield, will be published immediately by Mr. Henry Frowde. The Anglo-Saxon text followed is that edited by the translator for the Oxford University Press last year, and the book should be welcomed by those interested in the commemoration of the forthcoming millenary of King Alfred's death. Mr. Sedgefield hopes that the Modern English dress now given to the King's best book will help to make him less an unsubstantial shadow for Englishmen of to-day, and more a real man—practical, right-feeling, and earnest beyond his generation.

### ASTRONOMY AS A MORAL FORCE.

By ALFRED T. STORY.

I THINK it was Sir William Herschel who said that an undevout astronomer must be mad, or words to that effect; and we know that the philosopher Kant, in his great work "The Critique of Pure Reason," remarks that there is nothing so calculated to strike the mind with awe as the starry heavens and the moral law. The saying is a remarkable one, and it recalls to my mind an observation made to me some years ago by a young mechanic who had been attending a course of lectures on astronomy. He said: "One cannot study a subject like that without becoming a better and more thoughtful man. All that order and beauty and harmony, all that mutual dependence and marvellous interaction existing between millions of bodies, suns and systems and satellites, large and small, all working together with such wonderful exactitude and balance that their revolutions and their relative influence one upon another can be calculated and predicted with the greatest nicety—it is impossible to think of it without being impressed, in a way that words cannot express, with

the Being from whose mind it comes, and who must have intended that the same sublime order and majestic symmetry should obtain amongst the lesser creatures of His universe, and especially those who are, so to speak, soul of His soul."

These may not be the exact words of the young mechanic, but they embody his thought; and it is a thought so pregnant with meaning that the more it is pondered over the more deeply are we struck with its beauty and its truth. The harmony that reigns amongst the heavenly bodies is the harmony of the Divine Mind. It is a harmony so wondrous that it leaves nothing superfluous, shows nothing wanting. From the tiniest moon or asteroid to the most stupendous system, there is not one body without its due place and influence, not one but has its own beauty and radiance, even though that beauty, that radiance, be only reflected—like the light of our moon, for instance. Nay, when it comes to that, all owe something elsewhere: nothing is what it is of its own self. For the harmony is an inter-harmony—a something that cannot exist of itself alone. Each star, planet, world, depends on others, on the whole, and the whole again on the Central Soul, which is harmony, and lives and works through it all. The ancients were so struck with the sublime and ordered movements of the heavenly bodies that they likened them to a choric dance, which, in turn, they supposed to be accompanied by a celestial music—the music of the spheres. There is not only something very beautiful in the idea, but there is—as seems more than probable—an adumbration in it of a great truth. One of the conquests of the latter half of the century in the domain of science is the law of the correlation of forces. We know that, according to this law, no power is, or can be, lost. We know that, if it disappears as one thing, it reappears, or is traceable, as another. Thus the force we call electricity may be transformed into light, into heat, or into motor power; but, whatever the change, there is no loss, no waste.

In Nature electricity manifests itself to our intelligence as light in the lightning, as sound in the thunder, as energy in its destructive force. Dispersed through Nature, it is equally active in other, though more subtle, forms. It is in reality the same force revealing itself to different senses. So, we may say, it is with that choric dance of the spheres imagined by the ancients. To their eyes it was a dance, a stately movement; to their ears, the ears of the soul, it was music; while to the higher spiritual sense it was Divine harmony. To us moderns, used as we are to dwelling almost exclusively on external things, much of that inner sense which is so beautiful in the ancients, and is seen in such splendour in the Hebrew Scriptures, has been lost—lost, that is, in the depth and intensity it once had; and so, perhaps, the wonder and glory of the heavens do not so readily translate themselves to our minds as the ordered and rhythmic dance, as celestial music, as beauty, as creative, thought-out work. But, though the stars do not appeal to us in this way, or do not thus appeal to many, yet few are they who could study their structure, their motions, their interdependence one upon another, the laws of their existence, their inner life, so to speak, without being deeply influenced thereby. The order and harmony which reign in and through them enter into our souls as we study and contemplate their nature and movements, and can never again wholly leave us. We may not be at once transformed to their perfection of order and balance; we are not, and cannot be, suddenly so changed. But the force with which those perfections strike us, revealing, as they do, the beauty and unity of the creative thought, wherein there is no anarchy, the sense of awe and majesty they constantly create in us, as, perhaps, nothing else does in the same degree, gradually and insensibly work a change in our minds, fashioning us, as it were, more and more to their Divine model.

Careful study in other departments of Nature—as, for instance, in botany and chemistry—reveals the same system, the same symmetry of movement and of life, so to speak; but here they do not seem to possess the same moral value to us, possibly because these branches of investigation are more nearly allied to our everyday domestic economies and sublunary needs. In the case of astronomy, on the other hand, we are lifted suddenly, and at a bound, into another and a higher region—one in which we are brought in contact with forces and movements of such magnitude, and a life so vast, that the contrast strikes into insignificance the temporal ends and paltry ambitions of the terrestrial sphere.

No one who studies astronomy seriously can altogether avoid comparisons such as these. It does not follow, of course, that the things terrestrial should be neglected or misprised. They are essentials to be regarded and dealt with according to their

degree of importance. But, in proportion as they are allowed to monopolize more than their due share of interest, they lower and circumscribe the plane of life, and prevent it from reaching the grandeur and altitude native and possible to it. Hence the value, the high moral value, of the study of astronomy. We often hear it affirmed that the study of science tends to enlarge the mind; and that it undoubtedly does if pursued in the right spirit. But there are aspects of scientific study whose effect is the very opposite of broadening, and, as we may say, elevating, the mind. Take, for instance, the man whose thoughts are occupied solely with the explosive power of certain chemicals, the sum of whose ambition is to discover a compound which will destroy a whole legion or an entire city at a blow. He may be anything but a bad man; but there is nothing in his investigations to elevate and ennoble the mind. Very much the same thing may be said of one who devotes his time and strength to mineralogy with a view to the discovery and extraction of the precious metals. The study is perfectly legitimate and honourable; but its tendency is to impoverish the mind in its higher and broader relations and aptitudes—as we know, in the case of Darwin, his devotion to the minutiae of physiological and morphological action in animals and plants resulted in the atrophy and stultification of certain of the higher attributes of his nature. Such a thing could not arise from the study of astronomy. Its influence is to awaken just those faculties which suffered most in the great naturalist—to awaken and strengthen others also. It stirs and stimulates the imagination, wherein alone the soul can see and be, in a manner, in touch with the Divine ordering and handling of the universe. It purifies awe and lifts reverence into its true and natural atmosphere, and, while it humbles man by showing him his insignificance, he is, at the same time, elevated by being enabled to see that, despite his littleness, he possesses something of grandeur in that he finds in himself points of contact with the Divine Mind in being able to perceive the wonderful order with which it works, and to appreciate and love the perfections of that order.

Such being the case, is it too much to think that one, seeing and admiring the Divine order and harmony manifest in the universe, as revealed to us by astronomy, will be influenced thereby to wish to see in his own life and conduct, public as well as private, something of those supernal qualities? It is impossible to think otherwise. It is an inalienable attribute of the best natures to aspire unceasingly to the better and higher; and it cannot be that they should study that marvellous reign of law—attuned, as we put it, in the language of human feeling, to music and the dance—which is for ever above our heads, like a school lesson to be learned, without wishing to bring down something of its beauty, something of its perfection, into our too often tumultuous earthly life. And is not desire the parent of effort? So I hold that astronomy would be a most valuable adjunct to our school studies—for the higher forms, of course. Taught in a broad and sympathetic manner, it might be made to do wonders for the future citizens of our world-empire. Emerson, in one of his thoughtful and suggestive essays, speaks about yoking an implement to a star, and making it productive for human needs. But how much nobler to hitch the minds of youth, so to speak, to the constellations in their ordered and harmonious courses, and so to use them as instruments for the perfecting of our civic and national life!

To some this may seem nothing but imagination, pure and simple, and yet it is not so; for, inasmuch as—and in so far as—we have the powers to comprehend and admire all the beautifully adapted machinery of the heavens, to that extent we have a certification and assurance of our ability to approximate thereto, if we will, in our own life and doings.

#### NOTES FROM PARIS.

THE British Educational Section at the Paris Exhibition is now in good working order. The Palais de l'Education et de l'Enseignement is admirably placed. It forms part of the great building in the Champs de Mars, with the Eiffel Tower marking the entrance, and the renowned Château d'Eau the opposite end of the rectangular ground-plan—the whole lying on the left bank of the Seine, opposite to and connected by the Pont de Jéna with the Trocadéro. On the ground-floor the fine arts are illustrated; the scholastic department is above. Here the space assigned to Great Britain is certainly very limited; but the exhibits are so admirably laid out that the arrangements, unlike those at the Imperial Institute, do not suggest any undue crowding—and this with every square inch occupied, even thus early in the day. The section is approached by a transverse gallery, free on both sides, and



about the centre, arranged in three parallel groups, the six screens assigned to Scotland and Wales are placed. Beyond this, and standing at right angles on the same gallery, are five screens provided with shelves which afford space for relics, modern mementoes, photographs, and representative specimens of work from the Universities, the great public schools, with the secondary schools for girls and boys, technical schools and Board schools, with their offshoots. At the end of this gallery, and lying at right angles to it along one main side of the building, recesses have been arranged for some admirable examples of photography; beyond these, again, astronomical, geological, and other scientific charts are similarly arranged. Space has been found to screen off a small office, and here Mr. Fabian Ware, Director of the British Section, and a French colleague attend in turns to answer inquiries. Close at hand are hung photographs representing four sections of the Franco-English Guild, and just in front of these Mr. Gladstone's famous examination paper is a very conspicuous object. Our nearest neighbours are Germany, with scientific apparatus, and France, with specimens from the *écoles normales*. The collection is a most interesting one, and remarkably free from a certain element of "dullness" that so often goes with purely educational exhibitions. There can, indeed, be only one opinion as to the arrangements in this department, viz. :—that they reflect great credit on those who are responsible for their practical working. It is, however, to be regretted that here, as at the Imperial Institute, Ireland is unrepresented.

Two recesses in the Education Section of the Paris Exhibition have an interest all their own, for they are furnished by the pupils of the Maisons d'Education de la Légion d'Honneur, whose position is unique among French schools. Founded by Napoleon, in the first decade of the century, for the children (orphaned or not) of the members of the Legion, they were organized, in every detail, by the War Minister, under whose control they still remain. There are three such *maisons* in France, all in the neighbourhood of Paris: one is at St. Denis, adjoining the famous abbey; another at Les Loges, in the very heart of the forest of St. Germain-en-Laye; the third is at Ecouen, in the famous *château* of the Montmorency family, close to the forest of the same name. Of these, St. Denis stands *facile princeps*, for only the daughters of superior officers are eligible, and the educational programme is the widest. Ecouen is occupied mainly by the daughters of active non-commissioned officers, reinforced by some whose fathers are subalterns, retired or on "half-pay" as commissioned officers. At Les Loges the technical side of education is developed, and the pupils are often the children of men in the ranks. At the present moment there are just under a thousand names on the books of the three houses, and of these a very small contingent is supplied by children of civilian members of the Legion. There are no religious restrictions, and education is free, with a few places reserved for paying pupils. All the schools are under the rule of the "headmistress," at St. Denis, and, once a year, the pupils are there gathered together to celebrate the national *fête*. The mistresses—*les dames* they are called—are almost exclusively chosen from among former pupils; most of them now hold the higher Government diploma. An Old Girls' Association is a recent feature of the system. "Famille," "Honneur," "Patrie," are the watchwords of all concerned; and, if the education is less "progressive" than in some of the best known girls' *lycées*, the moral tone is of the highest, and the standard of manners worthily represents this tone.

### MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held at the College, Bloomsbury Square, on May 16. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Barlet, Rev. J. O. Bevan, Mr. Bidlake, Mr. Brown, Dr. Buchheim, Mr. Charles, Miss Dawes, Mr. Eve, Miss Jebb, Rev. R. Lee, Mr. Millar Inglis, Rev. G. P. Pearce, Mr. Pinches, Rev. Dr. Poole, Mr. Rushbrooke, Rev. Dr. Scott, Mr. Storr, Rev. J. E. Symms, and Rev. J. Twentyman.

The minutes of the last meeting were read and confirmed.

The Diploma of Associate was granted to Miss A. V. Acocks, who had passed the required examination.

The report of the Examination Committee was adopted.

The report of the Education Committee was adopted.

The following persons were elected members of the College:—

Mr. G. W. Dolbel, A.C.P., Oxford Road, Basford, Stoke-on-Trent.

Miss A. G. Doré, 50 Gladsmuir Road, Highgate, N.

Miss M. E. Gutteridge, A.C.P., Baynard Castle, Gravesend.

Mr. T. Hay, M.A. Camb., B.Sc. Lond., A.C.P., 15 Broomfield Road, Chelmsford.

The following books had been presented to the Library since the last meeting of the Council:—

By G. BELL & SONS.—Bell's History Readers (Tudor Period); Bell's Reading Books (Scott's Ivanhoe); Liddell's Caesar, Book I.; Pearce's Selections from Ovid's Metamorphoses; Wainwright's Virgil's Æneid III.

By BLACKIE & SON.—South Kensington Drawing Sheets, Sets I., II., and III.; Cheetham's Elementary Chemistry (Second Year); Crosskey's Shaded Drawings of Models and Ornaments for Class-Teaching; Downie's Macaulay's Essay on Clive; Moore Smith's Shakespeare's King John.

By C. J. CLAY & SONS.—Plato's Education of the Young (Translated from "The Republic").

By W. B. CLIVE.—Hayes and Plautow's Horace's Satires.

By HACHETTE & Co.—Oger's Erckmann-Chatrian's Madame Thérèse.

By MACMILLAN & Co.—Brennan, Pickburn, and Brereton's Selections from English Poetry (1783-1853); North's Ebnor's Herr Walther von der Vogelweide Voegelin's Kurtz's Die Hummisten.

By RIVINGTONS.—Duhamel's Luzel's Deux Légendes Bretonnes.

Calendars of Queen's College, Galway, 1899-1900; Bedford College, London, 1899.

The Medical Register, 1900; The Dentists' Register, 1900.

## REVIEWS.

### SIR JOSHUA FITCH'S LECTURES.

*Educational Aims and Methods.* Lectures and Addresses by Sir Joshua Fitch, M.A., LL.D. (Cambridge University Press.)

All who have enjoyed the reading of Sir Joshua Fitch's former treatises will welcome this new volume with much expectation of entertainment and help, and they will not be disappointed. It may be true, as the author admits, that this collection "is more miscellaneous and less systematic in its character than the 'Lectures on Teaching'"; but there is not an uninteresting element in the work, and throughout it exhibits the high ideals of the functions of a school and the appreciation of the work of teaching which we associate with Sir Joshua Fitch. It shows in every part his perfect grasp of the situation described or explained with his usual lucidity and grace of diction. The volume consists of lectures and addresses given at various times before different academic audiences in England and America, and is fitly described by its title. This might be expanded with appropriateness into educational aims, methods, and aspirations of the past and the present, and their connexion with social and industrial necessities, religious controversies, and political events. The subjects may naturally be divided into three classes:—(1) Questions of method specially interesting to teachers; (2) questions which have recently formed the subjects of public discussion and are of general interest; (3) the biographies of some educational reformers.

First in the first section, and also first in the work, is the lecture on the "Methods of Instruction as illustrated in the Bible." The first point made in this interesting lecture is drawn from an analogy between the life of a nation and the life of a man. "What is true in the infancy of society and of nations is true also of the childhood of every human being. It is easier to enforce the observance of particular acts than to make their meaning intelligible." "There was a stage, a very early stage, in the history of the chosen people wherein what they needed most was positive injunction respecting abstinence from certain faults to which, owing to the special circumstances of their lives, they were most prone. There is a similar stage in the lives of the young." This view of the necessity of imposing commands without explanation in the beginning is followed through a transitional reference to Wordsworth's "Ode to Duty," to the further necessity of leading the pupil to recognize as early as possible the *value* of the injunctions he is expected to obey.

The author, however, fails, we think, to trace in the Book of Proverbs what was, after the period of mere injunction, the first sketch of a system of education. His view that the proverb is less effective as an instrument of teaching than direct injunction, that there is an air of paradox and unreality about it, and that it is more interesting and intelligible to older people than to children, is not in agreement with the experience of many teachers who have freely used the proverbs. It is perfectly true that the proverbs and the scheme of education cast by the Book of Proverbs apply to different ages, but a judicious selection may well be used even with our younger children. It is, perhaps, no aim of the author in this lecture to go beyond the "Methods of Instruction as illustrated in the Bible," but as he dwells on the characteristics of Hebrew poetry, and discusses in connexion with this the question, "What poetry is suited for children?" it would require but a little advance to consider the use of Bible studies as part of a literary training, and a means of perfecting style. Illustrations of this influence may easily be drawn from the prose writings of Matthew Arnold, one of Sir Joshua Fitch's favourite authors, and from those of many others.

In the first section of subjects are a lecture on "The Evolution of Character," in which, for once, Sir Joshua surrenders himself to a scientist's point of view, and discusses the main items of the modern creed of evolution; another on "The Training of Reason," which is in Sir Joshua's best form; and a lecture on "Hand Work and Head Work," that is to say, manual and technical instruction.

The second class of subjects deals with endowments, and all

the vexed questions of their use and abuse, the University Extension Movement and its relation to schools, the Sunday school of the future, and higher education of women. On all these subjects we recognize that the author has said what he ought to have said.

The third section consists of the lectures on Socrates, Ascham, Joseph Lancaster, Pestalozzi, and Edward Thring. The first four are frequent and familiar subjects of our author; the times, the character, and methods of Socrates is perhaps his favourite subject, and yet it is ever fresh when coming from him, and never more so than in this last casting of the lecture. We yet have something to learn from Athens. The lecturer has had much reason to know and appreciate the work and character of Lancaster, for in the fifties, when Sir Joshua was Principal of the Borough Road College, there were on his Committee a number of aged Quakers who had known Joseph personally, and who had pleasant recollections of him and much reverence for his memory.

The lecture on Pestalozzi is all too short. We have several biographies of Pestalozzi—for instance, Baron Roger de Guimps', translated by Margaret C. Crombie, and J. Russell's work—but this life has not yet been treated fully with such judicious estimation and spiritual sympathy as Sir Joshua Fitch always brings to his criticisms. His appreciation here is a little qualified. He tells us: "There is no finality in the system of Pestalozzi. He saw with intense clearness some fundamental truths, but he could not see all the practical applications of those truths." This must be true of all living educational systems and of every educational reformer. A system which is "final" is dead, and no mortal can see beyond the veil and live. Pestalozzi himself was conscious of his defects. He says he was deficient in sustained attention, reflection, circumspection, and forethought. His views of life and the world, taken from his mother's parlour, were necessarily limited. The want of practice in boyish sports made him awkward. Yet, although his schoolfellows called him "Harry Oddity of Foolstown," they loved him for his good nature and obliging disposition. Later in life, believing that all people were like-minded with those of the home from which he took his standard, he trusted everybody, and was often mistaken and deceived.

We have not space in which to consider the lecture on Thring, but we commend it to our readers. In this, as in all the lectures of the book, there is evidence that the natural limitations to the use of all schemes and methods, the dangers of excess or abuse, the transient influence of the personality of the apostle or founder, are weighed with an impartial and matured judgment and explained with great clearness and perfect taste.

#### GIBBON EDITED.

*The History of the Decline and Fall of the Roman Empire.* By Edward Gibbon. Edited, with Introduction, Notes, Appendices, and Index, by Prof. J. B. Bury. (Methuen.)

When a professor of history edits an eighteenth-century historian for readers of the twentieth century, he testifies not merely to his own opinion of the original text, but also to the fact that scholars and men of judgment continue to find it both readable and trustworthy. Hume and Robertson "we laud as classics and leave on the shelves." Gibbon also is a classic in the literary sense; a balanced and musical writer of prose, and the literary progenitor of Macaulay. But we keep him "on the line" in our libraries, and do not shy him on the somnolent upper shelves. That is because he stands the test of time; the more we read him the more we find how much labour he gave to his task, how clear, as a rule, was his judgment, and how careful he was in his statement of facts.

In one important respect we believe that Gibbon substituted a prejudice for the impartial exercise of his judgment. The moral of his history is defined in his own epigram: "I have described the triumph of barbarism and religion." He lamented the breach of continuity in the development of human society along the lines of the classical spirit and "pagan" thought, of which Marcus Aurelius was the highest outcome. For this breach of continuity the Northern barbarians and Roman Christianity were responsible. Instead of progress he found retrogression; and, not content with watching the inevitable evolution of facts, recognizing the necessity of the struggle, acquiescing in the victory of the Teutons and Scandinavians, and balancing the ultimate benefits of this victory against the temporary suppression of Roman literature, culture, and philosophy, he expended on the Christian Church a vast amount of sarcasm, bitterness, and scorn.

Prof. Bury in some sense re-states and defends Gibbon's position:—

To attempt to deny a general truth in Gibbon's point of view is vain; and it is feeble to deprecate his sneer. We may spare more sympathy than he for the warriors and the Churchmen; but all that has since been added to his knowledge of facts has neither reversed nor blunted the point of the "Decline and Fall." Optimism of temperament may shut the eyes; faith, wedded to some "one increasing purpose" which it shrinks from grasping, may divert from the path of facts. But, for an inquirer not blinded by religious prepossessions, or misled by comfortable sophistries, Gibbon really expounded one of the chief data with which the philosophy of history has to reckon. How are we to define progress; how recognize retrogression?

It is not quite evident what Prof. Bury means by saying that it is feeble to deprecate Gibbon's sneer at the Church and Christianity. The question raised is one of historical interpretation. Gibbon was an eighteenth-century man; if he had lived to-day, his attitude would have been different. The historical instinct makes one desire to follow facts and interpret them, quite apart from our own predilections and prejudices. The historian describes the past, and knows that it led to the present. If he goes on to say: "I wish it had been otherwise," he may be well worth listening to, but, for the moment, he is no longer a historian. The "faith" which sees a steady purport in history, and grasps that purport as being the working out of physical and psychological laws, producing wisdom from experience and settled institutions from freedom, cannot be, as Prof. Bury says, diverted from the path of facts. On the contrary, it abides by the facts whatever they may be, and sees them "co-operating to an end"—not the end which it wishes, or a vague end which it shrinks from grasping, but an actual and definite end for each individual born into the world—the summation of a series whereof he or she is merely the last term.

We have been betrayed into what reads like a reflection on Gibbon by Prof. Bury's implied defence of what is really the weakest part of his "History." But we hasten to say that the editor's introduction of sixty-eight pages is a very interesting, a moderate and impartial estimate of the qualities of Gibbon as a historian. It shows the limitations of "the greatest history of modern times"; it allows that Gibbon would probably have taken a somewhat different standpoint if he had lived a hundred years later; it grants his cynicism and reserve of sympathy:—

It is well to realize that the greatest history of modern times was written by one in whom a distrust of enthusiasm was deeply rooted, and who regarded history as "little more than the register of the crimes, follies, and misfortunes of mankind." This cynicism was not inconsistent with partiality, with definite prepossessions, with a certain spite. In fact, it supplied the antipathy which the artist infused when he mixed his most effective colours. The conviction that enthusiasm is inconsistent with intellectual balance was engrained in his mental constitution, and confirmed by study and experience. It might be reasonably maintained that zeal for men or causes is an historian's marring, and that "reserve sympathy"—the principle of Thucydides—is the first lesson he has to learn. But, without venturing on any generalization, we must consider Gibbon's zealous distrust of zeal as an essential and most suggestive characteristic of the "Decline and Fall."

That is admirably judicious, and, so interpreted, we can accept all that Prof. Bury says of Gibbon's virtues. He is "still our master, above and beyond 'date.'" The editor's added notes, his valuable appendices of authorities and sources, and the very excellent index of 164 pages by Mrs. Bury complete an edition of Gibbon which is, on its own account, a precious and indispensable contribution to history.

#### THE OLDEST ARYAN.

"Short Histories of the Literatures of the World." Edited by Edmund Gosse, LL.D.—Vol. IX. *A History of Sanskrit Literature.* By Prof. Arthur A. Macdonell, M.A., Ph.D. (Heinemann.)

The Boden Professor of Sanskrit at Oxford gives us in this volume almost the first English history of Sanskrit literature—the prehistoric literature of the Hindoos, which was before we know anything about them except that they were. It is true that Prof. Max Müller wrote an account of "Ancient Sanskrit Literature" many years ago, confined to the Vedic age, which was at the time of its appearance a revelation to Englishmen. Since then there has been much research, and a great classification of ideas. German as well as English scholars have been at work, Prof. Macdonell amongst them. There was consequently

a clear demand for such a volume as this, which is at once a summary for the student and an attractive literary survey for the cultivated reader. A hundred years ago, it is to be remembered, we knew next to nothing of Sanskrit. H. T. Colebrooke laid the foundations of our exact knowledge of the language, which we now rightly regard as the key to Hindoo character, thought, and religion. "Vedic" literature, in the simple meaning of the words, implies nothing more or less than the Hindoo "Scriptures." The Scripture of India is less narrative and historic than the Syrian Scripture, but it is equally valuable as a guide to the religious and moral thought of the writers and their contemporaries. The "Rig-veda," the oldest Sanskrit book, may be described as the Hindoo Book of Psalms—the "Verse Scripture." It is a collection of hymns in praise of the gods, which were used as an accompaniment to the offering of *soma* juice and melted butter, the oblation or sacrifice of the mild Hindoo. The "Sama-veda" and "Yajur-veda" were also in the nature of service-books, mainly based on the "Rig-veda." The "Atharva-veda," roughly corresponding to Apocrypha as compared with canonical books, is a book of incantations, not to say exorcisms, addressed to the demon-world. Such are the four sections of Vedic literature, which, representing religious ideas at an earlier stage than any other literary monuments of the ancient world, "are of inestimable value to those who study the evolution of religious beliefs."

The "Brahmanas" are the later prose works of the Hindoo priesthood, comprising a very complex ritual—*brahman* signifying "devotion" or "prayer." As the "Vedas" give us the oldest poetry of the Indo-European family, so the "Brahmanas" give us the oldest prose. As to their substance, there need be no illusion: "they form an aggregate of shallow and pedantic discussions, full of sacerdotal conceits, and fanciful or even absurd identifications"; whereas the "Vedas" are "poetical in matter and form," and their thought is, on the whole, "natural and concrete." Next to these elements of Sanskrit literature come the "Sutra"—"threads" or "clews" of ritual, the record of practice and traditional ceremonial, which are reckoned amongst the sources of Indian indigenous law. Lower down the stream of time we come upon the epics, lyric poetry, drama, philosophy, science, and fables.

Prof. Macdonell supplies many illustrations of Sanskrit poetry, rendered by himself in metre, though without attention to rhyme. Here from the "Atharva-veda" is an incantation for the bedside of a sick person:

Just as a yoke with leathern thong  
They fasten on that it may hold:  
So have I now held fast thy soul  
That thou may'st live and may not die,  
Anon to be unhurt and well.  
Downward is blown the blast of wind,  
Downward the burning sunbeams shoot,  
Adown the milk streams from the cow,  
So downward may thy ailment go.

Here is a sleep charm:

The man who sits and he who walks,  
And he who sees us with his gaze,  
Of these we now close up the eyes,  
Just as we shut this dwelling-house.

The reader will find a varied interest in Prof. Macdonell's book. For the student it is rendered doubly valuable by an appendix on the authorities for Indian technical literature, law, history, grammar, mathematics and astronomy, medicine, and the arts, as well as by a series of general bibliographical notes.

#### NEW PROBLEMS FOR THE NEW WORLD.

*Colonial Civil Service: The Selection and Training of Colonial Officials in England, Holland, and France.* By A. Laurence Lowell. With an account of the East India College at Haileybury (1806-1857), by H. Morse Stephens. (Macmillan.)

Victories, like a great many other things, are apt to produce more difficulties than they solve. Certainly, since the decent interment of the late General Monroe, the new questions which have to be met by the United States are numerous, and not the least difficult of these is the one which Mr. A. Laurence Lowell has placed before his readers in this volume. Mr. Lowell's method of dealing with his subject is excellent and convincing. He begins by a review (with evident knowledge) of the methods of training adopted by the various colonizing nations of modern times, and then proceeds to apply what lessons can be drawn from them to the conditions which obtain in his own country.

If it be necessary that America should become a colonizing power (and it appears now inevitable that it must be so) it is well

that she should at least realize how large is the responsibility which she is undertaking, and prepare to play her part well. Mr. Lowell has gone through the systems of England, Holland, and France to obtain information. With regard to the last of these, we may observe at the outset that the French system has not yet had time enough to prove useful for purposes of comparison. Of the English system it is to be recollected that there are two perfectly distinct methods which have been used in supplying the Indian Civil Service (and in some senses that of the Colonies), namely, that of patronage and that of competitive examination. Both these systems have their special value, and to-day some of us are not quite so certain as Macaulay was that the method of getting the best article is always by open competition. In the second part of the volume there is a most interesting review by an old Cambridge man, H. Morse Stephens, perhaps the greatest authority we have on Indian history, of Old Haileybury, the college of the East India Company. He thus sums up what he has to say on this subject: "It appears clearly from this history that the patronage system produces . . . results not inferior to open competitive examination." No doubt there was less danger of that quagmire of all education, cramming, being resorted to under the system of qualified patronage than there is under that of open competition.

After a full consideration of both the English systems, Mr. Lowell feels that, admirable as they are here, they are not suited to the United States. The difficulties to be overcome there are, first, that the habits of thought of our cousins are entirely different from our own.

In England there is a strong feeling against making appointments to public office on the ground of personal favouritism, and, on the other hand, there is no serious opposition to basing appointments on a standard of scholarship which practically confines them to a small educated class. . . . In America the popular feeling is very nearly the reverse on both these points.

They have no objection to patronage in itself, and they would regard any high educational standard as being a perfectly indefensible piece of class legislation. "They would have little jealousy of a system of favouritism which virtually confines appointments to the men who have influence with politicians;" and they hold that even if an educational standard could be established it would be practically impossible to maintain it. If it were placed at the standard of the best educational establishments of America, the jealousy of the lesser States Universities would be at once aroused, and political machinery would be put in force to lower the standard.

Mr. Lowell is of opinion that the only solution of the difficulty, as far as America is concerned, is the foundation of a special College something after the style of old Haileybury. He proposes that entrance to this shall be by nomination as in the cases of Annapolis and West Point; that after nomination the educational standard in the college should be kept at a high standard, quite as high as that of the best Universities; and he most aptly points out that for those who are destined to make their career far from home the inestimable advantage of an *esprit de corps*, which cannot be obtained under the system of open competition, is almost an essential. He observes that the life of the civil servant in the colonies is entirely different from anything which is usual in the United States. "There are no men in the United States whose ordinary vocation is ruling Asiatics, or whose normal occupation involves the art of administering dependencies." And, therefore, he holds that the pay and conditions of pension, &c., should be so good as to justify the best men in giving their lives to the Colonial service, and that then they should be so trained both in general culture and in special training that the best possible results may be obtained from them.

#### REVISED TEXTS.

- (1) *Æschyl's Tragediæ, cum fabularum deperditarum fragmentis, postæ vita, et operum catalogo.* Recensuit Arturus Sidgwick. (Clarendon Press.) (2) *Corpus Postarum Latinorum a se aliisque denuo recognitorum.* Edidit J. P. Postgate. Fasc. III. (Bell.)

(1) Mr. Arthur Sidgwick's edition of *Æschylus* is a valuable piece of work, and confirms the good opinion we have formed of the "Oxford Classical Texts." Starting, of course, from the *Medicean*, he has supplemented its deficiencies with the readings of later MSS. and—where all fail—with conjectural emendations. The result is a far more scholarly text than that familiarized by the editor's well known school edition of separate plays. With regard to the conjectural emendations, it is inevitable that

there should be wide difference of opinion. The corruptions in the text of Æschylus are so serious that it is absolutely necessary to draw somewhat freely on the *fontes perennis* of conjectural emendation; and what, in the case of such a text, appears to one scholar a probable emendation may very well appear to another altogether unlikely. We have long regarded Mr. Sidgwick as a conservative—almost a high old Tory—in textual matters; and in editing this text we cannot but think that he must occasionally have been surprised at his own boldness. Still, it is needless to say, he does not go to such lengths as Wecklein and Nauck; and on the whole his text is a very satisfactory compromise between the excessive fidelity of Dr. Verrall and the reckless depreciation of manuscript authority in which the most advanced editors indulge. A noteworthy feature of the book is the inclusion of the Fragments, which will be welcome to more advanced students and add much to the value of the work.

(2) Speaking generally, the critical apparatus of the new Corpus of the Latin Poets is on a more extensive scale than that of the Oxford series of texts. The volume before us contains Grattius, Manilius, Phædrus, the "Aelna," Persius, Lucan (including the Fragments), and Valerius Flaccus. The volume, admirably edited under the general direction of Dr. Postgate, is a monument of industry, and is highly creditable to all concerned in its production. We trust that it will not be many years now before this great work is completed, and we congratulate Dr. Postgate on the progress that he has already made. In an interesting preface *benevolæ lectori*, he apologizes for the long interval that has elapsed since the preceding *fasciculus* appeared. But nobody who knows the immense trouble that is involved in the preparation of such a work as this will think the apology necessary. Both of these important works will take their place among the books indispensable to the English student.

## GENERAL NOTICES.

### CLASSICS.

"Illustrated Classics." Edited by E. C. Marchant.—*Vergil's Æneid*. Book I. Edited by E. H. S. Escott. Book III. Edited by L. D. Wainwright. (Bell.)

There is a good deal of difference between these two volumes of Bell's "Illustrated Classics." Neither of the introductions reaches a high standard, but it is by no means easy to make points on so wide and complicated a subject in a way that appeals to schoolboys. Both editors accept the common idea of the character of Æneas, without making an effort to appreciate and explain Vergil's point of view. It is just possible that a great artist like Vergil failed in an essential point; to assume offhand that he did so is inadequate criticism. The late J. R. Green, in one of his charming "Stray Studies," has, it seems to us, made out a very good case for the much-abused hero. As the series is probably to include most of the books of Vergil, it might be worth while for the general editor to consider whether it is not desirable to prefix to each of them an identical introduction, drawn up with extreme care, such as he himself could give us. When we come to the notes the difference is striking. Mr. Wainwright's extend to ninety pages, in which he makes careful and scholarly use of his materials, and shows judgment in dealing with conflicting interpretations. Perhaps he may even have gone a little too far in this direction for an elementary edition. Mr. Escott has but twelve pages; the help given is scarcely sufficient in amount, and there are several examples of inaccuracy and poor translation. Thus, in "officio nec te certare priorem pœniteat," *priorem* is called proleptic; in "dederatque comam diffundere ventis," *diffundere* is said to be epexegetic of the single word *comam*; and the familiar "vera inoessu patuit dea," is rendered "by her gait the true goddess stood revealed," as if *dea* were the subject. Again, one can hardly approve *talia moliri*, "to act thus"; or *fertur equis*, "is run away with," which does, no doubt, appear in Page, but not as a translation. Nor is it satisfactory to say that in "erumpere nubem," *nubem* is in the accusative after the transitive sense of *rumpere*, "to burst the cloud and come forth."

*The Satires of Horace*. Edited by B. J. Hayes and F. G. Plaistowe. (Clive.)

This edition is evidently intended for pass students. No difficulty is passed over; indeed, many comparatively common constructions, which ought to be familiar to a schoolboy sufficiently advanced to read the "Satires" with profit, are explained. The work seems to be done with accuracy and judgment, so far as it goes, but one misses the literary flavour and delicate taste which characterize the editions of Dean Wickham and Prof. Palmer. To the latter the editors would seem to be under considerable obligations; but there is a large stock of common matter on which every editor of Horace must draw. There is nothing about the book to indicate that it is a labour of love.

*Selections from Ovid's Metamorphoses*. Edited by J. W. E. Pearce. (Bell.) This volume of Bell's "Illustrated Classics" contains the stories of Pyramus and Thisbe, Philemon and Baucis, Midas, and the search of Ceres for Proserpine. The introduction is brightly written, and includes short specimens of Golding's, Garth's, and King's translations, which a teacher might make very instructive. The notes are clear and scholarly, and some, like that on *longa mora est*, show considerable power of dealing with schoolboys' difficulties. What is especially to be commended is the abundance of illustrative quotations from English poetry, both in the notes and in the short and interesting introductions to the several extracts. Nothing contributes more to the highest objects of classical teaching. The illustrations are plentiful and good; though, perhaps, it is doubtful whether a mulberry-tree and a lizard from Nature need have been included. It is to be regretted that the "Metamorphoses" take so small a place in school reading. They are not harder than the "Æneid," and contribute more to the knowledge of classical legend, in which schoolboys are generally so deficient. Examining bodies might take a hint.

*Greek Testament Reader*. By T. D. Hall. Second Edition. (Murray.)

This is an unpretentious, but judiciously compiled, little manual, which is very well fitted to assist those who, "not having the advantage of systematic instruction, are yet desirous of acquiring the power of reading the New Testament in the language in which it has been preserved to us." The short notes at the foot of the text explain every difficulty in a clear and really helpful manner; and Mr. Hall wisely refrains from pointing a moral, and from long illustrative quotations. The book is suitable for use also in the middle forms of schools. Indeed, it would give a better insight into the general contents and teaching of the Gospel narrative and the Epistles than can be got from plodding through successive books. There are no passages from the Acts of the Apostles.

*Herodotus, Book II*, translated by J. F. Stout (Clive), is a fluent rendering from Stein's text. Mr. Stout is a useful acquisition to the staff of translators engaged by the University Correspondence College, for he manages to be quite literal without degenerating into the ancient, but now happily discarded, style of dear old Bohn. But Mr. Stout cannot write English hexameters, as the following lines will show:—

"These, prepared with such skill, were the drugs of Zeus-born Helen,  
Excellent drugs, the gift of Thonis' wife, Polydamna,  
Egypt's queen; for there the fertile meads yield abundant  
Drugs, some good when mixed in the wine-cup, others as baneful."  
The last line is the only one that is satisfactory as a hexameter.

### SCIENCE.

*An Introduction to Science*. By Alex Hill, M.D. (Dent.)

We are not quite sure of the title of this little book, as there appear to be two title-pages, with variations. Both, however, describe it as "an introduction," so that when we read in the preface that, "if read without previous training or study, this book can hardly fail to be misleading," we feel somewhat bewildered. The frankness of the warning, at any rate, disarms our criticism, and leaves us free to say that there are many things in the book that are interesting, some that are new, and others which, though old, are retold so as to be worth the retelling. But when we take the book as a whole we are puzzled to say for whom it is written, and must leave each of our readers to form his own judgment from the above quotation.

(1) *An Elementary Course of Practical Zoology*. By the late T. J. Parker and W. N. Parker. (Macmillan.) (2) *A Manual of Zoology*. By the late T. J. Parker and W. A. Haswell. (Macmillan.)

These two books on zoology, alike in external appearance and in the presence, on the title-page, of the late Prof. Jeffery Parker's name as joint author, are otherwise altogether unlike. (1) The first is on the lines originated in Huxley and Martin, and familiar by the name of "type-system." It combines descriptions of a limited number of animal species, written so as particularly to bring out the broad biological laws which they illustrate, with instructions for the dissection and microscopic examination of them. The "types" selected are those set down in the syllabus of the Intermediate Science and Preliminary Scientific Examinations of London University, with one omission—the skull of the dog. In spite of this solitary omission, the book is likely to become the standard text-book for those examinations, as it leaves nothing to be desired in clearness of statement. There are many illustrations, not a few of which are new.

(2) The other book deals not with selected animals, but with the whole animal kingdom, and is in large measure a condensation of the great text-book of the same authors. Considerable care has been devoted to the condensation, and the plan of treatment varies with the different animal groups. Sometimes we find detailed description of a central type, followed by a statement of the main variations from this; at others, a generalized account of the whole group. Some of the small and unimportant divisions are omitted. Those who have wished for something smaller than the big "Parker and Haswell" will welcome the present manual. Digitized by Google

## MATHEMATICS.

*The Teaching of Elementary Mathematics.* By David Eugène Smith, Principal of the State Normal School at Brockport. (Macmillan.)

This is a work of three hundred pages, showing how the subjects included as elementary mathematics have developed in history, and how they have been used, and are being used, in education. It deals in succession with arithmetic, algebra, and geometry, and endeavours to answer for teachers such questions as—Whence comes the subject? Why am I teaching it? How has it been taught? What ought I to read in order to be duly prepared to teach it? The critical treatment of these questions will help to stimulate teachers to revolt against some antiquated customs, and to desire more rational methods. According to the author, it seems that America, following England's lead, has gone into problem-solving too extensively, neglecting the logic of the subject, which, both educationally and scientifically, is the most important part of it. The historical outline is not as well ordered as it might be, and the earlier treatises, which are worth noting for their clearness of exposition and for the amount of Latin and learning expended on them, are not mentioned. For instance, the earliest in our language is "The boke called the boke of algorym or Angrym after lewder use. This boke tretys the Craft of Nombryng" (Egerton 2622). The explanation of numeration there given is as follows:—"Every figure & he stonde aftir a nother toward the lyfte side he schal betakene ten tymes as much more as he schul betoken & he stode in the place there that the figure afore hym stonde. Loo an ensampulle 9634. The figure foure that has his schape 4 betokens bot hymselfe for he stonde in the first place. The figure of thre that has his schape 3 betokens ten times more then he schuld & he stode there as the figure of 4 stonde that is thretty"; and so on until the number is read "Nine thousande sex hundryth & thretty & foure." All the simple rules are explained with equal fullness, and some outline of their methods seems essential to a work sketching the various ways in which the subject has been taught in the past. A very useful chapter is the last, which is headed "The Teacher's Bookshelf."

*Longmans' Elementary Algebra, up to and including Quadratic Equations.* By Wm. Geo. Constable, B.Sc., B.A., and Jas. Mills, B.A. (Longmans.)

The chief feature of merit in this elementary text-book is the carefully graduated sets of exercises and examples. The authors have omitted formal proofs when such proofs contain difficulties for beginners; but they have carried their caution in this respect further than is advisable in several cases. For instance, the rule of signs for multiplication is laid down as follows:—"The following rule must be observed: If the signs of the two quantities be alike, the sign of the product is +," &c. Not a word is said which will help the beginner to see some reason for the rule; and rules without reasons are out of place in algebra.

*Algebra: An Elementary Text-Book for the Higher Classes of Secondary Schools and for Colleges.* By G. Chrystal, M.A., LL.D., Professor of Mathematics in the University of Edinburgh. Part II. Second Edition. (Black.)

When Prof. Chrystal's work first appeared it was at once recognized as an epoch-making book as regards algebra, rendering the subject exactly serviceable as herald and pioneer for the recent rapid developments of the higher mathematics. The experience of a few years has confirmed all teachers in this estimate of its value. "Algebra is generous," says D'Alembert. "L'algebre est généreuse; elle donne souvent plus qu'on ne lui demande." The truth of this saying is emphasized by the work of Prof. Chrystal. The subject has now become an unrivalled training in consecutive and sustained mathematical reasoning. The second edition now before us develops further the theory of series with a view to rendering it more useful to students proceeding to study the theory of functions. A sketch of the modern theory of irrational quantity is added to the chapter on limits, and forms a sound basis for the subsequent structure of pure analysis in its most modern form.

## MODERN LANGUAGES.

*Lamartine: Scènes de la Révolution Française.* Edited by O. B. Super. (Isbister.)

Mr. Super has made a good selection of chapters from the "Histoire des Girondins," including only such portions of the larger work as are not open to criticism on account of their inaccuracy. They relate exclusively to Louis XVI. and his family. There is a short biographical sketch; it is strange to find no mention of "Jocelyn." The notes are mainly historical, and are kept within reasonable bounds.

*Contes et Saynètes.* Edited by T. F. Colin. (Ginn.)

A useful selection of fourteen short stories and four slight dramatic sketches, all taken from writers of the present day, and suggesting the more harmless *contes* published in such papers as *Le Journal*. They are suitable for rapid reading, and will help to increase the vocabulary. There are a few notes at the foot of the page, with renderings or explanations; the list of words at the end ought to be fuller.

*French Prose of the Seventeenth Century.* Selected and edited by F. M. Warren. (Isbister.)

While there are numerous editions of dramas of the "classical"

century, there has hitherto been a lack of books introductory to the study of the prose-writers of this period. Mr. Warren's selections from the works of Descartes, Pascal, La Rochefoucauld, Bossuet, and La Bruyère can warmly be recommended for use in the highest classes of schools and at the University. There is a convenient introduction, perhaps a little too brief, dealing with these writers, and the notes have been written with care and will be found helpful to the young student.

*An Elementary French Grammar.* By G. E. Fasnacht. (Macmillan.)

This book gives the essentials of French grammar in little more than a hundred pages. It is carefully printed and skilfully arranged, and should serve well for purposes of reference, especially as far as the accident is concerned; in the sections devoted to syntax the endeavour to put things concisely has led to some rather serious omissions.

*Lehrbuch der Deutschen Sprache.* By A. Werner-Spanhoofd. (Isbister.)

The author's system stands midway between the classical method and that of the extreme partisans of the *neuere Richtung*. His principle is that each lesson should teach one grammatical fact or set of facts. With this view, he begins each chapter with a *development lesson*—i.e., a few short sentences, from which the rule or principle—for instance, the government of *an, auf, &c.*—is to be gathered. This part of the process, he thinks, should be done as much as possible in German—indeed, after a few lessons, the explanatory remarks are given in German. It is doubtful how far this is wise; to talk about grammar in German would seem to be out of the range of beginners. The book, however, is so arranged that the teacher can please himself on this point. Then follow reading exercises, longer sentences or anecdotes, still harping on the same string; then the grammar in English, vocabulary, and exercises. The exercises consist partly of German sentences to be completed, partly of English sentences to be translated. The plentiful supply of such exercises makes the book very useful for oral, as well as for written, work. The book is, on the whole, a good one; and the author tells us that it has been practically tested. But one may doubt whether it is effective in teaching the declension of nouns, or even that of adjectives. Two chapters for the former and a single chapter for the latter are hardly sufficient. It would have been better to spread the nouns, group by group, over a number of chapters dealing with other points.

*Walther's Allgemeine Meereskunde.* Edited by Miss S. A. Sterling.

(Isbister.)

A knowledge of German is indispensable to a scientific man. Probably that is the reason why the University of London has of late years done its best to exclude it, at least in practice, from its Matriculation Examinations. While school reading should be mainly literary, it is a distinct advantage if a boy destined for scientific studies can gain, before leaving school, an elementary knowledge of the commoner technical words and phrases he is likely to meet with. This abridgment of Walther's "Physiography of the Sea," to use the nearest English equivalent to *Meereskunde*, is, therefore, a welcome addition to our list of reading-books. The chapters on marine fauna and flora supply a biological vocabulary, while those on the saltiness of the sea, on icebergs, and on denudation and volcanic islands, introduce the reader to chemical and geological terminology. At the same time, the subject-matter is far more valuable than that of many of the story-books now in vogue. Even Hauff's "Karavane" might often give place to it with advantage. The notes and vocabulary are fairly useful, but might easily be improved. Translations like "mountain of folding," for *Faltengebirge*, "horsts" for *Horste*, "land-complexes" for *Landkomplexe*, "laterite" for *Laterit*, are not helpful; while it is quite unnecessary to translate *Kreta* or *Sauerstoff*, or to say where St. Helena and Formosa are situated. What is really wanted is an explanation, and not merely the English equivalents, of technical terms outside the vocabulary of an educated man with no pretension to specialist knowledge.

## MISCELLANEOUS.

*Our Great City, or London the Heart of the Empire.* By H. O. Arnold-Forster. (Cassell.)

The place of London in the world, and of Londoners in the history of the world, with a general description of the city, are the main features of this excellent little book. The author's forte is the clear arrangement of details. If anything, Mr. Arnold-Forster is too comprehensive; but this is a fault on the right side. There are chapters on municipal government and education, and a suggestive chapter on London as it might be. Altogether, it is an arresting and stimulative reading-book.

"Temple Encyclopædic Primers"—*The Civilization of India.* By Romesh C. Dutt, C.I.E. (Dent.)

An excellent volume of an excellent series. Mr. Dutt takes us through the Vedic and epic ages, the "age of laws and philosophy," the rise and progress of Buddhism, the Puranic and Rajput ages, the Afghan, Moghul, and Mahratta ascendancies. The story is fascinating; the author has told it very well, and the illustrations are very attractive. "Handbooks to the Bible and Prayer Book." Edited by the Rev.

Bernard Reynolds, M.A.—*Handbook to Joshua.* By the Rev. G. H. S. Walpole, D.D. (Rivingtons.)

A good book for teachers, arranged in a series of chapters with



text and notes, followed by lessons on the matter and method of each chapter, and "blackboard sketches" of moral inferences. The system is a little elaborate—which is all the better for the teacher.

(1) "Bell's History Readers."—*English History during the Tudor Period, 1485–1603.* (Bell & Sons.) (2) "Waverley School Series."—*Alternative Historical Reader, Book II.* (McDougall's Educational Co.)

The former of these two volumes gives a simple narrative for young readers, which is printed in good bold type, well illustrated, accurate, and sufficiently comprehensive. The summaries of the lessons are useful, and the book may be commended. The "Alternative" Reader comprises British history from 1603, with a *résumé* of the earlier period. It is well printed and specially well illustrated. The lessons are accompanied by a few definitions and words for spelling.

"The Pedagogical Library."—*Organic Education: a Manual for Teachers in Primary and Grammar Grades.* By Harriett M. Scott, assisted by Gertrude Buck, Ph.D. (Isbister.)

An educational report, of American origin, describing a plan of work based on actual experiment, in Detroit. It is pedantic, but at the same time practical and suggestive.

*The Abbey Church of Tewkesbury, with some Account of the Priory Church of Deerhurst, Gloucestershire.* By H. J. L. J. Massé, M.A. (Bell & Sons.)

A well written guide to two very interesting ecclesiastical buildings. This is one of the continuation series of volumes uniform with "Bell's Cathedral Series." It has forty-four excellent illustrations.

*The ABC of Drawing and Design.* By F. G. Jackson. (Chapman & Hall.)

A series of ruled drawing books and cards for graduated copying of designs, arranged for elementary standards.

*Art Studies of Animals, Plants, Common Objects, and Conventional Forms.* (Macmillan.)

This is a book of somewhat promiscuous copies for freehand drawing, with a few plain instructions in what are called the "principles of ornament." The idea is good, and it is well worked out.

*A Practical Method of Teaching Geography. Book II.: Europe.* By J. H. Overton. (Cassell.)

Outline maps of Europe in different aspects, and portions of Europe, each map being covered by tracing paper, so that the learner may go over the ground with his pencil. There are also directions for systematically exercising the memory.

*Penmanship for Pupil-Teachers, &c.* By A. H. Garlick, B.A. (McDougall's Educational Co.)

Copies and directions. There are notes at the foot of each page, intended to fix the attention of the writer. The plan is good; the "hand" is nearly perpendicular, and very distinct.

*Scarlet and Blue; or, Songs for Soldiers and Sailors.* Edited by John Farmer. (Cassell.)

The editor of "Gaudeamus" and "Dulce Domum" has here collected the words and music of nearly a hundred old English songs for soldiers and sailors, or dealing with them. He has also added thirteen regimental songs specially annexed by as many different regiments. The book is consequently full of old favourites, whose titles are household words, and whose airs are fixed in the memories of all. Notes and type are excellently printed, and the volume is a store of good things.

*The Army and Navy Musical Drill.* By A. Alexander. (Philip & Son.)

A very serviceable book of exercises for boys, well illustrated and explained, and accompanied by some of the best tunes (without words) by Arne, Boyce, Donizetti, and others. This is a capital book for its purpose.

*Cassell's Guide to London, and Cassell's Guide to Paris and the Universal Exhibition of 1900.* (Cassell.)

These are two good guides, clear and cheap, with plans and many illustrations. They are in paper covers, or they could not be so cheap; but they will easily survive a few weeks of daily use. There will be plenty of need for them in the coming season.

"Arnold's School Series."—*Passages for Dictation, selected from the Works of the best Prose Writers for Advanced Students.* (Edward Arnold.)

A handy little book of 167 passages in two parts, one set more difficult than the other. Some of the pieces were set in Queen's Scholarship and Teachers' Certificate Examinations, but most of them are specially selected. The authors should have been quoted in each case.

"The World's Epoch Makers."—*Cranmer and the Reformation in England.* By Arthur D. Innes, M.A. (Edinburgh; Clark.)

The idea of this series cannot be regarded as original; but there is, perhaps, still plenty of room for short biographies of the central men of important periods. Mr. Innes gives us not so much a life of Cranmer as an account of the ecclesiastical period in which he was prominent. He has done his work very well, and the volume may be found useful.

*Great Books as Life Teachers.* By N. D. Hillis. (Oliphant, Anderson, & Ferrier.)

Mr. Hillis gives us here a collection of "studies of character, real and ideal." It is, apparently, a book of American origin. We light on an anecdote of a bishop's "miter." Anecdotes, literary comments, and good moral inferences make up the substance of the volume.

*Practical Building Construction.* By John Parnell Allen. (Crosby Lockwood & Son.)

A third edition, revised, of a well known handbook for students intending to qualify as architects and surveyors, and to pass the Science and Art examinations. It has over one thousand very clear and detailed illustrations.

*The Building of the British Empire.* With Notes on the Growth of Constitutional Government in the Colonies, Imperial Federation, Statistical Tables, Etymology of Colonial Names, Biographies of Empire Builders, &c. By Arthur T. Flux. (A. M. Holden.)

This new volume of "Prof. Meiklejohn's Series," judging from its title-page alone, should be a very systematic and instructive work for young readers, on historical and geographical lines, with a touch of politics and reasoned patriotism. That, in fact, is a very good description of the book. Its history is summary rather than narrative, and there is an infinitude of well arranged detail. It is a serviceable manual, and will make a good sequel or companion to general textbooks on history and geography.

*Home Geography and the Earth as a Whole.* By Ralph S. Tarr and Frank M. McMurry. (Macmillan.)

Messrs. Tarr and McMurry design a set of three volumes on geography, of which this is the first. The second will deal with North America, and the third with "Europe and the other Continents"—from which it may be concluded that the work is intended primarily for students in the United States. The first volume is concerned mainly with physical geography and earth-knowledge, the main illustrations being taken from North America. It is a thoroughly good book on a sensible plan, though not specially adapted for our own schools.

*A First Manual of Composition.* By E. H. Lewis, Ph.D. (Macmillan.)

Here we have another book from over the water—an attempt to convert the young grammarian into a rhetorician, or, at any rate, to bridge the gulf between the analysis and the construction of sentences. It is not easy, as it depends on the talent of the pupil more than the skill of the teacher. But Dr. Lewis has provided a great deal of useful practice. He recommends the correction of pupils' exercises by means of rubber-stamps!

"The Prize Library."—*Wellington.* By George Hooper. Nelson. By J. K. Laughton. (Macmillan.)

These two reprinted biographies very naturally find a place in the publishers' series of cheap books suitable for small prizes and presents in schools where the prize fund is not large, and where the distribution of a large number of books at the end of a term is rather conventional and ornamental than anything else. Both volumes are well written, and Mr. Laughton is an acknowledged authority on the life of Nelson.

*The Story of Dick.* By Major Gambier Parry. (Macmillan.)

This simple and wholesome story may be classed, from some points of view, with the two volumes last mentioned. It is a sort of elementary recruiting text-book, and will do as a gift for boys, provided that the giver thinks it suitable for the boy.

*Us, and Grandmother Dear.* By Mrs. Molesworth. (Macmillan.)

These are two volumes of Messrs. Macmillan's half-crown illustrated stories "for presents and prizes." They are amongst the most popular of Mrs. Molesworth's tales—"Us" for young children and the other for older boys and girls—with pictures by Mr. Walter Crane.

*Nellie's Memories.* By Rosa Nouchette Carey. (Macmillan.)

An experimental volume: a novel of Miss Carey's "abridged for schools." Miss Carey is charming in her way, but we fear that her way is too sentimental for the schoolroom. And the abridging only concentrates the sentimentality.

*Eight Aysgarth School Sermons.* By C. H. Boutflower. (Macmillan.)

The Chaplain to the Bishop of Durham was accustomed for some eight years to preach from time to time in the chapel of Aysgarth School. He has now published a few of his simple and straightforward sermons as a memorial to the late Headmaster, the Rev. C. T. Hales. The discourses are well considered and reasonably colloquial.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*The New Code—1900 (N.U.T. Edition).* By J. H. Yoxall and T. A. Organ.

*The Coming of the Kilogram: a Plea for the Adoption of the Metric System of Weights and Measures—new edition,* by H. O. Arnold-Forster. (Cassell.)

*Practical Metal-Plate Work,* edited by Paul N. Hasluck (Cassell)—the second volume of a series of works on technical instruction.

*Electric Bells: How to Make and Fit Them.* Edited by Paul N. Hasluck. (Cassell.)

**MATHEMATICS.**

**14169.** (Professor COCHEZ.)—Etudier la courbe  
 $(2x + 3y)^2(x - y) + x + y = 0.$

Solution by G. D. WILSON, B.A.

Put  $x + y = \sqrt{2} X,$   
 $y - x = \sqrt{2} Y,$

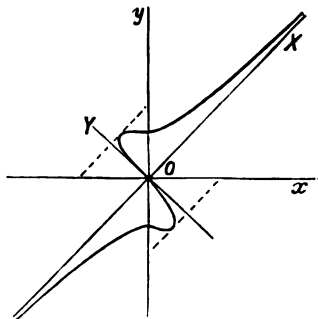
and the equation becomes

$$(5X + Y)^2 Y = 2X.$$

This is unchanged if we put  $-X, -Y$  for  $X, Y.$  Also  $Y$  and  $X$  must be of the same sign, and (solving as a quadratic for  $X$ )

$$Y^2 \leq \frac{2}{5}.$$

The only real asymptote is  $Y = 0,$  and  $X = 0$  is an inflexional tangent at the origin.



**6405.** (The late Professor SYLVESTER, F.R.S.)—If  $p, q, r, s$  are the distances of a point in a circular cubic from the four concyclic foci  $A, B, C, D,$  prove that

$$\frac{(p-q)(q-r)(r-p)}{ABC} = \frac{(q-r)(r-s)(s-q)}{BCD} = \frac{(r-s)(s-p)(p-r)}{CDA} = \frac{(s-p)(p-q)(q-s)}{DAB}.$$

Solution by Professor SIRCOM, M.A.

If  $AC, BD$  meet in  $O$  and  $OA = a, OB = b, OC = c, OD = d,$  we shall have (SALMON, *Higher Plane Curves*, p. 250),

$$(b+c)p + (a-b)r = (a+c)q \quad \text{and} \quad (c-d)p + (a+d)r = (a+c)s,$$

whence

$$c(p-q) + b(p-r) + a(r-q) = 0$$

and

$$c(p-s) + d(r-p) + a(r-s) = 0.$$

Finding  $b, d$  from these equations, and putting  $bd = ac,$  we find

$$c^2(p-s)(p-q) + ac\{(p-s)(p-q) + (r-s)(r-q)\} + a^2(r-s)(r-q) = 0,$$

whence

$$c(p-s)(p-q) + a(r-s)(r-q) = 0$$

and  $(s-p)(p-q)(q-s) : (q-r)(r-s)(s-q) = a : c = DAB : BCD.$

$$\frac{(s-p)(p-q)(q-s)}{DAB} = \frac{(q-r)(r-s)(s-q)}{BCD}, \quad \&c.$$

**14350.** (Professor N. BHATTACHARYYA.)—If a quadrilateral that is complete can be circumscribed about a circle, prove that the line of collinearity of the middle points of the diagonals passes through the centre of the circle.

Solution by J. H. TAYLOR, M.A.; and F. H. PEACHELL, B.A.

Let the middle points of  $AC, BD, EF,$  respectively, be  $H, K, G.$

Then

$$\triangle AHB = \triangle BHC$$

$$\text{and } \triangle DHC = \triangle AHD.$$

Therefore

$$\triangle AHB + \triangle DHC$$

$$= \frac{1}{2} \text{quadrilateral } ABCD.$$

Similarly,

$$\triangle AKB + \triangle DKC$$

$$= \frac{1}{2} \text{quadrilateral } ABCD.$$

Therefore, at any point  $P$  on straight line  $HKG,$

the sum of triangles  $\triangle APB, \triangle DPC = \frac{1}{2}$  quadrilateral  $ABCD$

(*Pitt Press Euclid*, p. 103, Ex. 3, *Solutions*, p. 46).

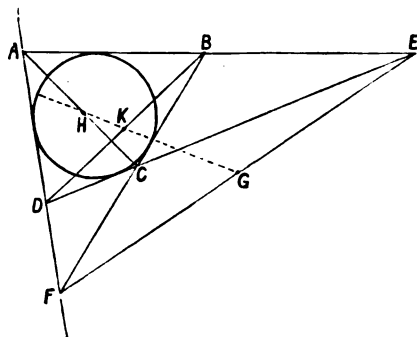
Now

$$AB + CD = AD + BC,$$

and, if  $O$  be the centre of the circle inscribed in quadrilateral, the altitudes of triangles  $\triangle ABO, \triangle BCO, \triangle CDO, \triangle DAO$  are equal; therefore

$$\triangle ABO + \triangle CDO = \frac{1}{2} \text{quadrilateral}.$$

Therefore  $O$  must lie on  $HK.$



**14325.** (R. KNOWLES.)—Prove that the sum of the first  $(r + 1)$  coefficients in the expansion of  $(1 - x)^{-m/n}$

$$= \{(m+n)(m+2n)\dots(m+rn)\}/n^r \cdot r!$$

Solution by F. H. PEACHELL, B.A., and H. J. WOODALL, A.R.C.S.

$$(1 - x)^{-m/n} = 1 + \frac{m}{n}x + \frac{m(m+n)}{n^2 \cdot 2!}x^2 + \frac{m(m+n)(m+2n)}{n^3 \cdot 3!}x^3 + \dots$$

Also

$$(1 - x)^{-1} = 1 + x + x^2 + \dots$$

Therefore

$$(1 - x)^{-(m/n)-1} = 1 + \left(1 + \frac{m}{n}\right)x + \left(1 + \frac{m}{n} + \frac{m(m+n)}{n^2 \cdot 2!}\right)x^2 + \dots$$

Therefore required sum is the coefficient of  $x^r$  in  $(1 - x)^{-(m/n)-1},$  and therefore

$$= \{(m+n)(m+2n)\dots(m+rn)\}/n^r \cdot r!.$$

**14267.** (B. N. CAMA, M.A.)—If an equiangular spiral be inscribed in a rectangle, prove that (1) the angular points of the rectangle lie on another spiral, (2) the lines joining the points of contact of opposite pairs of sides intersect at right angles in the pole, (3) the area of the quadrilateral of the chords of contact varies as the area of the rectangle.

Solution by the PROPOSER and H. W. CURJEL, M.A.

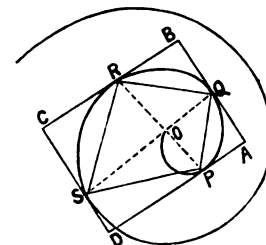
Let the spiral PQRS be inscribed in the rectangle ABCD. Then, since the locus of intersection of orthogonal tangents is a copolar spiral, therefore ABCD is inscribable in another spiral.

Also the quadrilaterals OBQR, OCRS, OPDS, OPAQ are cyclic; therefore

$$\angle QOR = \angle ROS = \angle SOP = \angle POQ = \text{a right angle};$$

therefore QS, PR intersect at right angles in O. Now the

$$\text{area of PQRS} \propto PR \cdot QS \propto AB \cdot BC \operatorname{cosec}^2 \alpha \propto \text{area of ABCD}.$$



**14377.** (E. W. REES, B.A.)—If, on the sides of a triangle ABC, squares  $BB_1C_1C, CC_2A_2A, AA_3B_3B$  be described, and if  $A_1A_3, B_3B_1, C_1C_2$  intersect in the points  $C', A', B',$  and if through  $A', B', C'$  perpendiculars be drawn respectively to  $BC, CA,$  and  $AB,$  prove that these perpendiculars intersect in a point O which is the centre of gravity of the triangle  $A'B'C',$  and that the symmedian point of this triangle is G, the centre of gravity of the triangle ABC.

Solution by the PROPOSER.

From similar triangles  $B'OC', A_2AA_3,$  we have

$$OB'/OC' = AA_2/AA_3 = b/c.$$

Therefore

$$OA' : OB' : OC' = a : b : c,$$

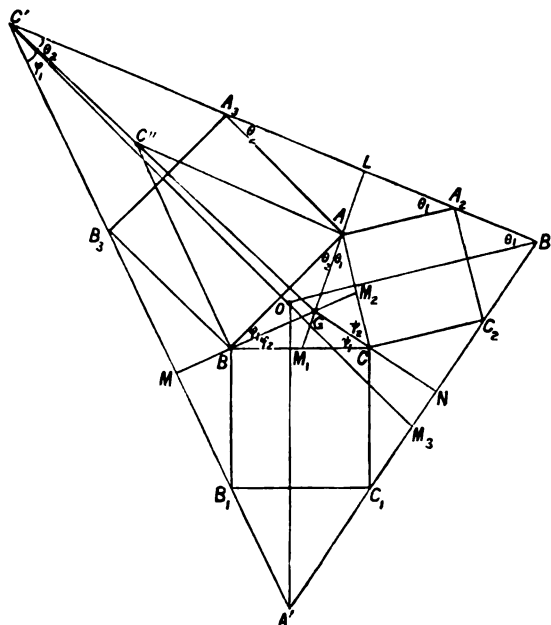
and the perpendiculars intersect in O.

And O is the centre of gravity of triangle  $A'B'C'.$  For let  $C'O$  meet  $A'B'$  in  $m_3.$  Then, from triangles  $B'C'm_3, A'C'm_3,$  we have

$$B'm_3/A'm_3 = (B'C' \sin \theta_2)/(A'C' \sin \phi_1);$$

and, from triangle  $AGB,$

$$\sin \theta_2/\sin \phi_1 = BG/AG = BM_2/AM_1 = B_1B_3/A_2A_3.$$



For  $A_2A_3^2 = b^2 + c^2 - 2bc \cos A, A_1A_3 = b^2 + c^2 + 2bc \cos A = 4AM_1^2;$

therefore

$$A_2A_3 = 2AM_1 \quad \text{and} \quad B_1B_3 = 2BM_2.$$

[The rest in Volume.]

**14266.** (V. R. THYAGARAGAIYAR, M.A.)—Find the equation of a curve (in Cartesian coordinates) which is such that the radius of

curvature at any point is equal to the length of the curve measured up to that point from a fixed point on the curve. Trace the curve.

*Solution by H. A. WEBB and H. W. CURJEL, M.A.*

With the usual notation,  $s = ds/d\psi$ ; therefore  $ds/d\psi = c\sqrt{2}e^{\psi+\frac{1}{2}\pi}$ ,  $c$  being a constant length.

Now  $ds = \sec \psi dx = \operatorname{cosec} \psi dy$ .  
Therefore  $dx = c\sqrt{2} \cos \psi e^{\psi+\frac{1}{2}\pi} d\psi$ ,  $dy = c\sqrt{2} \sin \psi e^{\psi+\frac{1}{2}\pi} d\psi$ .  
Therefore  $x - A = ce^{\psi+\frac{1}{2}\pi} \sin(\psi + \frac{1}{2}\pi)$ ,  $y - B = -ce^{\psi+\frac{1}{2}\pi} \cos(\psi + \frac{1}{2}\pi)$ ;  
 $A$  and  $B$  being constants.

Take the origin at a point on a curve, the directions of the axes being such that  $\psi = -\frac{1}{2}\pi$ . Then at the origin  $s = c\sqrt{2}$ . Also  $A = 0$ ,  $B = c$ .

Therefore  $x^2 + (y - c)^2 = c^2 e^{2\psi+\pi} = c^2 e^{-2 \tan^{-1} x/(y-c)}$   
or  $\log \{x^2 + (y - c)^2\} = 2 \log c - 2 \tan^{-1} x/(y - c)$ .

This is the equation of an equiangular spiral whose angle is  $\frac{1}{4}\pi$ .

**14122.** (The late "LEWIS CARROLL.")—It is given that (1), if  $C$  is true, then, if  $A$  is true,  $B$  is not true; and (2), if  $A$  is true,  $B$  is true. Can  $C$  be true? What difference in meaning, if any, exists between the following propositions?—(1)  $A, B, C$  cannot be all true at once; (2) if  $C$  and  $A$  are true,  $B$  is not true; (3) if  $C$  is true, then, if  $A$  is true,  $B$  is not true.

*Solution by H. MACCOLL, B.A.*

Using my usual method and notation, let  $\phi$  denote the data  $\{C : (A : B)\} (A : B)$ , which is synonymous with  $\{C : (AB)\} (AB)^*$ , we get  $S(C^*\phi) = C^*(A^* + B^* + A^*B^*)$ ,  $S(C^*\phi) = C^*A^*$ .

As neither of the products on the right-hand side is a formal impossibility, it follows that neither  $C^*$  (that  $C$  is impossible) nor its denial  $C$  (that  $C$  is possible) is formally inconsistent with our data  $\phi$ . Hence, without further data, we cannot answer the question "Can  $C$  be true?" To answer "Yes" would be to assert  $C^*$ ; to answer "No" would be to assert  $C$ ; and neither conclusion is legitimate without further data.

Expressed in the same notation, the PROPOSER'S second question is "What difference, if any, exists between the three statements  $(ABC)^*$ ,  $(CA : B)^*$ ,  $\{C : (A : B)\}^*$ ? The first and second are each equivalent to  $C : (AB)^*$ , and the third is equivalent to  $C : (AB)^*$ . Now, since  $(AB)^*$  formally implies, but is not equivalent to,  $(AB)$ , it follows that the third statement formally implies, but is not equivalent to, the first and second. (See my paper in *Mind*, January, 1900.)

[The rest in Volume.]

**14416.** (Professor IGNACIO BEYENS, M.A., Lt.-Col. du Génie.)—Si dans un triangle ABC on mène une droite AD et l'on prolonge  $AD_1 = AD$ , considérant les droites AB, AC, AD comme les magnitudes et directions de trois forces, leur résultante est la droite  $AD'$  isotomique de AD dans le triangle proposé.

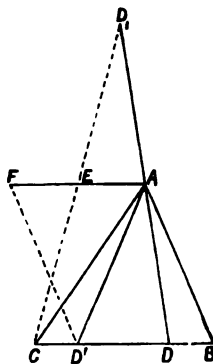
*Solution by Professor A. DROZ-FARNY; and H. W. CURJEL, M.A.*

Tirons  $CD_1$ , et soit E son point milieu, et prolongeons AE de  $EF = AE$ . AF sera la résultante des deux forces AC et  $AD_1$ . Il reste donc à chercher la résultante des forces AF et AB. Comme

$CE = ED_1$  et  $AD = AD_1$ ,  
AE est parallèle à BC et égale à  $\frac{1}{2}CD$ ; donc  
 $AF = CD$ .

Portons sur BC  
 $BD' = CD = AF$ .

Les points D et D' sont conjugués isotomiques et le quadrilatère  $AFD'B$  est un parallélogramme. Donc la résultante des forces AF et AB est bien la droite  $AD'$ .



**6322.** (J. E. A. SREGGALL, M.A.)—Solve  $x - y = a$ ,  $xs + y = b$  in positive integers,  $a$  and  $b$  being integers prime to each other, and one odd, the other even.

*Solution by H. W. CURJEL, M.A.*

$$x(z+1) = a + b;$$

therefore  $x$  is odd and  $z$  is even, and every resolution of  $a + b$  into a pair of factors  $c, d$  gives a solution if  $c > a$ , namely,  $x = c$ ,  $z = d - 1$ ,  $y = c - a$ .

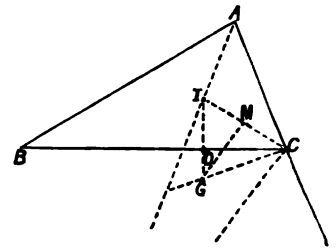
**14208.** (Rev. T. ROACH, M.A. Suggested by Quest. 13173.)—Six circles are described, each passing through the incentre and touching one side of the triangle at one of its extremities. (1) Show that the centres of the six circles lie on the radii  $ID \dots$ , on three circles concentric with the incircle. (2) Show that the product of the radii of three alternate circles =  $2R^2r$ .

*Solution by F. L. WARD, B.A.; and L. E. REAY, B.A.*

Let  $ID$  meet perpendicular to  $AC$  in  $G$ ; therefore

$\angle GCI = \frac{1}{2}\pi - \angle ACI = \frac{1}{2}\pi - \frac{1}{2}\angle C$ ,  
and  $\angle CID = \frac{1}{2}\pi - \frac{1}{2}\angle C$ ;  
therefore  $\angle GCI = \angle GIC$ ;  
therefore  $GI = GC$ ;  
therefore circle, centre  $G$ , radius  $GI$ , touches  $AC$  at  $C$ .

Similarly, the other centres lie on the radii  $ID \dots$ . Also, if  $GM$  is perpendicular to  $IC$ ,



$$GI = \frac{IC}{2 \sin \frac{1}{2}C} = \frac{ID}{2 \sin \frac{1}{2}C} = \frac{r}{2r_a r_b r_c}$$

where  $r_a \dots$  are the escribed centres =  $ab/2r_c$ ; therefore alternate products

$$= \frac{a^2 b^2 c^2}{8r_a r_b r_c} = \frac{2a^2 b^2 c^2 r}{16r_a r_b r_c r} = 2r \left(\frac{abc}{4\Delta}\right)^2 = 2R^2 r.$$

[The PROPOSER solves the second part of the Question as follows:—

$$GI = ID / (2 \sin^2 \frac{1}{2}C) = r / (2 \sin^2 \frac{1}{2}C);$$

therefore product of three radii =  $r^3 / (8 \sin^2 \frac{1}{2}A \sin^2 \frac{1}{2}B \sin^2 \frac{1}{2}C) = 2R^2 r^3$ .]

**14391.** (Professor E. LEMOINE.)—Si ABC est le triangle de référence,  $l$  la distance du point A' au côté BC,  $m$  la distance du point B' au côté CA,  $n$  la distance du point C' au côté AB, et que  $A_1 y = A_1' x$ ,  $B_1 z = B_1' x$ ,  $C_1 x = C_1' y$  soient, en coordonnées normales, les équations de  $AA'$ ,  $BB'$ ,  $CC'$ ,  $AA'B'C'$  seront triplement homologues par permutation circulaire (c'est-à-dire que  $AA'$ ,  $BB'$ ,  $CC'$ ;  $AB'$ ,  $BC'$ ,  $CA'$ ;  $AC'$ ,  $BA'$ ,  $CB'$  concourront en L, en M et en N). Si l'on a  $A_1 B_1 C_1 = A_1' B_1' C_1'$ , et

$$abc A_1 B_1 C_1 (l - h_a)(m - h_b)(n - h_c) + lmn (bA_1' + cA_1)(cB_1' + aB_1)(aC_1' + bC_1) = 0,$$

$a, b, c$  sont les trois côtés et  $h_a, h_b, h_c$  les trois hauteurs de ABC. On suppose  $0 \geq l \geq h_a, 0 \geq m \geq h_b, 0 \geq n \geq h_c$ .

*Solution by Rev. J. CULLEN.*

If  $AA'$ ,  $BB'$ ,  $CC'$  are concurrent, then, clearly,  $A_1 B_1 C_1 = A_1' B_1' C_1'$ . Again, since the points  $A', B', C'$  are  $(l, \lambda A_1', \lambda A_1)$ ,  $(\mu B_1', m, \mu B_1)$ ,  $(\nu C_1', n, \nu C_1)$ , the equations of  $AB'$ ,  $BC'$ ,  $CA'$  are

$$\mu B_1' y - m x = 0, \quad \nu C_1' z - n x = 0, \quad \lambda A_1' x - l y = 0.$$

Therefore  $\lambda \mu \nu A_1' B_1' C_1 = l m n$ ; also  $\lambda (bA_1' + cA_1) + a l = 2\Delta$ ;  
hence  $\lambda = -a(l - h_a) / (bA_1' + cA_1)$ , &c.

Similarly, the condition stated holds for  $AC'$ ,  $BA'$ ,  $CB'$ .

**14368.** (D. BIDDLE.)—If the roots of the cubic equation  $x^3 + qx + r = 0$  be  $x_1, x_2, x_3$ , prove that the sum of the products of  $(x_1 - x_2)/x_3, (x_2 - x_3)/x_1, (x_3 - x_1)/x_2$ , taken two at a time, is  $-9$ .

*Solution by Rev. T. ROACH, M.A.; R. P. PARANJPEY, B.A.; and many others.*

$$S = \frac{\sum x_2(x_1 - x_2)(x_3 - x_3)}{x_1 x_2 x_3} = \frac{\sum \{x_2^2(x_1 + x_3) - x_2^3 - x_1 x_2 x_3\}}{x_1 x_2 x_3}$$

Also  $\sum x_1 = 0, x_1 x_2 x_3 = -r$ ; therefore  $S = \frac{-2\sum x_1^3 + 3r}{-r}$ .

Again  $(x_1 + x_2 + x_3)^3 = 0$ ;  $\therefore \sum x_1^3 + 3r = 0$ ;  $\therefore S = -9$ .

[Mr. PARANJPEY observes that it is necessary that none of the roots should be zero, but they need not be real.]

**14205.** (Rev. W. ALLEN WHITWORTH, M.A.)—If convergents to  $\sqrt{3}$  be formed in the usual way by a continued fraction, show that the

$n$ th convergent is  $\frac{(2 + \sqrt{3})^n + (-1)^n}{(2 + \sqrt{3})^n - (-1)^n} \sqrt{3}$ .

*Solution by Rev. T. ROACH; and Professor SANJANA, M.A.*

$$\sqrt{3} = \sqrt{4 - 1} = 2 - \frac{1}{2 + \sqrt{3}} = 2 - \frac{2 - \sqrt{3}}{4 - 3} = 2 - (2 - \sqrt{3})$$

$n$  being number of components, and  $a, \beta$  roots of  $K^2 - 4K + 1 = 0$ . [HALL *Higher Algebra*, xxxi. A, No. 8.] Therefore

$$\begin{aligned} \sqrt{3} &= 2 - \frac{(2 + \sqrt{3})^n - (2 - \sqrt{3})^n}{(2 + \sqrt{3})^{n+1} - (2 - \sqrt{3})^{n+1}} \\ &= \frac{(2 + \sqrt{3})^n (3 + 2\sqrt{3}) - (2 - \sqrt{3})^n (3 - 2\sqrt{3})}{(2 + \sqrt{3})^{n+1} - (2 - \sqrt{3})^{n+1}} \\ &= \sqrt{3} \frac{(2 + \sqrt{3})^{n+1} + (2 - \sqrt{3})^{n+1}}{(2 + \sqrt{3})^{n+1} - (2 - \sqrt{3})^{n+1}} = \sqrt{3} \frac{(2 + \sqrt{3})^{2n+2} + (-1)^{2n+2}}{(2 + \sqrt{3})^{2n+2} - (-1)^{2n+2}} \end{aligned}$$

QUESTIONS FOR SOLUTION.

**14568.** (Professor G. B. MATHEWS, F.R.S.)—Let  $\psi(n)$  denote the number of positive integral solutions of  $x + y = n$ , subject to the conditions that  $3x \geq 4y$  and  $2x < 7y$ : then

$$\sum \psi(n) x^n = (1 + x^3 + x^4 + x^5 + x^6 + x^7 + 2x^8 + x^9 + x^{10} + x^{11} + x^{12} + x^{13}) + (1 - x^7)(1 - x^9).$$

Hence obtain an analytical expression for  $\psi(n)$ .

**14569.** (JOHN C. MALET, F.R.S.)—Being given that the roots of an algebraic equation of the twelfth degree,  $a_1, a_2, a_3, a_4, \beta_1, \beta_2, \beta_3, \beta_4, \gamma_1, \gamma_2, \gamma_3, \gamma_4$ , are connected by the relations

$$a_1 + a_2 + a_3 + a_4 = \beta_1 + \beta_2 + \beta_3 + \beta_4 = \gamma_1 + \gamma_2 + \gamma_3 + \gamma_4, \\ a_1 a_2 a_3 a_4 = \beta_1 \beta_2 \beta_3 \beta_4 = \gamma_1 \gamma_2 \gamma_3 \gamma_4,$$

solve the equation.

**14570.** (Professor NEUBERG.)—Les plans symétriques des faces d'un tétraèdre par rapport aux sommets opposés forment un nouveau tétraèdre. Trouver le rapport de similitude des deux tétraèdres.

**14571.** (Professor MORLEY.)—Prove that the sum of the cubes of the coefficients in the expansion of  $(1-x)^{-p}$  is, when convergent,

$$\cos \frac{1}{2}(\pi p) \Gamma(1 - \frac{1}{2}p) / \{\Gamma(1 - \frac{1}{2}p)\}^2,$$

$p$  being real or complex.

**14572.** (Professor E. LEMOINE.)—Soit ABC un triangle. Appelons  $A_1, B_1, C_1$  les pieds sur BC, CA, AB des trois bissectrices des angles du triangle, et  $A'_1, B'_1, C'_1$  les pieds des trois bissectrices des angles supplémentaires. On soit que  $A'_1, B'_1, C'_1$  sont en ligne droite, ainsi que  $A_1, B_1, C_1$ . Cela posé si nous appelons  $p$  le demi-périmètre du triangle,  $R$  le rayon du cercle circonscrit,  $r$  le rayon du cercle inscrit,  $d$  la distance des centres de les deux cercles. Démontrer que les distances  $P, P'$  du centre de gravité du ABC aux droites  $A'_1 B'_1 C'_1$  et  $A_1 B_1 C_1$  sont respectivement

$$P = \frac{p^2 + r(4R+r)}{2d}, \quad P' = \frac{(p-a)^2 - r_a(4R-r_a)}{2d_a},$$

$r_a$ , étant le rayon du cercle exinscrit tangent au côté BC et  $d_a$  la distance du centre de ce cercle au centre du cercle circonscrit.

**14573.** (Professor E. J. NANSON.)—Prove that

$$\sum \sin^2 A \sin(B-C) = -\sin(A+B+C) \Pi \sin(B-C).$$

**14574.** (Professor A. DROZ-FARNY.)—La bissectrice intérieure de l'angle A du triangle ABC coupe en D et E le côté BC et la circonférence circonscrite au triangle. Soit I le centre du cercle inscrit. Calculer le rapport AI/DE. Que devient ce rapport lorsque les côtés du triangle sont en progression arithmétique, BC étant le côté moyen ?

**14575.** (J. A. THIRD, M.A., D.Sc.)—If  $A'B'C'$  be the first BROCARD triangle of ABC, and D, E, F be the points where  $B'C', C'A', A'B'$  meet BC, CA, AB respectively, show (1) that  $DA', EB', FC'$  are tangents to the BROCARD circle of ABC, and (2) that DA, EB, FC are tangents to the circumconic of ABC which passes through the BROCARD points.

**14576.** (Professor COCHEZ.)—Courbe  $(x^2 - y^2)xy = 1$ .

**14577.** (Professor LANGHORNE ORCHARD, M.A., B.Sc.)—Sum to  $n$  terms the series  $1 + 5 + 3 + 4 + 3\frac{1}{2} + 3\frac{1}{2} + 3\frac{1}{2} + \dots$

**14578.** (Professor K. J. SANJANA.)—If A vary inversely with B, then B varies inversely with A; this is taken to be mathematically correct, but often fails when applied to purposes of practical inference. Thus, though it is true that price varies inversely with supply, we cannot say that supply varies inversely with price, for a higher price produces a more plentiful supply. Explain the apparent anomaly; or is the converse logically incorrect ?

**14579.** (Professor N. BHATTACHARYYA.)—The axes of a given ellipse E are  $2a, 2b$ ; and a similar ellipse  $E_1$  is inscribed within the evolute of E; another similar ellipse  $E_2$  is inscribed within the evolute of  $E_1$ , and so on. If  $S_n$  denote the sum of the areas of the ellipses E,  $E_1, E_2 \dots E_{n-1}$ , prove that

$$S_{2n} = \left\{ 1 + \left( \frac{a^2 - b^2}{a^2 + b^2} \right)^{2n} \right\} S_n.$$

**14580.** (Professor UMES CHANDRA GHOSH.)—Show that the sum of the  $r$ th powers of all the numbers less than any number N and prime to it, is

$$N^{r+1}/(r+1) \left\{ (1-1/a)(1-1/b)(1-1/c) \dots \right\} + B_1 \cdot r/2! \\ \times N^{r-1} (1-a)(1-b)(1-c) \dots \\ - B_2 \left[ \{r(r-1)(r-2)\}/4! \right] \cdot N^{r-3} (1-a^3)(1-b^3)(1-c^3) \dots \\ + B_3 \left[ \{r(r-1)(r-2)(r-3)(r-4)\}/6! \right] \cdot N^{r-5} (1-a^5)(1-b^5)(1-c^5) \dots \\ \dots \&c.,$$

$a, b, c, \&c.$ , being the different prime factors of N, and  $B_1, B_2, B_3, \&c.$ , the Bernoullian numbers.

**14581.** (D. BIDDLE.)—A given square has inscribed to it a random square and also a circle. Find the respective chances that a point taken at random in its area shall lie (1) within the inscribed square but outside the circle, (2) within the circle but outside the inscribed square.

**14582.** (R. TUCKER, M.A.)—The tangent at D, the extremity of the diameter through A, to the circumcircle ABC meets AC, AB produced in  $q, r$ . The orthocentre and S.-point of  $Aqr$  are given by  $\cos^2 B \cos^2 C, \cos A \cos B, \cos C \cos A$  and  $2bc \Pi \cos A, ca, ab$ , respectively. If  $\rho_a (\rho_b, \rho_c)$  are the circumradii of  $Aqr, \&c.$ , then  $\rho_a \rho_b \rho_c = R^3/P^2$ , where  $P \equiv \Pi(\sin A)$ . If  $\Omega_a, \Omega'_a, \&c.$ , are the B.-points of  $Aqr, \&c.$ , then the sum of the squares of the six tangents from A (B, C) to the circles  $\Omega \Omega' \Omega_a \Omega'_a, \&c.$ , equals  $4\Delta \sin^2 \omega/P$  and the product of the tangents =  $32R^2 \Delta \sin^2 \omega/P^3$ . If  $Bq, Cr$  meet in  $T_a$ , and so on, then  $AT_a, BT_b, CT_c$  meet in  $\cot A \cos A, \cot B \cos B, \cot C \cos C$ .

**14583.** (J. MACLEOD, M.A.)—EBK, HCL, two unequal circles external to each other, are cut by the line of centres AD in B, C. AM = diameter of EBK, and DN = diameter of HCL; M, N being on line of centres. ME is tangent to EBK, and NH to HCL. EB and NH meet in F, and ME and HC in G. Prove that  $FG = \frac{1}{2}EH$ .

**14584.** (R. F. DAVIS, M.A.)—ABC is a given triangle; O circumcentre, R circumradius. If along AO AP be set off =  $R \cdot \cos^2 \frac{1}{2}A$ , the circle centre P, radius PA touches the incircle of ABC (as well, of course, as the circumcircle). Hence, if A be a fixed point on a given circle, and PQ a variable chord of constant length, the incircle of the triangle APQ touches a fixed circle. (Due to Mr. C. E. McVICKER, M.A.)

**14585.** (J. H. TAYLOR, M.A.)—If three circles, which touch a fixed straight line at the focus S of a parabola, touch the parabola in P, Q, R; and cut in points  $p, q, r$  a circle which, centred on the axis, passes through S and touches the parabola, the circles  $pSO', qSO', rSO'$  (where O' is the reflection of the focus in the directrix) intersect at  $60^\circ$ .

**14586.** (R. O. ARCHIBALD, M.A.)—Any circle through the cusp and centre of the base of a cardioid cuts the curve again in two points  $P_1, P_2$ , and its double tangent in  $P_3, P_4$ . Show that, (1) the line  $P_1, P_2$  produced is tangent to the cardioid; (2) the lines  $P_1P_3, P_2P_4$  (which do not meet unless produced) are tangent to the cardioid at  $P_1, P_2$  respectively. Conversely, if any tangent to a cardioid meet the curve again in  $P_1, P_2$ , and if the tangents to the curve at  $P_1, P_2$  meet the double tangent in  $P_3, P_4$ , the points  $P_1, P_2, P_3, P_4$  lie on a circle through the cusp and centre of the base of the cardioid.

[Note.—The tangents  $P_1P_3, P_2P_4$  when produced cut on a hyperbola, and the points  $P_3, P_4$  divide the points of contact of the double tangent harmonically. This result was first stated by SIEBECK, *Crelle's Journal*, 1866, p. 362, and later by WOLSTENHOLME in *Educational Times Reprint*, 1874, Vol. xx., p. 34, Quest. 4142.]

**14587.** (G. H. HARDY, B.A.)—Prove that the line element of a sphere of unit radius may be expressed in the form

$$ds^2 = \{dn^2 - dn^2\beta\} (da^2 - d\beta^2);$$

that the equation of a circle on the sphere is

$$p \sin^2 \frac{1}{2}(\alpha - \beta) \sin^2 \frac{1}{2}(\alpha + \beta) + q \sin^2 \frac{1}{2}(\alpha + \beta) + r \sin^2 \frac{1}{2}(\alpha - \beta) + s = 0;$$

and that the condition that two circles should cut at right angles is

$$p\rho' + p'\rho = q\rho' + q'\rho.$$

**14588.** (R. P. PARAMJPYE, B.A.)—Prove by elementary considerations, and without the use of continued fractions, that the most general positive integral solution of the equation  $x^2 - 2y^2 = z^2$  is

$$x = k(\lambda^2 + 2\mu^2), \quad y = 2k\lambda\mu, \quad z = \pm k(\lambda^2 - 2\mu^2),$$

where  $\lambda$  and  $\mu$  are prime to each other, and the ambiguous sign is chosen to make  $z$  positive.

**14589.** (Rev. J. CULLEN.)—If  $\alpha, \beta, \gamma$  are vectors from a point P to the vertices of a given triangle ABC; also  $p, q, r$  are the trilinear coordinates of P, and  $p_1, q_1, r_1$  those of another point Q, show that the vector PQ is  $\sum \alpha p_1 / \sum \alpha p$ , with the condition  $\sum \alpha p \alpha = 0$ . [E.g.,  $\sum \alpha^2 \alpha = \alpha^2$  with  $\sum \alpha = 0$  is the vector from the centroid to the symmedian point.] Apply the above result to prove Quest. 14532.

**14590.** (G. D. WILSON, B.A.)—If the conic represented by  $Lx^2 + my^2 + nz^2 = 0$  (areal coordinates) be a parabola, show that the equation of its axis is

$$\frac{\cos A}{al} (my - nz) + \frac{\cos B}{bm} (nz - lx) + \frac{\cos C}{cn} (lx - my) = 0.$$

**14591.** (E. W. REES, B.A.)—Give a geometrical construction of a triangle, two sides and the inradius being given.

**14592.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Solve in integers in a general form the equation  $N_1 \cdot N_3 = N_2 \cdot N_4$ , where  $N_r = x^r + iy^r$ , and give numerical examples.

**14593.** (ROBERT W. D. CHRISTIE.)—Find all the primitive roots of any prime of the form  $12l + 1$  from a single equation

$$ax^{2k} \pm bx^k - c = 0 \pmod{12l + 1},$$

and extend the same, if possible to all primes.

E.g.,  $x^2 \pm 5x - 1 \equiv 0 \pmod{13}$ .

**14594.** (V. DANIEL.)—Points P and Q are taken on the sides CA, CB of a triangle ABC, so that  $PC \cdot QC = PA \cdot QB$ . Show that the envelope of the line PQ is the parabola touching CA and CB in A and B, and for which semi-latus rectum =  $\Delta^2/CV^2$ , CV being the median through C.

**14595.** (R. KNOWLES.)—If  $d$  denote the distance between the centres of the nine-point and circum-circles of a triangle, prove that  

$$4d^2 = R^2(1 - 8 \cos A \cdot \cos B \cdot \cos C).$$

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6614.** (J. J. WALKER, M.A.)—If  $u, v, w$  are any three functions of  $x$ , and if  $w'$  stands for  $dw : dx$ ,  $D^2w$  for  $d^2w : dx^2$ , ..., prove that the formula

$$uw'D^2vw^n + nDuvw' \cdot D^{n-1}vw^{n-1} + nD^2uw^2w' \cdot D^{n-2}vw^{n-2} + \dots + nD^{n-1}uw^{n-1}w' \cdot Dvw + D^n uw^n w',$$

is implicitly symmetrical in  $u, v$ ; and exhibit its value in an explicitly symmetrical form.

**6626.** (Professor SYLVESTER, F.R.S.)—(1) If  $\phi$  is any rational function of  $\omega$ , investigate a method for determining the condition to which  $\lambda$  must be subject in order that  $\lambda\phi + 1 = 0$  shall have one or more real roots of  $\omega$  lying between 0 and 1. (2) If  $\phi, \psi$  are any two rational functions of  $\omega$ , investigate a method for determining the condition to which  $\lambda, \mu$  must be subject in order that  $\lambda\phi + \mu\psi + 1 = 0$  shall have one or more real roots of  $\omega$  lying between 0 and 1.

**6629.** (Professor WOLSTENHOLME, M.A.)—Prove that the locus of the equation

$$\frac{\pi}{2} y^n = \int_0^{\pi} \frac{\sin z}{z} \cdot \frac{\sin 2z}{2z} \cdot \frac{\sin 4z}{4z} \dots \frac{\sin 2^{n-1}z}{2^{n-1}z} \cdot \frac{\sin \pi z}{z} dz$$

from  $x = -1$  to  $x = 1$  is the straight line  $y = x$ .

**6630.** (Professor NASH, M.A.)—If three tangents OP, OQ, OR be drawn to a semi-cubical parabola from any point O, prove that (1) the circle through P, Q, R meets the curve in three other points P', Q', R', the tangents at which will meet in another point O'; (2) the middle point of OO' always lies on a fixed straight line; and (3) the lines joining O, O' to the cusp make equal angles with the axis.

**6632.** (Professor GENSE, M.A.)—Find the envelope of the asymptotes of conics inscribed in or circumscribed about a given quadrilateral.

**6633.** (W. J. C. MILLER, B.A.)—A rifleman, who, on an average, hits his mark  $a$  times out of  $b$ , fires at random at a circular target which is turning round a vertical axis through its centre. Find his chance of hitting the target, and show what this chance becomes when  $a : b = 11 : 14$ .

NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

THE LONDON MATHEMATICAL SOCIETY.

Thursday, May 10, 1900.—Prof. Elliott, F.R.S., Vice-President, in the Chair. Twenty-two members present.

THE SPECIAL GENERAL MEETING.

The Chairman, having read the By-laws bearing upon the subject of the meeting, announced that it was proposed "that By-law IV., 1 (By-laws, p. xiii.) be amended by substituting the words 'half past 5 o'clock in the afternoon' for '8 o'clock in the evening.'" The motion, having been seconded by Dr. J. Larmor, was carried unanimously.

ORDINARY GENERAL MEETING.

Dr. Glaisher communicated "A Congruence Theorem relating to Eulerian Numbers and other Coefficients."

Prof. Lamb spoke on "A Peculiarity of the Wave-System due to the Free Vibrations of a Nucleus in an extended medium."

Prof. Love gave a description of Mr. J. H. Michell's "Diagrams illustrating Distributions of Stress in Two Dimensions" (a paper communicated at the January meeting).

The following papers were taken as read:—

"The Differential Equation whose Solution is the Ratio of Two Solutions of a Linear Differential Equation," Mr. M. W. J. Fry.

"Note on the Quinquefacial Equation," Prof. L. J. Rogers.

"On the Differentiation of Single Theta Functions," Rev. M. M. U. Wilkinson.

"Linear Substitutions commutative with a given Substitution," Dr. L. E. Dickson

Lt.-Col. Cunningham, R.E., showed that numbers which are expressible in the two forms  $N = (\mu x^2 + \nu y^2)/a = (\mu' x'^2 + \nu' y'^2)/a'$  are always composite, when  $\mu\nu = \mu'\nu'$ ; and showed how to reduce them to the forms  $N = X^2 + \mu Y^2 = X'^2 + \mu' Y'^2$ , the factorization of which is known from Euler's researches.

CASSELL'S EDUCATIONAL LIST.

JUST PUBLISHED.

**OUR GREAT CITY; or, London the Heart of the Empire.** By H. O. ARNOLD-FORSTER, M.P. About 300 pages, crown 8vo. With a Series of Full-page Illustrations. Strongly bound in cloth, price 1s. 9d.

Cheap Edition, 2s. 6d., of

**"SCARLET AND BLUE,"** The Best Collection of Patriotic Songs. Edited by JOHN FARMER, of Oxford.

Referring to this book, FIELD-MARSHAL LORD ROBERTS, V.C., G.C.B., G.C.S.I., &c., &c., writes:—

"I have been particularly interested in the collection. . . I feel sure that the whole publication will become popular. . . It is all-important, in my opinion, that esprit de corps should be encouraged in any possible way, and there is nothing which brings such a feeling to the surface in the minds of Englishmen as recollections of former deeds of heroism and bravery."

Cheap Edition, now ready, price 6d.

**THE COMING OF THE KILOGRAM.** By H. O. ARNOLD-FORSTER, M.P. A Plea for the Adoption of the Metric System of Weights and Measures.

New and Revised Edition.

**CASSELL'S LESSONS IN FRENCH.** Parts I. and II., 2s. each; complete in One Vol., 3s. 6d.

This work (which reached a sale of 141,000 copies in its original edition) has been revised by MR. JAMES BOELLE, B.A., Examiner in French Language and Literature in the University of London. It is now in all respects suitable for the Oxford and Cambridge Local Examinations and the College of Preceptors Examinations.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS. 256 pages. Extra Crown 8vo., prettily bound in cloth. With four coloured plates and numerous illustrations. Price 1s. 8d.; or handsomely bound as Prize Book, 2s. 6d.

**IN DANGER'S HOUR; or, Stout Hearts and Stirring Deeds.** A Reading Book for Upper Standards. With Introduction by H. O. ARNOLD-FORSTER, M.P. With Coloured Plates and numerous Illustrations. Prettily bound in blue cloth, 1s. 8d.; or, handsomely bound, cloth gilt, 2s. 6d.

**A PRACTICAL METHOD OF TEACHING GEOGRAPHY.** Book I.: ENGLAND AND WALES. Book II.: ENGLAND. By J. H. OVERTON, F.C.S. (Twenty-two Maps, interleaved with tracing paper.) 6d. each.

Cassell's Educational Catalogue will be sent post free on application.

CASSELL & COMPANY, LTD., LUDGATE HILL, LONDON, E.C.

NOW READY. Demy 8vo, cloth, 676 pp., price 2s. 6d., free by post. To Members of the College the price is 1s., or 1s. 6d. free by post.

THE CALENDAR OF

The College of Preceptors, FOR THE YEAR 1900:

CONTAINING

All information respecting the objects and operations of the College, Lists of Officers, Examiners, and Members, the Regulations of the various Examinations, &c., with an Appendix containing the following Examination Papers:—

1. Papers set at Examination of Teachers for Diplomas, Midsummer, 1899.
2. Do. do. do. Christmas, 1899.
3. Papers set at Examination of Pupils for Certificates, Midsummer, 1899.
4. Do. do. do. Christmas, 1899.
5. Papers set at Professional Preliminary Examination, March, 1899.
6. Do. do. do. September, 1899.
7. Papers set at Junior Forms Examination ... .. Midsummer, 1899.
8. Do. do. ... .. Christmas, 1899.

\*.\* Nos. 3, 4, 5, and 6 may be had separately, price, free by post, 7d. each set. Nos. 7 and 8, price, free by post, 4d. each set.

LONDON: FRANCIS HODGSON, 89 FARRINGDON STREET, E.C.



## MR. EDWARD ARNOLD'S LIST.

### ENGLISH TEXT-BOOKS FOR LOCAL EXAMINATIONS.

**As You Like It.** Edited by S. E. WINBOLT, B.A., Assistant-Master at Christ's Hospital. Cloth, 1s. 3d.

**Scott—Marmion.** Edited by G. TOWNSEND WARNER, M.A., Assistant-Master at Harrow School. Cloth, 1s. 6d.

**Milton—Paradise Lost.** Books III. and IV. Edited by J. SARGEANT, M.A., Assistant-Master at Westminster School. Cloth, 1s. 3d.

**Scott—Lay of the Last Minstrel.** Edited by G. TOWNSEND WARNER, M.A. Cloth, 1s. 3d.

**Macaulay—Lays of Ancient Rome.** (Including **Ivry** and **The Armada**). Edited by R. L. A. DU PONTET, M.A., Assistant-Master at Winchester College. Cloth, 1s. 6d.

**The Laureate Poetry Books.** An entirely new Series of carefully graded collections of Poems for Children. In Seven Books, with miscellaneous contents. Also Book VIII., Extracts from Tennyson's Works; and Book IX., Extracts from Shakespeare. Price 2d. each; cloth, 4d.

**A First Geometry Book.** A simple Course of Exercises based on Experiment and Discovery. By J. G. HAMILTON, B.A., Lecturer on Geometry at the Froebel Educational Institute; and F. KETTLE, B.A., Headmaster of Clapham High School for Boys. Crown 8vo, fully illustrated, cloth, 1s.; Answers (for Teachers only), 6d.

**Passages for Dictation:** Selected from the Works of the best Prose Writers for Advanced Students. They are arranged in Two Parts, and will be found useful to candidates for the Teachers' Examination, Civil Service, and other Competitive Examinations. In limp cloth, price 10d.

**Selections from the Poems of Tennyson.** Edited, with Introduction and Notes, by the Rev. E. C. EVERARD OWEN, M.A., Assistant-Master in Harrow School. Crown 8vo, cloth, 1s. 6d.

**Geographical Pictures.** Edited by W. L. WYLLIE, A.R.A. Eight splendid Pictures of Famous Landmarks of Geography. Size 30x20 inches. Unmounted, 1s. 6d. each net; post free, 1s. 10d. Mounted on linen and varnished, with rollers and tapes for hanging, 2s. 6d. each net; post free, 2s. 10d. Handsomely framed, unglazed, 5s. net. Framed and glazed, 7s. 6d. net.

**An Illustrated School Geography.** By ANDREW J. HERBERTSON, M.A., F.R.G.S., Lecturer in Geography in the Heriot-Watt College, Edinburgh; and formerly in the Owens College, Manchester, and ALEXIS E. FRYE. With sixteen pages of Coloured Maps, about fifty Outline and Photographic Relief Maps, and nearly seven hundred magnificent Illustrations and Diagrams. Large 4to (about 12 by 10 inches), 5s.

**English History.**—For Juniors. By E. S. SYMES, Author of "The Story of London," "The Story of Lancashire," &c. With Illustrations and Maps. Crown 8vo, cloth, 2s. 6d.

**England in the Nineteenth Century.** By C. W. OMAN, M.A., Fellow of All Souls' College, Oxford; Author of "A History of England," "The Art of War in the Middle Ages," &c. One Vol., crown 8vo, 3s. 6d.

**A History of England.** By CHARLES OMAN, M.A., Fellow of All Souls' College, Oxford; Author of "Warwick the Kingmaker," "A History of Ancient Greece," "A History of Europe, A.D. 476-928," &c.

New and Revised Edition, fully furnished with Maps, Plans of the Principal Battlefields, and Genealogical Tables. 760 pp., crown 8vo, cloth, 5s. Also, in Two Parts, each part complete with Index, 3s. Part I.: From the Earliest Times to 1603. Part II.: From 1603 to 1885.

**Africa as seen by its Explorers.** Containing Extracts from the Writings of more than Fifty Explorers, from the time of Herodotus to the present day. Edited by E. J. WEBB, B.A. With Illustrations. Crown 8vo, cloth, 2s.

**The King Alfred Readers:** An entirely New Series of Literary Readers, in Eight Volumes, beautifully Illustrated in Colour and Black and White. Books I. to VII. now ready, prices 8d. to 1s. 6d. An Introductory Reader is in the press.

**German Without Tears.** An Edition in German of Mrs. HUGH BELL'S "French Without Tears." With Illustrations. Book I. now ready. Price 9d.

**French Without Tears.** A Graduated Series of French Reading Books, arranged to suit the requirements of quite Young Children beginning French, with Humorous Illustrations and a Vocabulary. By Mrs. HUGH BELL, Author of "Le Petit Theatre des Enfants." Book I., 9d. Book II., 1s. Book III., 1s. 3d.

### SIMPLE FRENCH STORIES.

An entirely new Series of easy Texts, with Notes and Vocabulary, prepared under the General Editorship of Mr. L. VON GLEHN, Assistant-Master at Merchant Taylors' School. Price of each Volume, 9d.

**Un Drame dans les Aïrs.** By JULES VERNE.

**Pif-Paf.** By EDOUARD LABOULAYE.

**La Petite Souris Grise; and Histoire de Rosette.** By Madame DE SÈVUR.

**Monsieur Le Vent et Madame la Pluie.** By PAUL DE MUSSET.

Others in rapid preparation.

A COMPLETE EDUCATIONAL CATALOGUE WILL BE FORWARDED POST FREE ON APPLICATION.

London: EDWARD ARNOLD, 37 Bedford Street, Strand.

## MESSRS. BELL'S LIST.

Complete Educational Catalogue post free on application.

### BELL'S HANDBOOKS TO THE GREAT PUBLIC SCHOOLS.

Crown 8vo, profusely Illustrated, 3s. 6d. net each.

FIRST VOLUMES OF SERIES.

**CHARTERHOUSE.** By A. H. TOU, M.A., late Scholar of Trinity College, Oxford; Assistant-Master at Charterhouse. With 58 Illustrations, chiefly from Photographs by L. MARSHALL, Assistant-Master at Charterhouse.

**RUGBY.** By H. C. BRADBY, M.A., Assistant-Master at Rugby. With 44 Illustrations, chiefly from Photographs.

**ETON.** By A. CLUTTON-BROCK, New College, Oxford. [In the press.]

PART III. NOW READY. 4to, 9s. net.

**CORPUS POETARUM LATINORUM,** a se aliisque denuo recognitorum et brevi lectionum varietate instructorum, edidit JOHANNES PERCVIAL POSTGATE, Litt.D.

Contents:—**Grattius.** Edited by J. P. POSTGATE.—**Manilius.** Edited by MALVIN BECHERE.—**Phædrus.** Edited by JAMES GOW.—**Ætina.** Edited by ROBINSON ELLIS.—**Persius.** Edited by W. C. SUMMERS.—**Lucan.** Edited by W. E. HEITLAND.—**Valerius Flaccus.** Edited by J. B. BURY.

In Two Parts, crown 8vo, 4s. 6d. net each.

**GREGOROVIVS' HISTORY OF THE CITY OF ROME IN THE MIDDLE AGES.** Translated by Mrs. HAMILTON. Vol. VII.—**The Fifteenth Century.**

### NEW VOLUMES OF BELL'S SCIENCE SERIES.

EDITED BY PERCY GROOM, M.A.,

AND PROF. G. M. MINCHIN, M.A., F.R.S.

Crown 8vo, Illustrated, 288 pages, price 4s. 6d.

**AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE ANATOMY OF ANIMALS.** By GILBERT C. BOURNE, M.A., F.L.S., Fellow and Tutor of New College, Oxford; University Lecturer in Comparative Anatomy. Vol. I.—**Animal Organization. The Protozoa and Coelenterata.**

Crown 8vo, 3s. 6d.

**ESSAYS AND ESSAY WRITING FOR PUBLIC EXAMINATIONS.** By A. W. READY, B.A., Army and University Tutor, formerly Scholar of Wadham College, Oxford.

This book is divided into Three Parts. Part I. contains Rules and Directions for beginners. Part II. contains Twelve Complete Essays, preceded by an Analysis and Sketch of each, and followed by Notes and Explanations. Part III. contains Articles for Advanced Pupils. An Appendix contains a list of subjects set for Woolwich and Sandhurst.

Crown 8vo, 2s. 6d.

**A SHORT COURSE OF ELEMENTARY PLANE TRIGONOMETRY.** By CHARLES PENDLEBURY, M.A., Senior Mathematical Master of St. Paul's School; F.R.A.S.; formerly Scholar of St. John's College, Cambridge.

This Short Course of Elementary Plane Trigonometry is intended for the use of Junior Students and of those others who do not require so complete a knowledge of the subject as would be obtained from a study of the author's larger work. In its range this book will be found sufficient for Candidates for the Oxford and Cambridge Local Examinations, the College of Preceptors, the Cambridge Previous Examination, the London Intermediate Examination in Arts, the Science and Art Examinations, College Entrance Examinations, and other examinations of the same character.

### BELL'S ILLUSTRATED CLASSICS.

New Volumes, post 8vo, 1s. 6d. With or without vocabularies.

**OVID'S TRISTIA. Book III.** Edited by H. R. WOOLRYCH, M.A., Headmaster of Blackheath School.

**VERGIL. Selection from Æneid, Books VII.-XII.** Edited by W. G. COAST, B.A., Assistant-Master at Fettes College.

Full prospectus of this Series post free on application.

New Volume of the "All England" Series.

**CROQUET.** By Lieut.-Col. the Hon. HENRY C. NEEDHAM, Secretary United All England Croquet Association. With Illustrations. Small post 8vo, 1s.

London: GEORGE BELL & SONS, York Street, Covent Garden.

# MACMILLAN & CO.'S LATEST LIST.

## ENGLISH.

### A FIRST MANUAL OF COMPOSITION.

Designed for use in the Highest Grammar Grade and the Lower High School Grades. By EDWIN HERBERT LEWIS, Ph.D., Professor in the Lewis Institute, Chicago. Crown 8vo, 3s. 6d.

### KEY AND COMPANION TO ENGLISH GRAMMAR, PAST AND PRESENT.

By J. C. NESFIELD, M.A. Globe 8vo, 2s. 6d. net.

### MACMILLAN'S ENGLISH CLASSICS. NEW VOLUMES.

### FROM BLAKE TO ARNOLD. Selections from English Poetry (1783-1853).

With Introduction, Critical Essays, and Notes, by C. J. BRENNAN, M.A. Edited by J. P. PICKBURN, B.A., LL.B., and J. LE GAY BRERETON, B.A. Globe 8vo, 2s. 6d.

EDUCATIONAL TIMES.—"A very good piece of work. . . . The introductions are fresh and perspicacious, and the selections are generally admirable."

### DRYDEN.—THE HIND AND THE PANTHER.

With Introduction and Notes by W. H. WILLIAMS, M.A., formerly Scholar of Trinity College, Cambridge; Professor of Classics and English Literature in the University of Tasmania. Globe 8vo, 2s. 6d.

SCHOOLMASTER.—"A skilfully written introduction of some dozen pages gives a clear and concise enunciation and criticism of the animal fable which the poem is in form. . . . The notes which follow the text are, as far as we have tested them, accurate and full."

## FRENCH.

### LATEST ADDITIONS TO

### SIEPMANN'S ELEMENTARY FRENCH SERIES.

### NORMAND.—L'ÉMERAUDE DES INCAS.

Par CHARLES NORMAND. Adapted and Edited by the late F. ASTON BINNS, M.A. Balliol College, Oxford. Globe 8vo, 2s.

### WORD AND PHRASE BOOK. Sewed, 6d.

GUARDIAN.—"A text which boys will find of thrilling interest. It is rich in vocabulary and not overweighed with difficult constructions. We have been disappointed in no single instance in either notes or vocabulary, and the extensive aids to the acquisition of a stock of words and of facility in composition, which characterize this series, seem quite up to the usual level of excellence."

### DAUDET.—LA TOUR DES MAURES.

Par ERNEST DAUDET. Adapted and Edited by A. H. WALL, M.A., Assistant-Master at Marlborough College. Globe 8vo, 2s.

### WORD AND PHRASE BOOK. Sewed, 6d.

SCHOOL WORLD.—"The notes are good."  
EDUCATIONAL TIMES.—"The story is of rather an exciting nature, and is well suited for rapid reading. The notes are brief but sufficient."

### VERNE.—LE TOUR DU MONDE EN QUATRE-VINGTS JOURS.

Par JULES VERNE. Adapted and Edited by LOUIS A. BARBE, B.A., Headmaster of the Modern Language Department in the Glasgow Academy. Globe 8vo, 2s.

### WORD AND PHRASE BOOK. Globe 8vo, sewed, 6d. KEY. 2s. 6d. net.

ACADEMY.—"An excellent and amusing class-book. . . . The notes are satisfactory, and so is the vocabulary."

### A HISTORICAL FRENCH GRAMMAR.

By Prof. ARSÈNE DARMESTÈRE. Edited by Prof. ERNEST MURET and Prof. LÉOPOLD SUDRE. Authorized English Edition by Prof. ALPHONSE HARTOG. Crown 8vo, 12s. 6d.

EDUCATIONAL TIMES.—"MM. Muret and Sudre have done their work very thoroughly. . . . The outcome appears to be eminently satisfactory."

### AN ELEMENTARY FRENCH GRAMMAR.

By G. EUGÈNE FASSACHT, sometime Assistant-Master in Westminster School, Editor of "Macmillan's Series of Foreign Classics." Globe 8vo, 1s. 6d.

### SPECIMENS OF MODERN FRENCH PROSE.

Edited, with Biographical and Critical Notes, by H. E. BERTHON, Taylorian Teacher of French in the University of Oxford. Pott 8vo, 2s. 6d.

[Foreign School Classics.]  
Educational Times.—"Mr. Berthon has already given us a little volume of selections of French poetry. The present book shows the same happy discrimination and the same conscientious editing. . . . The biographical and historical notes are distinctly good."

## GERMAN.

### LATEST ADDITION TO

### SIEPMANN'S ADVANCED GERMAN SERIES.

### KURZ.—DIE HUMANISTEN.

Von ISOLDE KURZ. Edited by A. VOEGELIN, M.A. (Lond.), Assistant-Master at St. Paul's School. Authorized Edition. Globe 8vo, 2s. 6d.

### WORD AND PHRASE BOOK. Sewed, 6d.

## HISTORY AND GEOGRAPHY.

### A SHORT HISTORY OF THE UNITED STATES.

For School Use. By EDWARD CHANNING, Professor of History in Harvard University. With Maps and Illustrations. Crown 8vo, 6s.

### TARR AND McMURRY GEOGRAPHIES.

**FIRST BOOK.—HOME GEOGRAPHY AND THE EARTH AS A WHOLE.** By Prof. RALPH S. TARR, B.Sc., F.G.S.A., and Prof. FRANK M. McMURRY, Ph.D. With many Coloured Maps and numerous Illustrations. Crown 8vo, 3s. 6d.

## GREEK.

### PAUSANIAS, AND OTHER GREEK SKETCHES.

By J. G. FRAZER, Fellow of Trinity College, Cambridge, D.C.L. Oxford, LL.D. Glasgow, Litt.D. Durham. Globe 8vo, 5s. [Everaley Series.]

### TOPICS ON GREEK AND ROMAN HISTORY.

Intended for use in Secondary Schools. By ARTHUR L. GOODRICH, Free Academy, Utica, New York. Crown 8vo, 3s. 6d.

### KEY TO INTRODUCTION TO GREEK PROSE COMPOSITION.

By H. PITMAN, M.A. Globe 8vo, 5s. net.

### MACMILLAN'S CLASSICAL SERIES. NEW VOLUMES.

### EURIPIDES.—THE ANDROMACHE.

With an Introduction and Notes by A. R. F. HYSLOP, M.A., Assistant-Master in Harrow School. Fcap. 8vo, 2s. 6d.

EDUCATIONAL NEWS.—"A sound and scholarly piece of work."

SCHOOL WORLD.—"The editor has performed his task with diligence and skill. His annotations are sound and luminous."

### GREEK MELIC POETS.

By HERBERT WEIR SMYTH, Ph.D. Göttingen, Professor of Greek at Bryn Mawr College, Pennsylvania. Fcap. 8vo, 7s. 6d.

PILOT.—"We are glad to give a very hearty welcome to this valuable and learned edition of all the best remains of Greek melic poetry. . . . The breadth and accuracy of the editor's learning are evidenced on every page of his work. The book will be eagerly read by countless students in England and America."

SCHOOL WORLD.—"A book of very great use and interest. . . . Altogether an excellent contribution to the study of old Greek poetry."

### DEMOSTHENES.—ON THE PEACE, SECOND PHILIPPIC, ON

THE OBERONESUS, AND THIRD PHILIPPIC. Edited, with Introduction and Critical and Explanatory Notes, by JOHN EDWIN SANDYS, Litt.D., Fellow and Tutor of St. John's College, and Public Orator in the University of Cambridge. Fcap. 8vo, 5s.

GUARDIAN.—"Like all Dr. Sandys's work, it is admirably done. . . . As a piece of scholarship, it is excellent."

LITERATURE.—"The edition is thoroughly satisfactory."

## MATHEMATICS.

### BOOK I. NOW READY.

### THE ELEMENTS OF EUCLID.

By I. TODDUNTER, F.R.S. New Edition, Revised by S. L. LONEY, M.A. Globe 8vo, 4s. 6d. Book I., 1s.; Books I. and II., 1s. 6d.; Books I.-IV., 3s.

### WOOLWICH MATHEMATICAL PAPERS.

For Admission into the Royal Military Academy for the Years 1890-1899. Edited by E. J. BROOKSMITH, B.A., LL.M., St. John's College, Cambridge; Instructor of Mathematics at the Royal Military Academy, Woolwich. Crown 8vo, 6s.

### THE TEACHING OF ELEMENTARY MATHEMATICS.

By DAVID EUGÈNE SMITH, Principal of the State Normal School at Brockport, New York. Crown 8vo, 4s. 6d. net. [Teachers' Professional Library.]

SCHOOL WORLD.—"An excellent book, distinguished by common sense and sound judgment. . . . We have no hesitation in recommending the work to all mathematical teachers."

## SCIENCE.

### ENLARGED AND REVISED EDITION, NOW READY.

### LESSONS IN ELEMENTARY PHYSIOLOGY.

By THOMAS H. HUXLEY, LL.D., F.R.S. Enlarged and Revised Edition. Globe 8vo, 4s. 6d.

### NEW AND ENLARGED EDITION, NOW READY.

### ELEMENTARY LESSONS IN ELECTRICITY AND MAGNETISM.

By SILVANUS P. THOMPSON, D.Sc., F.R.S., Principal and Professor of Physics in the Technical College, Finsbury. With Illustrations. New and Enlarged Edition. Fcap. 8vo, 4s. 6d.

### JUNE NUMBER NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### LEADING CONTENTS.

**MUSIC AND SECONDARY EDUCATION.** By ARTHUR H. PEPPIN, B.A.—**SOME MODERN EXPERIMENTS IN EDUCATION.** (Illustrated.) By A. T. SIMMONS, B.Sc., A.R.C.Sc.—**MARKS AND MARKING.**

**I.: Class Marking.** By HAROLD W. ATKINSON, M.A.—**CHAPTERS IN HISTORY. IX.: The Eve of the Reformation (1479-1529).**

By A. JOHNSON EVANS, M.A.—**PIONEERS IN EDUCATION. VI.: Herbert and the Individuality of the Child.** By Prof. FOSTER

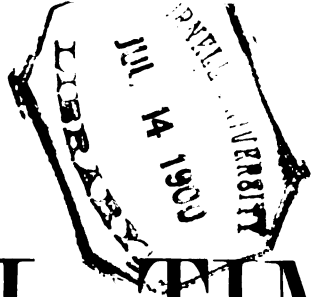
WATSON, M.A.—**EXPERIMENTAL CHEMISTRY.** (Illustrated.) **V.: Oxidation and Reduction; Carbon; Oxides of Carbon; Carbonates; Combustion; Flame.** By Prof. J. B. COLEMAN, A.R.C.S., F.I.C.—

**CURRENT GEOGRAPHICAL TOPICS. The Gold Coast and Ashanti; Swaziland.** By Dr. HERBERTSON, F.R.G.S.—**METHODS OF MANIPULATING BY COPYING MACHINES.** (Illustrated.)—**SENIOR**

**OXFORD LOCAL EXAMINATION, July, 1900. Revision Papers.—JUNIOR OXFORD LOCAL EXAMINATION, July, 1900. Monthly Test Papers, No. 6.—PRELIMINARY OXFORD LOCAL**

**EXAMINATION, July, 1900. Monthly Test Papers, No. 6.**

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.



# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 471.

JULY 2, 1900.

{ Price to Non-Members, 6d.  
{ By Post, 7d.

**COLLEGE OF PRECEPTORS.**—  
The Half-Yearly General Meeting of the Members of the Corporation will be held at the College, Bloomsbury Square, W.C., on Saturday, the 21st of July, at 3 p.m.  
C. R. HODGSON, B.A., *Secretary.*

**COLLEGE OF PRECEPTORS.**—  
EXAMINATIONS FOR 1900.

- 1. DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 10th of July, 1900.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.
- 2. CERTIFICATE EXAMINATIONS.**—The Midsummer Examination for Certificates will commence on the 3rd of July, 1900.
- 3. JUNIOR FORMS EXAMINATIONS.**—The Midsummer Examination will commence on the 3rd of July, 1900.
- 4. PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.
- 5. INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

**PRIZES.**

*Diploma Examination.*—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5.

*Certificate Examination.*—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Short-hand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

**PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.  
Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

**COLLEGE OF PRECEPTORS.**—

EXTRACT FROM THE BY-LAWS.

*Section II., clause 5.*—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

**COLLEGE OF PRECEPTORS.**—  
CERTIFICATE EXAMINATION, JULY AND DECEMBER, 1900.

Notice is hereby given that at the above Examinations the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War, Book VI., Virgil, Æneid, Book II.*; Scripture, Classes I. and II., the *First Book of Samuel.*

C. R. HODGSON, B.A., *Secretary.*

**COLLEGE OF PRECEPTORS.**

**THE CALENDAR FOR 1900**

is now ready, and may be obtained from Mr. F. HODGSON, 89 Farringdon Street, E.C. Price, free by post,

- To Members of the College ... 1s. 6d.
- To Non-Members ... 2s. 6d.

The Calendar contains, in addition to the Lists of Members, and of Schools sending in candidates to the Certificate Examinations, the Regulations respecting the Examinations to be held in 1900, &c., and the

**EXAMINATION PAPERS**

set at the Certificate, Junior Forms, Professional Preliminary, and Diploma Examinations held in 1899.

**UNIVERSITY DIPLOMA FOR WOMEN.**

**THE UNIVERSITY OF ST. ANDREWS** grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

**HOME AND COLONIAL SCHOOL SOCIETY.**

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

**TRAINING COLLEGE FOR SECONDARY TEACHERS.**

HIGHBURY HILL HOUSE, LONDON, N.

*Principal*—The Rev. DAVID J. THOMAS, M.A.  
*Vice-Principal*—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

THE

**FROEBEL EDUCATIONAL INSTITUTE,**

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

*Chairman of the Committee*—Mr. W. MATHER.  
*Treasurer*—Mr. C. G. MONTEFIORE.  
*Secretary*—Mr. ARTHUR G. SIMONDS, M.A.

**TRAINING COLLEGE FOR TEACHERS.**

*Principal*—Madame MICHAELIS.  
*Mistress of Method*—Miss E. E. LAWRENCE.

**KINDERGARTEN AND SCHOOL.**

*Headmistress*—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

**NOTICE.**—The "EDUCATIONAL TIMES" for **AUGUST** will contain the CLASS LISTS OF SUCCESSFUL CANDIDATES at the MID-SUMMER EXAMINATIONS of the College of Preceptors.

**LONDON COLLEGE OF MUSIC.**  
(Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

**FORMUSICAL EDUCATION, AND EXAMINATIONS IN PRACTICAL AND THEORETICAL MUSIC.**

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in July (June for Scotland and Ireland), when certificates will be granted to all successful candidates. Last day for entry, Friday, June 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in July and December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Piano-forte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, *Secretary.*

## University Correspondence College.

## FREE GUIDES

TO

## LONDON UNIVERSITY EXAMS.

**FREE GUIDE TO MATRICULATION**

(Postage 1d.),

INTER. ARTS, INTER. SCIENCE, B.A., OR

INTER. LAWS EXAMINATION.

Any one of the above Arts or Science Guides, Prospectus, and further particulars will be sent post free on application to

**THE SECRETARY,**

(Univ. Corr. Cols., London Office.)

32 Red Lion Square, London, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(Incorporated under Royal Charter, and a Constituent College of the University of Wales.)

*Principal*—H. R. REICHEL, M.A., late Fellow of All Souls College, Oxford.

DEPARTMENTS.	
Subjects.	Professors.
Greek	W. Rhys Roberts, Litt. D., late Fellow of King's College, Cambridge.
Latin	E. V. Arnold, Litt. D., late Fellow of Trinity College, Cambridge.
French and German	Frederic Spencer, M.A. (Camb.), Phil. Doc. (Leipzig).
Semitic Languages	T. Witton Davies, B.A., Ph.D.
History	J. E. Lloyd, M.A., Lincoln College, Oxford.
Constitutional History	The Principal.
English Language and Literature	W. Lewis Jones, M.A., late Scholar of Queens' College, Cambridge.
Philosophy	James Gibson, M.A., Fellow of St. John's College, Cambridge.
Mathematics	G. H. Bryan, Sc.D., F.R.S., late Fellow of Peterhouse, Cambridge.
Welsh	J. Morris Jones, M.A., late Scholar of Jesus Coll., Oxford.
Physics	E. Taylor Jones, D.Sc.
Chemistry	J. J. Dobbie, M.A., D.Sc., late Clark Fellow of Glasgow University.
Biology	R. W. Phillips, M.A., (Camb.), D.Sc. (Lond.), late Scholar of St. John's College, Cambridge.
Zoology	Philip J. White, M.B. (Edin.), F.R.S.E.
Agriculture	Thomas Winter, M.A. (Edin.), F.G.S.
Education	J. A. Green, B.A.

Inclusive Tuition Fee £11. 1s. a year. Laboratory Fees additional, on the scale of £1. 1s. per term for six hours a week.

The College Courses qualify for the degrees of the University of Wales, and include most of the Subjects for degrees of London University in Arts and Science. Students wishing to Graduate in Medicine in the Universities of Edinburgh and Glasgow can make one Annus Medicus at this College. Special provision is made for Electrical Engineering. There are a Day Training Department for men and women and a Department for the Training of Secondary Teachers.

The average cost of living (in lodgings) and tuition at Bangor for the Session (35 weeks) is from £30 to £40. A Hall of Residence for Women, under the supervision of Miss Mary Maude, who is the College Lady Superintendent of Women Students, is now open.

At the Entrance Scholarship Examination (which commences in September in each year) over 20 Scholarships and Exhibitions, ranging in value from £40 to £10, will be offered for competition.

For detailed information as to Courses, Entrance and other Scholarships, &c., apply to the Secretary and Registrar.

Bangor.

J. E. LLOYD, M.A.

## UNIVERSITY COLLEGE OF NORTH WALES.

(A Constituent College of the University of Wales.)

### DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.

(Recognized by the Cambridge Syndicate.)

*Professor of Education*—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAVESON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

## KELLAND TRAINING COLLEGE FOR TEACHERS, HIGH SCHOOL AND KINDERGARTEN, LEICESTER.

*Principal*—Miss MORGAN, N.F.U. Higher Certificate. *Head English Mistress*—Miss J. B. MORGAN, B.A. Lond. (Assisted by a Staff of Trained and Certificated English and Foreign Teachers.)

Preparation for Examinations of the National Froebel Union, Cambridge Teachers' Diploma, Oxford and Cambridge Locals, &c.

Grounds include Tennis Court, Croquet Lawn, Sand Playground, Garden, &c.

Prospectus, with particulars of Boarders' Fees, Entrance Scholarships, on application.

Resident GOVERNNESS STUDENT can be received. Premium 25 guineas. Excellent opportunity for gaining Teachers' Diplomas.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

*Principal*—Miss ETHEL HURLBATT.

The Session 1900-1901 will open on Thursday, October 4th. Students are requested to enter their names on Wednesday, October 3rd.

Lectures are given in all branches of General and Higher Education. Taken systematically, they form a connected and progressive course, but a single course of Lectures in any subject may be attended.

Courses are held in preparation for all the Examinations of the University of London in Arts and Science, for the Teachers' Diploma (London), and for the Teachers' Certificate (Cambridge); and also a Special Course of Scientific Instruction in Hygiene. Six Laboratories are open to students for Practical Work. Two Entrance Scholarships awarded yearly. A Gladstone Memorial Prize and the Early English Text Society's Prize are awarded to students each June.

The Art School is open from 10 to 4. Students can reside in the College.

Full particulars on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

### DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING

(Recognized by the Cambridge Syndicate.)

*Head of the Department*—Miss H. ROBERTSON, B.A.

The Third Term of the Session 1900 begins on Thursday, October 4th.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

The Council will, in December, award a Gilchrist Travelling Studentship, value £70.

Full particulars on application to Miss ROBERTSON.

## THE DATCHELOR TRAINING COLLEGE,

CAMBERWELL GROVE, S.E.

(In connexion with the Datchelor Collegiate School for Girls.)

*Governing Body*—The Worshipful Company of Clothworkers of the City of London.

*Principal*—Miss RIGG.

*Mistress of Method and Lecturer*—Miss CARPENTER. Assisted by other Teachers and Lecturers.

This College provides a full course of professional training for Women Teachers, together with abundant opportunity for regular class teaching in a school of over 400 pupils. Special provision is made for instruction in Physiology and Hygiene, Elocution, Drawing, and Ling's Swedish Drill.

Students are prepared for the Examination of the Cambridge Teachers' Training Syndicate.

Fees moderate.

A COLLEGE HALL OF RESIDENCE is provided for Students in the Training College. Terms moderate.

A Free Studentship (Training and Residence) will be awarded in September. For conditions apply to the SECRETARY.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

*Principal*—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

*Principal*—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

*Address*—74 GOWER STREET, LONDON, W.C.

*Registrar*—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## JOINT AGENCY FOR ASSISTANT-MASTERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

*Registrar*—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.

Incorporated Association of Headmasters.

College of Preceptors.

Teachers' Guild.

Welsh County Schools' Association.

Private Schools' Association.

Association of Headmasters of Preparatory Schools.

Association of Headmasters of Roman Catholic Schools.

Assistant-Masters' Association.

Association of Technical Institutions.

&c. &c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

## ASSOCIATION FOR PROMOTING THE EMPLOYMENT IN ELEMENTARY SCHOOLS OF GIRLS WHO HAVE HAD A SECONDARY EDUCATION.

*President*:

THE ARCHBISHOP OF CANTERBURY.

*Chairman of Executive Committee*:

SIR JOSHUA FITCH.

*Honorary Secretary*:

Miss J. MERIVALE,

4 Park Town, Oxford,

who will be glad to supply information.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS,

SALISBURY ROAD, BRONDESBURY, LONDON, N.W.

*Principal*—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

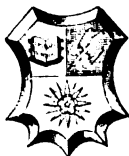
Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

**LONDON UNIVERSITY EXAMINATIONS.**



**SUMMER VACATION CLASSES FOR BEGINNERS**

IN PRACTICAL CHEMISTRY, PHYSICS, BOTANY, AND ZOOLOGY.

These Classes commence Tuesday, Aug. 7th, 1900, at University Tutorial College, London, and meet daily for four weeks. The Chemistry, Botany, and Zoology Courses extend over four weeks, and the Physics Course over two weeks.

The subjects will be dealt with in a very elementary manner, and in Zoology and Botany the work at first will be taken very slowly, so that the student may acquire skill with the knife and microscope, and thus pursue his private work to greater advantage.

**Summer Vacation Revision Class for B.Sc.**

Classes are held in subjects for the B.Sc. Examination, Oct., 1900, commencing Tuesday, Aug. 7th, at University Tutorial College, London, and extending over a period of four weeks. Special attention is paid to practical work.

Daily Lectures, supplemented by Private Tuition or small Exercise Classes, are given in Pure and Mixed Mathematics, and the more important parts taken up in Zoology and Botany.

During the last two Sessions, nearly 300 students of University Tutorial College have passed the Prelim. Sci. (M.B.) and Inter. Science Examination of London University with 30 places in Honours, and 64 students have passed the B.Sc. Examination with 15 places in Honours.

Full particulars of classes may be had from **THE VICE-PRINCIPAL,** University Tutorial College, 32 Red Lion Square, Holborn, W.C.

**ENGINEERING AND CHEMISTRY.**

**CITY AND GUILDS OF LONDON INSTITUTE.**

SESSION 1900-1901.

The Courses of Instruction at the Institute's CENTRAL COLLEGE (Exhibition Road) are for Students not under 16 years of age; those at the Institute's TECHNICAL COLLEGE, FINSBURY, for Students not under 14 years of age. The Entrance Examinations to both Colleges are held in September, and the Sessions commence in October. Particulars of the Entrance Examinations, Scholarships, Fees, and Courses of Study, may be obtained from the respective Colleges, or from the Head Office of the Institute, Gresham College, Basinghall Street, E.C.

**CITY AND GUILDS CENTRAL TECHNICAL COLLEGE.**

(EXHIBITION ROAD, S.W.)

A College for higher Technical Instruction for Day Students not under 16 preparing to become Civil, Mechanical, or Electrical Engineers, Chemical and other Manufacturers, and Teachers. Fee for a full Associateship Course, £25 per Session. Professors:—

*Civil and Mechanical Engineering*—W. C. UNWIN, F.R.S., M.Inst.C.E.

*Electrical Engineering*—W. E. AYRTON, F.R.S., Past Pres. Inst. E.E.

*Chemistry*—H. E. ARMSTRONG, Ph.D., LL.D., F.R.S.

*Mechanics and Mathematics*—O. HENRICI, Ph.D., LL.D., F.R.S.

**CITY AND GUILDS TECHNICAL COLLEGE, FINSBURY.**

(LEONARD STREET, CITY ROAD, E.C.)

A College for Intermediate Instruction for Day Students not under 14, preparing to enter Engineering and Chemical Industries, and for Evening Students. Fees, £15 per Session for Day Students. Professors:—

*Physics and Electrical Engineering*—S. P. THOMPSON, D.Sc., F.R.S., Principal of the College.

*Mechanical Engineering and Mathematics*—W. E. DALBY, M.A., B.Sc., M. Inst.C.E.

*Chemistry*—R. MELDOLA, F.R.S., F.I.C.

**JOHN WATNEY, Hon. Secretary.** City and Guilds of London Institute, Gresham College, Basinghall Street, E.C.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.)

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,

BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

**CAMBRIDGE UNIVERSITY**

SCHOLASTIC AGENCY, LTD.—MASTERS are wanted (1) for West Indies, Drawing and French. £80 or £90, Resident. (2) For Cape Colony, Mathematics and general work. £120, Resident. Free passages. Particulars will be sent *provided inquiries are accompanied by testimonials.* Apply to the Director, Prof. LEWIS, Cambridge.

**ALLAN GLEN'S SCHOOL, GLASGOW.**

—Wanted, for the Secondary and Science Departments, two ASSISTANT-MASTERS. Apply to the HEADMASTER, stating (1) University or other distinctions, (2) general qualifications for Secondary School work, (3) knowledge of Laboratory Courses, (4) experience in Teaching. Salary from £120 to £150.

**GERMAN LADY (18), seeks Situation**

in good English family, as GOVERNESS or COMPANION. Apply to Mr. and Mrs. WALTER FARMER (French and German Boarding School for English Children), Ruhfautchen Platz 3, Braunschweig, Germany.

**LONDON MATRICULATION and**

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

**MR. H. A. NESBITT (joint-author**

of "The Science and Art of Arithmetic," by A. SONNENSCHNIG and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic.—16 South Hill Park Gardens, Hampstead, N.W.

**CORRESPONDENCE TUITION,**

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. HORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS, SCI., ENCE, and PREL. SCI., B.A., and B.Sc. EXAMINATIONS. Day and Evening Classes.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, &c.

Papers Corrected for Schools. Private tuition for all Examinations. Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class, Classical Honours, Editor of "Phaedo," "Pro Plancio," &c.

**SUCCESSSES.**

1892-1899.—London Matric., 71; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**

**M.A., 2 (1898 and 1899).**

**THE ANSTEY PHYSICAL TRAINING COLLEGE**

OFFERS a professional Training in Swedish Gymnastics (both educational and medical) to Ladies of good education.

The Course begins in September, and lasts two years. Age of admission, 18 to 30. The work is particularly interesting and healthful, and is remunerative, there being more openings for trained teachers than can be filled.

Apply, for illustrated prospectus, to THE PRINCIPAL, The Loasowes, near Halesowen, Worcestershire.

**SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.**

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

No extras. Resident Governesses.

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

**ABERDARE HALL, CARDIFF.—**

RESIDENCE FOR WOMEN STUDENTS OF THE UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

Principal—Miss KATE HURLEATT.

Fees 30 guineas and 40 guineas per annum. College-tuition fees £10 per annum. Scholarships of £35, £25, and £20, and Exhibitions of £10, will be obtainable on result of Scholarship Examination to be held September. A Medical School and Department for Secondary and Elementary Training are attached to the College. Apply to the PRINCIPAL.

**QUEEN'S COLLEGE, LONDON.—**

First-rate Education Free. The GOVERNESSES' BENEVOLENT INSTITUTION will shortly present FOUR FREE PUPILS to Queen's College or Queen's College School, for a period of four years.

Candidates must be daughters of officers, professional men, or gentlemen of equal position, between 14 and 18 years of age, in some measure dependent on a Governess relative.

Applications can be made at this office until August 18.

C. W. KLUGH,

Secretary to the Governesses' Benevolent Institution.

32 Sackville Street, W.

**EPPS'S COCOA.**

GRATEFUL. COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 4-lb. and 1-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.

BREAKFAST. SUPPER.

**EPPS'S COCOA.**



FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

281 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1899, 56 with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P.**, **L.C.P.**, and **F.C.P.**

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.

## HINTS ON FRENCH SYNTAX.

By **F. STORR,**

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

Just Published.

THE SCHOOL EDITION OF

## MOLIÈRE'S LE BOURGEOIS GENTILHOMME.

EDITED BY PROFESSOR SPENCER.

With Full Notes and Glossary. Cloth, 1s. 3d. net.

Ready immediately.

## ASINETTE.

A FRENCH STORY FOR LITTLE ENGLISH READERS.

By MRS. J. G. FRASER.

With 8 Coloured Illustrations, and 200 in text. By H. M. BROCK.  
Crown 8vo.

J. M. DENT & CO., 29 AND 30 BEDFORD STREET, W.C.

<b>JOSEPH GILLOTT'S</b>	Gold Medals, Paris, 1878, 1889.
	<b>STEEL PENS.</b>

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping), 659 (Drawing);  
and (for Vertical Writing) 1045, 1046.

**THE PRINCIPAL** of an old-established Ladies' Day School near London wishes to retire at the close of the current term, and would accept the sum of £160 from an immediate Purchaser. This would include the transfer of from 20 to 26 Pupils, one piano, the complete modern furniture of three school-rooms (Swedish desks, maps, &c.), and the household fixtures. The rent of the house is £60. Address—**CANTAB.**, Office of *Educational Times*, 89 Farringdon Street, E.C.

**GOUIN SCHOOL OF LANGUAGES,**  
34 HARRINGTON ROAD, SOUTH KENSINGTON;  
16 FINSBURY CIRCUS, CITY.

Classes in French, German, Italian, all the year round. Special reduced fees to Teachers. Holiday Courses. Teachers trained on the Gouin Series Method.

**Modern Languages Holiday Courses.**

Organized by the Teachers' Guild.

**ELBEUF, LISIEUX, AND TOURS.**

1900.

Commencing on August 2nd.

Preliminary Programme gratis.  
Handbook, giving full particulars, price 6d., by post, from the Offices of the Guild, 74 Gower Street, London, W.C.

## SCHOOL PRIZES.


**BICKERS & SON** have the largest and most varied stock in London of **BOOKS** handsomely bound in Calf and Morocco, suitable for **SCHOOL PRIZES**.

They have had more than fifty years' experience, and have long had the reputation of being one of the best Bookbinding Firms in England.

*Catalogues post free.*

School Books supplied at 25 per cent. discount, and a Term's credit.

**BICKERS & SON, LEICESTER SQUARE, LONDON, W.C.**

 *Headmasters should apply for*

**EYRE & SPOTTISWOODE'S**

ILLUSTRATED CATALOGUE OF

**DRAWING INSTRUMENTS,**

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

**BOXES OF WATER AND OIL COLOURS,**

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## OXFORD LOCAL SHAKESPEARE, 1901.

DINGLEWOOD SHAKESPEARE MANUALS, BY STANLEY WOOD, M.A.

**HENRY THE FIFTH, QUESTIONS AND NOTES. 1s.**

"A little brochure of some fifty pages, which will suggest some useful thoughts to masters teaching the play."—*Journal of Education*.

**MERCHANT OF VENICE, QUESTIONS AND NOTES. 1s.**

"Cannot but prove useful to candidates for whom these plays are set."—*Scotsman*.

## CAMBRIDGE LOCAL SHAKESPEARE, 1900.

**AS YOU LIKE IT, QUESTIONS AND NOTES. 1s.**

"They will tend rather to discourage 'cram' than otherwise. . . . We can recommend the book as a distinctly useful 'aid.'"—*Guardian*.

Each of the Manuals contains about 250 Questions, of which all the most difficult (about one-third of the whole number) are fully answered as models.

JOHN HEYWOOD, LONDON AND MANCHESTER.

## CAREY'S "GRADUS AD PARNASSUM,"

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

**Diploma Correspondence College.**

The ONLY College that coaches SOLELY for

# A.C.P.,

L.C.P., AND F.C.P.

SUCCESSSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal

Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.

**New.**

**GILL'S**

**New.**

**"CARTOGRAPHIC"**

**WALL MAPS**

**FOR SECONDARY SCHOOLS.**

*Edited by GEORGE GILL, F.R.G.S.*

**Size,**  
80 x 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

**Price 16s.**

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

\*ENGLAND AND WALES.  
\*SCOTLAND.

\*IRELAND.  
\*EUROPE.

INDIA.  
\*AFRICA.

ASIA.  
\*N. AMERICA.

\* The Set Geography for the Local Examinations.

**Class Text-Books for the Examinations in 1900.**

<b>GEOGRAPHY.</b>		<i>s. d.</i>	<b>ENGLISH AND ENGLISH GRAMMAR.</b>		<i>s. d.</i>
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition	Physical, Descriptive, Political, Industrial, Commercial, Social.	4 6	Shakespeare, As You Like It. Second Edition ( <i>in the press</i> ). Edited by the Rev. F. MARSHALL, M.A. Most suitable for Junior Students	1 6	
<i>Also published in Sections as follows:—</i>			Macaulay, Lays of Ancient Rome. By the Rev. G. PRESTON, M.A.	1 6	
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.a. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.			Scott, Marmion. Edited by the Rev. F. MARSHALL, M.A., and similar to the above. Containing Introduction, Text, Appendix, Notes, and Maps. ( <i>In the press</i> )	2 6	
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes. New edition		2 6	The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A.	1 0	
The O. and C. Geography (Revised Edition). By GEORGE GILL. With numerous Coloured Maps		1 0	Preparation Papers in English Grammar. By the Rev. G. PRESTON, M.A. Per packet	0 8	
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms)		1 0	Exercises in Composition, Dictation, and Letter Writing	1 0	
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies		2 6	The O. and C. Spelling Book	1 0	
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps		1 0	2,345 Words	0 2	
<b>MATHEMATICS AND ARITHMETIC.</b>			<b>RELIGIOUS KNOWLEDGE.</b>		
Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A.		2 6	Marshall's St. Luke. Edited by the Rev. F. MARSHALL, M.A.	1 6	
Marshall's Examination Euclid. Books I.-IV.		1 0	Marshall's Acts of the Apostles (complete)	2 6	
The O. and C. Algebra		1 6	Marshall's Acts of the Apostles. Part II.: Chapters XIII.-end	1 6	
Preparation Papers in Algebra. By A. CUDWORTH, M.A.		0 8	Church Catechism. With Notes. By the same Author	1 6	
The O. and C. "Practical Arithmetic." 176 pp., crown 8vo (New Edition), cloth, enlarged. (With Answers, 1s. 6d.)		1 0	The O. and C. Genesis	1 0	
The O. and C. "Tests in Arithmetic." (With Answers, 1s. 6d.)		1 0	The Preparation Papers on St. Luke and the Acts of the Apostles are now ready. Per packet	0 8	
A Graduated Examination Arithmetic. 160 pp., cloth		1 0	<b>LATIN AND FRENCH. s. d.</b>		
The Metric System, Practical Guide to. Containing Appendix, &c.		0 2	The O. and O. Latin, Part I. (Accidence)	1 0	<b>NATURAL SCIENCE.</b>
The Metric Chart (60 by 40). In Four Tints, mounted and varnished		10 6	The O. and C. Latin, Part II. (Exercises)	1 0	Physical Measurements
The Long Tot Book. By the Rev. CHARLES BROOKE, M.A.		0 3	The O. and C. Latin, Part III. (Translations)	1 0	or in Three Parts
The Cross Tot Book. By the Rev. CHARLES BROOKE, M.A.		0 3	Commercial French Correspondence	1 0	Elementary Physics
Cambridge Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per pkt.		0 8	The O. and C. French, Part I.	1 0	Applied Mechanics
<b>BOOK-KEEPING.</b>			The O. and C. French, Part II.	1 0	Mechanics of Solids
Sarll's Practical Book-keeping. 128 pp., cloth		1 0	Phaedrus, Books I. and II.	1 0	Mechanics of Fluids
An Elementary Text-Book, illustrating the arrangement of the Bought, Sales, Cash, Bill Books, and Ledger; consisting of Graduated Exercises, followed by Examination Papers set by the College of Preceptors, accompanied by <i>full-worked</i> and <i>outline</i> keys.			Eutropius, Books I. and II.	1 0	Magnetism and Electricity
Sarll's Double-Entry Book-keeping. 256 pp., cloth		2 0	Cæsar, Book VI.	1 0	Physiological Charts, Set of Three
Sarll's Exercises in Double-Entry Book-keeping. 128 pp., cloth		1 0	Vergil, Æneid, Book VI.	1 0	Elementary Chemistry
The above with all introductory matter, <i>full</i> explanations, <i>outline</i> keys, &c.			Cicero, De Senectute	1 0	Chemical Laws and Problems
Manuscript Books published to accompany the above.			Preparation Papers in French	0 8	Chemistry of Common Objects
For Practical:—Cash Book	5d.	Ledger	Preparation Papers in Latin	0 8	Chemistry Notes
Ledger (100 Accounts)	7d.				
For Double Entry:—Journal	5d.	Ledger			
Short and Introductory Exercises	7d.				
Key to Double-Entry Book-keeping					
Key to Practical Book-keeping					

**GILL'S MILITARY DRILL.**

ARRANGED IN FOUR PARTS.

2/6 Part I.—Squad Drill. Part II.—Company Drill. Part III.—Bayonet Exercise. 2/6 Part IV.—Manual Exercise for Rifle, and Bayonet Exercise.

WITH CHORAL MARCHES EASILY AND SIMPLY ARRANGED.

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens of Class Text-Books only will be sent.

LONDON; GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# Blackie & Son's List

FOR OXFORD LOCAL EXAMINATIONS, 1901.

**SHAKESPEARE.—HENRY THE FIFTH.** Edited by G. C. MOORE SMITH, M.A. 1s. 6d. *(The Warwick Shakespeare.)*  
 The Athenæum says:—"Edited with great care. No better edition could be found either for the class teacher or for the solitary student."  
 The Guardian says:—"The notes are excellent."

**SHAKESPEARE.—HENRY THE FIFTH.** Edited by W. BARRY, B.A. ( Lond.). 8d. *(Blackie's Junior School Shakespeare.)*

**SHAKESPEARE.—THE MERCHANT OF VENICE.** Edited by H. L. WITHERS, B.A. 1s. 6d. *(The Warwick Shakespeare.)*  
 The Journal of Education says:—"One of the best small editions of 'The Merchant of Venice' that we have seen. We heartily recommend this edition."  
 The Educational Times says:—"The introduction and notes alike are models of interpretation by suggestion as well as by clear, pointed exposition."

**CAESAR.—THE GALLIC WAR. Books IV., V., VI.** Edited by Prof. JOHN BROWN. With numerous Illustrations, Plans, and Maps. 1s. 6d. each.  
 The Athenæum says:—"Admirably done (Book V.). The notes are terse and lucid; the introduction is full and equally lucid."

**HORACE.—THE ODES. Book IV.** Edited by STEPHEN GWYNN, B.A. With or without Vocabulary. Illustrated. 1s. 6d. *(Blackie's Illustrated Latin Series.)*

The Academy says:—"The distinguishing feature of this new series is the illustrations. Those in the present volume are interesting and appropriate. Apart from this the work is well done. Mr. Gwynn's introduction is excellent, and shows independence of thought."

**VIRGIL.—ÆNEID. Book I.** Edited by Prof. A. J. CHURCH, M.A. Cloth, 1s.  
 The Bookman says:—"One of the most intelligently edited text-books for elementary students to be met with."

**LIVY.—Book V.** Edited by W. CECIL LAMING, M.A. Cloth, 2s. 6d.  
 The Spectator says:—"Mr. Laming has incorporated excellent matter in his book. . . . There are some valuable hints on translation, . . . . There are some excellent illustrations which add much to the value of the book."

\* \* \* The Publishers will be pleased to entertain applications for Specimen Copies with a view to introduction.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID,

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.  
 By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.  
 Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

**A KEY TO THE EXERCISES**  
 IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."  
 By JOSEPH B. CASEY, Tutor, University College, Dublin.  
 Second Edition. Small 8vo, price 6s.

**A SEQUEL TO THE**  
**FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."**  
 Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

**A TREATISE ON THE**  
**ANALYTICAL GEOMETRY**  
 OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.  
 Containing an account of its most recent Extensions, with numerous Examples.  
 New Edition. Crown 8vo.

**A TREATISE ON**  
**ELEMENTARY TRIGONOMETRY.**  
 With numerous Examples and Questions for Examination.  
 Third Edition. Small 8vo, 148 pp., price 3s.

**KEY TO THE EXERCISES**  
 IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.  
 With numerous Examples and Questions. Second Edition. Price 3s.

**A TREATISE ON**  
**PLANE TRIGONOMETRY.**  
 Containing an account of Hyperbolic Functions, with numerous Examples.  
 Crown 8vo. Second Edition.

Crown 8vo, price 5s.

**A TREATISE ON**  
**SPHERICAL TRIGONOMETRY,**  
 AND ITS APPLICATION TO GEODESY AND ASTRONOMY.  
 With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.  
 LONDON: LONGMANS & CO.

**XENOPHON.—ANABASIS. Book I.** Edited by C. E. BROWN-RIGG, M.A. Cloth, 1s. 6d.  
 The Educational Times says:—"As complete as could be desired, whether in point of maps, introductions, or commentary."  
 The University Correspondent says:—"A decidedly good and useful edition."  
 The Speaker says:—"The text is accompanied by a sound and excellent introduction and copious grammatical and other notes."

**LATIN GRAMMAR PAPERS.** Selected from Oxford and Cambridge Local and London Matriculation Examination Papers. By A. C. LIDDELL, M.A. Cloth, 1s.

## THE OXFORD MANUALS OF ENGLISH HISTORY.

General Editor—C. W. C. OMAN, M.A., Fellow of All Souls College, Oxford. Cloth, 1s. each.

**No. I.—THE MAKING OF THE ENGLISH NATION.**  
 B.C. 55—A.D. 1135. By C. G. ROBERTSON, B.A.

**No. II.—KING AND BARONAGE.** 1135—1327. By W. H. HUTTON, B.D.

**No. III.—ENGLAND AND THE HUNDRED YEARS' WAR.**  
 1327—1485. By C. W. C. OMAN, M.A.

**No. IV.—ENGLAND AND THE REFORMATION.** 1485—1603. By G. W. POWERS, M.A.

**No. V.—KING AND PARLIAMENT.** 1603—1714. By G. H. WAKELING, M.A.

**No. VI.—THE MAKING OF THE BRITISH EMPIRE.**  
 1714—1832. By ARTHUR HASSALL, M.A.

**HIGHER ENGLISH.** An Outline of English Language and Literature. By DAVID CAMPBELL. Cloth, 1s. 6d.  
 "The book is as full of information as the proverbial egg. . . . It is an admirable little work."—*Journal of Education.*

JULY NUMBER NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### LEADING CONTENTS.

**AIDS TO CLASSICAL STUDY.** (Illustrated.) By W. H. D. ROUSE, M.A.—**EDUCATION AT THE PARIS EXHIBITION.** (From our Special Correspondent at Paris.)—**CLAY-MODELLING IN SCHOOLS.** (Illustrated.) By T. L. HUMBERSTONE, A.R.C.S., B.Sc.—**MARKS AND MARKING. II.: Summation of Marks.** By HAROLD W. ATKINSON, M.A.—**EXPERIMENTAL CHEMISTRY.** (Illustrated.) **VI.: Sulphur; Hydrogen Sulphide and Sulphides; Sulphur Dioxide; Sulphurous Acid and Sulphites; Sulphur Trioxide; Sulphuric Acid and Sulphates; Varieties of Phosphorus.** By Prof. J. B. COLEMAN, A.R.C.S., F.I.C.—**SHORT TOURS IN NORMANDY.** (Illustrated.) By WALTER ROBINS, B.Sc.—**TOURS TO PARIS WITH EXTENSIONS.—TEACHERS' NOTES ON ENGLISH HISTORY, 1509—1603.** By L. J. McNAIR, B.A., and C. S. FEARENSIDE, M.A.—**CURRENT GEOGRAPHICAL TOPICS. Peking and Pechili.** By DR. A. J. HERBERTSON, F.R.G.S.—**OUTLINES OF A COURSE OF ENGLISH LITERATURE.—OXFORD LOCAL EXAMINATIONS. Set Subjects for 1901.**

MACMILLAN & CO., LTD., LONDON.

## EXAMINATION PAPER

AS USED BY THE

### COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Beams of **480 Sheets**... per Beam, **2s. 6d.**  
 " " **240 " " " "** " " " " **1s. 3d.**  
 " " **120 " " " "** " " " " **6d.**

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.  
 Remittance should accompany Order.

HEWARD & SHELBORNE, Wholesale and Retail Stationers,  
 63 HIGH HOLBORN, LONDON, W.C.

# MESSRS. WM. BLACKWOOD & SONS' LIST.

## BLACKWOODS' ILLUSTRATED CLASSICAL TEXTS.

General Editor—H. W. AUDEN, M.A., Assistant-Master at Fettes College.

NOW READY.

**Cæsar.—Gallic War. Books IV., V.** By ST. J. B. WYNNE WILLSON, M.A., Assistant-Master at Rugby. *With or without Vocabulary.* 1s. 6d. Vocabulary separate, 3d.

(Prescribed for the Oxford Local, London Matriculation, and College of Preceptors Examinations, 1900.)

"Mr. Wynne has certainly succeeded in giving boys all the information and help they could possibly desire for translating Cæsar, and we may say that a thorough acquaintance with the contents of this volume would be a considerable step towards a knowledge not only of Latin, but of Roman history and antiquities in general. . . . The notes are copious and accurate; while an appendix of proper names, with historical and geographical notes, is a good feature."—*Journal of Education.*

"A very attractively edited volume, with some quite successful pictures and good notes which reach a really high level of merit."—*Guardian.*

**Virgil.—Georgics. Book IV.** By J. SARGEANT, M.A., Assistant-Master at Westminster. 1s. 6d.

(Prescribed for the Cambridge Higher Local Examinations, 1900, 1901.)

"The editing of the specimen before us is thoroughly competent: the notes are brief and interesting, and the introduction and the appendices are of more than average merit. . . . The price of the book is remarkably low."—*Educational Times.*

"The book is the best we have seen of the new type of school-book. If Messrs. Blackwood keep up to this standard, their series will stand high."—*Literature.*

"There is a pleasing freshness about this volume."—*Athenæum.*

**Cicero.—In Catilinam. Books I.—IV.** By H. W. AUDEN, M.A. 1s. 6d.

"The introduction, notes, and appendix are all on the level of the highest classical work, and contain a great deal of useful and suggestive material for the most advanced classes. The illustrations, of which there are eleven, cannot fail to be most helpful to an appreciation of the speeches."—*Glasgow Herald.*

**Ovid.—Metamorphoses (Selections).** By J. H. VINCE, M.A., Assistant-Master at Bradford. 1s. 6d.

**Demosthenes.—Olynthiacs I.—III.** By H. SHARPLEY, M.A., formerly Assistant-Master at Marlborough. [Immediately.]

**Xenophon.—Anabasis. Books I., II.** By A. JAGGER, B.A., Hymer's College, Hull. [Immediately.]

## BLACKWOODS' ENGLISH CLASSICS.

With Frontispieces. In fcap. 8vo volumes, cloth.

General Editor—J. H. LOBBAN, M.A., Editor of "English Essays," formerly Examiner in English in the University of Aberdeen.

**Macaulay.—Life of Johnson.** By D. NICHOL SMITH, M.A., Editor of "King Henry VIII." (Warwick Shakespeare). 1s. 6d.

"A MOST DESIRABLE EDITION. The introduction includes a life of the author, together with an excellent appreciation of his style and critical methods, whilst the one difficulty in reading Macaulay—his fondness for allusion—is overcome by a complete and interesting set of notes, involving considerable research in eighteenth century biography."—*Educational News.*

**Goldsmith.—Traveller, Deserted Village, and other Poems.** By J. H. LOBBAN, M.A. 1s. 6d.

"Goldsmith has never appeared in more attractive garb than he does here, type and binding being alike beautiful. Nor do the literary accompaniments of the text in the shape of introduction and notes deserve less praise. . . . The editor's remarks on the poems are full of fine feeling and discrimination. . . . In short, this is not only AN IDEAL EDITION for schools, but is well worthy of a place on the student's bookshelf."—*Educational News.*

**Milton.—Paradise Lost. Books I.—IV.** By J. LOGIE ROBERTSON, M.A., First English Master, Edinburgh Ladies' College. 2s. 6d.

**Cowper.—The Task, and Minor Poems.** By ELIZABETH LEE, Author of "A School History of English Literature." 2s. 6d.

**Scott.—Lady of the Lake.** By W. E. W. COLLINS, M.A. 1s. 6d.

**Johnson.—Lives of Milton and Addison.** By Prof. J. W. DUFF, M.A., Durham College of Science, Newcastle-upon-Tyne. 2s. 6d.

**Carlyle.—Essay on Burns.** By JOHN DOWNIE, M.A. [Immediately.]  
*Other Volumes to follow.*

## BLACKWOODS' LITERATURE READERS.

Edited by JOHN ADAMS, M.A., B.Sc., F.C.P.,

Rector of the Free Church Training College, Glasgow.

The Series consists of Four Volumes.

Book I. Pp. 228 . . . Price 1s.      Book III. Pp. 303 . . . Price 1s. 6d.  
Book II. Pp. 275 . . . Price 1s. 4d.    Book IV. Pp. 381 . . . Price 1s. 6d.

"The volumes, which are capitally printed, consist of selected readings of increasing difficulty, to which notes and exercises are added at the end. The selected pieces are admirably chosen, especially in the later books, which will form a beginning for a really sound and wide appreciation of the stores of good English verse and prose."—*Athenæum.*

"The selected readings . . . are interesting, and possessed of real literary value. The books are well bound, the paper is excellent, and the unusual boldness and clear spacing of the type go far to compensate for the entire absence of pictorial illustrations."—*Guardian.*

"A very excellent gradus to the more accessible heights of the English Parnassus. . . . The appendices on spelling, word-building, and grammar are the work of a skilful, practical teacher."—*Pall Mall Gazette.*

## BLACKWOODS' SCHOOL SHAKESPEARE.

Edited by B. BRIMLEY JOHNSON.

Each Play complete, with Introduction, Notes, and Glossary. In Crown 8vo Volumes, price 1s. 6d. each, cloth; paper, with cloth back, 1s.

As You Like It. [Ready.]

(Prescribed for Cambridge and Oxford Local Examinations, 1900.)

The Merchant of Venice. [Ready.]      Julius Cæsar. [Ready.]  
Richard III. [Ready.]      The Tempest. [Ready.]

\* \* Others to follow.

## ENGLISH LANGUAGE AND LITERATURE.

**History of English Literature.** By J. LOGIE ROBERTSON, M.A., Senior English Master, Edinburgh Ladies' College. 3s.

**Outlines of English Literature.** For Young Scholars, with Illustrative Specimens. By the same Author. 1s. 6d.

**English Verse for Junior Classes.** By the same Author. Part I.—CHAUCER TO COLERIDGE. Part II.—NINETEENTH CENTURY POETS. 1s. 6d. net each.

**English Prose for Junior and Senior Classes.** By the same Author. Part I.—MALORY TO JOHNSON. Part II.—NINETEENTH CENTURY WRITERS. 2s. 6d. each.

**Stormonth's Handy School Dictionary.** 1s.

**One Hundred Stories for Composition.** In Alternative Versions. 1s. 3d.

**Elementary Grammar and Composition.** Based on the Analysis of Sentences. With Chapter on Word-Building and Derivation. 1s.

## LATIN AND GREEK.

**First Latin Sentences and Prose.** By K. P. WILSON, M.A. [Immediately.]

**Tales of Ancient Thessaly.** An Elementary Latin Reading-Book, with Vocabulary and Notes. By J. W. E. PEARCE, M.A., late Assistant-Master, University College School, London. 1s.

**Higher Latin Unseens.** By H. W. AUDEN, M.A., Assistant-Master at Fettes College. 2s. 6d.

**Higher Latin Prose.** By H. W. AUDEN, M.A. 2s. 6d.  
\* \* KEY, 5s. net.

**Lower Latin Prose.** By K. P. WILSON, M.A., Assistant-Master at Fettes College. 2s. 6d. \* \* KEY, 5s. net.

**Lower Latin Unseens.** By W. LOBBAN, M.A. 2s.

**Latin Historical Unseens.** For Army Classes. By L. C. VAUGHAN WILKES, M.A., late Classical Scholar of Hertford College, Oxford. 2s.

**Higher Greek Unseens.** By H. W. AUDEN, M.A. 2s. 6d.

**Higher Greek Prose.** By H. W. AUDEN, M.A. 2s. 6d. \* \* KEY, 5s. net.

**Lower Greek Prose.** By K. P. WILSON, M.A. 2s. 6d.

**Greek Prose Phrase-Book.** Based on Thucydides, Xenophon, Demosthenes, and Plato. Arranged according to Subjects, with Indexes. By H. W. AUDEN, M.A., Editor of "Meissner's Latin Phrase-Book. Interleaved, 3s. 6d.

**Greek Test Papers.** By JAMES MOIR, Litt.D., LL.D., Co-Rector of Aberdeen Grammar School. 2s. 6d.

## FRENCH AND GERMAN.

**French Historical Unseens.** By N. E. TOKE, B.A. 2s. 6d.

**Select Passages from Modern French Authors (Prose and Verse).** With short Literary and Biographical Notices. Part I.—ADVANCED COURSE. Part II.—JUNIOR COURSE. By L. E. KASTNER, B.A., late Scholar of Clare College, Cambridge, Lecturer in Modern Languages at Caius College, Cambridge. 2s. 6d. each.

**The Tutorial Handbook of French Composition.** By ALFRED MERCIER, L.es-L., Lecturer on French Language and Literature in the University of St. Andrews. 3s. 6d.

**The Children's Guide to the French Language.** By ANNIE G. FERRIER, Teacher of French in the Edinburgh Ladies' College. 1s.

**Progressive German Composition** (with Copious Notes and Idioms) and **First Introduction to German Philology.** By LOUIS LUBOWITZ, German Master in the Secondary Schools of the Govan School Board, Glasgow. 3s. 6d. Also, in Two Parts—**Composition**, 2s. 6d. \* \* KEY, 5s. net. **Philology**, 1s. 6d.

**Lower-Grade German:** Reading, Supplementary Grammar with Exercises, and Material for Composition. By the same Author. 2s. 6d.

**A Compendious German Reader.** Consisting of Historical Extracts, Specimens of German Literature, Lives of German Authors, an Outline of German History (1640-1890), Biographical and Historical Notes. Especially adapted for the use of Army Classes. By G. B. BEAK, M.A. Oxon., Modern Language Master at The King's School, Bruton. 2s. 6d.

**Arithmetic.** With numerous Examples, Revision Tests, and Examination Papers. By A. VEITCH LOTHIAN, M.A., B.Sc., Lecturer in Mathematics, Church of Scotland Training College, Glasgow. *With Answers*, 3s. 6d.

**Modern Geometry of the Point, Straight Line, and Circle.** By J. A. THIRD, M.A., Headmaster, Spier's School, Beith. 3s.

Complete Educational Catalogue forwarded post free on application.

## Professor MEIKLEJOHN'S SERIES.

### The Art of Writing English. A Manual for Students.

With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A.  
Second Edition. Crown 8vo, 340 pp. . . . . 2s. 6d.

### One Hundred Short Essays in Outline. By Professor MEIKLEJOHN. Second Edition. Crown 8vo, 110 pp. . . . . 1s.

"This is undoubtedly one of the most useful books for pupil teachers, Scholarship and Certificate students, ever produced."—*The Practical Teacher*.

### General Intelligence Papers; with Exercises in English Composition. By GERALD BLUNT, M.A. Crown 8vo, 130 pp. . . . . 2s.

"This little book is likely to be very useful. It avoids the faults of so many books of the same class: the questions are not too difficult."—*Rev. Joseph Wood, D.D., Headmaster of Harrow School*.

### A School Geography; with Special Reference to Commerce and History. With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A. Crown 8vo, 410 pp. . . . . 2s. 6d.

"This is a well-planned book, with many good features, and the promise of the title-page is sedulously fulfilled."—*The Educational Times*.

### A School Algebra for Junior Forms. By F. OSCAR LANE, B.Sc. Lond., Assistant-Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. . . . . 1s. 6d.

With Answers, 266 pp. . . . . 2s. 0d.

"A very trustworthy book for beginners, extending to indices, surds, and progressions."—*The University Correspondent*.

### A Short Arithmetic. By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. . . . . 1s.

With Answers, 1s. 6d.

"A book of well graduated examples, and just as much theory as will explain the methods of their solution."—*The Educational Times*.

### A Short Geography, with the Commercial Highways of the World. Sixteenth Edition. Crown 8vo, 196 pp. . . . . 1s.

"Terse, practical, informative, and statistic. This shilling Geography is exactly what a School Geography needs to be."—*The Teachers' Aid*.  
"Clearness and conciseness exemplified."—*The Private Schoolmaster*.

### A Short History of England and Great Britain. B.C. 55 to A.D. 1890. Twelfth Edition. Crown 8vo, 172 pp. . . . . 1s.

"In the 'Short History' there is plenty of anecdote, ballad, and stray gems of literature; and we find, though not with its usual emphasis, the Professor's expertness in the use and disposition of type."—*Education*.

### A Short Grammar of the English Tongue, with Three Hundred and Thirty Exercises. Eleventh Edition. . . . . 1s.

This little book is written in the clearest and simplest style for beginners. It contains:—

- |                                 |   |
|---------------------------------|---|
| i. The Simplest Definitions.    | iv. Graduated Methods of Parsing.       |
| ii. Slowly graduated Exercises. | v. Bad Grammar Corrected, with Reasons. |
| iii. Clearly printed Tables.    | vi. Analysis, with Plain Diagrams.      |

### A New Spelling Book. With Side Lights from History. Eighth Edition. Crown 8vo, 152 pp. . . . . 1s.

"We agree with the main principle here followed—that spelling should be learnt through the eye rather than through the ear."—*The School Guardian*.

### A New Poetry Book for the Use of Schools and Families. Fourth Edition. 180 pp. . . . . 1s.

"This neatly bound little collection, which is one of Professor Meiklejohn's series of school manuals, may be confidently recommended to teachers in search of new selections for recitation."—*The Schoolmaster*.

## BOOKS FOR PRIZES. PUBLISHED BY BLACKIE & SON.

**THE BOYHOOD OF A NATURALIST:** An Autobiography. By FRED SMITH. Crown 8vo, cloth, 3s. 6d.  
"An admirable little book. . . . We can warmly recommend it to young people."—*Athenæum*.

**AMONG THE BIRDS IN NORTHERN SHIRES.** By CHARLES DIXON, Author of "Bird Life in a Southern County," &c. With Coloured Frontispiece and 40 other Illustrations by CHARLES WHYMPER. Demy 8vo, cloth, gilt top, 7s. 6d.  
"You can scarcely open it without fishing up something interesting and agreeable."—*Academy*.

**THE UNIVERSE:** or, The Infinitely Great and the Infinitely Little. A Sketch of Contrasts in Creation, and Marvels revealed and explained by Natural Science. By F. A. POTCHET, M.D. Illustrated by 270 Engravings on wood, and Four Coloured Plates. Thirteenth Edition. Medium 8vo, cloth elegant, gilt edges, 7s. 6d.

"We can honestly commend this work, which is admirably, as it is copiously, illustrated."—*Times*.

### NEW UNIFORM EDITION OF GEORGE MACDONALD'S STORIES.

Fully Illustrated by Laurence Housman, Arthur Hughes, Helen Stratton, and W. Parkinson. Price, in cloth extra, 3s. 6d. each.

**At the Back of the North Wind.** | **The Princess and the Goblin.**  
**Ronald Bannerman's Boyhood.** | **The Princess and Curdie.**  
**A Rough Shaking.**

### G. A. HENTY'S HISTORICAL TALES.

Fully Illustrated by various Artists, and Elegantly bound in Cloth.

#### PRICE SIX SHILLINGS EACH.

**Won by the Sword.** A Tale of the Thirty Years' War.

**A Roving Commission;** or, Through the Black Insurrection of Hayti.

**Under Wellington's Command.** A Tale of the Peninsular War.

**Both Sides the Border.** A Tale of Hotspur and Glendower.

**With Frederick the Great.** A Tale of the Seven Years' War.

**With Moore at Corunna.** A Tale of the Peninsular War.

**At Agincourt.** A Tale of the White Hoods of Paris.

**With Cochrane the Dauntless.** A Tale of Lord Cochrane in South American Waters.

**A Knight of the White Cross.** A Tale of the Siege of Rhodes.

**The Tiger of Mysore.** A Story of the War with Tipu Saib.

**Wulf the Saxon.** A Story of the Norman Conquest.

**St. Bartholomew's Eve.** A Tale of the Huguenot War.

**Through the Sikh War.** A Tale of the Conquest of the Punjab.

**Berio the Briton.** A Story of the Roman Invasion.

**In Greek Waters.** A Story of the Grecian War of Independence (1821-1827.)

**The Dash for Khartoum.** A Tale of the Nile Expedition.

**By England's Aid;** or, The Freeing of the Netherlands.

**By Right of Conquest;** or, With Cortez in Mexico.

**With Lee in Virginia.** A Story of the American Civil War.

**By Pike and Dyke.** A Tale of the Rise of the Dutch Republic.

**Bonnie Prince Charlie.** A Tale of Fontenoy and Culloden.

**For the Temple.** A Tale of the Fall of Jerusalem.

**The Young Carthaginian.** A Story of the Times of Hannibal.

**With Wolfe in Canada;** or, The Winning of a Continent.

**The Lion of the North.** A Tale of Gustavus Adolphus.

**With Clive in India;** or, The Beginnings of an Empire.

**In Freedom's Cause.** A Story of Wallace and Bruce.

**Through the Fray.** A Story of the Luddite Riots.

**Under Drake's Flag.** A Tale of the Spanish Main.

**When London Burned.** A Story of Restoration Times and the Great Fire.

**True to the Old Flag.** A Tale of the American War of Independence.

#### PRICE FIVE SHILLINGS EACH.

**No Surrender!** A Tale of the Rising of La Vendée.

**At Aboukir and Acre.** A Story of Napoleon's Invasion of Egypt.

**A March on London.** Being a Story of Wat Tyler's Insurrection.

**On the Irrawaddy.** A Story of the First Burmese War.

**Through Russian Snows.** A Story of Napoleon's Retreat from Moscow.

**Held Fast For England.** A Tale of the Siege of Gibraltar.

**Maori and Settler.** A Story of the New Zealand War.

**One of the 28th.** A Story of Waterloo.

**The Cat of Bubastes.** A Story of Ancient Egypt.

**In the Reign of Terror.** The Adventures of a Westminster Boy.

**Orange and Green.** A Tale of the Boyne and Limerick.

**The Bravest of the Brave;** or, With Peterborough in Spain.

**A Final Be reckoning.** A Tale of Bush Life in Australia.

**For Name and Fame;** or, Through Afghan Passes.

**The Dragon and the Haven;** or, The Days of King Alfred.

**St. George for England.** A Tale of Cressy and Poitiers.

**By Sheer Pluck.** A Tale of the Ashanti War.

BLACKIE & SON'S ILLUSTRATED CATALOGUE OF BOOKS SUITABLE FOR SCHOOL PRIZES, &c., with Synopsis of their Contents, will be sent post free on application.



CONTENTS.

	Page		Page
Hap-hazard .....	271	Secondary Inspection. By Dr. R. P. Scott. Paper read at the College of Preceptors .....	281
A Modern Language Congress .....	272	The Jubilee of Bradfield College. By E. C. Marchant, M.A. ...	284
Notes .....	272	Reviews.....	285
Summary : The Month .....	274	Old Stagers and No Stagers; Literary Handbooks; Public Schools; Mr. Firth's Cromwell.	
Universities.....	276	General Notices .....	286
Forecasts and Comments :—Fixtures .....	279	Meeting of the Council of the College of Preceptors .....	288
Education Gossip .....	279	Correspondence .....	289
Appointments and Vacancies.....	280	Secondary Inspection; What is <i>not</i> Grammar?	
Literary Gossip.....	280	Mathematics.....	289

The Educational Times.

Just a year ago, we observe on turning back *Hap-hazard?* to our file, the Board of Education Bill had found its way into Grand Committee. It passed into law with very little difficulty; and just three months ago it came into operation. We cannot at the moment fix the date of its practical and effective application, because that depends on a number of wise and eminent men who, whatever may be their faults, are neither old men in a hurry nor young men in a galloping haste. In one word, the working of the Act is slow. We have spoken of the new Higher Elementary Schools projected as "the crown of the primary." During the past month an Order in Council has been printed, and it will take effect this month, transferring the educational functions of the Charity Commissioners to the Board. Beyond this, we are not aware that the Board has done anything definite on its new lines except the shifting of a few officials and pigeon-holes. As we go to press, we have heard nothing about the Consultative Committee—unless it be a little gossip from behind the scenes as to the selection of individuals to sit on this Committee. We made a remark to deaf ears, many months ago, to the effect that much valuable time would be saved by appointing this Committee as the first proceeding under the Act. There were six or eight months after the passing of the Act during which the selection of the Committee might have been provisionally made, and the Order in Council necessary for their appointment could have been issued in the first week of April. The advantage of such a course was obvious. The fourth clause of the Act provides for the establishment of

a Consultative Committee consisting, as to not less than two-thirds, of persons qualified to represent the views of Universities and other bodies interested in education, for the purpose of—

(a) Framing, with the approval of the Board of Education, regulations for a register of teachers, which shall be formed and kept in manner to be provided by Order in Council: Provided that the register so formed shall contain the names of the registered teachers arranged in alphabetical order, with an entry in respect to each teacher showing the date of his registration, and giving a brief record of his qualifications and experiences; and

(b) Advising the Board of Education on any matter referred to the Committee by the Board.

The third clause provides that

the Board of Education may by their officers, or, after taking the advice of the Consultative Committee hereinafter mentioned, by any Univer-

sity or other organization, inspect any school supplying secondary education and desiring to be so inspected, for the purpose of ascertaining the character of the teaching in the school and the nature of the provisions made for the teaching and health of the scholars, and may so inspect the school on such terms as may be fixed by the Board of Education with the consent of the Treasury.

These are the functions of the Consultative Committee. Without it the Board cannot seek the advice of the educational experts, cannot frame preliminary regulations for the Register, and cannot direct any University or other organization to inspect secondary schools. The Board may not be keen for the advice of experts, and there may be no urgent need for inspection until the Secondary Authorities are created. But every one is keen, and there is urgent need, for a Register. It seems to us that the delay in the appointment of the Consultative Committee is most unfortunate.

The Board of Education, we infer, see no reason whatever for being in a hurry. We have no desire to put them out of step by goading from behind, but we trust that they will not in the meantime allow their policy and system of operations to be imposed on them from without. The manner in which the Board are to deal with the endowed schools—so far as any change is to be made from the methods of the Charity Commissioners—is, we should have thought, pre-eminently a matter on which they would desire to have the advice of their Consultative Committee. We cannot say what they would have desired, but, as a matter of fact, they seem to have adopted the policy of inviting the managers of educational trusts throughout the country to come to Parliament for separate and private Acts. If we are wrong, we shall be glad to be corrected. The debate of June 22, on the third reading of the Birmingham (King Edward VI.) Schools Bill, in the House of Commons, leaves this important matter in an extraordinary—not to say an impossible—position. We simply cannot believe that the Board of Education, having taken over the responsibilities of the Charity Commission, intend forthwith to abandon all present and prospective control over the management of the school trusts, and to go back to the old plan of management by local bodies without supervision. Yet Mr. Balfour stated in the course of the debate that the Birmingham Bill ran on general lines which the Board of Education were prepared to accept in the case of other charities.

To make the matter perfectly clear, so far as the Leader of the House may have accurately interpreted the opinions and

intentions of the Board of Education, let us see precisely what it was that Mr. Balfour said. He observed that it was a mistake to treat the Birmingham Bill as though it were introduced by a local authority without any reference to a central authority.

That was not the case. The Bill was referred to the new Education Department, and upon it that Department passed judgment and introduced amendment. The new Education Department were of opinion that the Bill ran on general lines, and they were prepared to approve any other Bill which resembled this. Therefore, they were not legislating at random, but on general educational conditions which had been considered by the central department of the Government which had been entrusted with the duty. In the next place, was it possible to proceed by general legislation? It was manifestly impossible, in his judgment, to proceed by a general Act which should be applicable to 22,000 cases, or half that number, or a quarter that number, or an infinitesimal portion of that number. Every case must be tried on its merits. He had no doubt that there were, outside Birmingham, other great institutions which might be treated, and they probably would be treated, as it was proposed to treat King Edward's School. In those cases the Education Department would apply the same principle which was applied to that Bill. In future, private Bills would be submitted to the Education Department, and he had no doubt the House would be prepared to sanction similar measures as they were about to sanction this Bill.

After that, we may expect a deluge of fresh legislation. If all the schools which want to be rid of supervision bring in their Bills, as Mr. Balfour invites them to do, Parliament will soon be sick (if it is not already sick) of the very name of education.

Mr. Balfour holds that this is the only fair and just way to proceed. It is not the way of the Endowed Schools Commission and Acts of Parliament. It is not the way of those who think that endowed schools need the supervision of a central authority, empowered to step in at any moment and revive a dwindling school by a modification of its scheme. Nor is it the way of those who think that the Board of Education should retain, and not dispense with, the powers of organization which have lately been collected in their hands. It is difficult to look without misgiving on the hap-hazard manner in which a momentous new departure seems to have been taken by the Board as a mere incident in the engineering of a Birmingham private Bill.

*A Modern Language Congress.*

A MEETING of the German Association of Modern Language Teachers was held at Leipsic in Whitsun week, and attended by nearly two hundred persons, including a delegate from the French Government and a representative of the English Modern Language Association. The real interest of the meeting consisted in the general acquiescence in the principles of the reformers, or *neuerer Richtung*, who, under the inspiration of Prof. Vietor, of Marburg, and with the practical experience of distinguished schoolmasters like Prof. Hartmann, of Leipsic, Prof. Wendt, of Hamburg, and Prof. Walter, of Frankfort, have for years been endeavouring to give a new direction to modern language teaching. Their methods are becoming known in England, and may be found fully developed in the series of class-books now being published under the auspices of Prof. Rippmann. The aim is to cultivate as much as possible, and that from the earliest stages, the power of thinking in the foreign language, and, as a means to that end, lessons are to be carried on as much as possible in that language. The resolutions adopted dealt with the higher classes of the *Oberrealschulen*—that is, of the schools in which no Latin is taught—and it was maintained that they were compatible with any efficient

method of instruction in the lower classes, though it was obvious that the sympathies of their supporters were with oral methods in those classes.

The most important of them were as follows:—The foreign language is to be the medium of instruction, only exceptional difficulties being explained in the mother tongue; translation is to be the exception and not the rule; syntax is to be taught, in the main, by the inductive method out of the reading-book; free composition in the foreign language is to be the rule, translation into it hardly falling within the range of school-teaching; reading-books should be selected to initiate boys and girls as much as possible into the life and ways of thought of other nations. Only one resolution of the reformers was rejected. It was to the effect that the teacher of a foreign language should not make the learning of the mother tongue an object of his teaching. Concurrently with these resolutions, others were passed, urging the appointment of an adequate modern language teaching staff at all Universities not fully equipped in that direction, a better supply of travelling scholarships to enable teachers to become familiar with English and French life, and permission for the *alumni* of the non-Latin schools to study modern languages at the Universities. This resolution called forth a formal protest on the part of a considerable minority.

The discussions were supplemented by several interesting lectures. One dealt with the study of Chaucer, another with the effect of political divisions on the formation of the Romance languages, and a third with the system of instruction adopted at Frankfort, where French is used in preference to Latin in the lowest classes of the different types of schools as a common basis of general grammatical knowledge. One of the most interesting features of the gathering was the invitation to the Paris Congress addressed to the assembly by Prof. Schweitzer, who is eminently *doctus sermones utriusque linguæ*, and an enthusiast for modern language reform. He dwelt in graceful and eloquent words on the international value of such a teaching of modern languages as might bring about a real understanding of the thoughts and aims of other nations. The Congress was by no means limited to formal discussions; hospitality was the order of the day. Most of the members met at dinner in the hall of the famous Buchhändlerhaus, and finished the evening at a representation of the "Meistersinger of Nuremberg" given in their honour by the Opera Company. Other evenings were passed in the enjoyment of the *Commers*, where, to the clink of beer-glasses and the accompaniment of toasts and songs, some of them written for the occasion, the time passed very pleasantly.

## NOTES.

THE Secondary Education Bill, intended to supplement the Act of last year by establishing Local Authorities, has been introduced as we go to press, but too late for comment this month. The interval for comment will be a long one, as the Bill cannot become law this Session. It provides that County and County Borough Councils shall be empowered to submit schemes, either separately or in combination, for the establishment of Statutory Committees, to take over the local control of secondary and technical education, and to

administer the Parliamentary grants already at their disposal, without restriction to technical objects. There is a clause conferring on the Councils a fuller power of rating than they already possess. The Duke of Devonshire has been unable to carry out his undertaking to create a third branch of the Department for Secondary Education other than technical, but he designs a subdivision of Sir William Abney's branch, under Mr. W. N. Bruce as Assistant-Secretary, which will partly serve the same purpose. The Duke looks forward to yet another Bill in the future for the further delimitation of elementary and secondary education. It will certainly be needed.

We are not surprised to find the skies of June speech-days displaying somewhat of a military tone. Mr. Choate's speech at the Leys School was, however, an exception, due perhaps more to diplomatic discretion than to a conclusion that his audience "cared for none of these things." Cultured Americans make ideal distributors of prizes. Speaking with a quaint directness of language and wide knowledge of practical life not often met with in educated Englishmen, they find a more ready response in an audience of schoolboys. Lord Coleridge, at the City of London School, was perhaps too learned and improving, while Lord Cross, at Rossall, overburdened his speech with a not very necessary panegyric on the virtues of athleticism. We must, however, be grateful to him for giving us a variant of the Queen of France and cricket story in the form of Queen Adelaide and the football. Speeches on speech-days are, however, as sermons, free from criticism, and one is happy to think that their usual buoyant tone only reflects the buoyant spirits of the boys.

We are sorry to have to record the death of Dr. C. A. Buchheim, Professor of German Language and Literature at King's College, London, and a member of the Council of the College of Preceptors. He was born in Moravia seventy-two years ago, and studied at the University of Vienna. After a short stay in Paris, he came to England, in 1852, and settled down in London, where he was engaged for some years as a translator, in the teaching of his native tongue, and in correspondence for German literary papers. He was, we believe, the first to introduce the novels of Dickens to his countrymen in a German version. After he had lived eleven years in London, and edited several German works for English schools, he was appointed to his professorship at King's College in 1863, and held the chair to the time of his death. For some time he was German tutor to the children of the Prince and Princess of Wales. His literary labours were mainly devoted to the editing of Lessing, Schiller, Goethe, and Heine. His many German texts, with elaborate introductions and notes, some of which were recognized as the most scholarly editions of German masterpieces which had appeared in England, will be fresh in the memory of our readers. Most of these were published by the Clarendon Press, who also printed his "Modern German Reader." Amongst his other works we may mention "Materials for German Prose," "Deutsche Lyrik," "Balladen und Romanzen," and Heine's "Lieder und Gedichte"—the three last-named being volumes in the "Golden Treasury" series. In 1897 the University of Oxford conferred on him the honorary degree of M.A., which he privately described as "an ample reward for a life of hard work." Dr. Buchheim's connexion with

the College of Preceptors began in 1862. In the following year he was appointed an Examiner in German; he was elected to the Council in 1867, and took the Fellowship Diploma in 1873.

THE Committee recently formed to secure the presence of women on Secondary Educational Authorities has appointed an Executive Committee, with Sir Richard Jebb as Chairman and the Right Hon. A. D. Acland as Vice-Chairman. Mr. H. B. Garrod, the treasurer of the Committee, invites contributions to meet the necessary expenses. It may be remembered that the Report of the Royal Commission on Secondary Education (1895) made the following recommendation:—"We think that women ought to be eligible for appointment (whether by a public authority or by co-optation) upon both sets of authorities [that is, county authorities and county borough authorities], and that it is indeed desirable to provide that a certain number shall be women, as experience seems to have shown that the interests of girls often receive insufficient attention, and that there is also a risk that women may not be chosen unless some special provision for their presence is made." Comparatively few women have been appointed on the Technical Instruction Committees of the County Councils, and the object of the new Committee is to provide beforehand for a more satisfactory state of things in regard to the authorities hereafter to be created. The Hon. Secretary of the Executive Committee is Mrs. J. R. MacDonald, 3 Lincoln's Inn Fields.

THE first annual meeting of the Agricultural Education Committee was held on Friday, June 22, at the Rooms of the Society of Arts. Lord Egerton of Tatton took the chair, and the adoption of the report of the Executive Committee was moved by Sir William Hart-Dyke, and seconded by Mr. J. H. Johnstone, M.P. In the words of the latter speaker it would be difficult to find any Committee which in the short space of eleven months had accomplished so much of its object as the one in question. Sir William Hart-Dyke referred to the alteration in the Code for rural schools, which we have already discussed in these columns. He welcomed the special circular issued by the Board of Education to managers and teachers of rural elementary schools, impressing upon them "the importance of making education in the village school more consonant with the environments of the scholars than is now usually the case, and especially encouraging the children to gain an intelligent knowledge of the common things which surround them in the country." The Committee have succeeded in persuading the new Board of Education to modify the "Science and Art Directory," which now includes separate curricula (1) for rural schools of science for boys, and (2) for girls' schools of science. They have also put themselves in touch with Technical Instruction Committees and Agricultural Societies, and have issued some twenty-three pamphlets. A special reader is being prepared, containing selections from classical English authors bearing on agriculture, for use in elementary schools; and a series of Nature-study leaflets modelled after those published in America by the Cornell University are in contemplation. As there is still much left to be done, the Agricultural Education Committee agreed to continue work, and re-elected the old Executive, with one or two additions, including the Countess of Warwick. The question as to the

educational work of the Board of Agriculture is still unsettled. The training of teachers has not yet been put on a proper footing, and means to fulfil the provisions of the Code, so far as possible, must be devised at once.

LORD BEACONSFIELD, in one of his airy excursions into political economy, said that, while the nation was always prone to be anxious about the misfortunes of all other industries, it never concerned itself about the condition of agriculture—by far the largest and most important industry in the kingdom. The report of the Executive Committee fortunately shows that that is no longer the case. Much credit is, indeed, due to this Committee for the advice given by it to the Board of Education when framing the New Code in order to ensure both a general and really practical course of education in agricultural subjects in country schools. The Royal Agricultural Society has for many years endeavoured to develop in secondary schools some interest in the subject. The system of junior scholarships established by the Society lent itself somewhat too kindly to text-book cramming; but it was mainly due to the efforts of the Agricultural Society that the subject was recognized at all in secondary schools. We are glad to learn that the Committee intends to go on with its work and to do its best to secure further reforms in agricultural education.

THE controversy between the London colleges and the Medical Council is reaching an acute stage. Recently the minimum period of medical study necessary to enable a student who has passed the qualifying examinations to be registered as a practitioner was extended from four to five years. This change has apparently led to a certain diminution in the numbers of students attending the medical departments of the colleges, which now seek to obtain the recognition of the last year spent by a student in certain schools, if engaged in scientific study, as a part of such minimum period of five years. This system, of course, enables a medical student to save the expense of one year's training at a medical college; but, says the Council, "we are jockeyed out of our five years' *bona fide* medical study." Both parties have expressed their views in strongly worded reports; and it would seem that the colleges are minded to question the jurisdiction of the Council to lay down any conditions as to *where* the five years' course of medical study should be pursued. The controversy is, indeed, a compliment to secondary schools, as showing the admitted excellence of their scientific training. It, perhaps, also points to the *res angusta domi* of the medical colleges, which prevents them from lowering their fees, to enable them to attract a larger number of students.

THE deplorable estrangement from Nature which modern conditions of life and education entail on the children of our large towns is glaringly illustrated by a correspondent's experience during a holiday at Whitsuntide, spent near Leith Hill, in Surrey. His wife had taken with them a young servant of some eighteen years, bright, intelligent, and well educated according to London School Board standards. She had, however, never been out of London except for two or three day trips. The evening of their arrival was wet, and she was sent to the landlady for some firewood to lay a fire.

She returned, exclaiming: "Look! she has given me bits of trees. These won't light a fire!" They were only very serviceable, well dried, chopped twigs. The following morning she stood in amazement in front of a gooseberry bush—"Growing!" The volumes contained in the tone of voice could not be expressed. It took her nearly a week to learn the difference between rows of potatoes, beans, and carrots, and she found great difficulty in hearing the notes of the cuckoo, although she heard the song of other birds easily. Her delighted wonder at the sight of a brood of chickens but a few hours old was exquisitely refreshing, and she wanted to bring one to London as a house pet. London! She thought a week in the country was enough at a time.

It is inevitable that the pupils of the new secondary schools will be principally recruited from the elementary schools of the country. According to the report of the Welsh Central Board for 1899, five out of every seven scholars in the secondary schools of Wales come from public elementary schools. The result is not an ideal one, inasmuch as a small proportion only remain to complete their full secondary-school course, and the education given in the junior forms is not a satisfactory conclusion to the education of a boy intended for trade or commerce. Without further organization, such a result is inevitable in England, as it now is in Wales. At present in Wales both elementary and secondary schoolmasters are dissatisfied. The former complain that boys leave for secondary schools who would do far better to complete their education in the higher standards, and the latter suffer from a congestion in the lower forms which hampers the real work of their schools.

## SUMMARY.

### THE MONTH.

THE Board of Education is gradually applying the special powers of reorganization conferred on it by the Act of 1899. During the month a draft Order in Council was issued as a "first instalment," by which some of the powers of the Charity Commissioners relating to trusts for educational purposes are transferred to the Board. The reorganizing zeal of the Department is evidently not to be confined to the directions of the Act. Thus, in the last week of May, the President of the Board approved a Committee consisting of the Right Hon. J. L. Wharton, M.P. (Chairman); Mr. Stephen E. Spring Rice, C.B., of Her Majesty's Treasury; Mr. T. H. Elliott, C.B., of the Board of Agriculture; General Festing, C.B., of the Board of Education (Victoria and Albert Museum); Dr. H. F. Parsons, of the Local Government Board; Mr. W. T. Blanford, F.R.S., late of the Geological Survey of India; Professor C. Lapworth, F.R.S., of Mason University College, Birmingham; with Mr. A. E. Cooper, Board of Education, South Kensington, as secretary; to inquire into the organization and staff of the Geological Survey and Museum of Practical Geology; to report on the progress of the Survey since 1881; to suggest the changes in staff and arrangements necessary for bringing the Survey in its more general features to a speedy and satisfactory termination, having regard especially to its economic importance; and, further, to report on the desirability or otherwise of transferring the Survey to another public Department.

It may be convenient to place on record the main provisions of the Order in Council referred to above:—

1. The powers of (a) inquiring into charities; and (b) requiring accounts and statements to be rendered and answers to questions to be returned; and (c) requiring copies of and extracts from documents to be furnished; and (d) searching records; and (e) requiring the attendance of witnesses and the production of documents; and (f) examining witnesses on oath and administering oaths conferred on the Charity Commissioners and their Assistant Commissioners and officers by the enactments specified in Part I. of

the First Schedule to this Order, or by any scheme under the Charitable Trusts Acts, 1853 to 1894, or the Endowed Schools Acts, 1869 to 1889, may, so far as they relate to trusts for educational purposes, be exercised by the Board of Education and their officers concurrently with the Charity Commissioners and their Assistant Commissioners and other officers. 2. There shall be transferred to the Board of Education (a) all powers conferred on the Charity Commissioners by any scheme made under the Endowed Schools Acts, 1869 to 1889, or any of them, and regulating an endowment held for, or applicable to, educational purposes in Wales or the county of Monmouth, or by any scheme amending any such scheme, except such of those powers as relate to the vesting or transfer of any land or funds of the endowment in, to, or from the Official Trustee of Charity Lands or the Official Trustees of Charity Funds; and (b) all powers conferred on the Charity Commissioners by the Charitable Trusts Acts, 1853 to 1894, or the Endowed Schools Acts, 1869 to 1889, so far as those powers are exercisable in respect of any endowment so regulated.

On June 13 the Council of the University of Birmingham held its first meeting. Amongst those who attended were Mr. Chamberlain, Chancellor, the Lord Mayor of Birmingham, Vice-Chancellor, and Dr. Heath, Vice-Principal. The Council resolved: "That all the professors and other members of the teaching staff and all officers and servants of Mason University College be hereby appointed to the same offices and places in the University of Birmingham as they at present hold in the College until September 30 next." It is not till October 1 that the Birmingham University Act, which has received the Royal Assent, comes into operation, and by a clause in the Act every one included in the resolution is transferred to the University. The appointments now made cover the intervening time, and a further effect of the resolution is that the Senate of the University is formally constituted. The Council divided the professional staff into Faculties of Science, Arts, and Medicine, and the Faculties of Science and Arts will proceed to elect their Deans, who will have seats on the Council. The Dean of the Medical Faculty (Dr. Windle) is elected under the Charter, but in the other two cases the election lies with the professors. The Faculty of Medicine, in accordance with the Charter, will have to appoint an additional representative on the Council, and when these elections have been made the Council will be complete. The formal business included the appointment of three committees: (1) General Purposes; (2) Finance and Estates; and (3) Library. An Advisory Board was also constituted, consisting of officers of the University and members of the former Advisory Board, to consider the report having relation to the deputation to the United States and Canada, which was referred at the last meeting of the Court of Governors to the Council, with power to take such action in the matter as might seem to them desirable. The following appointments were made:—The Vice-Principal (Dr. Heath) as Registrar of the University, Mr. Charles Showell as Treasurer's Deputy, Mr. John Humphreys, L.D.S., as honorary secretary of the Dental School, and Messrs. Cornish Brothers, of New Street, as booksellers and publishers to the University. It was decided to hold the first Matriculation Examination of the University in September next.

On June 14, the House of Commons discussed the Education Estimates. Sir John Gorst made an interesting speech, from which we quote what he said as to the necessity of greater accommodation for the training of teachers:—

If Parliament really intends to have teachers properly taught and fit for the work they have to do, they must pick the children out of the elementary or higher elementary schools when they are of proper age. They must send them with a scholarship to secondary schools, as they are trying to do in Wales. They must there have them taught to teach, and they must have a sufficient supply of training colleges in which to train these young teachers as soon as they are fit to be trained. At the examinations of Christmas, 1899, of those who succeeded a great number were quite unable to get into the training colleges for want of room. Of men, 2,338 desired to obtain admission into training colleges, but only 1,042 got in; 223 failed to get in, not from failure in examinations, but through lack of accommodation, while 1,073 failed in examinations. In the case of women, there were 3,968 who desired admission to the training colleges. Of these 1,575 got in, and 1,369, though qualified, were unable to get in for lack of accommodation. Every place in every training college in the country is absolutely full.

The new Code of regulations for evening continuation schools for the year 1900-1901 substitutes for "English" the two grant-earning subjects of "English Language" and "English Literature." We subjoin the syllabus of the latter subject:—

1. What is literature? It may be approached either for relaxation ("light" literature), or for instruction (philosophy, science, history in certain aspects), or for knowledge of, sympathy with, and pleasure in the spiritual life and history of humanity (poetry in the widest sense). The permanent and transient elements of poetry. Writers are the children of their ages, and their works reflect their infinitely various personalities; but all great writers express, in their own way, the central truths and interests of human nature. The making of English. The Anglo-Saxons. Their heathen lays. Beowulf. The gleemen. The coming of Christianity. Caedmon. Alfred. The Norman Conquest. English swamped by Norman French. The Celtic fringe and its bards. Romance.

2. English literature begins again. Its debt to French. Renaissance. Chaucer. How he sums up the literary tendencies of his age. His romance and realism. Wyclif and English prose.

3. Literature withers during the Wars of the Roses. Importance of printing. Caxton. Malory. The Renaissance again. The humanists. Wyatt and Surrey. Literature withers again during the disputes about religion. Exception in the English Bible and Prayer Book.

4. Elizabeth. Growth of national life and patriotism. Spenser, Sidney. Their influence. Elizabethan lyric and pastoral.

5. The origins of drama. Its position in Elizabethan society, the city, the court. Marlowe, the first great dramatist.

6. Shakspeare: his life and plays. Roughly, the plays fall into four chronological periods: the Histories, e.g., "Richard II.," "Henry IV.," "Henry V.," "The Comedies, e.g., "As You Like It," "Twelfth Night"; the Tragedies, e.g., "Hamlet," "Macbeth," "Lear"; the Romances, e.g., "Cymbeline," "The Tempest." (Only one or two plays should be treated with any detail.)

7. Elizabethan prose. Its application to the literature of knowledge by Bacon, Hooker, Raleigh.

8. From Elizabeth to James. The courtly poets, Donne, Herrick, Carew. Growing artificiality of lyric. The religious poets, George Herbert, Vaughan.

9. Puritanism and poetry. Milton.

10. The Restoration. Influence of French literature. Common sense and lucidity become the literary ideals. The age of prose begins. Dryden.

11. Prose, and prosaic poetry. The "classic" ideal. Pope. Swift. Johnson.

12. The reaction from prose. Feeling for romance, for Nature. The first comes to a head in Coleridge, the second in Wordsworth.

13. Later developments of romanticism. Shelley, Byron. The worship of beauty. Keats.

14. Nineteenth-century prose. History. Macaulay, Froude. Social speculation. Mill, Carlyle, Arnold, Ruskin.

15. The beginnings of the novel. Its nineteenth-century development.

16. Tennyson sums up the ideals of his age. A new impulse to the study of the individual. Browning.

THE new Directory of the Board of Education, South Kensington, containing regulations for establishing and conducting science and art schools and classes, has been published. Many of the regulations have been modified, more particularly those referring to administrative matters and practical work. The syllabus of practical mathematics has been revised, but the subjects remain much the same as were prescribed in last year's syllabus. A syllabus of an advanced stage of practical mathematics has been added. The syllabus of mineralogy has been slightly modified and recast. The laboratories in a school of science are to be available for preparation work by students of the school beyond the school hours of the time-table. Courses of work for schools of science in rural districts have been added. The obligatory subjects of the elementary course for men are:—(1) mathematics; (2) chemistry (with practical work); (3) physiography (Section I.) or elementary physics (with practical work); (4) biology (Section I.) or elementary botany (practical work may be in the field or garden); (5) drawing, practical geometry, or practical mathematics. Manual instruction in its application to workshop and garden must also form part of the course, which is intended to cover two years. The elementary course for women in schools of science differs slightly from the foregoing. Physics and chemistry are optional for the second year, and hygiene may be taken instead of botany. Practical mathematics is not included. Separate advanced courses of work are prescribed for men and women who have passed through the elementary courses.

THE SCHOOL OF ART WOOD-CARVING at South Kensington having received from the Clothworkers' Company a grant of £50, this, in addition to a similar grant from the Drapers' Company, has enabled the school to continue its work for another year in rooms rented from the Imperial Institute. But for this



timely grant it would have been necessary to close the school, as the Committee of the City and Guilds Institute, in consequence of the increasing demands on their funds, have been obliged to withdraw their annual grant of £250. The closing of the school is, however, only deferred for a year, unless aid towards its funds can be obtained from some other source.

ONE result of the order of merit in the University Honour lists is that the top men and their schoolmasters have come to expect a little biographical attention from the Press. We add a few details as to the highest Wranglers in the Cambridge Mathematical Tripos. The Senior Wrangler, Mr. Joseph Edmund Wright, having gained a minor scholarship, entered Trinity in October, 1897. He was educated at the Liverpool Institute. Mr. Arthur Cyril Webb Aldis, Second Wrangler, matriculated at Trinity Hall in October, 1897, as a scholar of that foundation, having previously been educated at the Grammar School, Walsall, where his father, Mr. J. A. Aldis, M.A. (formerly scholar of Trinity), was Headmaster, and at King Edward's School, Birmingham. Mr. William Cecil Bottomley, Third Wrangler, is a son of Mr. William Bottomley, solicitor, of Manchester. He was educated at Tettenhall College and Owens College, and matriculated at Trinity in October, 1897. Mr. Balak Ram, Fourth Wrangler, was born in 1876, at Jullundhar, Punjab, India, and is a son of Mr. Madho Ram. He was educated at the Government College, Lahore, and entered St. John's College as scholar and prizeman in October, 1897. Mr. John Chadwick, Fifth Wrangler, gained an entrance scholarship at Pembroke College in 1877. Mr. Marples, bracketed Sixth Wrangler, was educated at the Cloughton Collegiate School, under Mr. W. R. Yardley, L.C.P., and at University College, Liverpool. He is a B.Sc. of Victoria University. At the age of sixteen (we are informed by Mr. Yardley) he made a collection of over three hundred and fifty varieties of imports into Liverpool, placed them in boxes with labels, and presented them to his old school. He showed great application, was an adept at drawing and shorthand, and had an advanced knowledge of French and German. Miss W. M. Hudson, who is equal to Eighth Wrangler, is the daughter of Prof. Hudson, of King's College. She was born in London, and educated at Clapham High School. She entered Newnham with a scholarship in 1897. Her brother, Prof. Hudson, was Senior Wrangler two years ago. Miss Greene (between Ninth and Eleventh Wranglers) was born in Shropshire, and educated at Ladies' College, Wellington, and Orme Girls' High School.

A MEETING of the Council of the University College of North Wales, Bangor, was held at the college on June 20. Mr. W. W. Firth, B.Sc. Victoria, formerly Whitworth Exhibitioner, was appointed to the Assistant-Lectureship in Electrical Engineering which the college has been enabled to establish by the liberality of the Company of Drapers. Mr. Firth began his career in the works of Messrs. Platt at Oldham, and was trained in Owens College, Manchester, and the Royal College of Science, London. Mr. Alexander Darroch, M.A., was appointed Assistant-Lecturer in the Day Training Department. Mr. Darroch is a trained certificated teacher, who, after teaching for some years in Scottish public schools, entered the University of Edinburgh, where he won a Rhind Philosophical Scholarship, and graduated with First Class Honours in Philosophy. After graduating, he attended classes in the subjects of Education and Political Economy, gaining a medal in each subject, and in the latter also the Merchant Company's Prize. In 1899 he was appointed a Heriot Research Fellow. A vote of thanks was passed to the Piercy Trustees for their donation of £1000 to found a Piercy Scholarship at the college.

A TYPICAL "pious donor" in the United States died early in June. Jonas Gilman Clark had made money in land, gold, and banking, and twenty years ago he retired to Worcester, Massachusetts. According to an obituary notice in the *Times*:

He had long had a desire to found a University, his purpose being, in his own words, "to increase human knowledge, and transmit the perfect culture of one generation to the ablest youth of the next; to afford the highest education and opportunity for research." He had given a close study to the subject of the higher education, and was anxious to include in his proposed University the best features to be found in institutions in America and elsewhere. He travelled extensively in search of information, studying the records of education as carried on in Egypt, Greece, and ancient Rome, as well as the experiences of contemporary Europe. He then secured a charter for

Clark University at Worcester in 1887, endowing it with one million dollars, to which he added a like amount later on. In accordance with the usual course in America, this institution, founded by a single individual, has already been the beneficiary of large amounts from local donors.

## UNIVERSITIES.

(From our Correspondents.)

THE end of a summer term which has no "Commem." Oxford. is almost monopolized by the Final Schools. Candidates this year were expected to be fewer than usual, because a special decree was passed, allowing those on service in South Africa to postpone their examinations for one year. The Vice-Chancellor announces the names of fifty-one undergraduates who have availed themselves of this permission. But in the Honour schools the number this year is 469, against 490 last year, a drop of only twenty-one. The Pass schools, on the other hand, are no less than seventy-four to the bad—417 against 491. It will be noticed that this year the Honours men considerably outnumber the pass men. Probably this does not indicate any new preponderance of the student, but results rather from a very general belief that a "gulf"—i.e., a pass without Honours, in an Honours school—is easier than a pass through the Pass schools. Whether this belief is founded on fact may be doubted, but its results are good; even for the man of average stupidity, the crumbs that fall from the table of "Greats" are probably more stimulating by far than the dead level of elementary all-round knowledge "got through" in "Groups." The only things that suffer much are "Greats" lectures. Just as a fleet must steam the pace of its slowest ship, so a lecture tends to sink to meet the capacity of its least capable hearer.

The ill effects of this come out specially in our very loose lecture system. Oxford lectures were originally collegiate affairs; a college tutor lectured to his pupils. He lectured on wide subjects in few hours, and was saved from being either too meaninglessly general or too irrelevantly particular, by possessing a close personal knowledge of his hearers and their requirements. Now that lectures have for many years been inter-collegiate, this saving condition has ceased to work; and the lecturer's position has, in consequence, become very difficult, while for the serious student it is getting proverbial that "lectures are no use." There are two remedies. One may revert to the collegiate system: in philosophy this is to some extent happening; energetic tutors lecture classes of their pupils informally in their own rooms; or, if lectures remain inter-collegiate, as for the most part they are bound to do, fewer must be given, upon more definitely limited subjects, and these few must extend over more hours. Of this reform also there are signs and foretastes already; and, as a rule, the more eminent and the better teacher a lecturer is, the more you will find him radically dissatisfied with the existing arrangements. The evil is greatest in the case of lectures for Honour Moderations—certainly the school of whose possibilities least is made. It is also rampant in those for "Greats," and bad in several other cases.

My indictment of the Classical Honour Moderations School in my last letter preceded by only ten days a tardy attempt at reform. On June 5 a form of statute was promulgated, and the preamble of it approved, providing that there shall in future be a Fourth Class. That a change was urgently wanted, almost every ex-Moderator would testify. It is less certain whether the proposed Fourth Class is the best form for the change to take. The congestion in the school is at the top end not at the bottom. And by leaving the classes First, Second, and Third, while subdividing them where advisable, we should preserve that continuity of the school and its classes, at which the proposed change deals a violent blow. However, the Fourth Class will almost certainly be adopted; no opposition was offered in Congregation to the first steps towards it, and on June 19 the second stage was also passed.

The important Hertford Scholarship has been won by Mr. R. W. Livingstone, New College. Five "mentions" were given, and the names placed only in alphabetical order. This is just what—Moderations being as they are—is wanted; but it rests entirely with the caprice of the examiners, who do not often act so wisely. The Lothian Prize for this year has not been awarded.

Prof. Burrows, who has since 1862 been Chichele Professor of English History, is retiring from the active performance of his duties, which will, of course, devolve on a deputy. Who he will be is not settled; and Oxford is exceptionally rich just now in her younger History dons. Probably either Mr. B. H. Firth or Mr. C. W. C. Oman will be appointed.

THERE seems to be a good prospect of extensive building operations taking place in the Long Cambridge. Vacation. The plans for the Botany School are practically approved by the Senate, and before the men return to residence some progress will doubtless be made in the actual work. The Geological Museum will also by that time have made substantial progress, while it is not beyond reason to expect that, through the lucky windfall of the Squire bequest, the Law School will also take material shape before many months are over. The proposal to roof in the eastern quadrangle of the University Library has not met with prompt acceptance from the Senate; in the debate it was to all intents and purposes admitted that the architectural features of the King's Parade front were not of such importance as to necessitate consideration, but the depleted state of the University Chest was a determining factor in the arguments against the costly alterations suggested by the Syndicate.

The resignation by Dr. Sidgwick of the Knightbridge Professorship of Moral Philosophy, on account of ill-health, came as a great surprise to all except the Professor's intimate friends. He will carry with him into his retirement the good wishes of all. Dr. Sidgwick's good work for Newnham and his unflinching generosity to that institution are known to but few, and it is to be hoped that for many years Mrs. Sidgwick may, in her difficult position as Principal of Newnham, have so valuable an adviser ever at her side.

Prof. Somerville has already begun to win the confidence of the University and the public for his new department of Agriculture. We have lately had a striking proof of this. Mr. Macfarlane Grieve, who, though an Oxford M.A., has been admitted to the Cambridge degree *ad eundem*, has come to the conclusion that a Professor of Agriculture without an experimental farm is like a Professor of Chemistry without a laboratory. Mr. Grieve, whose residence is at Impington Park, near Cambridge, has accordingly offered to the University free of rent till 1909 a farm of 145 acres on his estate, within three miles of Cambridge. It is hardly necessary to add that this generous offer has been gladly accepted by the Senate.

At the beginning of 1899 a grant was made to Mr. W. W. Skeat, of Christ's College, towards defraying the cost of a scientific expedition to the Malay peninsula. The report shows that much valuable work has been done in the fields of ethnology, geology, and zoology.

The publication of the various Tripos lists has not been productive of any great surprises, but a remarkable state of things is shown to exist with reference to the relative popularity of the various subjects. For example:—Mathematics, Class I., 16; Class II., 26; Class III., 21; total 63. Classics, Class I., 19; Class II., 63; Class III., 31; total 113. Natural Science, Class I., 40; Class II., 43; Class III., 39; total 122. The numbers in the Chemistry Special are also increasing, a result due to the rapid growth of our Medical School. In the Medieval and Modern Languages Tripos one man is placed in the first class with one mark of distinction; the women's list contains four first classes with three marks of distinction.

On June 12 we administered honorary degrees of Doctor of Law to Mr. Choate, the American Ambassador; Lord Rosse, Chancellor of Dublin University; Mr. Gully, the Speaker; and Sir William Anson, Warden of All Souls, Oxford. The recipients of the Doctorate in Science and Letters included—Science: Sir Benjamin Baker, Sir Walter Buller, M. Jules Poincaré, member of the Institute of France; Letters: Mr. Ingram Bywater, Regius Professor of Greek at Oxford; Prof. Davidson, Edinburgh; Prof. Flinders Petrie; Mr. W. L. Newman; Prof. W. M. Ramsay, of Aberdeen; and Prof. White, of Harvard. Next year we hope to have two of these names repeated—Buller and White, with the possible addition of Baden-Powell.

Mr. Wilberforce has been elected to the vacant Lectureship in Physics, and Mr. Sykes has been appointed to succeed Dr. Sandys as Tutor of St. John's.

The festivities of the May week were much overclouded by the intimate association of so many Cambridge men with the war. The number of visitors was much below the average, and several of the balls usually held were given up altogether. First Trinity had no difficulty in keeping head of the river, and will probably be able to put on two strong crews for Henley.

Wales. The latter part of June in the University of Wales has been very largely occupied with various University examinations. Owing to the large number of options which the Wales degree allows, it is found needful to spread the examination over some time, so as to prevent "clashing" between

subjects taken by students. The Matriculation Examination of the University was held this year in the week beginning June 25.

The examinations of the Central Welsh Board for Intermediate Education will be held during the last fortnight in July. It is not improbable that the question of changing the time of the examination from July to Easter will be again raised. It is felt by many that it is a very severe strain on children to have to undergo an important examination in very hot weather, such as we had at the end of July last year, with the risk of interruption from the emotional disturbance caused by thunderstorms. Doubtless the question of the date of the examination will receive very careful consideration on the part both of the Central Board and of the Headmasters' Association.

A movement is now on foot to establish a University Settlement in Cardiff. To this end an association is being formed, with an executive committee to carry out the work. This movement has been started for the most part by some of the past students of the Welsh University Colleges. There is no doubt a very considerable field in Wales for the dissemination of culture from University and other centres both by individual and collective effort, and this new movement may well supply a want in this direction. In the industrial districts, especially of Glamorganshire and Monmouthshire, institutions, such as a settlement and the like, could do much to brighten the lives of the inhabitants. In Cardiff itself it is only fair to state that the University College, through its excellent system of evening and day technical and other classes, which are attended by hundreds of the inhabitants of Cardiff and the district, has been now for some years doing a great work for popular education in Glamorganshire. It is to be hoped that if the proposed settlement is started its promoters will come to a clear understanding with the College authorities as to their respective spheres of work, so as to prevent the overlapping of classes and the like. As some of the leading spirits in connexion with this interesting and valuable new movement are connected with the Cardiff College, no doubt this precaution will be taken.

The headmasters and headmistresses of the county schools of South Wales and Monmouthshire have elected as their representatives upon the Central Welsh Board for Intermediate Education Mr. R. W. Jones, B.A., Headmaster of the Gelligauer Grammar School, and Miss L. M. Bengier, Headmistress of the Swansea High School for Girls.

## A SELECTION FROM CASSELL'S PRIZE BOOKS.

**OUR GREAT CITY; or, London the Heart of the Empire.** By H. O. ARNOLD-FORSTER, M.P. About 300 pages, crown 8vo. With a Series of Full-page Illustrations. Strongly bound in cloth, 1s. 9d.

"Eminently readable and instructive, and its many well chosen illustrations add much to its attractiveness."—*The Scotsman*.

**IN DANGER'S HOUSE; or, Stout Hearts and Stirring Deeds.** With Introduction by H. O. ARNOLD-FORSTER, M.P. With Four Coloured Plates and numerous Illustrations. Handsomely bound in cloth gilt, 2s. 6d.; also in blue cloth, 1s. 8d.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS. With Four Coloured Plates and numerous Illustrations. Handsomely bound in cloth gilt, 2s. 6d.; also in red cloth, 1s. 8d.

**BRITAIN'S ROLL OF GLORY; or, the Victoria Cross, its Heroes, and their Valour.** By D. H. PARRY. Cheap Edition, Revised and Enlarged. With Eight Full-page Illustrations by STANLEY L. WOOD. Cloth, 3s. 6d.

**THE IRON PIRATE.** A Plain Tale of Strange Happenings on the Sea. By MAX PEMBERTON. With Sixteen Full-page Illustrations, 3s. 6d.

**KING SOLOMON'S MINES.** By H. RIDER HAGGARD. Illustrated, 3s. 6d.

**THE BLACK ARROW.** By R. L. STEVENSON. Illustrated, 3s. 6d.

**ROBINSON CRUSOE, CASSELL'S FINE ART EDITION OF.** With upwards of 100 Original Illustrations by WALTER PAGET, 3s. 6d.; buckram, gilt edges, 5s.

**PERIL AND PATRIOTISM.** True Tales of Heroic Deeds and Startling Adventures. Profusely Illustrated, 7s. 6d. Also in Two Vols., 4s. each.

**UNCLE TOM'S CABIN.** By HARRIET BEECHER STOWE. Fine Art Memorial Edition. With upwards of 100 Original Illustrations by JENNY NYSTROM STOEPENDAAL. 7s. 6d.

**THE QUEEN'S EMPIRE.** A Pictorial Record, in which the Modes of Government, National Institutions, Forms of Worship, Methods of Travel, &c. of the Inhabitants of the British Empire are vividly portrayed. Two Volumes, containing about 700 splendid Illustrations, 9s. each.

**THE STORY OF THE HEAVENS.** By SIR ROBERT STAWELL BALL, LL.D., F.R.S. With Chromo Plates and Wood Engravings, 10s. 6d.

**THE STORY OF THE SUN.** By SIR ROBERT STAWELL BALL, LL.D., F.R.S., F.R.A.S. With Eight Coloured Plates, and other Illustrations. Cloth gilt, 10s. 6d.

**CASSELL'S ILLUSTRATED PRIZE CATALOGUE,** containing a list of Prize Books adopted by the London School Board, &c., and **CASSELL'S COMPLETE CATALOGUE,** giving particulars of several hundred Books suitable for presentation, will be sent, post free, on application.

CASSELL & COMPANY, LTD., LUDGATE HILL, LONDON, E.C.

A FEW OF THE PUBLICATIONS OF  
**MOFFATT & PAIGE, Ltd.**

**ENGLISH CLASSICS.**

Edited by **THOMAS PAGE.**

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

**THE PLAYS OF SHAKESPEARE.**

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

**REVIEWS I—**

*Saturday Review.*—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir **HENRY IRVING.**—"A most faithful and scholarly edition."  
*Daily Telegraph.*—"Julius Caesar" "... is invaluable as an aid to the study of the play."

*South Africa.*—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."

*Athenæum.*—"Essentially books for students."  
*Educational News.*—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

	s.	d.
*AS YOU LIKE IT ... ..	2	0
CORIOLANUS ... ..	2	6
*HAMLET ... ..	2	6
HENRY V. ... ..	2	6
*JULIUS CESAR ... ..	2	0
KING JOHN ... ..	2	0
KING LEAR ... ..	2	0
MACBETH ... ..	1	6
MERCHANT OF VENICE ... ..	1	6
*MIDSUMMER NIGHT'S DREAM ... ..	2	0
*RICHARD THE SECOND ... ..	1	6
TEMPST ... ..	2	0
TWELFTH NIGHT ... ..	1	6

\* For Current Examinations.

**BACON.**

*Schoolmaster.*—"The edition will stand as an exemplar." s. d.

**BACON'S ESSAYS. Part 1** ... .. 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

**MILTON.**

*Practical Teacher.*—"Marked by those features of almost exhaustive annotation." s. d.

\*PARADISE LOST. Books 1 and 2. (Just published.) 2 0

SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDIAS, L'ALLEGRO, and IL PENSIEROSO 1 4

\* For Current Examinations.

**SCRIPTURE.**

Edited by **R. J. WOOD, B.A.**

*Educational Times.*—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

**FRENCH.**

**FRENCH COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

**GERMAN.**

**GERMAN COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times.*—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

**MOFFATT & PAIGE, Ltd.,**

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.

Works: Johnson's Court, Fleet Street.

**MESSRS. BELL'S LIST.**

Complete Educational Catalogue post free on application.

**BELL'S HANDBOOKS TO THE GREAT PUBLIC SCHOOLS.**

Crown 8vo, profusely Illustrated, 3s. 6d. net each.

FIRST VOLUMES OF SERIES.

**CHARTERHOUSE.** By A. H. TOP, M.A., late Scholar of Trinity College, Oxford; Assistant-Master at Charterhouse. With 58 Illustrations, chiefly from Photographs by L. MARSHALL, Assistant-Master at Charterhouse.

**RUGBY.** By H. C. BRADBY, M.A., Assistant-Master at Rugby. With 44 Illustrations, chiefly from Photographs.

**ETON.** By A. CLUTTON-BROCK, New College, Oxford. [In the press]

PART III. NOW READY. 4to, 9s. net.

**CORPUS POETARUM LATINORUM,** a se aliisque denue recognitorum et brevi lectionum variate instructorum, edidit JOHANNES PERCIVAL POSTGATE, Litt.D.

Contents:—Grattius. Edited by J. P. POSTGATE.—Manilius. Edited by MALVIN BECHERT.—Phædrus. Edited by JAMES GOW.—Ætina. Edited by ROBINSON ELLIS.—Persius. Edited by W. C. SUMMERS.—Lucretius. Edited by W. E. HEITLAND.—Valerius Flaccus. Edited by J. B. BURY.

Cheaper Re-issue. 2 vols. 8vo, 15s.

**TEUFFEL'S HISTORY OF ROMAN LITERATURE.**

Revised and Enlarged by LUDWIG SCHWABE. Authorized Translation from the Fifth German Edition by GEORGE C. W. WARR, M.A., Ex-Fellow of Trinity College, Cambridge, Professor of Classical Literature in King's College, London.

**BELL'S SCIENCE SERIES.**

NEW VOLUME.

EDITED BY PERCY GROOM, M.A.,  
AND PROF. G. M. MINCHIN, M.A., F.R.S.

Crown 8vo Illustrated, 288 pages, price 4s. 6d.

**AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE ANATOMY OF ANIMALS.** By GILBERT C. BOURNE, M.A., F.L.S., Fellow and Tutor of New College, Oxford; University Lecturer in Comparative Anatomy.

Vol. I.—Animal Organization. The Protozoa and Coelenterata.

Crown 8vo, 3s. 6d.

**ESSAYS AND ESSAY WRITING FOR PUBLIC EXAMINATIONS.** By A. W. READY, B.A., Army and University Tutor, formerly Scholar of Wadham College, Oxford.

This book is divided into Three Parts. Part I. contains Rules and Directions for beginners. Part II. contains Twelve Complete Essays, preceded by an Analysis and Sketch of each, and followed by Notes and Explanations. Part III. contains Articles for Advanced Pupils. An Appendix contains a list of subjects set for Woolwich and Sandhurst.

Crown 8vo, 2s. 6d.

**A SHORT COURSE OF ELEMENTARY PLANE TRIGONOMETRY.** By CHARLES PENDLEBURY, M.A., Senior Mathematical Master of St. Paul's School; F.R.A.S.; formerly Scholar of St. John's College, Cambridge.

This Short Course of Elementary Plane Trigonometry is intended for the use of Junior Students and of those others who do not require so complete a knowledge of the subject as would be obtained from a study of the author's larger work. In its range this book will be found sufficient for Candidates for the Oxford and Cambridge Local Examinations, the College of Preceptors, the Cambridge Previous Examination, the London Intermediate Examination in Arts, the Science and Art Examinations, College Entrance Examinations, and other examinations of the same character.

**BELL'S CLASSICAL TRANSLATIONS.**

The following have been added to this Series:—

**PLATO.**—Apology of Socrates and Crito (1 Vol.), Phædo, and Protagoras. Translated by H. CARY, M.A. 3 vols. 1s. each.

**PLAUTUS.**—Trinummus, Aulularia, Menæchmi, and Captivi. Translated by HENRY T. RILEY, M.A. 4 vols. 1s. each.

**BELL'S ILLUSTRATED CLASSICS.**

New Volumes, pott 8vo, 1s. 6d. With or without Vocabularies.

**XENOPHON, ANABASIS. Book I.** Edited by E. C. MARCHANT, M.A.

**OVID'S TRISTIA. Book III.** Edited by H. R. WOOLRYCH, M.A., Headmaster of Blackheath School.

**VERGIL. Selection from Æneid, Books VII.-XII.** Edited by W. G. COAST, B.A., Assistant-Master at Pettes College.

Full prospectus of this Series post free on application.

London: **GEORGE BELL & SONS, York Street, Covent Garden.**

# COLLEGE OF PRECEPTORS' EXAMINATIONS.

SUITABLE BOOKS IN THE  
**University Tutorial and Preceptors' Series.**

## English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. Low, M.A. Lond., and ARNOLD WALL, M.A. Lond. [*In the press.*]  
**The English Language: Its History and Structure.** By W. H. Low, M.A. Lond. With 320 Test Questions. *Fifth Edition.* 3s. 6d.  
**History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, and numerous Chronological and other Tables. By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.

## French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.  
**FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. es Sc., Univ. Gall. 1s. 6d.  
**French Prose Composition.** By E. WEEKLEY, M.A. Lond. 3s. 6d.  
**FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. *Second Edition.* 1s. 6d.  
**French Prose Reader.** Edited by S. BARLET, B. es Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. *Third Edition.* 2s. 6d.

## Latin Grammar, &c.

- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [*In the press.*]  
**Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Fourth Edition.* 3s. 6d. **Exercises and Test Questions on.** 1s. 6d.  
**Latin Composition.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fifth Edition.* 2s. 6d.  
**Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.  
**LATIN READER, THE PRECEPTORS'.** [*In preparation.*]

## Mathematics and Science.

- Algebra, The Tutorial.** By WM. BRIGGS, M.A., LL.D., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Based on the *Algebra* of RADHAKRISHNAN. Part II.: Advanced Course. 6s. 6d.  
**Algebra, A Middle.** By WM. BRIGGS, M.A., LL.D., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.  
**Arithmetic, The Tutorial.** By W. P. WORKMAN, M.A. [*In preparation.*]  
**Biology, Text-Book of.** By H. G. WELLS, B.Sc. Lond., F.Z.S., F.C.P. Part I.: Vertebrates. *Second Edition.* 2s. 6d. Part II.: Invertebrates and Plants. 2s. 6d.  
**Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d. Exercise Books ruled Ledger, Journal, or Cash. 3d.  
**BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [*In preparation.*]  
**Botany, First Stage.** By A. J. EWART, D.Sc. Lond. 2s.  
**Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, M.A., F.C.S. Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.  
**Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By WM. BRIGGS, M.A., F.C.S., F.R.A.S. Interleaved. 1s. 6d.  
**Euclid, Books I-IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.  
**Hydrostatics, An Elementary Text-Book of.** By WM. BRIGGS, M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. *Second Edition.* 2s.  
**Magnetism and Electricity, Text-Book of.** By R. W. STEWART, D.Sc. *Fourth Edition.* 3s. 6d.  
**MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.  
**Mensuration of the Simpler Figures.** By WM. BRIGGS, LL.D., M.A., F.C.S., and T. W. EDMONDSON, M.A. *Second Edition.* 2s. 6d.  
**Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. Lond. 2s.  
**Trigonometry, The Tutorial.** By WM. BRIGGS, M.A., LL.D., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.  
**TRIGONOMETRY, THE PRECEPTORS'.** Edited by WM. BRIGGS, M.A., LL.D., F.C.S., F.R.A.S. 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', London University, Science and Art Department, and other Examinations, free on application.

London : UNIVERSITY TUTORIAL PRESS (University Correspondence College Press).  
W. B. CLIVE : 13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	2 10 0	.....	"	3 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.

Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 3d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

July 2, 1900.

THE General Meeting of Members of the College Fixtures. of Preceptors will be held on Saturday, July 21, at 3 p.m. A course of twelve lectures on "The Practice of Education" will be delivered in the autumn session. The Council propose to arrange for a Winter Meeting of teachers in January next on the plan of those which were held in January, 1898 and 1899.

\* \* \*

ON July 3, Prof. A. V. Dicey will distribute the prizes at King's College, London. There will be a conversatione in the evening. On the same evening the Wykehamist anniversary dinner will be held at the Whitehall Rooms.

\* \* \*

JULY 4 is Harrow speech day. The same date is fixed for the Bradfield College Jubilee dinner.

\* \* \*

ON July 10, Lord Reay presides at the annual meeting of the Children's Happy Evenings Association.

\* \* \*

AN examination will be held at the Charterhouse, London and Godalming, on July 10 and 11, for ten or more scholarships, open to boys between twelve and fourteen years of age.

\* \* \*

THE London School of Economics and Political Science offers three studentships for the encouragement of research—one of £100 a year for two years, and two of £50 a year, confined, in the first instance, to women students. The examinations will be held on July 17 and 18. Particulars may be obtained on application to the Director, at 10 Adelphi Terrace.

\* \* \*

THE DUKE AND DUCHESS OF YORK have promised to present the prizes to the cadets of the Thames Nautical Training College, on Thursday, July 19. The Committee of the "Worcester" have engaged the General Steam Navigation Co.'s new steamer "Eagle" to take the Duke and Duchess and a large company to the "Worcester," off Greenhithe, on the occasion. The boat will leave Fresh Wharf, London Bridge, at noon.

\* \* \*

THE Midsummer entries for the Diploma examination of the College of Preceptors number 270, a figure which stands favourable comparison with the 186 of last year.

\* \* \*

OXFORD CONVOCATION has passed a statute providing that the subjects on which the occupant of the newly established Wykeham Chair of Physics, for which the endowment, in accordance with the arrangements of the University Commission, is provided by New College, shall chiefly lecture shall be electricity and magnetism. The election of a professor will be proceeded with as soon as possible.

\* \* \*

THE *Athenaeum* says that it is "expected by optimists" that the University of London will set out on its new career with a fully constituted Faculty of Law. It is hoped that the Inns of Court will fall into line, after all, and associate themselves with the University. One seat on the Senate was assigned by the

Statutory Commission to each of the four Inns, but it seemed doubtful for a time whether the Inns would avail themselves of the opportunity thus presented to them.

\* \* \*

VICTORIA UNIVERSITY now includes agriculture among the subjects of examination for the degree of Bachelor of Science, thus following the example of Cambridge, Durham, and Wales in the recognition of agriculture as a study within the University.

\* \* \*

THE authorities of the Gilchrist Educational Trust have established in commemoration of their late chairman, Mr. Leigh Holland, who was specially interested in the higher education of women, a Fellowship of the value of £100 a year, to be held in alternate years by students of Girton and Newnham respectively. The holder of the Fellowship must have been placed in the First Class of one of the triposes, and will be required to follow a course of preparation for the profession of medicine or teaching, or such other professional pursuit as may be approved by the trustees. The first award will be made by Girton in July.

\* \* \*

AN honorary scholar, at a school or University, is a scholar who stands first in the examination, but leaves the emoluments for the candidate who comes next to him. That is honourable as well as honorary, and it is good to see the increasing frequency with which rich men's sons covet and attain this position. The names of two of these appear in the latest scholarship list of Cheltenham College.

\* \* \*

THE "Universities Catholic Education Board," in their report for 1899-1900, claim that they have been instrumental in appointing a chaplain and lecturer at both Universities. The subjects of the lectures given every Sunday during term time embrace religion, philosophy, and history. There were forty-five Roman Catholic undergraduates in residence at Oxford and twenty-seven at Cambridge. The expenditure in the maintenance and salaries of chaplains and lecturers amounted to £617; subscriptions to £660. The estimated expenditure for 1900 is £800.

\* \* \*

At the recent annual meeting of the Central Council of Diocesan Conferences, Canon Brooke, of Rochester, painted an alarming picture of the insecurity of the denominational system. We quote as we find it.

It was tottering to its very basis, and, unless something was done, they would have, in the course of two or three months, voluntary schools given up right and left on all sides. He thought that, if Church people were going to do anything in this matter, they should act at once. It was a fallacy to suppose that the parents were generally interested in this matter of religious education. The clergy, in his opinion, had neglected their schools in the most shameful and abominable manner.

\* \* \*

THE following have been appointed by the Committee of Management to the staff of examiners in the London College of Music:—John Greig, M.A. Edin., Mus.Doc. Oxon.; John C. Bowen, musical director of the Dominican Church, Haverstock Hill; Matthew Kingston, Mus.Bac. Cantab.; F. W. Pacey, Mus.Bac. Oxon.; and H. G. Trembath, Mus.Bac. Oxon.

\* \* \*

THE Council of Newnham College has finally arranged to purchase the freehold of the site of the college buildings, at present held on lease from St. John's College. This freehold will be acquired at Michaelmas, 1900, on payment of £18,000. Towards this sum gifts and promises amounting to nearly £13,900 have already been received.

\* \* \*

THE Grocers' Company offer four scholarships tenable at their school at Oundle, covering boarding and tuition fees (amounting to £76 or £81, according to age), open to sons of officers, naval or military, who have been killed in action or have died of disease during the campaign in South Africa. These scholarships

will be awarded by the Court by selection, subject to a qualifying examination. Applicants must not be less than ten or more than fifteen years of age, and the scholarship will be tenable so long as the boy remains in the school. Applications to be addressed to the Clerk, Grocers' Hall.

—♦♦—

Appointments and Vacancies. DR. TYRRELL, Professor of Greek at Trinity College, Dublin, has been appointed to the Chair of Ancient History, in succession to Dr. Mahaffy, now Senior Fellow. Prof. Tyrrell is many-sided—his volume on Cicero's Letters is well known, as also is his exceptional literary acumen.

\* \* \*

DR. OLIVER LODGE, D.Sc. Lond., Professor of Experimental Physics in University College, Liverpool, a Staffordshire man, has been appointed by the Crown to be Principal of Birmingham University. Dr. Lodge was at one time scientific adviser to the Electrical Power Storage Company. He is the President of the Physical Society of London, has been a Fellow of the Royal Society since 1887, and has written largely in the scientific journals on mechanics and electricity. His works comprise "Modern Views of Electricity," a collection of his contributions to the scientific press, "Lightning Conductors and Lightning Guards," "Pioneers of Science," a popular illustrated work on astronomical biography and discoveries, and "The Work of Hertz and his Successors."

\* \* \*

WE regret to learn that illness is assigned as a cause of Dr. Henry Sidgwick's resignation of the Knightbridge Chair of Moral Philosophy in the University of Cambridge, which he had held for seventeen years.

\* \* \*

CONSIDERATIONS of health also account for the resignation by Canon Shuttleworth of the Chair of Pastoral Theology at King's College, London, and for the retirement from active duties of Mr. Montagu Burrows, Chichele Professor of English History at Oxford.

\* \* \*

THE approaching retirement is announced of Mr. F. W. Walker, High Master of St. Paul's School, and previously High Master of Manchester Grammar School. Mr. Walker has served at both these schools the traditional full term of a headmastership, and he raised them both to the highest level of efficiency. Of his work at St. Paul's we shall speak again.

\* \* \*

THERE have been more than the ordinary number of changes this year at the public schools. Repton has received a new Head in the person of the Rev. H. M. Burge, of University College, Oxford, who succeeds Canon Furneaux, resigned. A new Headmaster is required for Sedbergh School, Yorkshire, in the place of Mr. Hart. The statement that Dr. Warre, of Eton, contemplated retirement was made without foundation.

\* \* \*

At Oxford, Mr. E. De Selincourt, M.A., has been appointed Lecturer in Modern English Literature for a term of three years.

\* \* \*

THE Lectureship in Physiology at Durham University is vacant by the death of Mr. G. E. Williamson, F.R.C.S.

\* \* \*

CARDIFF UNIVERSITY COLLEGE is about to appoint assistant-lecturers in the normal and intermediate training department, in classics, and in history, with English language and literature.

—♦♦—

Literary Gossip. OXFORD is always generous with the books which she annually produces in her capacity as printer and publisher. She has just sent to Birmingham University several hundred volumes from the Clarendon Press, to the value of £100 sterling. Mason College, of course, has a good library of its own; but the Birmingham University Library is still *in nubibus*.



THE interesting collections of the late Dr. Fortnum will cost the University of Oxford about a thousand pounds to reduce finally into her own possession. In addition to £500 contributed by Braenose College, the University is spending double that amount on the extension of the Ashmolean, which is necessary for the accommodation of the Fortnum and other recent acquisitions.

\* \* \*

MR. FLINDERS PETRIE, the Professor of Egyptology at University College, London, had a very good reception when he was presented for his honorary degree at Cambridge. The Public Orator pointed out that he had taught archaeologists the great value of a strictly scientific method. "He had carefully surveyed Stonehenge and the other principal monuments of Great Britain, and had written, with no less care, on 'Weights and Measures' and on 'Inductive Metrology.' He had explored the Pyramids of Egypt, and, by his discovery and excavation of the site of Naucratis, and his researches among the ruins of the Labyrinth in the region of Lake Moeris, had, in both cases, triumphantly vindicated the veracity of Herodotus." This was almost as nice for Herodotus as though he, too, were being capped as D.Sc. or Litt.D. Cantab.

\* \* \*

THE five-hundredth anniversary of the foundation of Cracow University was duly celebrated on June 7. A large number of men of science, including representatives of most of the European Universities and colleges, attended. The Austrian and foreign investigators went in procession on Thursday morning to the Church of St. Mary, where a Papal Brief in reference to the celebration was read. The graves of the founders of the University were visited, and wreaths were deposited on them. At the special commemorative meeting subsequently held, speeches in Latin were delivered by Prof. Tarnowski, the Rector, and Dr. von Hartel. An illuminated address was presented by a deputation from Oxford University.

\* \* \*

THE process of Celtogalvanism still continues. The Board of Education prints as an appendix to specimen schemes intended for use in Welsh-speaking districts a note stating that, "in districts where Welsh is the home language of the children, it is advisable that Welsh be freely used as the medium of instruction in the lower part of the school, especially in such subjects as object lessons on geography. But the English lesson, the chief aim of which is to 'impart a command' of correct English, should be conducted as far as possible in the English language, though Welsh should be used for the purposes of necessary explanation." The Board also recommend bilingual school reading books. The Celtic tongues are very interesting, as a matter of history and literature; but falling water does not go uphill. To teach those children English would be the true education.

\* \* \*

CAMBRIDGE is very wise in giving a large option of subjects for its University Essays. The adjudicators of the Prince Consort Prize announce the following subjects for dissertations for the year 1902:—(1) "The Second Athenian Confederacy." (2) "The Client-Princes of the Roman Empire." (3) "Alexius Comnenus." (4) "Political and Commercial Relations between England and Flanders under the Houses of Lancaster and York." (5) "The Theory of Toleration under the later Stuarts." (6) "The Colonial Charters and their bearing on American Polity." Any one of the following subjects may be chosen by a candidate for the Cobden Prize in 1901:—(1) "Lessons to be deduced from recent experience at home and abroad in the application of Co-operative Methods to Agriculture, with special reference to credit associations." (2) "The nature and limits of the services that may be rendered by Statistical Methods to Economic Inquiry in ascertaining the causes which determine the general rate of wages in a modern industrial community, and in appraising their relative importance." (3) "The causes and effects of Changes in the relative Values of different kinds of Agricultural Produce in

the United Kingdom during the last fifty years." (4) "The influence on International Trade exerted by changes in the methods and cost of Transport by Land and Water during the last fifty years; with special reference to the United Kingdom, Germany, and the United States of America." (5) "The methods by which the burden of Taxation upon different individuals and classes should be determined."

\* \* \*

THE Stopford Brooke Lecture Fund at University College, London, has reached about £700, out of the £10,000 which it was desired to collect. It is expected that a first course of lectures may be arranged for next year.

\* \* \*

THE PRINCE OF WALES has accepted a copy of the third volume of the "Handbook to Christian and Ecclesiastical Rome" (A. & C. Black), by M. A. R. Tucker and Hope Malleon. This volume contains an account of the Order of St. John of Jerusalem, of which one of the authors is a member, and of which the Prince is Grand Prior in England.

\* \* \*

THE volume on Wales which Prof. Owen Edwards has been writing for "The Story of the Nations" series has now been finished, and the manuscript is in the publisher's hands. Prof. Edwards has succeeded in collecting a number of curious and interesting pictures for the illustration of this volume.

\* \* \*

"A HISTORY of Bradfield College by old Bradfield Boys," edited by Mr. A. F. Leach, will be published shortly by Mr. Henry Frowde, Oxford University Press. The book will be a handsome volume, and will contain many illustrations. Mr. Leach is already known as a historian of Winchester College, and author of "English Schools at the Reformation."

## SECONDARY INSPECTION.

At the Evening Meeting of the College of Preceptors, held on Wednesday, June 13, Dr. WORMELL in the chair, R. P. SCOTT, Esq., M.A., LL.D., read the following paper on "The Inspection of Secondary Schools: of what tests ought it to consist?"—

### THE ROYAL COMMISSION ON SECONDARY EDUCATION: ITS OUTCOME.

It is now nearly five years since the Report of the Royal Commission on Secondary Education was signed, and since then not a few things have happened in the educational world. We have much to be grateful for to the Bryce Commission, since, like its great predecessor of 1864, it has come to conclusions which are constructive, and offer a definite plan of organization. We may agree with many of its recommendations, or we may differ from the plan as a whole; but the promulgation of a reasoned system is a challenge to all and sundry to formulate reasons for accepting or for rejecting the proposals thus authoritatively made. The interchange of opinion on the Report, taken together with the definition of terms which results from discussion, does good service to the cause of education; it helps clear thinking, and clear thinking should lead in due time to right action.

Some persons may be inclined to discount the results of the Bryce Commission, because after five years so few of its definite recommendations have been placed upon the Statute Book. Such criticism seems, however, to ignore facts. It is the fate of Education Commissions in England to be effective partially, and after much delay; yet the Board of Education Act has passed and has opened the door to a series of momentous changes of which few people recognize the importance. Thus, we have now a Minister of Education—in name; we have a Board of Education—still in the throes of being about to be; we have a Permanent Secretary, who is responsible—in theory—for the whole education of the country; we have a Consultative Committee—in *posse*. Registration of teachers is imminent, and a Local Authority Bill looms in the near future; nor should it be forgotten by those who are not enthusiastically in favour of such a measure that this subject was accorded a prominent position in the Queen's Speech, and has thus acquired a definite place on the Government programme for the present Session. Thus, though it must be conceded that in secondary education the wheels of the administrative chariot are driving heavily, yet it is a fact, apparent even to the naked eye, that it moves.

### ONE CAUSE OF DELAY IN LEGISLATION.

It may be affirmed, without much fear of contradiction, that, while part of this delay is due to natural causes (such as the ingrained English dislike to reform, and the consequent inertness of officials), some of the delay is due to the method adopted by the Commission itself. The Commission pointed out truly enough the urgency of the

case, and circumstances continue to justify its view; but, owing to political exigency, the Commission was hurried in its work, and, though only appointed in March, 1894, its Report was called for before the autumn of 1895, in order that its recommendations might form a basis for legislation on the subject in 1896. The Commission was unable, therefore, to present with sufficient force the case for reform. It omitted to base its conclusions on widespread investigation and inspection, and, in consequence, the movement for giving effect to the Commission's recommendations has been deprived of much of the force which otherwise it should have acquired. A general inspection of schools is a necessary preliminary to effective and well considered action, and until that necessary step has been taken we shall remain in the dark, not only as to what provision for secondary education exists, but also as to the equally important fact of the *quality* of this provision. We need such an inspection, not only in the interests of education, but also in those of justice to vested interests and in those of the economy of public money. Unless we take stock of our educational resources, we shall not realize the richness of its variety. We may, in ignorance, trample out of existence many valuable and delicate seedlings; we may bring to undeserved ruin many teachers whose work lies outside the public and official groove; we may embark on an unnecessarily costly experiment, through building and maintaining new schools, where often it might be possible to make use of such schools as exist.

But if, in the interests of the nation, we really desire to preserve variety, to deal justly with vested interests, to build up an efficient system of secondary schools, with due regard to economy, it is indispensable to set on foot a wise system of inspection, even though on a small scale to begin with, so administered that from the outset it may enjoy the confidence both of teachers and of the public.

#### TWO ASPECTS OF INSPECTION.

One of the incidents in "Alice in Wonderland" somehow fixes itself in my mind as illustrating two aspects of our present attitude towards inspection. The bewilderment of the teacher who has lost his bearings under the new conditions, the impassive, go-as-you-please air of the high officials, are both reflected in Alice's first interview with the sententious Cheshire Cat. The Cheshire Cat, you will remember, always offers its advice grinning, and from a safe distance:—

"It looked very good natured, she thought; still, it had *very* long claws and a great many teeth; so she felt that it ought to be treated with respect.

"Cheshire Puss," she began, rather timidly, as she did not at all know whether it would like the name, 'will you please tell me which way I ought to go from here?'

"That depends a good deal where you want to get to," said the Cat.

"I don't much care—" said Alice.

"Then it doesn't matter which way you go," said the Cat.

"—so long as I get *somewhere*," Alice added as an explanation.

"Oh! you're sure to do that," said the Cat, 'if you only walk long enough.'

The obviousness of such advice need not hide from us its wisdom, nor the difficulty, under present circumstances, of applying it in educational practice to schools which do not set out with any definiteness of aim.

There is, perhaps, hardly any word which has stood, and stands, for more apprehension, anxiety, and heartburning among teachers than the word *inspection*. Nor is this to be wondered at, for the term is so wide that only use and custom can narrow its application. To *inspect* is to look into—i.e., for the purpose of reporting to a proper authority; and *inspection* as applied to schools may be taken to mean to look into any (or all) of the matters which relate, whether directly or indirectly, to teaching. Thus a complete inspection will, for the purpose of reporting to the proper authority, look into and estimate the efficiency of (a) the premises in which the teaching takes place; (b) the administrative conditions in which the teacher is placed; (c) the instruments through which the teaching is communicated to the learner; (d) the result of the teaching as evidenced in the pupil.

The Bryce Commission distinguished these four tests from each other. The first three are inspectional, and are classed as sanitary, administrative, and educational inspection respectively. The last is the examination test, and should be distinguished from inspection. It is true that these kinds of inspection tend to overlap; yet it will be well if we endeavour, in speaking of them, to keep them distinct. And before dealing with them separately it may be well to indicate some important considerations which should accompany their use.

1. The cost of inspection ought certainly to be borne by the State. It would be unreasonable to expect that a school doubtful as to its efficiency should have to pay for having the doubt decided against it; and yet this is the very case in which inspection would be most serviceable. In Wales schools pay for being inspected; but, as they are examined as well as inspected, the payment may probably be regarded solely as an examination charge.

2. That only such schools as are reported upon satisfactorily under all three heads should be allowed to be classed as "efficient" in the

Register of Schools. It is clear that, in the future, admission to this Register will be indispensable for any school if it is to hold its own against competition. After a time the public will only use such schools as are registered as efficient.

3. In sanitary inspection no report ought to become public property, and action ought not to be taken on such report by the proper authority until those responsible for the school have been allowed a reasonable time to set right any shortcomings which inspection may have revealed.

4. In educational inspection, the report, before submission to the Local or Central Authority, should first be submitted to the headmaster or principal of the school, not with the object of allowing alteration in the statements therein contained, but in order to afford an opportunity of adding any comments or explanations which would help the Authority in its judgment of the report itself.

#### INSPECTION OF THREE KINDS: CONSIDERATIONS AFFECTING INSPECTION.

Turning now to the kinds of inspection:—

1. Sanitary inspection deals with the buildings, the class-rooms—their adequacy and suitability as to light and air—the playgrounds, playing-fields, offices, the actual situation of the school, its accessibility, &c. It is highly important that this kind of inspection should be thorough, and be undertaken by an inspector chosen for his knowledge not only of the principles of sanitation generally, but of the application of such principles to school conditions in particular. Regulations as to the conditions desiderated in the matter of floor-space, position of windows and doors, approved modes of ventilation, width of passages, &c., should be issued for the guidance of those who are responsible for the upkeep of schools, and the inspectors in their reports should be allowed for some time to come a considerable latitude in applying the principles to concrete cases, and should in all cases of reasonable approximation to the approved conditions issue the certificate of sanitary efficiency. This inspection ought to be in the hands of men and women specially appointed for this specific purpose. In the case of Local Authorities administering large areas, the Local Authority would probably appoint, but the Central Authority ought to have available such inspectors, whose services might be placed at the disposal of Local Authorities administering small areas.

2. The second kind of inspection is administrative. It will be essential for the Local Education Authority of the future, on which will be thrown the responsibility of supplying (or aiding the supply of) an adequate number of secondary schools, to know the exact conditions on a fixed day in each year under which each school in the local list is administered. It should know the type of secondary school to which the school belongs, the fee charged, the number and age of the pupils, the number for whom accommodation is provided, the number and the qualifications of the staff, the income of the school from endowment, from grants (central or local), from fees, &c. It should know exactly how the school is administered, whether by governing body, directors, or proprietor; and, if the school is administered under a scheme or other legal instrument, it should know whether the provisions of such document are faithfully carried out. It will readily be seen that much of the work of administrative inspection can be conducted by means of a return made at the instance of the Board of Education. A copy of this return would naturally be placed in the hand of the educational inspector when about to visit the school. The foregoing details of the return should be public. Also, for the official information of both Local Authority and Central Authority, but not for publication, the actual salaries paid to assistant masters and mistresses should be noted. It should be competent for the Board of Education to take any necessary steps to verify such return.

3. The third kind of inspection—educational inspection—is that variety of inspection which generally monopolizes the name; but this is too frequently confused with examination, with which it is nearly allied. It will be well to distinguish the two. Educational inspection of the school, as distinguished from examination of the pupils, should consist in a looking into for the purpose of making an official report thereon (a) the suitability of the curriculum—that is, of the whole course of instruction—to the professed aim and type of school; and (b) the general working of the school regarded for this purpose as a part of administrative machinery. Such inspection comprises the organization of the school into forms and sets, the syllabus of work assigned to each form and set, the number of pupils in each form and set, the proficiency as regards teaching of each member of the staff. Such inspection should further report upon the discipline of the school, the method by which it is obtained, the general relations between teachers and pupils, the efficiency of the school outside its strictly instructional orbit—the school games, the school societies, the influences which outside the class-room also help in character building. For an inspection of this kind to be really efficient we need singularly able, industrious, honest, and tactful men and women as inspectors. It will be difficult at first to find in any large number persons really fitted to undertake this work. Moreover, it should be borne in mind that each secondary school will, in general, require more than one inspector to properly appraise its work. We shall need inspectors qualified respectively to inspect in classics, in modern languages, in English and mathematics, in science, and in

art. If this removes one difficulty—that of not requiring too much from any one inspector—it creates another—that of increasing the number of inspectors and the stringency of the test. But neither is this difficulty insuperable; for it would be possible, and in general it would be satisfactory, to vary each year, after the first time of inspection, the chief stress of the inspection. One year the educational inspection might be principally directed to ascertaining the school efficiency in the humanities, say; the next to the scientific side; and it might be possible, on special recommendation, to allow individual schools of admitted efficiency to be inspected once only (say) in three years, provided the results of outside examinations continue satisfactory. The good results of inspection conducted in this manner cannot be doubted, and examples of its benefits will be within the experience of many of us. To take two illustrations drawn from my own knowledge. Teachers in secondary schools, speaking generally, are grievously lacking in the power to teach in the presence of an adult visitor. This self-consciousness is an evil in itself; but, in fact, many secondary teachers who possess good ability are weak in teaching power—that is, in mapping out a lesson, in presenting its points with clearness and force, in getting hold of the pupils' attention and keeping it, in questioning, in summarizing—because they have never been helped by the sympathetic criticism of a master of their craft. This an inspector should be. He should, through having been a teacher himself, know the difficulties of the task, and, like a cricket expert watching a county match, he should be a keen and accurate judge of the skill shown by batsman and bowler. In a recent case which has come to my knowledge a friend of mine, who is a good French scholar, not only acknowledged, in a letter he recently sent me, the gain which the hints of the inspector had been to him in teaching the subject, but added that, when the inspector went away, many of the boys had a much greater liking for French than they had when he came.

Such an inspector should examine individual pupils only so far as he wished to do so, in order to verify any impression he might have formed; but the examination of the school should be entirely distinct from its inspection. The main reason for keeping the two distinct is in order to get the best out of the inspector. If he has to go through the drudgery involved in stacks of examination papers, his judgment will be pressed to death by sheer pounds avoirdupois, and he will evade the task of thinking, and will assume that the teacher and the school public will be charmed to hear skilful variations on the theme that Brown, ma., of the Shell, did an excellent paper in French Unseen, and that Wilkinson, min., of the Preparatory, gained absolutely full marks in the Junior Arithmetic paper.

Overwork as to details is the reason why too frequently in school reports we cannot see the wood for the trees. Frequently this is not so much the fault of the tester as of the test. And it must, of course, be obvious that inspection, whether regarded as an art, or as a craft, suffers incalculably from the want of recognized types of schools and standards of teaching. Except in the case of the great public schools and the schools which prepare for them, there are as yet no recognized types of curricula, so that the inspector is unable to carry with him to the school any accurate, or even approximate, standard of comparison by which to estimate its work. Each secondary school is officially a separate and unrelated entity, and the inspector who recognizes the disadvantage of this has, perhaps, been bidden not to proclaim these difficulties from the house-tops, lest, perhaps, the school concerned should transfer its custom to some other examining body which cultivates a more discreet mode of life.

I may point out that the College of Preceptors is endeavouring, and with a great deal of success, to carry out this plan which I have just been speaking about; and, in a memorandum which was sent in March last year to the Secretary, Intermediate Education (Ireland) Commission, the College states that the method which seems to be very acceptable to schools is as follows:—

(1) Inspection of the whole or part of a school may be taken in conjunction with the examination of some of the pupils under the Certificate and Junior Forms Examination Schemes, a report being furnished on the combined examination and inspection. (2) In addition to the full schedules of marks awarded in every subject, which are supplied to all heads of schools sending in candidates to the Certificate and Junior Forms Examinations, the College furnishes, for a small additional fee, a written report on the work of the candidates (where whole classes have been sent in). These reports are based on the remarks made by the individual examiners while marking the answers of the candidates, and are, therefore, of the nature of a judgment on the work compared with that of other schools as they pass in succession before the examiner's mental vision. To this comparative appreciation by a large number of experts in their particular subjects greater weight would probably attach than to that of a single examiner. This scheme has only been in operation for two or three years, and the growing demand for these reports shows that they are found useful.

To the educational inspection properly conducted, an indispensable supplementary test is the examination of the pupils, of whom, if the

school age allows, a certain proportion should enter for some public examination, such as the University Locals or the examinations of the College; and it is important to note that one (or more) whole forms should thus be presented, and the results of this and other external examinations should be noted in the inspector's report. This report will be made more complete, and, therefore, more valuable, if it could incorporate also the report on an inspection of the annual examination of the school conducted somewhat as follows:—The headmaster or principal assigns among the staff the whole of the setting and marking of the examination papers, no teacher, as a rule, examining his own pupils. The questions as set are submitted to the examiner for revision and approval; the papers, when marked, are also submitted to him. With a comparatively small expenditure of labour, the inspector, under these circumstances, is able to bring to bear the whole force of his personal experience in estimating the result; and if on a single sheet he could put against each subject in each form a letter, such as "G" (good), "F" (fair), "M" (moderate), to denote the standard attained, it would be possible, almost at a glance, to see which subject and which forms are being taught well, and which not so well. In school inspection the general result is best realized by means of a few bold strokes in a complete and well defined outline.

#### NEED FOR A COLLEGE OF INSPECTORS.

But, in order to get inspectors to deal thus with their work, there is the need of a corporate and professional feeling among inspectors as such. Inspectors should meet in conference, to compare and contrast the results obtained in similar schools under various conditions in different parts of the country; experiments in teaching should be by them watched and recorded, their judgment, favourable or otherwise, tabulated, their own methods discussed and modified. In this manner a college of inspectors could do invaluable work for schools. Assuredly, an ever increasing importance attaches, and must attach, to inspection. Examination (both public and private) has its place, and that an important one, in the school economy; but the weight attaching to it is likely to decrease as inspection grows in efficiency, and, therefore, in public repute; but when it is recognized that examination, at most, touches but a small proportion of the pupils of any one school; that it is a test which perforce is a test of instruction rather than of education; that, in the nature of things, it takes no account of the spirit and tone, of the discipline, of the subtle influences of tradition, of the formative intercourse between teacher and pupil—all elements in the school's highest life; it may, perhaps, be acknowledged that a body of teachers could hardly set themselves a more fruitful, if difficult, task than that of helping to form a healthy public opinion among parents, as well as among legislators and administrators, as to the absolute and urgent necessity of pressing into the service of the inspection of schools a body of efficient men and women, whose work shall be carried on in such conditions of official recognition and corporate life as ultimately shall ensure its success.

Mr. EVE called attention to the reports now issued by the College of Preceptors based on the notes of the several examiners, often combined with inspection. It was not easy to draw up such reports because they had to be submitted to governing bodies who were not always familiar with school details. For this reason the plan had been adopted of sending the general report to the governors and the minuter details (including practically all the remarks of the examiners) to the headmaster of the school. He agreed with the lecturer that it was extremely difficult to find suitable inspectors. It would be regrettable if the work of inspection were entrusted to young men who had not had sufficient experience as teachers to fit them for the task. He knew one man who was almost ideally qualified to be an inspector, a man of advanced scholarship and of considerable experience as assistant-master and headmaster, and who, in addition, had had much miscellaneous experience, being a member of a County Council and managing a good deal of their educational work. Unfortunately, few men with such qualifications were available, and a single inspector could not manage to inspect more than about fifteen schools in a year. Above everything officialdom was to be avoided.

Miss CROOKSHANK thought that the inspection of a school should not be placed in the hands of a single inspector, but that at least two should be associated in the work. A school should also not be inspected by the same inspector in successive years. These precautions would tend to correct variations of standard.

The Rev. J. O. BEVAN said an examiner was expected to combine so many different qualifications that it was very difficult to obtain suitable men in sufficient number. All inspectors should have had experience as heads of schools, and know something about the management of them. Otherwise teachers would feel the lack of that sympathy which should exist between the inspector and the principal and teachers of the school inspected. It should be borne in mind that the inspectors would not all be Government inspectors, as the Act provided for inspection by other bodies, whose reports would of course have the same weight as the Government reports. Examination of a school by paper work alone was not sufficient. It was important that the

examiner should visit the school and become acquainted with its "atmosphere." He could then deal with the answers of the pupils in different ways according to the particular type of school presented to his consideration. Inspectors were sometimes unjustly criticized when their reports did not agree with the experience of the head teacher. It sometimes happened, for example, that a pupil who generally did good work in school was unwell during an examination, and consequently unable to do himself justice. He agreed with Dr. Scott that private schools furnished a valuable asset in the country's educational stock, and it was to be regretted that such schools suffered not only in the present, but also in their prospects for the future, from want of concerted action.

Miss WALKER considered that reports should be full and candid. They would then be of assistance to the principal in remedying defects and in raising the standard of the school from year to year.

Mr. ORCHARD thought that inspection should be compulsory; otherwise those schools which most required it would shirk it. To be thorough, inspection should embrace the teacher, the taught, and the school premises. The inspector and the examiner should go through the examination work together as far as possible, and prepare a joint report. Pupils should be examined *viva voce*, in order that the value of their knowledge might be accurately estimated. To be able to draft a satisfactory report an inspector should have had experience in teaching, so that he might come to the work with the necessary knowledge and sympathy with teachers and pupils. He agreed with the lecturer that there should be different inspectors for different classes of subjects.

Mr. SHIPHAM thought that, having regard to the enormous difficulty of forming a correct estimate of the work of a school, it was important that sufficient time should be devoted to the inspection. Instead of the one or two days usually spent on the oral examination and inspection of a school, at least five days should be allowed if a trustworthy estimate was to be formed. When an inspector visited a school for a single day the boys were on their best behaviour; but this unnatural condition would not last for five days. This would, of course, increase the expense, but it was necessary.

The CHAIRMAN, referring to the lecturer's remark that up to the present time the recommendations of the Secondary Education Commission had only been partially put into effect, said he was sure that the Commissioners had reason to be satisfied that so much had already been accomplished. He felt that inspection, supplemented by a certain amount of examination, ought to be welcomed by teachers, as it might be the means of emancipating teaching from the tyranny of examination. Inspection should cover all the work of a school. There was danger in incomplete or one-sided inspection. An inspector who was a specialist in science or in literature, for example, might unduly stimulate his favourite subject to the detriment of other subjects. The last speaker had rightly urged that inspection should not be hurried. It was of the highest importance that the inspector should patiently take such time as might be required. He agreed with Mr. Eve that special care was required in preparing reports for governing bodies, as, from their unfamiliarity with school details, they might easily mistake a suggestion for improvement as being a censure. The College of Preceptors, therefore, did wisely in supplementing its reports to governing bodies by recommendations to heads of schools.

Dr. SCOTT having replied to the remarks of the various speakers, a vote of thanks to the lecturer concluded the proceedings.

### THE JUBILEE OF BRADFIELD COLLEGE.

BRADFIELD completes her fiftieth year of existence this year. Founded in 1850 by "Tom" Stevens, rector and squire of Bradfield, with three pupils, the school gradually increased during the first decade of its existence both in numbers and reputation. In 1860 the number of boys was about a hundred and twenty, and that number was maintained, but not substantially added to, during the next decade. The founder was so convinced of the stability of his school that in 1862 he obtained a Royal Charter, having previously conveyed the buildings and land to trustees. But in the trust deed he committed an error that well nigh proved fatal to Bradfield. For by reserving to himself absolute power as Warden over the funds, and over the head and assistant masters, he in effect forged against himself and his offspring the deadly weapon that has the magic power of dealing the blow that kills even when the wielder of it is unconscious that he has raised his arm to strike. He created a dual control.

By 1880 Stevens was seriously embarrassed. The numbers had fallen to fifty and three; the resources of the founder had been crippled by the large sums he had expended in "restoring" and refurbishing his church; and in 1881 he was compelled to retire from the Wardenship, resign the living, and dispose of his property. Bradfield had at the best, it might seem, furnished to

the scholastic world, and to the authority that controls its destinies, a striking example of the miserable consequences that attend upon the setting up of a double head. It seems odd now to reflect that Stevens had started his school as a choir school. Deeply interested in one side of the Oxford movement, he had dreamed of setting up a cathedral service in his parish church; and for that purpose he had found the resources of the village inadequate. I have no thought of disparaging the energy of Mr. Abdy Williams; and I am not concerned here to estimate the value, educational or otherwise, of his Greek music and his Greek instruments. But I do not think that in this year of jubilee the chapel music at Bradfield can be accounted a strong feature. In this case the founder's "intentions" faded with the founder.

And yet, after all, Tom Stevens had builded better than he knew. For in 1880 the present Headmaster, Dr. H. B. Gray, to whom the resuscitation of the school is wholly due, had left Westminster to take charge of the fifty-three. For five or six years he had a hard struggle for existence. But by 1888 the battle had been won; and now, in place of fifty-three, there are over three hundred boys in the school. The only dark spot in the outlook, as it seems to me, is the consequence of the fact that the prosperity of Bradfield has been in its inception, and is in its continuance, so entirely due to its chief. "May the king live for ever!" should be the pious wish of all O.B.B.'s; but, however vain one may be to abstain from words of ill omen, it should act as a warning to all concerned that Dr. Gray, for the first time in his life, was recently ordered to spend three days in bed in consequence of overwork. Let him inspire his lieutenants, and adopt betimes that most valuable and most inspiring of the *arcana* of rulers—that the chief business of the chief is to do nothing; and that salaries should vary in inverse proportion to the amount of work accomplished.

With this one reservation at which I have hinted, but on which I am unwilling to dwell, the outlook for Bradfield is bright indeed. The school lies amid some of the fairest scenery of Berkshire; the site is high, and the situation salubrious; the school looks down from a beautifully wooded eminence on a village and church so fairly placed that it is no wonder a mystic should have been seized with a longing to praise God continually there with singing sweet as that elusive music with which the neighbouring wood re-echoes. The buildings, though not palatial, are adequate; they have grown up in so pleasantly haphazard a style from the old manor-house, the nucleus from which Tom Stevens started, that they present a charming unity in their very diversity. Perhaps a more solid advantage is the present popularity of the modern boarding schools. As against the ancient foundations, the expenses are generally smaller, and the accommodation and appliances are better.

The great day schools do not seem to be making way; they certainly are not, in most cases, obtaining their fair proportion of the natural increase in demand. The prejudice against educating sons in great towns does not diminish among parents; some of the most successful day schools have done injury to themselves by proclaiming too loudly their scholastic successes. On the whole, we rather expect a considerable increase in the numbers at Bradfield, always assuming that Dr. Gray does not allow the sword to wear out the scabbard.

If Dr. Gray continues to guide the fortunes of the school for another ten years, its fortune is apparently assured. We read that when Brasidas the Spartan died a chapel was erected to his memory at Amphipolis, which he had delivered from the enemy; and, by a pleasing convention, he was declared founder of the city. So when the present head of Bradfield—after the lapse, as we must all hope, of many more than the ten years just mentioned—shall have suffered the common lot of all men, it will not be strange if the college chapel, now a torso, is completed in his memory, and if, perhaps in a still more remote future, Dr. Gray comes to be looked upon as the *œcist* of the college. Certainly "Tom" Stevens's achievement, estimable as were his aims, is scarcely the kind of plant that burgeons into pious memories and founder's day speeches. At the most it may be his lot to play Zeno to Dr. Gray's Chrysippus.

Of the triennial Greek plays that have proved a valuable attraction at Bradfield, I shall say nothing at present, as I hope to give some account of the jubilee performances in the next number of this journal. As for sports and games, cricket and soccer flourish; and the red-coated cadet corps, as competitors at Bisley know, is a tower of strength. The "bug-hunting" club seems to attract a large number of the junior boys.

E. C. MARCHANT.

## REVIEWS.

## OLD STAGERS AND NO STAGERS.

- (1) *The Greek Drama*. By Lionel D. Barnett. (Dent.) (2) *The Frogs of Aristophanes*. Translated by E. W. Huntingford. (Methuen.)

Between the "Old Stagers" and the "No Stagers" the battle rages yet. If we may quibble with the metaphor, the English stage, we may say, was already occupied by an "old stager" in the person of Mr. Haigh. But there was room for a "no stager"; and in due time Mr. Barnett has made his entrance. He is, however, placed at a disadvantage, because, whereas Mr. Haigh had space wherein to dilate upon the why and wherefore, Mr. Barnett is compelled in his little manual to state only his conclusions without giving reasons. One consequence of this enforced reticence is that his book will not serve the purpose of examination candidates. He is a disciple of Dörpfeld and Robert; and his work provides in a convenient compass a general survey of their views. Those who follow the long-lived controversy over the details of the fifth-century theatre may well be amused to note how one by one the notions that they learned in youth for facts are being relegated to the limbo of exploded things. The *thymele*, for example, which of late years has shifted its position and its signification more than once, has now disappeared altogether; and we are to think of the word as a mere synonym of "orchestra." These things are very perplexing; and, full of learning as is Mr. Barnett's book, we cannot think that the construction of the fifth-century theatre is a suitable subject to be dealt with in a handbook so small that theories have constantly to be stated as though they were ascertained facts.

We much prefer that portion of Mr. Barnett's book which is devoted to the dramatists. And here we have in a small compass some admirable criticism, as bright and sound as it is learned. "Æschylos," says the author, "is the greatest of the Greek prophets, and with Pindar he is the last." We rather think that Isocrates would have winced at this dictum. Sophokles is "a polished man of the world, a refined sensualist of singular sweetness of charm and manner." Euripides is described much as Wilamowitz and Dr. Verrall have depicted him. Aristophanes is neatly hit off as a combination of Rabelais and Mr. W. S. Gilbert, though, of course, Mr. Barnett recognizes that the genius of Aristophanes has other sides too; for was not his the soul that all the Muses chose for their abiding place?

Among the extant plays of Aristophanes, "The Birds" and "The Frogs" undoubtedly occupy the highest place as daring flights of fancy. In "The Birds" the poet climbs up into heaven; in "The Frogs" he goes down into hell. Of "The Frogs" a spirited and ingenious verse translation is before us. Mr. Huntingford is especially successful in representing the verbal puns of the original. Perhaps the happiest hit is made in the passage where Charon declines to take the slave Xanthias on board "unless he has fought at Arginuse for his skin." "Slaves not taken" (rhymes Mr. Huntingford) "Unless he's fought at sea and saved his bacon." The bragging of Dionysus is admirably turned:—

I'd like a small adventure with a devil,  
To raise the journey's rather prosy level!

Whether the translator is well advised in freely introducing modernisms we are not sure. It is often easy to make a point by frankly indulging in anachronistic renderings; but they have an incongruous effect; as when, for example, we read of Theramenes:—

Theramenes? he's clever; he's a fox at politics, sir,  
Who, if he plays to beat the ace, and finds he's in a fix, sir,  
Consults his sleeve without your leave, and always wins the trick, sir.

That is adaptation rather than translation; and the modernity of it jars in the neighbourhood of allusions to the details of ancient life and manners. Take another example:—

Where the porpoise comes round at the bos'un's shrill sound  
To the dingy black bows, and in fun  
Flings up to the ship a prophetic tip  
On the number of miles of the run.

The words we have italicized are a highly diverting adaptation of the original—*παρρέια και σταδίου*; but, with the assistance of a modern reference, it introduces a point that has no place in the original.

In rhyming Mr. Huntingford has much facility; he can make his lines jingle like church bells—

Change the metre, rather fleetly, hail Demeter, harvest Queen;  
You must greet her and entreat her with a sweeter tune, I ween.

That he does not stick at trifles in order to secure this jingling effect is shown by such lines as this:—

And in a crisis if he's high in power, makes money of it.

But, whatever difficulties present themselves, Mr. Huntingford never flags. His rendering is a most spirited performance, and will make good reading even for those who know nothing of the original. We conclude with a longer extract that shows what the translator can do in the lyric passages:—

Come forth, Iacchus, come!  
And leave thy honoured home  
To dance upon this lawn, and here to meet  
The brotherhood  
Of holy men and good,  
Iacchus, O Iacchus!  
And waving round thy brows  
A wreath of myrtle boughs  
That teems with leaf and berry,  
With fearless feet  
Strike up the measure, unrestrained and merry,  
With grace that every sense can please,  
The mystic dance of holy votaries.

## LITERARY HANDBOOKS.

- (1) "Periods of European Literature." Edited by Prof. Saintsbury.—*The Transition Period*. By G. Gregory Smith, M.A. (Blackwood.) (2) *The Early Poems of Alfred Lord Tennyson*. Edited by John Churton Collins. (Methuen.) (3) *A History of Epic Poetry (Post-Virgilian)*. By John Clark, M.A. (Edinburgh: Oliver & Boyd.)

(1) Mr. Gregory Smith, Lecturer in English in the University of Edinburgh, is under the impression that there is a "pleasant fiction, which abides with us too securely," that the change from the old to the new in Western languages and literatures came to us "suddenly and strangely, as at the pass of a harlequin's wand." It would be very difficult to hold an idea of this kind, and we are not quite clear as to where Mr. Smith has found it laid down in "critical tradition." What has unquestionably existed in our literary manuals for generations past is a certain vagueness, slurring, and even manifest neglect in dealing with the fifteenth century, arising partly from lack of knowledge and of sympathy with the authors of that century, but mainly from the fact that these authors could not compare with Dante and Chaucer, that they were crippled by the uncertainty of literary form, and that their inspiration was rather for fugitive songs, allegories, and pastorals than for masterly and sustained poems. Of course, Mr. Smith is perfectly accurate in pointing out that there was no absolute gap or check of literary development, that the transition was natural, regular, and continuous, and that the value of the actual products of this period has too often been under-estimated.

The contents of this volume, so far as Britain is affected, are concerned with the Chaucerian tradition, the influence of the metrical romances, the Scottish poets, the ballads and popular songs, the development of the drama, the moulding of English prose, and the stimulating effects of the printing press. The chapters on French literature deal with the mediæval traditions, poetry before and after Villon, the *chansons*, the early drama, the chronicles, *nouvelles*, didactic works, and the development of French prose. Other chapters are devoted to the Italian humanists, the early romanticism, popular song, the *rispetti* and *stornelli*, to the Spanish ballads and German *Volkslieder*, and to the drama in Spain, Italy, and Germany. Mr. Gregory Smith's volume is one of the most comprehensive and informing of the series to which it belongs.

(2) Mr. Collins tells us that he has given much time and labour to this critical edition of Tennyson's earlier poems; and, indeed, the fact is evident in the work. This volume will earn for its writer an additional tribute of gratitude from all who have learned to appreciate his keenly critical and accurate methods of literary study. He begins with an introduction of forty-three pages on the sources and inspirations of Tennyson's art, and then proceeds to reproduce the poems in their chronological order, supplying commentaries and notes, with the variant readings from earlier editions. An appendix gives us the poems temporarily and finally suppressed, with the Cambridge prize poem of "Timbuctoo"; and at the end there is a complete bibliography. To the lover of Tennyson this volume will be invaluable, not to say indispensable. It does not lend itself to quotation by way of illustrating its critical system, and we must be content to commend it as one of the most scholarly achievements of English literary analysis.



(3) Mr. Clark examines with some thoroughness, and in an attractive manner, the epic poetry of Europe after the time of Virgil. From the "Pharsalia" and the "Thebaid," from "Fingal" and "Beowulf," from the "Song of Roland" and "The Cid," he takes us through the stories of the great national epics of Germany, Italy, Spain, Portugal, France, and Britain, dealing with their metre and characteristic qualities, and frequently comparing one with another. The book has considerable critical value; but, as a simple collection of plots, it will be welcomed by many readers.

#### PUBLIC SCHOOLS.

(1) *Charterhouse*. By A. H. Tod, M.A. (2) *Rugby*. By H. C. Bradby, B.A. (Bell & Sons.)

(1) There can be no doubt but that Godalming is a far more healthy site for a public school than Smithfield. Physically and morally and mentally, woods and fields and fresh air must be better for boys than the reek of central London, the network of dingy streets, and the weariness that seems to hang over the places which men have long inhabited. And yet one cannot read Mr. Tod's account of Charterhouse without feeling that the change from town to country was a heavy loss. Indeed, he confesses as much. The "traditional loyalty towards the school suffered," he says, "a severe shock at the migration"; and all through the book we feel that this is the history of a practically new school—a very admirable one, doubtless; no mean nurse of heroes, and yet scarcely connected more than in name with the old foundation that Thackeray loved. Probably the change was both wise and inevitable, and yet it was a pity; since tradition and sentiment and the religion of the ancient site were entities as real and true as fresh air and sanitation, and it is above all by sentiments and traditions, and the indefinable emotions which emanate from ancient things, that character is formed. We are glad to note that the author is alive to the great defect of the public-school system—its tendency, growing stronger and stronger, to make for a rigid uniformity, to crush out originality of character as the eighth deadly sin. It is a serious defect, this, since, in the last resort, nations are often saved by the abnormal man who can grapple with the abnormal danger; and yet the sourest critic of the public school would hesitate if he were asked for a remedy. Rugby has a form of "specialists"; but even the holdest headmaster would hesitate before constituting a class for original geniuses.

(2) Rugby School inevitably suggests Arnold, and this volume in Messrs. Bell's series of "Handbooks to the Great Public Schools" gives reason to the common opinion by choosing a portrait of the great Doctor as its frontispiece. But, when one turns to the very admirable history which Mr. Bradby has written, one sees, we will not say the injustice, but the exaggeration, of the popular view. Rugby had a history, had heroes, before Dr. Arnold; and now, as the century closes, and we permit ourselves to review and to revise its most cherished dogmas, it may be permissible to hint a doubt even as to the great *mythos* of "Tom Brown." A "school for Christian gentlemen" was Dr. Arnold's ideal. *Negatur*, a scholastic opponent might reply; the ideal was rather, if Dr. Arnold had but known it, a school for high stoical gentlemen, and the *ethos* cultivated, though it expressed itself in terms of Christianity, drew its true inspiration from the fountains of Marcus Aurelius. An admirable discipline, we will all admit, and yet there is something lacking, and perhaps it is the absence of this "something"—let us say, boldly, that "something" stands for the mystical element, the transcendent love, which is the note of true Christianity—which leaves the character of the ruling caste in England deficient in certain very important points. "It is just, but it is not gracious," was the comment of a foreigner on the English rule in India; and one recognizes the truth of the criticism, and one may inquire whether this lack of graciousness is not to be traced to the stoic discipline of Arnold. A word of praise must be given to the excellent series of illustrations, which give a kind of pictorial history of Rugby. They prove, by the way, that the sham Gothic of 1809, foolish enough in all conscience, is infinitely preferable to the elaborate and learned perversity, to the fireworks in coloured brick, which issued from the brain of Mr. Butterfield in the seventies.

#### MR. FIRTH'S CROMWELL.

"Heroes of the Nations." Edited by Evelyn Abbott, M.A.—*Oliver Cromwell, and the Rule of the Puritans in England*. By Charles Firth, M.A. (Putnam's Sons.)  
We are being rather overdone by lives of Cromwell; but, if

any one is entitled to a hearing on the later and most authoritative additions to the historical biography of the Protector, it is Mr. Firth, of Balliol; and it may be said, on the publishers' behalf, that Cromwell could not possibly be omitted from a series of national heroes. Mr. Firth has based this volume in part on his article contributed to the "Dictionary of National Biography" twelve years ago, and within the twelve years there have been new publications of seventeenth-century papers, as well as a natural accumulation of points in the mind of the biographer. The consequence is that this volume deserves to be regarded as new in all important respects—for the "Dictionary" article is merely the skeleton which Mr. Firth has clothed.

The Civil War, as Mr. Firth very wisely and clearly points out, was a historical and constitutional crisis even beyond what the actors in it conceived. That it was partly a war between Puritanism and Popery, and partly a struggle between Parliament and King, every schoolboy knows; though schoolboys are not always made to understand, and, perhaps, could not understand, how these two antagonisms grew out of and into each other. But what Mr. Firth is concerned to show is that our constitutional history came to its main turning-point sixty or more years before we finally based the tenure of the throne on a written contract with the people.

To themselves the Parliamentary leaders seemed defenders of the existing constitution in Church and State against the revolutionary changes of the King. In reality, the greatest innovation of all lay in the claim of the Commons that Church and State should be controlled by the representatives of the people, not by the will of the King. When that claim was once made the struggle for sovereignty was an inevitable and irrepressible conflict.

It is quite true that the popular claim was relatively new and aggressive—yet based, it must be well understood, on the inherent right of a nation, and on the ancestral practice of our Teutonic forefathers. Charles honestly thought that he was fighting for "his own"—for the prerogative of his ancestors, which they had come—more fatuously than blasphemously—to attribute to the direct gift of God. "Remember," he said to the Commons in 1626, "that Parliaments are altogether in my power for their calling, sitting, and dissolution; therefore, as I find the fruits of them good or evil, they are to continue or not to be." The descendants of Saxon Assemblies and English Witenagemotes were convinced by language of this kind that the time had come to put their house in order.

Mr. Firth is not a Cromwell bigot, but his estimate of the man is necessarily high—high in the historic sense, which has recently induced a Tory Government to acquiesce in the erection by an aristocratic Imperialist of a statue to a regicide, between the Commons which he flouted and the Lords which he abolished. Either as a soldier or as a statesman, says Mr. Firth, Cromwell was far greater than any Englishman of his time, and he was both soldier and statesman in one. He was not a Cæsar or a Napoleon, but he "bestrode the narrow world" of England "like a Colossus."

## GENERAL NOTICES.

### CLASSICS.

(1) *Ovid, Tristia, Book III*. Edited by H. R. Woolrych. (2) *Vergil's Æneid, Selections from Books VII.-XII*. Edited by W. G. Coast.

(3) *Cæsar, Gallic War, Book V*. Edited by A. Reynolds. (Bell.)  
Here we have three more volumes of Bell's "Illustrated Classics," which have been so frequently noticed of late in this column. Several reproductions from photographs have been introduced with excellent results; and the maps are greatly superior to those contained in the earlier volumes of the series. It is, indeed, manifest that the publishers are sparing no pains to render the series as nearly perfect as possible; and we observe, with much interest, that it is to be extended to Greek books. We find Mr. Woolrych's notes on Ovid scholarly and accurate, but here and there rather "advanced," and suited rather to the teacher than the taught. They contain some interesting allusions, and should find favour with an intelligent learner. Mr. Coast has contrived to present a fairly continuous narrative of the last six books of the *Æneid*, "preserving the main features of the story." This volume is admirably suitable for beginners in Vergil. The major portion of the introduction is simple and elementary, but there is a section devoted to translations of Vergil which will not fail to interest teachers. The notes are short and to the purpose. This book should be widely adopted. Mr. Reynolds's "Cæsar V." is about on a level with the other books of Cæsar in the same series. The exercises, however, and some of the grammatical notes are rather more elaborate. The editor has made good use of Mr. Rice Holmes's book and of previous editions.

*Topics on Greek and Roman History*, by A. Goodrich (Macmillan), is a book in which teachers and students of ancient history may find a convenient store of references to modern authorities. The lists, which are elaborate, contain so many books that every one is sure to have access to some of the works mentioned; and, with the help of Mr. Goodrich, any one who has to lecture on the subject, or write essays, or get up periods for examination, will be able to save the time so often spent in hunting for material. The matter is divided up into a great number of topics, so that every branch of political history and the allied subjects—topography, geography, literature, &c.—is adequately represented. We cannot make out why "Cæsar, J. C., De bello Gallico," is included in the general list of authors under Roman history. We do not gather that the object of the compiler is to supply a list of original authorities; if it were, we should look for Thucydides and Cicero, and the whole host of ancient authors.

*Lucian, Charon and Timon*, being set for the London Matriculation, has been edited and translated by T. R. Mills (Clive). We have examined the volumes, and find them all that can be desired for the purpose. The competent manner in which the volumes of this series are edited is now well known and generally recognized. We are pleased to see that Mr. Mills acknowledges the sources on which he has drawn.

*Cicero in Catilinam*. Edited by H. W. Auden. (Blackwood.)

It is somewhat difficult to see the *raison d'être* of this edition; the Catilinarian orations have already been more than once handled in a scholarly way. The introduction contains, among other things, a brief history of the conspiracy, a useful notice of the rhetorical form of the orations, and a historical summary of the political position, going back to a period before the Gracchi. The summary fails to trace the filiation of popular leaders from Tiberius Gracchus to Cæsar, and the brief life of Cicero, while referring to his exile, makes no mention of its connexion with the events of his consulship. An appendix gives some useful notes on the rhetorical figures and connecting particles employed by Cicero, and a few passages for Latin prose. The notes are meagre, and do not show either very exact scholarship or exceptional felicity of translation. Thus, "scelus anhelantem" is rendered "breathing out wickedness," "panting for villany." Both cannot be correct. Again, for "sed, cum viderem, ne vobis quidem omnibus re etiam tum probata si illum, ut erat meritis, morte multassem," we have "but being aware as I was that if I, at a juncture when not even all of you were convinced of the fact, put him to death." The English reads very like a crib, the force of *etiam tum* is not brought out, and both the position of *vobis* between *ne* and *quidem* and the tense of *multassem* are ignored. Further on *inveterascent* is translated "continue their long life," which might easily divert a schoolboy's attention from the inceptive verb. It would be easy to multiply similar examples. The pictorial illustrations are interesting, and include a picture by a modern Roman artist of Cicero addressing the Senate, and restorations of the Forum and the Temple of Jupiter Stator.

#### MODERN LANGUAGES.

*Ein Opfer des Berufs und Mein Onkel aus Pommern*. By E. von Wildenbruch. Edited by R. C. Perry. (Whittaker.)

These are two short stories by E. von Wildenbruch, one of the most distinguished of contemporary German authors in the three fields of poetry, drama, and fiction. The first deals with the adventures of an ambitious, but not very sensible, young author, whose desire to shine in realistic fiction prompts him to make personal experience of the life of a cab-driver. The other tells the story of the very brief visit to Berlin of a Pomeranian squire of the old school, disposed to quarrel with everybody and everything. The stories are amusing, and meet the desire felt by many teachers for books dealing with modern everyday life; but it may be questioned whether they have literary merit or refinement enough to make them a profitable study for one or two terms. The notes and vocabulary are carefully done, and attention has been called to veiled allusions to quotations from German classics. Examples of good grammatical notes are those on "auf das Glatteste" and "ehe ich mich's versah." On the other hand, the order of "als wollte sie sagen," a construction to which attention is repeatedly called, should have been explained, and a note like that to "einige kurz hingeworfene Redebrocken," "a few remarks which I casually threw out (as a feeler)," might just prevent a boy from looking out for the real meaning of *Redebrocken*. One or two phrases are not explained, for example, "die schattigen Hallen des Thiergartens" and "der Molkenmarkt," which, from the context, ought to be a police-station. Some sentences for re-translation are added. It is a question whether a vocabulary is useful in a book intended for fairly advanced pupils; it is apt to encourage the idea that German and English words exactly answer to each other, and to postpone the acquisition of the useful art of using a dictionary with judgment.

- (1) *Histoire de la Littérature Française*. By E. E. B. Lacomblé.  
(2) *A Short History of English Literature*, by A. E. H. Swaen. (Noordhoff, Groningen.)

These books are written by Dutch schoolmasters for the pupils of modern schools. M. Lacomblé's preface is a protest against the too utilitarian treatment of modern languages which appears to prevail in

Holland, and of which there are many signs both in Germany and in our own country. His book makes no pretensions to originality, but gives, in the space of about a hundred pages, clear and appreciative notices of the chief French authors down to our own times. He has carefully avoided treating any but the best authors, and has thus been able to devote space enough to each, and to produce a very readable book. M. Swaen's book is on the same lines, but more names are introduced in a volume of about half the length of M. Lacomblé's, and the notices are hardly as interesting. Nor is the English quite free from fault.

*Ebner's Herr Walther von der Vogelweide*. Edited by E. G. North. (Macmillan.)

This book consists of selections from Ebner's work on "Walther von der Vogelweide," which is written for young people, and deals with an episode in his life when he attached himself to Philip of Swabia, about A.D. 1200. There is a brief introduction, describing the position of affairs in Germany at that time, as well as notes, a vocabulary, and an appendix of drill in words and phrases, with sentences and longer passages for translation, as in other volumes of the series. In the introduction, which is clearly written, there is an odd slip. Walther, having been born about 1170, is said to have died about 1228, at the age of seventy. The notes are fair, but would bear improvement. For example: *zu Mute sein*, "to feel"; and *zu Mute werden*, "to begin to feel," are mixed; *darnach angethan* is inadequately explained; and an anomalous expression like *ich bin gesehen* is left unnoticed. It is scarcely necessary to describe the position of Coblenz, Magdeburg, and Mayence. Some of the space gained by omitting them might, with advantage, have been given to notes on some of the particles, which are such a constant source of difficulty.

*Isolde Kurz's Die Humanisten*. Edited by A. Voegelin. (Macmillan.)

This story, taken from the authoress's "Florentiner Novellen," is in the same series as "Herr Walther von der Vogelweide," and deals, as its name implies, with the Renaissance in Italy. As in that volume, there are some notes that could be spared; half a page on Regulus is unnecessary, nor need the positions of the St. Gothard, Milan, and Bologna have been described. Otherwise the notes seem satisfactory. Perhaps one or two illustrations from "Romola" would have added to their interest.

#### MISCELLANEOUS.

*The Divine Pedigree of Man, or the Testimony of Evolution and Psychology to the Fatherhood of God*. By Thomson Joy Hudson, LL.D. (Putnam's Sons.)

This is an attempt to outline a scientific basis of Christian theism. In other words, it is a book of natural religion, written to impress spiritual ideas on the "constantly enlarging class of men who are imbued with the ultra-scientific dogma that nothing in either physical science or spiritual philosophy is worthy of belief if it is not confirmed by a series of well authenticated facts." Such people, Dr. Hudson thinks, are too apt to conclude that there is no logical necessity for the existence of an intelligent deity; and he wants to show them that there is—that science, indeed, furnishes the data for the inductive study of religion. His main theses are that the "objective mind" feeds and educates the subjective mind, which is specially fitted for life on the higher plane, and which contains in itself "all that is worth preserving in the future life." The "impellent energy" of physical, mental, moral, and religious progress is an "evolutionary instinct"; and on this instinct the author bases both the necessity and the proof of continuity. Man was made in the image of God: to this extent he may know something of God—but the knowledge shows him not so much human attributes in God as divine attributes in man. The reasoning is close, shrewd, and reverent; and the book thoroughly deserves to be read.

*Essays and Essay-Writing for Public Examinations*. By A. W. Ready, B.A. (Bell & Sons.)

Mr. Ready gives us in this volume the apparatus with which he has been accustomed to coach young men entering for Army and other examinations in the art of writing a sensible essay. His directions and admonitions are often much to the point:—"Genius is above rules; but you presumably are not a genius. . . . Cut your sentences short. . . . On no account be funny or flippant. . . . Write the exact title of the essay at the top of your first page; keep looking at this title, and ask yourself constantly if you are writing to the point." There are twelve sample essays, preceded by an analysis and sketch of each, and followed by notes and explanations. After these come a few rational lectures for advanced students on the adornments of writing; and at the end we have about a hundred subjects set for Army examinations since 1884. Altogether, this book is calculated to be very useful to those for whom it is intended.

- (1) *The Story of the West Country*. (Edward Arnold.) (2) *Outlines of Geography, an Introductory Text-book*. (McDougall.) (3) *Geography through Object-Lessons, Part I*. By F. H. Shoosmith, Ph.D., B.Sc. (A. G. Dawson.)

(1) "The Story of the West Country" is another of Mr. Arnold's well designed "Local Readers." It gives a descriptive account of "the western watershed"—of the Southern shires from Hampshire to

Cornwall, together with Gloucestershire. The book is well printed, and has good pictures and a map. (2) The "Outlines of Geography" is on a more formal plan, including statistics of all the countries of the world. It is lightened by many clear maps and pictures, and may be regarded as a satisfactory school-book. (3) Dr. Shoosmith's introduction to physical geography, illustrated by himself, is simple and commendable.

"Methuen's Commercial Series." Edited by H. de B. Gibbins, Litt.D. —*Commercial Law*. By W. D. Edwards. (Methuen.)

A good book of a good series, comprising a general outline of the commercial law of England, for such as are preparing for business life and need some clear notions of the law which will affect them. It is a serviceable guide, simply written.

*The Laureate Poetry Books*. (Edward Arnold)

This is a varied and well chosen collection of English poems in seven clearly printed paper-covered books. We cannot say why the same poems should be repeated in different books. It looks like padding, and shows that there is no systematic graduation.

*Religious Education in the Home. Hints for the Use of Parents of the Upper and Middle Classes*. With a Preface by the Bishop of Bristol. (Rivingtons.)

A very sensible and helpful colloquy with parents who are sensible; and prefaced by a very reasonable and pertinent commendation by Dr. Forest Browne. This is a paper-covered tract; but it is worth preserving.

*Kitty's Garland*. By Lady Lindsay. (Kegan Paul.)

A penny paper-covered book of sixteen poems for children. They are admirable in their way, as poetical as they are simple, as literary as they are childish. We like them very much.

*Timber and Tools: A Text-Book for Manual Training Classes*. By Jerome Wallace. (Nelson.)

This is a text-book for higher-grade science schools and classes for manual work generally. It is not specially framed for a particular examination, but contains all that is necessary for the City and Guilds Institute, the Sloyd Association, and similar examining bodies.

"Text-Books of Technology." Edited by Dr. W. Garnett and J. Wertheimer.—*Millinery, Theoretical and Practical*. By Clare Hill. (Methuen.)

Very clear and practical, with many diagrams, and well calculated to guide an intelligent young milliner towards good work and dainty achievement.

*Abbotsholme, 1889-1899; or Ten Years' Work in an Educational Laboratory*. By Cecil Reddie, B.Sc., Ph.D. (George Allen.)

Dr. Reddie gives us in this volume an elaborate account of his school, with thirty tempting photographs, a large number of press notices and other appreciations and descriptions of what seems to be a valuable and enjoyable course of manual, moral, and mental instruction in a delightful country home. The book is a glorified prospectus, and something more. Dr. Reddie is doing a good work, and deserves to succeed.

*Love and Mr. Lewisham: the Story of a very Young Couple*. By H. G. Wells. (Harper & Brothers.)

Mr. Wells is so old an acquaintance of our readers that we need not commend this story to them as clever and appetizing. It is not, like his earlier books, a work of scientific imagination, but only a pathetic story of an usher, thoroughly true to life and full of keen observation. Mr. Lewisham was a South Kensington scholar, and very green at that. He fell in love and married on nothing—then he went round to the scholastic agents in search of work. His ambition ran too high to begin with, as may be gathered from the ejaculation of Mr. Blendershin's chief assistant:—"I say! One and twenty, no degree, no games, two years' experience as junior—wants a headmastership of an endowed school. . . ." "Fifty-resident," said Mr. Blendershin, concisely, "that's your figure." There is plenty of humour in this story, with a large infusion of cynicism. It is too cynical for boys and girls, but older readers will find much in it to amuse and interest them.

Of texts with notes we have *King John* in the "Warwick Skakel-speare" (Blackie), edited by Prof. G. C. Moore Smith, M.A.—a good match for the editor's *Henry V.* in the same series; Tennyson's *Princess*—a good edition, with introduction and notes by Andrew J. George, M.A. (Isbister); Pope's *Iliad of Homer* (I, VI, XXII, and XXIV.), with introduction and notes by Paul Shorey, Ph.D. (Isbister); Scott's *Ivanhoe*, abridged for use in schools (Bell & Sons); Cowper's *The Task and Minor Poems*, by Elizabeth Lee, Milton's *Paradise Lost I-IV.*, by J. Logie Robertson, and Goldsmith's *Select Poems*, by J. H. Lobban, in "Blackwoods' English Classics," adequately dealt with under the editorship of Mr. Lobban. Messrs. A. & C. Black send us three volumes of an annotated "school edition" of Scott's poems—*Marmion*, *The Lady of the Lake*, and *The Lay of the Last Minstrel*—well edited and rather poorly illustrated. From the same publishers we have Scott's *The Talisman*, with introduction and notes by W. Melven, M.A. Messrs. Methuen send us *A Son of the State*, by W. Pett Ridge—not

bad reading for comfortable boys about a pauper boy; full of the salt of humanity.

Amongst the reprints we have Dr. A. R. Wallace's *Travels on the Amazon and Rio Negro* (Ward, Lock, & Co.), first published forty-seven years ago. Wallace was only second to Darwin in the exposition of the theory of natural selection and evolution; and Darwin said to him on one occasion: "You are the only man I ever heard of who persistently does himself an injustice, and never demands justice. But you cannot burke yourself." This is a very interesting book, and well illustrated.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*Directory and Regulations for Establishing and Conducting Science and Art Schools and Classes—August, 1900-July, 1901*. (Her Majesty's Stationery Office.)

*Report of the City and Guilds of London Technical Institute*. (Gresham College.)

"University Tutorial Series."—*The Tutorial Latin Grammar*, by B. J. Hayes, M.A., and W. F. Masom, M.A. Fourth Edition. *Latin Composition*, by A. H. Allcroft, M.A., and J. H. Haydon, M.A. Fifth Edition Revised. (Clive.)

*Crown Copy-Books*, 1-14 (Educational Supply Association)—a complete set of well arranged and engraved copy-books, good in style and on good paper.

*Universal Writing-Books*, designed by John T. Pearce, B.A. (Blackwood)—with and without headlines, on feint-ruled paper, well calculated to produce a consistent handwriting.

*Exercise-Book of Facsimile Commercial Forms, Domestic Copy-Book for Girls, Commercial Copy and Exercise-Book* (Pitman & Sons)—admirably designed and excellently printed; serviceable in every way for commercial schools.

*The Vivid Map-Sheets* (A. G. Dawson)—very bold outline-maps, with a few principal features of each country, enlarged from the maps in the "Warwick Head and Hand Geographies."

*Trentieth Century Readers, First and Second Primers*. (Chambers.) *The New Penny Magazine* (Cassell & Co.)—a very good illustrated volume for boys and girls.

## MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held at the College, Bloomsbury Square, on June 16. Present: Mr. Pinches, in the Chair; Miss Crookshank, Mr. Barlet, Rev. J. O. Bevan, Rev. A. W. Boulden, Mr. Butler, Mr. Eve, Mr. Rule, Dr. R. P. Scott, Mr. Sergeant, Rev. T. W. Sharpe, and Rev. J. E. Symms.

The minutes of the last meeting were read and confirmed.

The Secretary reported that the number of entries for the forthcoming Certificate and Junior Forms Examinations, to take place on July 3-6, was about 5,300, and the number of entries for the Diploma Examination, to take place on July 10-13, about 280.

He reported the death of Dr. C. A. Buchheim, a member of the Council.

Saturday, July 21, was fixed as the date of the next Ordinary General Meeting of the members of the College.

The draft Report of the Council to the General Meeting was considered, and referred to the President, Vice-Presidents, and Dean for final revision.

The following persons were elected members of the College:—

Miss B. A. Blick, A.C.P., 30 Woodstock Rd., Moseley, Birmingham.  
Miss M. M. Butler, St. Joseph's Convent, Claylands Road, Clapham.

Mr. J. H. Fudge, B.A. Lond., L.C.P., Parmiter's School, Victoria Park.

Mr. W. J. Herlihy, A.C.P., St. Joseph's College, Denmark Hill.

Miss V. E. Vincent, A.C.P., Convent High School, Weymouth.

The following books had been presented to the Library since the last meeting of the Council:—

By E. ARNOLD.—Arnold's Geographical Handbooks, Nos. VII.-X.; Laureate-Poetry Books, I.-IX.; Story of the West Country; Passages for Dictation: Hamilton and Kettle's First Geometry Book, and Answers; Leakey's De Musset's Monsieur le Vent et Madame la Pluie.

By G. BELL & SOSS.—Baker's Translation of Livy XXI., XXII., and XXIII.; Coast's Selections from Vergil's *Æneid*, Books VII.-XII.; Marchant's Translation of Theoclydes, Book VII.; Reynolds's *Cæsar*, Gallie War, Book V.; Woolrych's *Ovid's Tristia*, Book III.

By A. & C. BLACK.—Higham's Scott's *Ivanhoe*; Mackenzie's Scott's *Lay of the Last Minstrel* and Scott's *Marmion*; McKinlay's Scott's *Lady of the Lake*; Melven's Scott's *Talisman*; Ord's Scott's *Quentin Durward*.

By C. J. CLAY & SONS.—Fitch's Educational Aims and Methods.

By W. B. CLIVE.—Allcroft and Haydon's Latin Composition; Hayes and Masom's Tutorial Latin Grammar; Lyster's First Stage Hygiene; Mills's *Lucian's Charon and Timon*.

By MACMILLAN & CO.—Fasnacht's Elementary French Grammar.

By J. MURRAY.—Murray's Handy Classical Maps: Britannia, Hispania, Gallia, and Italia and Sicilia; Greenidge's Student's *Gibbon*, Part I.; Hall's Greek Testament Reader; Hassall and Haverfield's Student's France.

By WHITTAKER & CO.—Perry's *Waldenbuch's Ein Opfer des Berufs und Mein Onkel aus Pommern*.

**CORRESPONDENCE.**

**SECONDARY INSPECTION.**

To the Editor of the Educational Times.

DEAR SIR,—In the course of the discussion which followed Dr. Scott's lecture on the "Inspection of Secondary Schools," I had the privilege of supporting Mr. Kahn in his plea that inspectors should report on the adequacy of salaries paid to assistant-masters, and on the conditions attached to the tenure of their appointments. Dr. Scott replied sympathetically, but charged us with drawing a red herring across the path; and a lady who spoke also rejected our suggestion, a suggestion as absurd, she urged, as if one should propose to use a scale of salaries in testing the efficiency of assistant-curates.

First, Sir, for the red herring. I thought we all desired an inspectorate which should reveal not only inefficiency, but also the causes of inefficiency; and Dr. Scott himself expressly said that the inspectors ought to inquire into the amount of endowments and the proper application of the same. It would, therefore, be open to an inspector to point out that too much of the endowment was spent on plant, and too little on persons. Especially would he be likely to do this if he believed, as many do, that there is a cash nexus between inefficiency of schools and inefficiency of teachers.

I am not sure that the analogy of assistant-curates is very illuminating. Social status on the one hand, the noble traditions of nineteenth centuries on the other, may do much to counteract the injustice of not giving the hire of which the labourer is worthy. Even so, it still remains true that in the long run—not very long—an ill-paid ministry tends to become an inefficient ministry. This stream of tendency making for inefficiency is stronger in the case of assistant-masters. Meagre payment impairs the effective force of the present generation; it helps to deter the able, and to attract only the inferior men in the rising generation. The enthusiasm of a young man listening for his vocation is often chilled by the calm prudence of a parent. "I don't want my son to be a curate, or that sort of thing," said the father of one of the boys in my class to me the other day; "there's no living to be got out of that." Obviously "that sort of thing" stood for that poor relation of the professions to which the boy's class-master had the "misfortune" to belong.

And is it altogether ignoble to think of payment in making one's choice of a profession? A young man, even burning to spend himself in the service of humanity, may properly reflect that there are other ways of service than the Church and the school. Who is to throw stones at him if he decides that he can serve his generation most effectively, and live most nearly according to the law of his nature, in a profession the members of which receive a "living wage"?

If the community wishes to underpay teachers, the community will suffer. Those who clamour for martyrs are akin to persecutors. Persecution is twice cursed; it curseth sometimes him that suffers.—I am, Sir, yours faithfully,

F. P. BEVILL SHIPHAM.

**WHAT IS NOT GRAMMAR.**

To the Editor of the Educational Times.

SIR,—In your current number a certain Edom (Edomite?) affects to "reply" to my article on "Grammar" in your April number. I am always pleased to receive instruction from any critic competent to give it, but, unhappily, your correspondent himself compels me to declare that he is totally incompetent. A writer who tells us that "letters are sounds," and, conversely, that "sounds are called letters and syllables;" also that "letters are words," because we use the corresponding sounds as their names, proclaims aloud that he has not yet mounted the very first rung in the ladder of thought; for one of the earliest linguistic lessons that an intelligent teacher impresses on children is to discriminate between things and their names, between abstractions and their concrete symbols. Further, all the diverse things that I carefully differentiated he jumbles together again and treats as identical or indifferent. Of the revolution effected in linguistic study by modern philology he has never heard, but shelters himself behind obsolete dicta of a pre-scientific age. The only valuable points of his letter, however, are the quotations, which are, at any rate, sensible, although they are of interest chiefly as fossils. With regard to my article, I desire to leave it as it stands.

I may add, as to Wilson's "Chemistry," that I never saw it; but I made no boast of the obvious analogy I employed, which, indeed, various other sciences would also have supplied. As to my method, your learned readers will at once recognize that it is based on the procedure of Plato in similar cases, and naturally does not agree with two-penny grammar primers.

I remain, sir, your obedient servant,

June, 1900.

T. LE M. DOUSE.

**MATHEMATICS.**

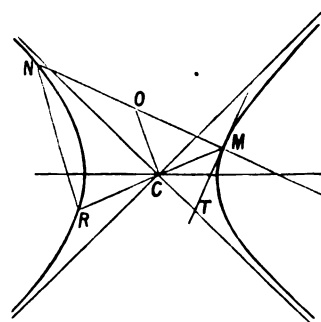
**14424.** (Professor NEUBERG.)—Trouver le lieu des centres des hyperboles équilatères qui ont une corde normale commune MN.

Solution by Professor K. J. SANJANA, M.A.; Professor A. DROZ-FARNY; and H. W. CURJEL, M.A.

The angle between the chord MN and the tangent at M is equal to the angle subtended by MN at the extremity R of the diameter through M.

Thus MRN is a right angle. Draw CO parallel to RN to meet the chord. Then MCO is a right angle, and MO is half of MN.

Hence the locus of C is the circle on MO as diameter.



**14501.** (Rev. T. WIGGINS, B.A.)—Given a triangle ABC, find a point D within it such that  $DA^2 + DB^2 + DC^2$  is a minimum.

I. Solution by J. H. TAYLOR, M.A.

The general problem of which this is a particular case is given in WILLIAMSON'S *Diff. Cal.* (1877), § 157.

Let A have coordinates  $h, k$ ; B,  $0, 0$ ; C,  $a, 0$ ; D,  $x, y$ .

$$\phi(u) = 3x^2 + 3y^2 - 2ax - 2hx - 2ky + a^2 + h^2 + k^2.$$

$$du/dx = 6x - 2a - 2h = 0, \text{ suppose. } d^2u/dx^2 = 6 \dots\dots\dots (A),$$

$$du/dy = 6y - 2k, \quad d^2u/dy^2 = 6 \quad (c), \quad d^2u/(dx dy) = 0 \dots\dots\dots (B).$$

Therefore  $x = \frac{1}{3}(a + h)$ ,  $y = \frac{1}{3}k$  for the minimum, indicating clearly the centroid.

II. Solution by Professor JAN DE VRIES, Ph.D.

E being the middle point of BC, we get  $BD^2 + CD^2 = 2DE^2 + \frac{1}{2}BC^2$ .

Again, G being the centre of gravity, we have, by the theorem of STEWART,

$$2DE^2 + AD^2 = 3DG^2 + \frac{1}{3}AE^2.$$

Combining with  $AB^2 + AC^2 = 2AE^2 + \frac{1}{2}BC^2$ ,

$$\text{we obtain } AD^2 + BD^2 + CD^2 = 3DG^2 + \frac{1}{3}(a^2 + b^2 + c^2).$$

Hence  $AD^2 + BD^2 + CD^2$  will be a minimum if D coincides with the centre of gravity.

III. Solution by F. H. PEACHELL, B.A.

If A, B, C, &c., be any number of points, O their centroid, P any other point, then the sum of the squares of distances of O from A, B, C, &c., exceeds the sum of the squares of distances of O from these points by  $n \cdot OP^2$ , where  $n$  is the number of points. Then, for a minimum in the question given, D must evidently coincide with the centroid of the triangle.

[See CASEY'S *Sequel*, 6th edition, p. 25.]

**14410.** (Rev. T. WIGGINS, B.A.)—Inscribe in a given triangle the triangle of least perimeter.

Solution by J. G. SMITH; W. J. GREENSTREET, M.A.; G. D. WILSON, B.A.; and many others.

The pedal triangle is that required.

For, because ROPB is cyclic,

$$\text{therefore } RPB = ROB;$$

because AROQ is cyclic, there-

$$\text{fore } ROB = A;$$

because ABPQ is cyclic, there-

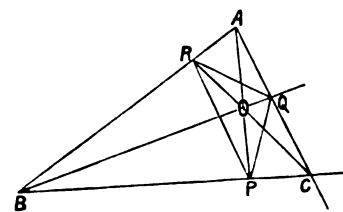
$$\text{fore } QPC = A.$$

Therefore

$$RPB = QPC.$$

Therefore, if Q, R be fixed, QP + RP is minimum.

Similarly for the others. Therefore any change in the position of any vertex of PQR increases the perimeter. Therefore PQR has minimum perimeter.



**14444.** (P. MILNEN.)—A conic cuts the sides of triangle ABC in D, D', E, E', F, F' respectively; AD, AD' intersect the conic again in  $d, d'$ ; BE, BE' in  $e, e'$ ; CF, CF' in  $f, f'$ . Show that the intersections of  $dd', ee', ff'$  with the polars of A, B, C respectively are collinear.

Solution by R. P. PARANJPYE, B.A.; and Professor SANJANA, M.A.

With the triangle ABC as the triangle of reference, let the conic be

$$0 = ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy \dots\dots\dots (1).$$

The equation of the lines AD, AD' is

$$by^2 + cz^2 + 2fyz = 0 \dots\dots\dots (2).$$



The locus  $ax^2 + 2gzx + 2hxy = 0$  passes through the intersection of (1) and (2). Therefore the equation of  $dd'$  is

$$ax + 2gz + 2hy = 0,$$

and we get similar equations for  $ee'$  and  $ff'$ .

Now we easily see that the line  $x/f + y/g + z/k = 0$  passes through the intersection of  $dd'$  and  $BC$ , &c. Hence the three points in question are collinear.

[Mr. CURJEL solves the Question as follows :—

Let the polars of A, B, C cut  $dd'$ ,  $ee'$ ,  $ff'$  in P, Q, R. Now the polar of A cuts AD, AD' in the harmonic conjugates of A with respect to Dd, D'd'. Therefore P lies on BC. Similarly Q and R lie on AC, AB.

Let O be the pole of DD'. Then OR, OQ, OA are the polars of C, B, P. Therefore OQ, AR and OR, AQ cut DD' harmonically. Therefore OA, QR cuts DD' harmonically; but OA, AP cut DD' harmonically. Therefore QR cuts BC in P.]

**14493.** (J. H. TAYLOR, M.A.)—If A', B', C' are vertices of similar isosceles triangles described all externally, or all internally, on the sides of any plane triangle BCA, the straight lines AA', BB', CC' are concurrent.

*Solution by W. L. THOMSON and the PROPOSER.*

Let A'BC be one of the isosceles triangles, the base angles being  $\theta$ . Let AA' cut BC in D. Let AX, AY be perpendiculars from A on BA', CA'. Then

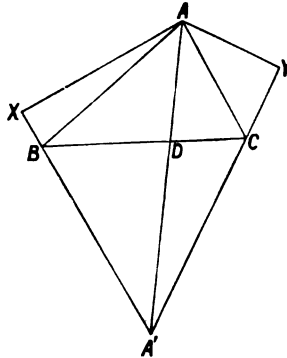
$$\frac{BD}{DC} = \frac{\Delta ABA'}{\Delta ACA'} = \frac{AX}{AY} = \frac{c \sin(B + \theta)}{b \sin(C + \theta)}$$

Similarly, if BB', CC' cut AC, AB in E, F, respectively,

$$\frac{CE}{EA} = \frac{a \sin(C + \theta)}{c \sin(A + \theta)} \text{ and } \frac{AF}{FB} = \frac{b \sin(A + \theta)}{a \sin(B + \theta)}$$

$$\text{Therefore } \frac{BD}{DC} \cdot \frac{CE}{EA} \cdot \frac{AF}{FB} = 1.$$

Therefore AA', BB', CC' are concurrent.



**14445.** (Rev. J. CULLEN.)—Prove that

$$q^{2^p-1} - 1 \equiv 0 \pmod{(q \cdot 2^p + 1)},$$

if  $q \cdot 2^p + 1$  be a prime.

*Solution by Lt.-Col. ALLAN CUNNINGHAM, R.E.; and H. W. CURJEL, M.A.*

Let  $q \cdot 2^p + 1 = p$  (a prime).

Then, provided  $q > 2$ ,  $2^{1(p-1)} \equiv +1$ .

Also  $(p-1)/2q = 2^{p-1}$  and  $2^q \cdot q \equiv -1 \pmod{p}$ .

Therefore  $(2^q)^{(p-1)/2q} \cdot (q)^{(p-1)/2q} \equiv (-1)^{(p-1)/2q} \equiv +1$ .

Therefore  $2^{1(p-1)} \cdot q^{(p-1)/2q} \equiv +1$ , whence  $q^{2^p-1} \equiv +1 \pmod{p}$ .

The proof fails when  $q > 2$ ; but, when  $q = 1$ ,  $p = 3$ , and it is obviously true; and when  $q = 2$ ,  $p = 9$ , which is not prime. Unfortunately, the form  $(q \cdot 2^p + 1)$  gives no small primes, none in fact when  $q > 20$  (except  $p = 3$ ).

**14278.** (I. ARNOLD.)—Two non-concentric spheres intersect, forming a shell. Find the centre of gravity of the larger shell and its distance from the centre of the larger sphere, the distance between the centres of the spheres being  $d$ , and the radii of the spheres being  $R$  and  $r$ .

*Solution by the PROPOSER.*

Let  $R^3$  represent the weight of whole concentrated at centre of gravity C of larger sphere, and  $r^3$  the weight of part at A, the centre of gravity of the smaller sphere;  $d$  being equal to AC, the distance of their centres.

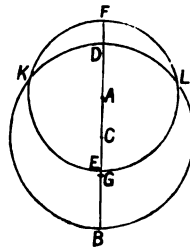
The centre of gravity of shell will be in AC produced. Let it be G. Then, by a well known theorem,

$$CG : CA :: r^3 : R^3 - r^3,$$

$$\text{or } CG : d :: r^3 : R^3 - r^3;$$

$$\text{therefore } CG = dr^3 / (R^3 - r^3),$$

which determines the centre of gravity of the shell KBLE.



**14512.** (Professor NEUBERG.)—Trouver dans le plan du triangle ABC un point M qui soit le centre de gravité de ses projections A', B', C' sur BC, CA, AB, pour les poids donnés  $\alpha, \beta, \gamma$ .

*Solution by H. W. CURJEL, M.A.; and CONSTANCE I. MARKS, B.A.*

Let A'M meet B'C' in A'', and let  $\angle BAM = \theta$  and  $\angle CAM = \phi$ . Then B'A'' : A'C' =  $\gamma : \beta$ . Therefore  $\sin \theta : \sin \phi = \beta \sin C : \gamma \sin B$ .

Hence AM may be drawn as the line joining A to the intersections of two parallels to AB, AC at distances  $\beta \sin C$ ,  $\gamma \sin B$ . Similarly, BM and CM may be drawn.

**14201.** (R. TUCKER, M.A.)—P, Q, R are points on a parabola, such that PQ, QR are normals to the curve. If SP, SQ, SR are denoted by  $r_1, r_2, r_3$ , prove  $(r_2 - r_1)^3 = (r_1 + r_2)^2(2r_2 - r_1 - r_3)$ ; hence they cannot be in A.P. Show that the circle PQR is given by

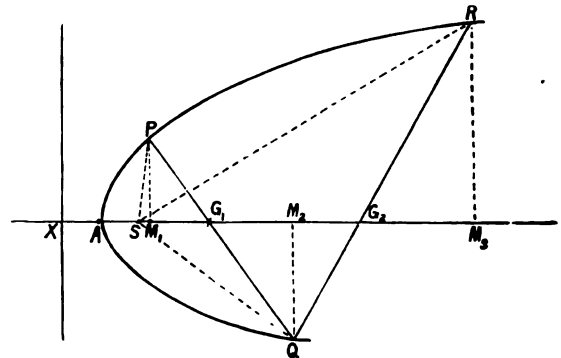
$$m^2(m^2 + 2)^2(x^2 + y^2) - 2pqax - 4pmay + m^2(m^2 + 2)(m^2 + 4)qa^2 = 0,$$

where P is the point  $(am^2, 2am)$  and  $p, q$  stand respectively for  $m^4 + 4m^2 + 2$ ,  $m^4 + 6m^2 + 4$ . Find also when the circle passes through the focus.

*Solution by F. L. WARD, B.A.*

With the usual notation, let PQ meet axis in  $G_1$ , and QR in  $G_2$ . Drop  $PM_1, QM_2, RM_3$  perpendicular to axis. Denote P, Q, R by  $(x_1, y_1)$ , &c. Now  $AM_1 \cdot AM_2 = AG_1^2$  or  $x_1 x_2 = (x_1 + 2a)^2$ , since  $M_1 G_1 = 2a$ .

Also  $x_2 x_3 = (x_2 + 2a)^2$ , since  $M_2 G_2 = 2a$ .



From these, and since  $r_1 = x_1 + a$ , &c.,

$$x_1(r_2 - r_1) = 4ar_1 \text{ and } x_2(r_3 - r_2) = 4ar_2;$$

therefore  $(r_3 - r_2)/(r_2 - r_1) = r_2 x_1 / r_1 x_2 = r_2 x_1^2 / r_1 (x_1 + 2a)^2$ .

But  $x_1(r_2 - r_1) = 4ar_1$ ; therefore  $(x_1 + 2a)x_1 = (r_1 + r_2)/2r_1$ ;

therefore  $(r_3 - r_2)/(r_2 - r_1) = 4r_1 r_2 / (r_1 + r_2)^2$ ,

which is the same as the result given.

[The rest in Volume.]

**14476.** (Professor E. J. NANSON.)—If

$$\frac{a^2 - bc}{a} + \frac{b^2 - ca}{b} + \frac{c^2 - ab}{c} = 0, \text{ then } \frac{a}{a^2 - bc} + \frac{b}{b^2 - ca} + \frac{c}{c^2 - ab} = 0.$$

*Solution by J. BLAIKIE, M.A.; L. E. REAY, B.A.; and many others.*

If  $\Sigma \{(a^2 - bc)/a\} = 0$ , we get  $\Sigma (a^2 bc - b^2 c^2) = 0$ .

Multiplying by  $a + b + c$ , we get

$$\Sigma \{a^3 bc + ab^2 c^2 - a^3 (b^2 + c^2)\} = 0 \text{ or } \Sigma a (b^2 - ca)(c^2 - ab) = 0.$$

Therefore

$$\Sigma \{a/(a^2 - bc)\} = 0.$$

**14458.** (J. A. THIRD, D.Sc.)—XYZ is a triangle inscribed in ABC and having its sides proportional to the medians of ABC. Show that the envelope of the circumcircle of XYZ is the LEMOINE ellipse of ABC.

*Solution by Rev. J. CULLEN and G. N. BATES, B.A.*

The sides of the pedal triangle XYZ of the symmedian point K are proportional to the medians. Hence, if the lines KX, KY, KZ revolve round K through an angle  $\theta$ , the triangle formed by joining (KX, BC), &c., is similar to XYZ, the modulus of similarity being  $\sec \theta$ . Therefore the envelope of the circle  $X, Y, Z$  is the in-conic whose foci are K and G, the centroid, since in general, if the ranges forming the pedal triangles of  $\Lambda$  and its isogonal conjugate  $\Lambda'$  revolve through an angle  $\theta$  in contrary directions, the six points are concyclic, the envelope of the circle being the in-conic whose foci are  $\Lambda$  and  $\Lambda'$ .

[Mr. BATES observes that this is a particular case of Mr. CULLEN's Quest. 14182; see Vol. LXXII., p. 65.]

**14499.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Prove that the continued product  $P = (a \mp b)(a^3 \mp b^3)(a^5 \mp b^5) \dots (a^{2^n-1} \mp b^{2^n-1})$

is divisible by  $\{ (2n)! + (2^n \cdot n!) \}^{n+1}$  if  $(a \mp b)$  is divisible by  $(2n)! + (2^n \cdot n!)$ .

*Solution by Rev. J. CULLEN; H. W. CURJEL, M.A.; and the PROPOSER.*

$$\text{Let } N = 1 \cdot 3 \cdot 5 \dots 2n - 1 = (2n)! + (2^n \cdot n!).$$

Now, if  $r$  is odd, we have

$$a^r \mp b^r = (a \mp b)(a^{r-1} \pm a^{r-2}b + \dots \pm b^{r-1}),$$



and, since  $a \equiv \pm b \pmod{N}$ ,

$$a^{r-1} \pm a^{-r-2} b + \dots \pm b^{r-1} \equiv r b^{r-1} \pmod{N}.$$

Therefore  $a^r \mp b^r$  is divisible by  $rN$ , and hence  $P$  by  $1.3.5 \dots 2n-1.N^n$ , i.e., by  $N^{n+1}$ .

**14443.** (R. KNOWLES.)— $F, S$  are the foci of a rectangular hyperbola; from a point  $T$  on the circle whose diameter is  $FS$ , tangents  $TP, TQ$  are drawn to meet the curve in  $PQ$ ; the circle  $TPQ$  cuts the curve again in  $CD$ ; prove that (1) the diagonals of the quadrilateral  $PQCD$  intersect in the axis; (2) two of its sides are parallel.

*Solution by Professor A. DROZ-FARNY.*

Soient  $x^2 - y^2 = a^2$  et  $x^2 + y^2 = 2a^2$  les équations de l'hyperbole équilatère et du cercle  $FS$ . La polaire d'un point  $(x', y')$  par rapport à l'hyperbole étant  $xx' - yy' = a^2$ , l'équation d'un cercle  $TPQ$  sera de la forme

$$(xx' - yy' - a^2)(xx' + yy' + \lambda) + \mu(x^2 - y^2 - a^2) = 0.$$

Cette conique sera un cercle passant par le point  $(x', y')$  du cercle  $x^2 + y^2 = 2a^2$  si  $\lambda = \mu = -a^2$ .

Les droites  $PQ$  et  $CD$  auront donc respectivement pour équations

$$xx' - yy' = a^2, \quad xx' + yy' = a^2.$$

Ces deux droites étant symétriquement disposées par rapport à l'axe transverse de l'hyperbole, le quadrilatère  $PQCD$  est un trapèze ayant cet axe comme médiane orthogonale. Il en résulte immédiatement les deux questions proposées.

**14516.** (Professor JAN DE VRIES, Ph.D.)—For each conic of a given pencil the orthoptical circle (circle of MONGE) is constructed. How many of these circles will pass by a given point?

*Solution by the PROPOSER.*

Denoting by  $A_{ki}$  the minor of the determinant

$$\Delta = \begin{vmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{vmatrix}$$

belonging to  $a_{ki}$ , the centre of the conic

$$a_{11}x^2 + 2a_{12}xy + a_{22}y^2 + 2a_{13}x + 2a_{23}y + a_{33} = 0$$

is determined by  $x_0 = A_{13} : A_{23}, y_0 = A_{23} : A_{33}$ .

If the same conic is represented by the equation

$$b_{11}\xi^2 + b_{22}\eta^2 + b_{33} = 0,$$

we have  $b_{33} = \Delta : A_{33}$ ; and the quantities

$$u_1 = -b_{23} : b_{11}, \quad u_2 = -b_{33} : b_{22}$$

will be determined by

$$A_{33}u^2 + (a_{11} + a_{22})A_{33}\Delta u + \Delta^2 = 0.$$

[The rest in Volume.]

**14474.** (R. KNOWLES.)—Tangents from a point  $T$  meet a parabola in  $P, Q$ ; the circle  $TPQ$  cuts the parabola again in  $C, D$ ; the sides  $PC, QD$  of the quadrilateral  $PQCD$  meet in  $E$ ; the diagonals in  $G$ ;  $M$  is the mid-point of  $EG$ ;  $MN_1, EN_2, GN_3$  are drawn at right angles to the axis;  $MN_1$  meets the parabola in  $K$ . Prove that  $KN_1^2 = EN_2 \cdot GN_3$ .

*Solution by R. TUCKER, M.A.*

Let  $P, Q, C, D$  be  $(m_1, m_2, m_3, m_4)$ ; then  $\Sigma(m) = 0$ . Now

$PC$  is  $y(m_1 + m_3) - 2x = 2am_1m_3$ ,  $QD$  is  $y(m_2 + m_4) - 2x = 2am_2m_4 \dots (i.)$ ; therefore  $2x_E = -a(m_1m_3 + m_2m_4)$  and  $2x_G = -a(m_1m_4 + m_2m_3)$ ;

therefore

$$4x_M = -a(m_1 + m_2)(m_3 + m_4).$$

Hence

$$KN_1^2 = 4ax_M = a^2(m_1 + m_2)^2.$$

From (i.),  $y_E = a(m_1m_3 - m_2m_4)/(m_1 + m_3) = a(m_1 + m_2)(m_2 + m_3)/(m_1 + m_3)$

and  $y_G = a(m_2m_3 - m_1m_4)/(m_2 + m_3) = a(m_1 + m_3)(m_1 + m_2)/(m_2 + m_3)$ .

Therefore

$$y_E y_G = KN_1^2.$$

QUESTIONS FOR SOLUTION.

**14596.** (Professor G. B. MATHEWS, F.R.S.)—Prove that

$$\frac{1}{(1-x)(1-y)} = \frac{1}{(1-x)(1-x^2y)} + \frac{1}{(1-x^2y)(1-x^4y^2)} + \frac{1}{(1-x^4y^2)(1-x^6y^3)} + \dots$$

$$+ \frac{1}{(1-x^2y^2)(1-xy)} + \frac{1}{(1-xy)(1-y)} - \frac{1}{1-x^2y} - \frac{1}{1-x^4y^2} - \frac{1}{1-x^6y^3} - \frac{1}{1-xy};$$

and show how to construct any number of such identities.

**14597.** (Professor NEUBERG.)—Trouver les relations entre les abscisses de quatre points pris sur l'hyperbole équilatère  $2y = 1$ , et tels que les tangentes en ces points touchent une même circonférence.

**14598.** (Professor MORLEY.)—A string is attracted to a centre  $O$ , according to NEWTON'S LAW, and rests over two pins equidistant from  $O$ . Prove that the least length of the string is  $2r(1 + \theta)^2$  where  $r$  is the distance of a pin from the centre, and  $2\theta$  is the angle (supposed  $< 2$ )

which the pins subtend at the centre. [The curves concerned are considered in an article in the *Annals of Mathematics*, October, 1899.]

**14599.** (Professor COCHEZ.)—Courbe  $\rho \sin \omega - 2\rho + 1 = 0$ .

**14600.** (Professor E. J. NANSON.)—If a triangle be self conjugate to the conic  $S$ , and two of its vertices lie respectively on  $S' + \lambda S, S' + \mu S$ , prove that the third vertex lies on  $S' + \nu S$ , where  $\Delta(\lambda + \mu + \nu) + \theta = 0$ .

**14601.** (Professor K. J. SANJANA.)—An object is placed in front of a combination of three coaxial convex lenses, whose focal lengths are  $f_1, f_2, f_3$  respectively, and the successive distances between them  $a, b$ . If the final image is in the same position as the object, prove that

$$(f_1 - a)(f_3 - b) + f_2(f_1 - a + f_3 - b) = 0 \dots \dots \dots (1);$$

$$2f_1f_2(a + b) + 2f_1f_3a - f_1b(2a + b) - f_2(a + b)^2 - f_3a^2 + ab(a + b)^2 = 0 \dots \dots (2);$$

$$\text{and } (a + b)^2f_2 + a^2f_3 - ab(a + b) = 0 \dots \dots \dots (3).$$

If  $a, b$  be given, the focal lengths are  $a(a + b)/2b, ab/2(a + b), b(a + b)/2a$  respectively, and the final image is equal to the object in magnitude. [A particular case is the system formed by three convex lenses of focal lengths  $\frac{1}{2}, \frac{1}{3}, \frac{1}{3}$ , at intervals  $1, \frac{1}{3}$ ; see WOLSTENHOLME, No. 2,781.]

**14602.** (Professor N. BHATTACHARYA.)—A light string just fits round an ellipse (eccentricity =  $e$ ), and is under the action of a central force towards a focus, varying inversely as the distance. If  $T$  and  $T'$  be the tensions at the extremities of any focal chord, show that  $e \cdot TT' + e \cdot T \cdot T'$  is constant. If  $N$  be the normal pressure on the ellipse at any point whose distance from the centre of force is  $r$ , prove that

$$N = \frac{b\mu}{\sqrt{(2ar - r^2)}} \left\{ \frac{1}{2r} + \frac{a}{(2ar - r^2)} \log \frac{a}{a(1-e)} \right\}.$$

**14603.** (J. A. THIRD, M.A., D.Sc.)— $U$  is a straight line in the plane of a triangle  $ABC$ ,  $\Delta_1$  is the conic with respect to which  $U$  is the polar of the centroid, and  $ABC$  self-polar. Prove the following statements:—

(1) If a variable in-conic, touching  $BC, CA, AB$  at  $X, Y, Z$ , has its centre on  $U$ ,  $AX, BY, CZ$  conintersect on a circum-conic,  $\Delta_2$ . (2) If a variable circum-conic has its centre on  $U$ , and if  $LMN$  be the triangle formed by the tangents to it at  $A, B, C, AL, BM, CN$  conintersect on a conic,  $\Delta_3$ , passing through the mid-points of the sides of  $ABC$ . (3)  $\Delta_1, \Delta_2, \Delta_3$  are similar and similarly situated, and intersect on  $U$ . (4) The centre of  $\Delta_3$  bisects the distance between the centres of  $\Delta_1$  and  $\Delta_2$ ; the line of centres passes through the centroid; the centroid and the centre of  $\Delta_1$  are the centres of similitude of  $\Delta_2$  and  $\Delta_3$ . (5)  $\Delta_1, \Delta_2, \Delta_3$  are parabolas, hyperbolas, or ellipses, according as  $U$  touches, cuts, or does not cut in real points the maximum inscribed ellipse of  $ABC$ ; they are circles when  $U$  is the line  $\Sigma a \cos A = 0$ , and equilateral hyperbolas when  $U$  passes through the symmedian point; generally their eccentricity is constant, as  $U$  envelops a conic having double contact with the maximum inscribed ellipse on the line  $\Sigma a \cos A = 0$ . (6) If a variable circum-conic pass through the centre of  $\Delta_1$ , its centre-locus is  $\Delta_3$ , and if  $L'M'N'$  be the triangle formed by the tangents to it at  $A, B, C, AL', BM', CN'$  conintersect on  $U$ .

**14604.** (Professor UMES CHANDRA GHOSH.)—If a conic circumscribing a quadrilateral  $ABCD$  be inscribed in a quadrilateral  $abcd$ ,  $ab$  touching the conic at  $D, bc$  at  $A, cd$  at  $B$ , and  $da$  at  $C$ , prove that the following quartets of lines are concurrent and harmonically conjugate:— (1)  $DB, AC, bd, ac$  (see SALMON'S *Conics*, p. 242); (2)  $DA, BC, ac, ef$ ; (3)  $AB, DC, bd, ef$ ; and that the three diagonals of either quadrilateral form a self-conjugate triangle with respect to the conic.

**14605.** (D. BIDDLE.)—In a tetrahedron, the trilinear coordinates of the point of contact of the inscribed sphere with any face, taken in reference to the edges of that face, are in direct proportion to the combined perpendiculars to the respective edges, from the opposite vertex and its projection on the plane of the face, the ratio being that between the area of the particular face and the entire surface of the tetrahedron.

**14606.** (R. TUCKER, M.A.)— $ABC, A'B'C'$  are the in- and circum-triangles of the same circle, and their sides are parallel. Prove

$$AB = 4\pi(\sin \frac{1}{2}A) A'B',$$

and that  $A'A, B'B, C'C$  meet in

$$(s-a)a/a = (s-b)b/b = (s-c)c/c.$$

**14607.** (Rev. W. ALLEN WHITWORTH, M.A.)—"Find two unequal integers such that the sum of their reciprocals shall be equal to the reciprocal of a given integer  $N$ ."—Show that there are

$$\frac{1}{2}(2a + 1)(2\beta + 1)(2\gamma + 1) \dots - \frac{1}{2}$$

solutions of this question, where the prime factors of  $N$  are given by

$$N = a^2 b^2 c^2 \dots$$

For example, if  $N = 12$ , there are seven solutions, viz.,

$$\frac{1}{12} = \frac{1}{15} + \frac{1}{20} = \frac{1}{16} + \frac{1}{24} = \frac{1}{18} + \frac{1}{36} = \frac{1}{24} + \frac{1}{30} = \frac{1}{30} + \frac{1}{36} = \frac{1}{36} + \frac{1}{36}$$

$$= \frac{1}{18} + \frac{1}{36}.$$

**14608.** (EDWARD V. HUNTINGTON, A.M.)—Let  $a$  and  $b$  be the radii of the circles through the cusps and vertices respectively of any epi- or hypo-cycloid having an odd number of cusps. Then, according as  $b - 3a$  is positive or negative, a line of length  $b + a$ , sliding within the curve, will envelope an epi- or a hypo-cycloid having double the number of cusps.

**14609.** (R. C. ARCHIBALD, M.A.)—Prove the following relations between the cardioid and the three-cusped hypocycloid or tricuspide:— (i.) The envelope of the parabolas, with foci on a cardioid and always tangent to two fixed lines drawn at pleasure through its cusp, is a tricuspide. (ii.) A cusp S of a tricuspide and its opposite vertex V are joined. Any tangent to the tricuspide intersects this line SV in X. With centre V and radius VX, a circle is described which cuts the tangent again in P. The locus of P is a cardioid.

**14610.** (R. F. DAVIS, M.A.)—Prove that the length of the chord of the circumcircle to a triangle ABC, drawn so as to bisect the sides AB, AC, is  $2R \{1 - \cos^2 B \cos^2 C\}^{\frac{1}{2}}$ .

**14611.** (G. H. HARDY, B.A.)—A, B, two of the angular points of a triangle XAB, lie on two faces of a tetrahedron, and the side AB passes through its centre of gravity. The sides XA, XB divide the opposite edge in fixed ratios  $\theta : 1 - \theta, 1 - \phi : \phi$ . Prove that the locus of X consists of two points, a straight line and a conic; and that the latter will be an ellipse, parabola, or hyperbola, as

$$\{3(\theta + \phi) - 2(1 + 4\theta\phi)\}^2 \begin{matrix} < \\ > \end{matrix} \begin{matrix} < \\ > \end{matrix} 4\theta\phi(3 - 4\theta)(3 - 4\phi).$$

Verify this when  $\theta = \phi = \frac{1}{2}$ .

**14612.** (R. P. PARANJPYE, B.A.)—Find the maximum number of cusps that a curve of the  $n$ th degree can have.

**14613.** (Rev. J. CULLEN.)—Two points P and Q lie on the circum-circle of a given triangle ABC, and subtend a constant angle at O, the centre. Prove that the locus of the intersection of the SIMSON-lines of P and Q is a hypocycloid.

**14614.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Factorize completely  $(17927 + 1)$ .

**14615.** (W. R. HUGHES.)—The four points determined by the intersection of the tangents and common chords of the circles of curvature at two points P, Q on an ellipse lie on a circle coaxial with the circles of curvature.

**14616.** (R. W. D. CHRISTIE.)—Prove for primes of the form  $4M - 1$  the modular equation  $a^2 + b = 0 \pmod{p}$ , where  $a$  and  $b$  are any primitive roots; e.g., prime 11, roots 2, 6, 7, 8, we have  $2^2 + 7 = 6^2 + 8 = 7^2 + 6 = 8^2 + 2 = 0 \pmod{11}$ .

**14617.** (V. DANIEL.)—The locus of the middle point of the intercept of a variable tangent by tangents from a fixed point to a parabola is the tangent parallel to the polar of the fixed point.

**14618.** (J. J. BARNVILLE, B.A.)—Prove that

$$\begin{aligned} \frac{1}{2+7} + \frac{1}{7+7} + \frac{1}{47+7} + \frac{1}{322+7} + \dots &= \frac{1}{3\sqrt{5} + 18}, \\ \frac{1}{5+7} + \frac{1}{17+7} + \frac{1}{97+7} + \frac{1}{565+7} + \dots &= \frac{2\sqrt{2} + 1}{28}, \\ \frac{1}{4+7} + \frac{1}{15+7} + \frac{1}{191+7} + \frac{1}{2468+7} + \dots &= \frac{9 + \sqrt{165}}{154}, \\ \frac{1}{3+7} + \frac{1}{23+7} + \frac{1}{503+7} + \frac{1}{11043+7} + \dots &= \frac{4 + \sqrt{30}}{70}. \end{aligned}$$

**14619.** (R. KNOWLES.)—If

$$F_x/(1-x)^n = 1 + (m+1)^{n-1}x + (2m+1)^{n-1}x^2 + \dots + (m+1)^{n-1}x^r + \&c.,$$

where  $m$  is any positive integer greater than 2, prove that (1)  $F_x$  is a function of the form  $1 + Bx + Cx^2 + \&c.$  of the degree  $(n-1)$  in  $x$ ; (2) the coefficients in it of  $x$  and  $x^{n-1}$  are respectively  $(m+1)^{n-1} - n$  and  $(m-1)^{n-1}$ ; (3) the sum of its coefficients is  $n-1! \cdot m^{n-1}$ ; e.g., if  $m = 3, n = 5$ , the series becomes  $1 + 4^4x + 7^4x^2 + \&c.$ , and

$$F_x = 1 + 251x + 1131x^2 + 545x^3 + 16x^4.$$

**14620.** (SRISH CHANDRA GHOSH, M.A.)—A comet of very small dimension and mass  $M$  is projected to move in a parabola (parameter =  $4a$ ) under the action of a focal attractive force ( $= \mu x^2$ ), from a point distant  $R$  from the focus. Another particle, mass  $m$ , is then shot off from the focus at an angle  $\theta$  to the principal diameter, and strikes the comet with velocity  $v$ . Investigate the subsequent motion of the comet, the coefficient of restitution being  $\epsilon$ . Supposing these elements to be in C.G.S. units, and a fraction  $k$  of the energy dissipated by collision to be spent in thermal effects, calculate the heat generated.

**14621.** (H. W. CURJEL, M.A.)—If quadrilaterals can be at the same time inscribed in a conic  $C_1$  and circumscribed to a conic  $C_2$ , prove that triangles can be at the same time inscribed in  $C_1$  and circumscribed to the conic  $C_2$ , which is the polar reciprocal of  $C_1$  with respect to  $C_2$ ; and if P is the common vertex of such a triangle and quadrilateral, the vertex of the quadrilateral opposite to P and the side of the triangle opposite to P are pole and polar with respect to  $C_2$ .

**14622.** (Rev. T. ROACH, M.A.)—If  $T_1, T_2, T_3$  is a triangle described about an ellipse, then the angle subtended by  $T_2, T_3$  at S = 2 complement of that subtended by P, Q, the points where the tangents from T<sub>1</sub> touch.

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6635.** (CHRISTINE LADD.)—If A, B, C, D are four fixed points on a sphere, and P is a variable point, prove that the mean value of  $\cos PA \cos PB \cos PC \cos PD$

$$\text{is } \frac{1}{15} (\cos AB \cos CD + \cos AC \cos BD + \cos AD \cos BC).$$

**6637.** (A. MARTIN, M.A.)—The square root of 9781, when expanded as a continued fraction, contains 157 quotients in a period. Is there a prime number of the form  $4n + 1$ , composed of four digits, having a greater number of quotients in a period of its square root?

**6642.** (J. R. HARRIS, M.A.)—When two or more spherical soap-bubbles, blown from the same mixture, are allowed to coalesce into a single bubble, prove (1) that we obtain for the radius of the bubble an equation of the form  $x^3 - r_1^3 - r_2^3 - \dots = a(r_1^2 + r_2^2 + \dots - x^2)$ ,

$r_1, r_2, \dots$  being the radii of the bubbles, and  $a$  some positive quantity; and (2) verify (what one would infer also from physical considerations) that this equation implies a reduction of the total surface.

**6648.** (H. FORTEY, M.A.)—In a plane triangle ABC, bisect AB in D, and take DBA opposite to DA, or DAB' opposite to DB, each equal to half the sum of AC and BC; and prove that the semi-perimeter AA' or BB' will subtend an acute angle at C if the base AB does not exceed half the sum of AC and BC.

**6654.** (C. LEUDESORF, M.A.)—A particle is revolving in a circle of radius  $a$  about a centre of attractive force varying inversely as the square of the distance. Suddenly the centre of force is shifted to a point O, distant by a very small quantity  $c$  from the centre of the circle C. Show that the eccentricity of the new orbit described by the particle is  $a^{-1}c + \frac{1}{4}a^{-2}c^2 \sin a \sin 2a$  nearly,  $a$  being the angle subtended at C by the line joining O to the position of the particle at the moment of the change.

**6657.** (Professor SYLVESTER, F.R.S.)—If  $\lambda, \mu, \nu, \dots$  be any prime integers, and  $\rho_\lambda, \rho_{\lambda^2}, \rho_{\lambda^3}, \dots$  mean the primitive roots of  $\rho^\lambda - 1, \rho^{\lambda^2} - 1, \rho^{\lambda^3} - 1, \dots$  respectively, show that, if

$$P = \{1 - (1/\lambda)\} \{1 - (1/\mu)\} \dots \{1 - (1/\theta)\},$$

$$\frac{1}{1-x} - \sum \frac{1}{1-x^{\lambda^k}} + \sum \frac{1}{1-x^{\lambda^k \mu^l}} \dots$$

$$= P \left\{ \frac{1}{1-x} - \sum \left( \frac{1}{\lambda-1} \cdot \frac{1}{1-\rho_\lambda x} \right) + \sum \left( \frac{1}{(\lambda-1)(\mu-1)} \cdot \frac{1}{1-\rho_{\lambda\mu} x} \right) - \dots \right\}.$$

NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

THE LONDON MATHEMATICAL SOCIETY.

Thursday, June 14, 1900.—Lord Kelvin, G.C.V.O., President, in the Chair. Present, three foreign members, twenty-one ordinary members, and a visitor, Prof. Stringham, California.

At the request of the President, Prof. F. Klein made a few remarks on the continuation of the edition of Gauss's collected works.

Prof. Darboux spoke "Sur différents problèmes relatifs aux transformations de l'espace et aux déformations finies de la matière, et sur leurs rapports avec la théorie des systèmes triples orthogonaux"; and Prof. Poincaré spoke "Sur quelques théorèmes relatifs à l'analysis situs et sur les propriétés des polyèdre dans l'espace à plus de trois dimensions."

Prof. Stringham also made a few remarks on "A Proof of the Directorial Property of the Plane Sections of a Cone in Non-Euclidean Space."

Prof. Elliott read some "Notes on Concomitants of Binary Quantics." In consequence of the lateness of the hour Lord Kelvin simply read the titles of the following papers:—

"Some Multiform Solutions of the Partial Differential Equations of Physical Mathematics and their Application," Part II., Mr. H. S. Carslaw.

"Some Quadrature Formule," Mr. W. F. Sheppard.

"Extensions of the Riemann-Roch Theorem in Plane Geometry," Dr. F. S. Macaulay.

"On the Invariants of a certain Differential Expression connected with the Theory of Geodesics," Mr. J. E. Campbell.

"On the Transitive Groups of Degree  $n$  and Class  $n-1$ ," Prof. W. Burnside.

"The Invariant Syzygies of Lowest Order for any Number of Quartics," Mr. A. Young.

"Canonical Reduction of Bilinear Forms," Part II., Mr. Bromwich.

"The Energy Function of a Continuous Medium," Mr. H. M. Macdonald.

"Note on the Representation of a Circle by a Linear Equation," Mr. J. Griffiths.

Messrs. Darboux and Poincaré were admitted into the Society. Votes of thanks to the foreign members were passed for their communications.

# MACMILLAN & CO.'S LIST OF BOOKS SUITABLE FOR PRIZES.

## ANTIQUITIES,

- Pompeii, Its Life and Art.** By A. MAU. Translated by F. W. KEISEY. Illustrated. 8vo, 25s. net.
- A Handbook of Greek Sculpture** By ERNEST A. GARDNER, M.A. Extra crown 8vo. Parts I. and II., 5s. each. Complete in One Vol., 10s.
- A History of Greek Art.** With an Introductory Chapter on Art in Egypt and Mesopotamia. By F. B. TARBELL. Extra crown 8vo, 6s.
- Atlas of Classical Antiquities.** By TH. SCHREIBER. Edited by Prof. W. C. F. ANDERSON. 4to, 21s. net.
- The City State of the Greeks and Romans; a Survey** Introductory to the Study of Ancient History. By W. WARDE FOWLER, M.A. Crown 8vo, 5s.
- A Companion to School Classics.** By JAMES GOW, M.A., Litt.D. Illustrated. Third Edition. Crown 8vo, 6s.
- Rambles and Studies in Greece.** By Rev. J. P. MAHAFFY, D.D. With Illustrations. New Edition. With a Map. Crown 8vo, 10s. 6d.

## ART.

- A Popular Handbook to the National Gallery.** Including Notes collected from the Works of Mr. Ruskin. By E. T. COOK. Fifth Edition, 1897. Crown 8vo, half morocco, 14s.
- A Popular Handbook to the Tate Gallery.** By E. T. COOK. Crown 8vo, 5s.
- Some Hints on Learning to Draw.** Containing Examples from Leighton, Watts, Poynter, &c. By G. W. C. HUTCHINSON, Art Master at Clifton College. Super royal 8vo, 8s. 6d.
- Art Anatomy of Animals.** By ERNEST E. S. THOMPSON. Illustrated 4to, 30s. net.

## ASTRONOMY.

- Popular Astronomy.** By Prof. SIMON NEWCOMB. With 112 Engravings and Maps of the Stars. Second Edition. 8vo, 18s.
- Pioneers of Science.** By Prof. OLIVER LODGE, F.R.S. Extra crown 8vo, 7s. 6d.  
Contains Lives of Copernicus, Tycho Brahe, Kepler, Galileo, Descartes, Newton, Roemer, Bradley, Lagrange, Laplace, Herschel, and Bessel.

## BIOGRAPHY.

- Boswell's Life of Johnson.** Edited, with an Introduction, by MOWBRAY MORRIS. Globe 8vo, 3s. 6d.
- St. Anselm.** By R. W. CHURCH. Globe 8vo, 5s.
- Francis of Assisi.** By Mrs. OLIPHANT. Crown 8vo, 6s.
- Alfred the Great.** By THOMAS HUGHES. Crown 8vo, 6s.

## COLLECTED WORKS. ESSAYS. MISCELLANEOUS WORKS.

- English Prose Selections.** With Critical Introductions by various writers, and General Introductions to each period. Edited by Sir HENRY CRAIK, K.C.B., LL.D. In 5 Vols. Crown 8vo. Vol. I.—14th to 16th Century, 7s. 6d. Vol. II.—16th Century to Restoration, 7s. 6d. Vol. III.—17th Century, 7s. 6d. Vol. IV.—18th Century, 7s. 6d. Vol. V.—19th Century, 8s. 6d.
- Oliver Goldsmith: The Miscellaneous Works of.** With Biographical Introduction. Edited by Prof. MASSON. Globe 8vo, 3s. 6d.
- Bacon's Essays and Colours of Good and Evil.** With Notes and Glossarial Index by W. ALDIS WRIGHT, M.A. Pott 8vo, 2s. 6d. net.
- The Essays of Elia.** By CHARLES LAMB. Edited by Canon AINGEE. Globe 8vo, 5s.
- The Choice of Books.** By FREDERIC HARRISON. Globe 8vo, 5s.
- The Pleasures of Life.** By LORD AVEBURY. Globe 8vo, 2s. 6d.
- The Use of Life.** By Lord AVEBURY. Globe 8vo, 3s. 6d.
- Aspects of the Greek Genius.** By Professor S. H. BUTCHER, Litt.D. Crown 8vo, 7s. net.
- Greek Studies.** By WALTER PATER, M.A. 8vo, 10s. 6d.
- Essays in Criticism.** By MATTHEW ARNOLD. Globe 8vo, 5s.
- Essays in Criticism.** Second Series. By MATTHEW ARNOLD. Globe 8vo, 5s.
- Miscellanies.** By JOHN MORLEY. Three Vols. Globe 8vo, 5s. each.

## HISTORY.

- A Short History of the English People.** By JOHN RICHARD GREEN, LL.D. With Maps and Tables. Crown 8vo, 8s. 6d. Illustrated Edition in 3 Vols., 40s. net.
- The Expansion of England.** Two Courses of Lectures. By Sir J. R. SEELEY, M.A. Globe 8vo, 5s.
- History of Rome.** By Dr. MOMMSEN. Abridged. Crown 8vo, 7s. 6d.
- A History of Rome to the Battle of Actium.** By E. S. SHUCK-BURGH, M.A. Crown 8vo, 8s. 6d.
- A History of Greece.** By J. B. BURY. Crown 8vo, 8s. 6d.
- Forty-one Years in India.** By LORD ROBERTS. Extra crown 8vo, 10s. net.
- A History of the Indian Mutiny.** By T. RICE HOLMES, M.A. Second Edition. Extra crown 8vo, 12s. 6d.
- Cawnpore.** By Sir GEO. ORTO TREVELYAN. Crown 8vo, 6s.
- The Chronicles of Froissart.** Translated by Lord BERNERS. Edited by G. C. MACAULAY, M.A. In extra gilt binding. Crown 8vo, 2s. 6d.
- Handbook of European History, 476—1871.** Chronologically Arranged. By ARTHUR HASSALL, M.A., Student of Christ Church, Oxford. Extra crown 8vo, 8s. 6d. net.

## NATURAL HISTORY.

- Cambridge Natural History.** Edited by S. F. HARMER, M.A., and A. E. SHIPLEY, M.A. Illustrated. 8vo.
- Vol. II.—**Worms, Botifers, and Polyzoa.** By F. W. GAMBLE, M.Sc., Miss L. SHELDON, A. E. SHIPLEY, M.A., M. M. HARTOG, M.A., W. B. BENHAM, D.Sc., F. O. BEDDARD, M.A., and S. F. HARMER, M.A. 17s. net.
- Vol. III.—**Molluscs and Brachiopods.** By the Rev. A. H. COOKE, M.A., A. E. SHIPLEY, M.A., and F. R. C. REED, M.A. 17s. net.
- Vol. V.—**Peripatus.** By A. SEDGWICK, M.A. **Myriapods.** By F. G. SINCLAIR, M.A. **Insects.** Part I. By D. SHARP, M.A., F.R.S. 17s. net.
- Vol. VI.—**Insects,** Part II. By D. SHARP, M.A. 17s. net.
- Vol. IX.—**Birds.** By A. H. EVANS, M.A. 17s. net.
- Curiosities of Natural History.** By FRANCIS T. BUCKLAND. In 4 vols. Crown 8vo, 2s. 6d. each.
- Short Studies in Nature Knowledge.** By WILLIAM GEE. With Illustrations. Globe 8vo, 3s. 6d.
- Tales of the Birds.** By W. WARDE FOWLER. Illustrated. Crown 8vo, 2s. 6d.
- A Year with the Birds.** By W. WARDE FOWLER. Illustrated. Crown 8vo, 3s. 6d.
- Summer Studies of Birds and Books.** By W. WARDE FOWLER, M.A. Crown 8vo, 6s.
- Glaucus; or, The Wonders of the Sea-Shore.** By CHAS. KINGSLEY. With Coloured Illustrations. Crown 8vo, 3s. 6d.; Presentation Edition, extra cloth, 7s. 6d.; Prize Edition, 2s. 6d.
- The Malay Archipelago.** By ALFRED RUSSEL WALLACE. Extra crown 8vo, 6s.
- Natural History and Antiquities of Selborne.** By GILBERT WHITE. Edited by FRANK BUCKLAND. Crown 8vo, 6s.
- Wild Beasts and their Ways.** By Sir SAMUEL BAKER. Extra crown 8vo, 12s. 6d.
- The Natural History of Aquatic Insects.** By Prof. L. C. MIALL, F.R.S. Crown 8vo, 6s.
- Round the Year: Short Nature Studies.** By Prof. L. C. MIALL. Crown 8vo, 5s.

## POETRY.

- Arnold.—Complete Poetical Works.** Crown 8vo, 7s. 6d.
- Chaucer.—The Works of Geoffrey Chaucer.** Edited by ALFRED W. POLLARD, H. FRANK HEATH, MARK H. LIDDELL, W. S. MCCORMICK. Crown 8vo, full gilt back and tops, 3s. 6d.
- Cowper.—Poetical Works.** Edited by Rev. W. BENHAM, B.D. In extra gilt binding. Crown 8vo, 3s. 6d.
- Goldsmith.—Miscellaneous Works.** Edited by Prof. MASSON. In extra gilt binding. Crown 8vo, 3s. 6d.
- Lowell—Complete Poetical Works.** With Introduction by THOMAS HUGHES. Crown 8vo, 7s. 6d.
- Milton.—Poetical Works.** With Introductions by DAVID MASSON, M.A., LL.D. In extra gilt binding. Crown 8vo, 2s. 6d.
- Scott.—Poetical Works.** Edited by Prof. F. T. PALGRAVE. In extra gilt binding. Crown 8vo, 3s. 6d.
- Shakespeare.—Complete Works.** Edited by W. G. CLARK and W. A. WRIGHT. In extra gilt binding. Crown 8vo, 3s. 6d.
- **The Victoria Edition.** In 3 Vols. Comedies. Histories. Tragedies. Crown 8vo, 3s. 6d. each.
- Spenser.—Complete Works.** Edited by R. MORRIS. With Memoir by J. W. HALES, M.A. In extra gilt binding. Crown 8vo, 3s. 6d.
- Tennyson.—Complete Works.** New and Enlarged Edition. With a Portrait. Crown 8vo, 7s. 6d.
- The Poetical Works of Alfred, Lord Tennyson,** Poet Laureate. Crown 8vo, 3s. 6d.; also in extra cloth, gilt edges, crown 8vo, 4s. 6d.
- Wordsworth.—Complete Poetical Works.** With Introduction by JOHN MORLEY. Crown 8vo, 7s. 6d.
- The English Poets.** Edited by T. H. WARD, M.A. Crown 8vo. Vol. I.—Chaucer to Donne. 7s. 6d. Vol. II.—Ben Jonson to Dryden. 7s. 6d. Vol. III.—Addison to Blake. 7s. 6d. Vol. IV.—Wordsworth to Tennyson. 8s. 6d.

## TRANSLATIONS.

- The Odyssey of Homer.** Done into English Prose by S. H. BUTCHER, M.A., and A. LANG, M.A. With a Plate. Crown 8vo, 7s. 6d. net.
- The Iliad of Homer.** Done into English Prose by ANDREW LANG, M.A., WALTER LEAF, Litt.D., and ERNEST MYERS, M.A. Crown 8vo, 12s. 6d.
- The Republic of Plato** Translated into English by J. LLEWELYN DAVIES, M.A., and D. J. VAUGHAN, M.A. Pott 8vo, 2s. 6d. net.
- The Trial and Death of Socrates:** being the Euthyphron, Apology, Crito, and Phaedo of Plato. Translated by F. J. CURCH. Pott 8vo, 2s. 6d. net.
- The Phaedrus, Lysis, and Protogoras of Plato.** A New and Literal Translation. By J. WRIGHT, M.A. Pott 8vo, 2s. 6d. net.
- Theocritus, Bion, and Moschus.** Rendered into English Prose by ANDREW LANG. Pott 8vo, 2s. 6d. net.

# OXFORD UNIVERSITY PRESS.

SET AND SUITABLE FOR OXFORD LOCALS, 1901.

- A Greek Testament Primer.** An Easy Grammar and Reading Book for the use of Students beginning Greek. By E. MILLER, M.A. Second Edition. Extra fcap. 8vo, paper, 2s.; cloth, 3s. 6d.
- Helps to the Study of the Book of Common Prayer.** Being a Companion to Church Worship. Crown 8vo, from 2s.  
This may also be had bound up with various sizes of the Oxford Prayer Book, with Hymns Ancient and Modern, in leather bindings.
- Helps to the Study of the Bible,** taken from the "Oxford Bible for Teachers." New, Enlarged, and Illustrated Edition. Pearl 16mo, stiff covers, 1s. net; Nonpareil 8vo, cloth boards, 2s. 6d.; Large Type Edition, Long Primer, 8vo, cloth boards, 5s.
- Old Testament History for Schools.** By T. H. STOKES, D.D. Part I (Second Edition): From the Creation to the Settlement in Palestine. Part II: From the Settlement to the Disruption of the Kingdom. Part III: From the Disruption to the Return from Captivity. Extra fcap. 8vo, 2s. 6d. each, with Maps.  
\*\*\* Part III completes the work.
- Shakespeare.—Henry the Fifth.** Edited by W. ALDIS WRIGHT, D.C.L. 2s.  
— **Merchant of Venice.** Edited by W. G. CLARK, M.A., and W. ALDIS WRIGHT, D.C.L. 1s.
- Byron.—Childe Harold.** With Introduction and Notes, by H. F. TOZER, M.A. Third Edition. Extra fcap. 8vo, 3s. 6d.; in parchment, 5s.
- Scott, Sir Walter, Bart.—Ivanhoe.** Edited, with Introduction, Notes, and Glossary, by C. E. THEODOSIUS, M.A., Worcester College. Extra fcap. 8vo, stiff covers, 2s.
- Short German Plays, for Reading and Acting.** With Notes and Vocabulary. By EMMA S. BUCHHEIM. Extra fcap. 8vo, cloth, 3s.
- Riehl's Seines Vaters Sohn and Gespensterkampf.** Edited, with Notes, by H. T. GERRANS, M.A. Extra fcap. 8vo, 2s.
- Tales of the Roman Republic.** Adapted from the Text of Livy. With Notes, Vocabulary, and English Exercises. By JOHN BARROW ALLEN, M.A., late Scholar of New College, Oxford. Extra fcap. 8vo, 112 pages, with Two Maps, stiff covers, 1s. 6d.
- Tales of the Roman Commonwealth.** By the same Editor. [Immediately.]
- Demonstrations in Latin Elegiac Verse.** By W. H. D. ROUSE, M.A. Crown 8vo, 4s. 6d.
- Caesar.—The Commentaries (for Schools).** With Notes and Maps. By CHARLES E. MOBERLY, M.A. **The Gallic War.** Books VI-VIII, 3s. 6d.
- Horace.** With a Commentary. (In a size suitable for the use of Schools.) Vol. I: The Odes, Carmen Seculare, and Epodes. By E. C. WICKHAM, D.D. Second Edition. Extra fcap. 8vo, 6s.  
— **Selected Odes.** With Notes for the use of a Fifth Form. By the same Editor. Extra fcap. 8vo, 2s.
- Livy.** Books V-VII. With Introduction and Notes. By A. R. CLUEB, B.A. Second Edition. Revised by P. E. MATHESON, M.A. Extra fcap. 8vo, 5s.  
— Book V. By the same Editors. Extra fcap. 8vo, 2s. 6d.
- Virgil.—Aeneid I.** With Introduction and Notes. By C. S. JERRAM, M.A. Extra fcap. 8vo, limp, 1s. 6d.
- An Elementary Latin Grammar.** By J. BARROW ALLEN, M.A. 2s. 6d.
- An Elementary Latin Dictionary.** By CHARLTON T. LEWIS, Ph.D. Square 8vo, 7s. 6d.
- A Primer of Greek Prose Composition.** By J. Y. SARGENT, M.A. 3s. 6d.  
\*\*\* A KEY to the above, 5s. net. Supplied to Teachers only, on application to the Secretary, Clarendon Press, Oxford.
- Helps, Hints, and Exercises for Greek Verse Composition.** Collected and Arranged by C. E. LAURENCE, M.A. Extra fcap. 8vo, 3s. 6d.  
\*\*\* A KEY to the above, 5s. net. Supplied to Teachers only, on application to the Secretary, Clarendon Press, Oxford.
- Euripides.** In Single Plays. Edited, with Introduction and Notes. Extra fcap. 8vo. **Alcestitis.** By C. S. JERRAM, M.A. Fifth Edition. 2s. 6d.
- Sophocles.**—Edited, with Introductions and English Notes, by LEWIS CAMPBELL, M.A., and EVELYN ABBOTT, M.A. **Antigone.** 2s.
- Xenophon.—Anabasis.** Book I. Edited for the use of Junior Classes and Private Students. With Introduction, Notes, &c. By J. MARSHALL, M.A. Extra fcap. 8vo, 2s. 6d.  
— **Anabasis.** Book II. With Notes and Map. By C. S. JERRAM, M.A. Extra fcap. 8vo, 2s.
- Euclid, The "Junior."** Books I and II. By S. W. FINN, M.A. Crown 8vo, 1s. 6d. \*\*\* Books III and IV in preparation.
- Fisher.—Class-Book of Chemistry.** By W. W. FISHER, M.A., F.C.S. Fourth Edition. Crown 8vo, 4s. 6d.
- Hamilton and Ball.—Book-keeping.** New and Enlarged Edition. By SIR R. G. C. HAMILTON and JOHN BALL. Cloth, 2s.  
*Ruled Exercise Books adapted to the above may be had, price 1s. 6d.; also, adapted to the Preliminary Course only, price 4d.*
- Minchin.—Geometry for Beginners.** An Easy Introduction to Geometry for Young Learners. By G. M. MINCHIN, M.A. Extra fcap. 8vo, 1s. 6d.
- Nixon.—Elementary Plane Trigonometry.** By R. J. C. NIXON, M.A. Crown 8vo, 7s. 6d.
- Woolcombe.—Practical Work in General Physics.** By W. G. WOOLCOMBE, M.A., B.Sc. Crown 8vo, 2s. each part.  
Part I. General Physics. } Second Edition, Revised.  
Part II. Heat.  
Part III. Light and Sound.  
Part IV. Magnetism and Electricity.
- Skeat.—A Concise Etymological Dictionary of the English Language.** By W. W. SKEAT, Litt.D. Fourth Edition. Crown 8vo, 5s. 6d.  
— **A Primer of English Etymology.** Third and Revised Edition. Extra fcap. 8vo, stiff covers, 1s. 6d.
- Buckmaster.—Elementary Architecture (Classic and Gothic) for Schools, Art Students, and General Readers.** By MARTIN A. BUCKMASTER. With Thirty-eight full-page Illustrations. Crown 8vo, 4s. 6d.
- Upcott.—Introduction to Greek Sculpture.** By L. E. UPCOTT, M.A. Second Edition. Crown 8vo, 4s. 6d.
- Troutbeck and Dale.—Music Primer.** By J. TROUTBECK, D.D., and R. F. DALE, M.A. Third Edition. Crown 8vo, 1s. 6d.
- Sweet.—A New English Grammar, Logical and Historical.** Part I: Introduction, Phonology, and Accidence. By HENRY SWEET, M.A., Ph.D., LL.D. Crown 8vo, 10s. 6d.  
Part II: Syntax. Crown 8vo, 3s. 6d.
- Lewis.—Remarks on the Use and Abuse of some Political Terms.** By SIR G. CORNEWALL LEWIS, Bart. New Edition, with Notes and Introduction, by THOMAS RALEIGH, D.C.L. Crown 8vo, paper boards, 3s. 6d.; cloth, 4s. 6d.
- Lucas.—Historical Geography of the British Colonies.** By C. P. LUCAS, B.A.  
Vol. II. The West Indian Colonies. With Twelve Maps. 7s. 6d.

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.

AUG 1 1900

# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 472.

AUGUST 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 1st of January, 1901.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Christmas Examination for Certificates will commence on the 4th of December, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Christmas Examination will commence on the 4th of December.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

*Diploma Examination.*—The following Prizes will be offered for competition.—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5. The Doreck Scholarship of £20 will be awarded on the results of the Christmas Examination.

*Certificate Examination.*—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.—

The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

### EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, DECEMBER, 1900.

Notice is hereby given that at the above Examination the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War, Book vi., Virgil, Æneid, Book II.*; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS

#### ON THE SCIENCE AND ART OF EDUCATION. THE PRACTICE OF EDUCATION.

To be delivered by H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester, late Principal of the "Borough Road" Training College, Isleworth.

The Second Course of Lectures (Twenty-sixth Annual Series), will begin on Saturday, October 6, at 5 p.m. The Syllabus will be published in the September number.

The Fee for the Course is Half-a-guinea. The Lectures will be delivered on Saturday Afternoons at 5 o'clock, at the College, Bloomsbury Square, W.C. Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

The Council of the College of Preceptors will shortly proceed to the appointment of additional EXAMINERS in PHYSICS and PHYSIOLOGY. Candidates must be Graduates, and should have had experience in teaching. Applications (twenty copies), stating age, experience, &c., should be addressed to the DEANS of the College not later than the 1st of October. If testimonials are sent, they should be not more than three in number, and twenty copies of each should be forwarded.

C. R. HODGSON, B.A., Secretary.

### UNIVERSITY DIPLOMA FOR WOMEN.

## THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## L.L.A. ST ANDREWS UNIVERSITY.

—Oral Classes for London students in all subjects of this examination are held at the Day Training College, White Street, Finsbury Street, and Rope-maker Street, Finsbury Pavement, E.C., and are conducted by Mr. S. Blows, M.A. Honours Cantab., B.A. Honours, B.Sc., and Teacher's Diploma, London.

Correspondence Tuition in all subjects for country students. All applications to be addressed to Prof. CUSACK.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## CORRESPONDENCE TUITION.

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—P. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

### MEDICAL SCHOOLS.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.  
ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.  
ST. BARTHOLOMEW'S HOSPITAL.  
LONDON HOSPITAL MEDICAL COLLEGE.  
MIDDLESEX HOSPITAL MEDICAL SCHOOL.  
GUY'S HOSPITAL.  
ST. MARY'S HOSPITAL MEDICAL SCHOOL.  
DENTAL HOSPITAL MEDICAL SCHOOL.  
KING'S COLLEGE HOSPITAL.

(For particulars of the above, see following pages.)

### TRAINING COLLEGES, &c.

CAMBRIDGE TRAINING COLLEGE.  
MARIA GREY TRAINING COLLEGE.  
DATCHELOR TRAINING COLLEGE.  
HOME AND COLONIAL TRAINING COLLEGE.  
KELLAND HOUSE, LEICESTER.  
BEDFORD COLLEGE, LONDON.  
ST. GEORGE'S TRAINING COLLEGE.  
FROEBEL EDUCATIONAL INSTITUTE.

(For particulars of the above, see following pages.)

### OTHER COLLEGES, &c.

UNIVERSITY COLLEGE OF NORTH WALES.  
UNIVERSITY COLLEGE OF WALES.  
UNIVERSITY COLLEGE, LONDON.  
UNIVERSITY COLLEGE, BRISTOL.  
KING'S COLLEGE, LONDON.  
OWENS COLLEGE, MANCHESTER.  
UNIVERSITY TUTORIAL COLLEGE.  
TRINITY COLLEGE, LONDON.  
LONDON COLLEGE OF MUSIC.  
CARLYON COLLEGE.  
UNIVERSITY EXAM. POSTAL INSTITUTION.  
WESTFIELD COLLEGE.

(For particulars of the above, see following pages.)

## LONDON MATRICULATION,

JUNE, 1900.

# 202

## SUCCESSSES

WERE GAINED BY STUDENTS OF

University Correspondence College.

**For those who have failed**

**A SHORT COURSE FOR JANUARY,  
1901, IS PROVIDED.**

Fee for all Subjects £3. 17s. 6d.

Prospectus, Guide to Matriculation, Inter. Arts, Inter. Laws, Inter. Science, and B.A. Examinations, and further particulars, will be sent, post free, on application to

### THE SECRETARY,

University Correspondence College London Office,

32 Red Lion Square, Holborn, W.C.



**UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.**

(Incorporated under Royal Charter, and a Constituent College of the University of Wales.)

*Principal*—H. R. REICHEL, M.A., late Fellow of All Souls College, Oxford.

DEPARTMENTS.	
Subjects.	Professors.
Greek	W. Rhys Roberts, Litt.D., late Fellow of King's College, Cambridge.
Latin	E. V. Arnold, Litt.D., late Fellow of Trinity College, Cambridge.
French and German	Frederic Spencer, M.A. (Camb.), Phil. Doc. (Leipzig).
Semitic Languages	T. Witton Davies, B.A., Ph.D.
History	J. E. Lloyd, M.A., Lincoln College, Oxford.
Constitutional History	The Principal.
English Language and Literature	W. Lewis-Jones, M.A., late Scholar of Queens' College, Cambridge.
Philosophy	James Gibson, M.A., Fellow of St. John's College, Cambridge.
Mathematics	G. H. Bryan, Sc.D., F.R.S., late Fellow of Peterhouse, Cambridge.
Welsh	J. Morris Jones, M.A., late Scholar of Jesus Coll., Oxford.
Physics	E. Taylor Jones, D.Sc.
Chemistry	J. J. Dobbie, M.A., D.Sc., late Clark Fellow of Glasgow University.
Biology	R. W. Phillips, M.A., (Camb.), D.Sc. (Lond.), late Scholar of St. John's College, Cambridge.
Zoology	Philip J. White, M.B. (Edin.), F.R.S.E.
Agriculture	Thomas Winter, M.A. (Edin.), F.G.S.
Education	J. A. Green, B.A.

Inclusive Tuition Fee £11, Is. a year. Laboratory Fees additional, on the scale of £1, Is. per term for six hours a week.

The College Courses qualify for the degrees of the University of Wales, and include most of the Subjects for degrees of London University in Arts and Science. Students wishing to Graduate in Medicine in the Universities of Edinburgh and Glasgow can make one Annus Medicus at this College. Special provision is made for Electrical Engineering. There are a Day Training Department for men and women and a Department for the Training of Secondary Teachers.

The average cost of living (in lodgings) and tuition at Bangor for the Session (35 weeks) is from £30 to £40. A Hall of Residence for Women, under the supervision of Miss Mary Maude, who is the College Lady Superintendent of Women Students, is now open.

At the Entrance Scholarship Examination (which commences in September in each year) over 20 Scholarships and Exhibitions, ranging in value from £40 to £10, will be offered for competition.

For detailed information as to Courses, Entrance and other Scholarships, &c., apply to the Secretary and Registrar.

Bangor. J. E. LLOYD, M.A.

**UNIVERSITY COLLEGE OF NORTH WALES.**

(A Constituent College of the University of Wales.)

**DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.**

(Recognized by the Cambridge Syndicate.)

*Professor of Education*—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAVESON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

**THE**

**FROEBEL EDUCATIONAL INSTITUTE,**

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

*Chairman of the Committee*—MR. W. MATHER.

*Treasurer*—MR. C. G. MONTEFIORE.

*Secretary*—MR. ARTHUR G. SYMONDS, M.A.

**TRAINING COLLEGE FOR TEACHERS.**

*Principal*—MADAME MICHAELIS.

*Mistress of Method*—MISS E. E. LAWRENCE.

**KINDERGARTEN AND SCHOOL.**

*Headmistress*—MISS M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

**BEDFORD COLLEGE, LONDON (FOR WOMEN),**

YORK PLACE, BAKER STREET, W.

*Principal*—MISS ETHEL HURLBATT.

The Session 1900-1901 will open on Thursday, October 4th. Students are requested to enter their names on Wednesday, October 3rd.

Lectures are given in all branches of General and Higher Education. Taken systematically, they form a connected and progressive course, but a single course of Lectures in any subject may be attended.

Courses are held in preparation for all the Examinations of the University of London in Arts and Science, for the Teachers' Diploma (London), and for the Teachers' Certificate (Cambridge); and also a Special Course of Scientific Instruction in Hygiene. Six Laboratories are open to students for Practical Work. Two Entrance Scholarships awarded yearly. A Gladstone Memorial Prize and the Early English Text Society's Prize are awarded to students each June. The Art School is open from 10 to 4. Students can reside in the College.

Full particulars on application to the PRINCIPAL.

**BEDFORD COLLEGE, LONDON (FOR WOMEN),**

YORK PLACE, BAKER STREET, W.

**DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.**

(Recognized by the Cambridge Syndicate.)

*Head of the Department*—MISS H. ROBERTSON, B.A.

The Third Term of the Session 1900 begins on Thursday, October 4th.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

The Council will, in December, award a Gilchrist Travelling Studentship, value £70.

Full particulars on application to Miss ROBERTSON.

**THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS.**

SALUSBURY ROAD, BRONDESURRY, LONDON, N.W.

*Principal*—MISS ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

**THE DATCHELOR TRAINING COLLEGE.**

CAMBERWELL GROVE, S.E.

(In connexion with the Datchelor Collegiate School for Girls.)

Governing Body—The Worshipful Company of Clothworkers of the City of London.

*Principal*—MISS RIGG.

*Mistress of Method and Lecturer*—MISS CARPENTER. Assisted by other Teachers and Lecturers.

This College provides a full course of professional training for Women Teachers, together with abundant opportunity for regular class teaching in a school of over 400 pupils. Special provision is made for instruction in Physiology and Hygiene, Elocution, Drawing, and Ling's Swedish Drill.

Students are prepared for the Examination of the Cambridge Teachers' Training Syndicate.

Fees moderate.

**A COLLEGE HALL OF RESIDENCE**

is provided for Students in the Training College. Terms moderate.

A Five Studentship (Training and Residence) will be awarded in September. For conditions apply to the SECRETARY.

**CENTRAL REGISTRY FOR TEACHERS.**

—MISS LOUISA BROUGH (late Registrar of Women Teachers in connexion with the Teachers' Guild) supplies University Graduates, Trained and Certificated Teachers, for Public and Private Schools, Visiting Teachers of Special Subjects, Kindergarten Mistresses, &c., as well as English and Foreign Governesses for Private Families.—25 Craven Street, Charing Cross.

**LONDON COLLEGE OF MUSIC.**

(Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

**FORMUSICAL EDUCATION, AND EXAMINATIONS IN PRACTICAL AND THEORETICAL MUSIC.**

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in December, when certificates will be granted to all successful candidates. Last day for entry, November 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship also take place in December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

**OWENS COLLEGE, VICTORIA UNIVERSITY, MANCHESTER.**

PROSPECTUSES for the Session 1900-1901 will be forwarded on application:—

- I. DEPARTMENT OF ARTS, SCIENCE, AND LAW; and DEPARTMENT FOR WOMEN.
- II. DEPARTMENT OF MEDICINE.
- III. EVENING AND POPULAR COURSES.

Special Prospectus can also be obtained of:—

- IV. DEPARTMENT OF ENGINEERING.
- V. DEPARTMENT OF LAW.
- VI. DEPARTMENT OF PUBLIC HEALTH.
- VII. DENTAL DEPARTMENT.
- VIII. PHARMACEUTICAL DEPARTMENT; and
- IX. FELLOWSHIPS, SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.

Apply to Mr. CORNISH, 16 St. Anne's Square, Manchester, or at the College.

SYDNEY CHAFFERS, Registrar.

**UNIVERSITY COLLEGE, BRISTOL.**

**ENGINEERING EDUCATION.**

**COURSES FOR CIVIL, MECHANICAL, MINING, AND ELECTRICAL ENGINEERS, AND FOR ARCHITECTS AND SURVEYORS.**

*Professor*—T. E. STANTON, D.Sc.

Special facilities are offered in the way of College Scholarships and Engineering Works Scholarships, favourable arrangements being made with firms in or near Bristol for practical training to be obtained in works concurrently with the College Course.

Surveying, Field Work, and Geology form prominent features of the Civil Engineering Scheme.

A College Diploma is awarded to students who pass the qualifying Examinations.

The Institution of Civil Engineers accepts the Preliminary Certificate of the College in lieu of its Entrance Examination.

Sessional Courses are also organized for the Matriculation, Preliminary Scientific, Intermediate Arts, and Intermediate Science Examinations of the University of London, and for the B.A. and B.Sc. Degree work.

Composition fee for each Session 13 guineas. Registration fee 1 guinea.

The work of women students is under the supervision of a Lady Tutor.

Applications for vacancies in October to be made as early as possible to the SECRETARY, from whom prospectus and particulars of residence in Clifton may be obtained.

JAMES RAFTER, Secretary.

**HOME AND COLONIAL SCHOOL SOCIETY.**

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

**TRAINING COLLEGE FOR SECONDARY TEACHERS.**

HIGHBURY HILL HOUSE, LONDON, N.

*Principal*—The Rev. DAVID J. THOMAS, M.A.

*Vice-Principal*—MISS PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

**LONDON UNIVERSITY EXAMINATIONS.**



**SUMMER VACATION CLASSES FOR BEGINNERS**  
IN PRACTICAL CHEMISTRY, PHYSICS,  
BOTANY, AND ZOOLOGY.

These Classes commence Tuesday, Aug. 7th, 1900, at University Tutorial College, London, and meet daily for four weeks. The Chemistry, Botany, and Zoology Courses extend over four weeks, and the Physics Course over two weeks.

The subjects will be dealt with in a very elementary manner, and in Zoology and Botany the work at first will be taken very slowly, so that the student may acquire skill with the knife and microscope, and thus pursue his private work to greater advantage.

**Summer Vacation Revision Class for B.Sc.**

Classes are held in subjects for the B.Sc. Examination, Oct., 1900, commencing Tuesday, Aug. 7th, at University Tutorial College, London, and extending over a period of four weeks. Special attention is paid to practical work.

Daily Lectures, supplemented by Private Tuition or small Exercise Classes, are given in Pure and Mixed Mathematics, and the more important parts taken up in Zoology and Botany.

During the last two Sessions, nearly 300 students of University Tutorial College have passed the Prelim. Sci. (M.B.) and Inter-Science Examination of London University with 30 places in Honours, and 64 students have passed the B.Sc. Examination with 15 places in Honours.

Full particulars of classes may be had from

**THE VICE-PRINCIPAL,**  
University Tutorial College,  
32 Red Lion Square, Holborn, W.C.

**TALFOURD ELY, M.A., F.S.A.,**

Fellow of University College, London (late of the University of Berlin), Teaches and Lectures on Ancient Art and History, Classics, and English. Address—75 Parliament Hill, Hampstead, N.W.

**MR. H. A. NESBITT** (joint-author

of "The Science and Art of Arithmetic," by A. SONNENSCHN and H. A. NESBITT, M.A.) has a few hours at his disposal for Lessons in Ladies' Schools in Mathematics, History, and Literature. Mr. Nesbitt also gives Lectures on the Teaching of Arithmetic,—16 South Hill Park Gardens, Hampstead, N.W.

**MISS LOUISA DREWRY** gives

LECTURES, READINGS, and LESSONS in English Language and Literature and kindred subjects; examines; and helps Students by letter and in her Reading Society. Miss DREWRY has some leisure,—143 King Henry's Road, London, N.W.

**GYMNASTICS, HOCKEY, &c.**—

Miss SPENCER HARRY, Principal of West Norwood Gymnasium, is open to additional engagements, visiting in London or vicinity.—41 Binfield Road, Clapham, S.W.

**DANCING, DEPARTMENT, AND**

PHYSICAL EXERCISES.—Mr. and Mde. MARGUERITE ST. CLAIR attend high-class Schools (in London and the Country), for Instruction in all Ball Room and Fancy Dancing.—Greville House, 195 Isledon Road, London, N.

**PHYSICAL CULTURE.**—Miss

AMEE PHIPPS (niece of Miss Chreimann), ably assisted by Ladies of Miss Chreimann's staff, visits Schools for Scientific and Recreative Exercises. Special experience in Figure Training and Department.—39 York Place, Portman Square, W.

**UNIVERSITY MATRICULATION**

AND COLLEGE OF PRECEPTORS.—Mr. E. BAYNES BADCOCK, M.A., Sidney Sussex College, Cambridge (Senior Optime), prepares for Examinations privately and in Classes. One or two Boarders can be taken,—62 Warwick Gardens, Kensington, W.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A.

(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,  
BURLINGTON CLASSES,  
27 CHANCERY LANE, LONDON.

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS, SCIENCE, and PREL. SCI., B.A., and B.Sc. EXAMINATIONS. Day and Evening Classes. New Term in September and October.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, B.U.I., &c.

Papers Corrected for Schools. Private tuition for all Examinations. Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Phaedo," "Pro Planicio," &c.

**SUCCESSSES.**

1892-1900.—London Matric., 74; Inter. Arts, Sc., and Prel. Sci., 81, 6 in Hons.; B.Sc., 18'6-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**  
**M.A., 2 (1898 and 1899).**

**Diploma Correspondence College.**

The ONLY College that coaches SOLELY for

**A.C.P.,**

**L.C.P., AND F.C.P.**

SUCCESSSES: 145 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—  
**Dr. KNIFE, Dip. Corr. Coll., Fishponds, Bristol.**

HIGH SCHOOL, STAMFORD, NORTHANTS.

BOARDERS are received by the Headmistress, Miss L. M. MONRO. Separate cubicles. Terms on application.

**KING'S COLLEGE, LONDON.—**

FULL COURSES for MATRICULATED STUDENTS in Arts, Science, Engineering, Medicine, and Theology at composition fees, or students may attend the separate classes.

Preparation for all Examinations of the London University.

NEXT TERM commences Thursday, October 4.

There are a few vacancies for Resident Students. For prospectuses and all information apply to the SECRETARY, King's College, London, W.C.

**UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.**

(One of the constituent Colleges of the Univ. of Wales.)

**TRAINING DEPARTMENT FOR SECONDARY TEACHERS, MEN AND WOMEN.**

Recognized by the Cambridge Teachers' Training Syndicate.

Professor of the Theory, Practice, and History of Education—FOSTER WATSON, M.A. Lond.

Assistant-Lecturers—Miss C. P. TREMAIN, B.A.

Wales: D. R. HARRIS, B.A. Cantab. and Lond.

Preparation for (a) the Degrees in Arts and Science of the University of Wales, the curriculum for which includes the Theory and History of Education as an optional subject in the third year; (b) Cambridge Teachers' Certificate, Theory and Practice; (c) London University Teachers' Diploma; (d) College of Preceptors' Diplomas.

Composition Fee for the Session (including Lectures and Practice) £10.

Men Students reside in registered lodgings in the town, or at the Hostel for Men Students to be opened in October, 1900.

Women Students reside in the Hall of Residence for Women Students. Terms from 27 to 42 guineas.

For further particulars apply to  
**T. MORTIMER GREEN, Registrar.**

**UNIVERSITY COLLEGE, LONDON.**

**ENGINEERING AND ARCHITECTURAL DEPARTMENT.**

Assisted by Technical Education Board of London County Council and by the Carpenters' Company.

SESSION 1900-1901.

The Courses of Instruction in Mechanical, Civil, Municipal, and Electrical Engineering and Architecture commence on October 2nd. They are arranged to cover periods of two and three years.

Particulars of the Courses, of Entrance Scholarships, of the Matriculation Examination, and of the Fees, may be obtained from the SECRETARY.

**Professors.**

Mechanical Engineering . . . T. Hudson Beare, M.I.C.E.  
Electrical Engineering . . . J. A. Fleming, D.Sc., F.R.S.  
Municipal Engineering . . . Osbert Chadwick, M.I.C.E., C.M.G.

Civil Engineering . . . L. F. Vernon Harcourt, M.I.C.E.

Architecture . . . T. Roger Smith, F.R.I.B.A.

Physics . . . H. L. Callendar, F.R.S.

Chemistry . . . W. Ramsay, F.R.S.

Applied Mathematics . . . K. Pearson, F.R.S.

Economic Geology . . . T. G. Bonney, F.R.S.

Mathematics . . . M. J. M. Hill, F.R.S.

The New Wing of the College, opened by H.R.H. the Duke of Connaught in May, 1893, contains spacious Mechanical and Electrical Engineering Laboratories, Workshops, Drawing Office, Museum and Lecture Theatres. The Laboratories are fitted with all the best appliances for practical work and for research work of the most advanced character.

**WESTFIELD COLLEGE.**

FINCHLEY ROAD, HAMPSTEAD, N.W. TWO

ENTRANCE SCHOLARSHIPS, of the value of £45 and £50 a year for two years, will be offered for competition among women students at an Examination to be held on September 12 and 13. Candidates must have passed the Matriculation Examination of London University in Honours or in the First Division, and the successful competitors will be required to enter into residence in October next, and to read for the B.A. or B.Sc. Degree of London University. Further particulars and entrance forms may be obtained from the Secretary to the Council, Miss S. M. SMER.

**QUEEN'S COLLEGE, LONDON.—**

First-rate Education Free. The GOVERNESSES' BENEVOLENT INSTITUTION will shortly present FOUR FREE PUPILS to Queen's College or Queen's College School, for a period of four years.

Candidates must be daughters of officers, professional men, or gentlemen of equal position, between 14 and 18 years of age, in some measure dependent on a Governess relative.

Applications can be made at this office until August 18.

C. W. KLUGH,  
Secretary to the Governesses' Benevolent Institution,  
32 Sackville Street, W.

## ST. THOMAS'S HOSPITAL MEDICAL SCHOOL,

ALBERT EMBANKMENT, LONDON, S.E.

The WINTER SESSION of 1900-1901 will open on Tuesday, October 2, when the prizes will be distributed at 5 p.m. by Sir WILLIAM MACCORMAC, Bart., K.C.V.O., in the Governors' Hall.

Three Entrance Scholarships will be offered for competition in September, viz., one of £150 and one of £60, in Chemistry and Physics, with either Physiology, Botany, or Zoology, for First Year's Students; one of £50 in Anatomy, Physiology, Chemistry (any two) for Third Year's Students from the Universities.

Scholarships and Money Prizes of the value of £300 are awarded at the Sessional Examinations, as well as several Medals.

Special Classes are held throughout the year for the Preliminary Scientific and Intermediate M.B. Examinations of the University of London.

All Hospital Appointments are open to students without charge.

Club-rooms and an Athletic Ground are provided for students.

The School Buildings and the Hospital can be seen on application to the Medical Secretary.

The fees may be paid in one sum or by instalments. Entries may be made separately to Lectures or to Hospital Practice, and special arrangements are made for students entering from the Universities and for Qualified Practitioners.

A Register of approved lodgings is kept by the Medical Secretary, who also has a list of local Medical Practitioners, Clergymen, and others who receive students into their houses.

For Prospectus and all particulars apply to Mr. RENDLE, the Medical Secretary.

H. G. TURNEY, M.A., M.D. Oxon., *Dean*.

## CHARING CROSS HOSPITAL MEDICAL SCHOOL,

The WINTER SESSION, 1900-01, will commence on Tuesday, October 2nd, 1900, at 4 p.m., when LORD LISTER, President of the Royal Society, will deliver the Third biennial HUXLEY LECTURE.

The Livingstone Scholarship (100 guineas), the Huxley Scholarship (55 guineas), and six other Entrance Scholarships, total value £550, are awarded annually.

Two Scholarships of the value of 60 guineas each are reserved for Students of Oxford, Cambridge, or London University.

FEES.—For the five years' curriculum of study required by the various Examining Bodies and for hospital Practice, 110 guineas in one sum, or 121 guineas in five instalments.

The composition fee for sons of registered medical Practitioners is 100 guineas, and the fee by instalments 110 guineas in five payments.

The composition fee for Dental Students is 54 guineas, or 60 guineas payable in two instalments of 30 guineas each.

A proportionate reduction of the above Fees is made to Students who have completed part of the curriculum elsewhere.

CHARING CROSS HOSPITAL is within three minutes' walk of the Dental Hospital of London, and the hours of Lectures are arranged to suit the convenience of both General and Dental Students.

The Hospital and School are situated within two minutes of both Charing Cross Stations, and the Athletic Ground at Eltham can be reached within half an hour from Charing Cross.

**THE SCHOOL PROSPECTUS, containing full information concerning the classes, prizes, and all other arrangements connected with the Medical School, will be sent on application to the Dean, Chandos Street, Strand, W.C.**

H. MONTAGUE MURRAY, *Dean*.

## KING'S COLLEGE, LONDON, and KING'S COLLEGE HOSPITAL.

The WINTER SESSION will commence on October 1. SCHOLARSHIPS AND PRIZES.

At Entrance £500 is awarded annually, of which £150 is for Divinity, Classics, and Mathematics; £220 is for Science and Mathematics; £130 is for Science.

During the curriculum £300 is awarded annually in prizes and scholarships.

There are chambers and buttry for students at King's College, and an approved list is kept of medical men who receive students into their houses.

In addition to the regular courses of instruction for the University, and for the Conjoint Board Examinations, special classes have been organized for the London Matriculation, and for the Primary and Final Examinations for the F.R.C.S.

During the vacation extensive additions to the accommodation of the Departments of Anatomy and Physiology have been made.

Detailed information of Classes, Scholarships, Prizes, and other matters, may be found in the Prospectus, or may be obtained from the Sub-Dean or the Secretary by letter, or by interview at appointed hours.

ALFRED W. HUGHES, M.B., M.S., F.R.C.S., *Dean*.

RAYMOND CRAWFORD, M.A., M.D. Oxon., *Sub-Dean*.

M.R.C.P., *Sub-Dean*.

For Prospectus apply to the SECRETARY, King's College, Strand, W.C.

## GUY'S HOSPITAL MEDICAL SCHOOL.

The WINTER SESSION will begin on Monday, October 1st, 1900. Five Open ENTRANCE SCHOLARSHIPS of the combined value of £410 are offered for competition in September next, and numerous Prizes, Medals, and Scholarships are awarded annually. The COLLEGE accommodates 60 residents, and contains Reading Rooms, Dining Hall, and Gymnasium for the general use of the students. During last year more than 7500 patients have been treated in the Wards of the Hospital. The Preliminary Scientific Class for Students who matriculated at London University in July will begin on October 1st. The Clubs' Union Athletic Ground at Honor Oak Park is easily accessible from the Hospital. A handbook of information for students about to enter the profession will be forwarded on application. For further particulars, or Prospectus of the School, apply personally or by letter to the DEAN, Guy's Hospital, London Bridge, S.E.

## THE DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.

LEICESTER SQUARE.

The WINTER SESSION, 1900-1901, will commence on Monday, October 1st.

*Dental Anatomy and Physiology* (Human and Comparative)—CHARLES S. TOMES, F.R.S., M.A. Oxon., F.R.C.S., L.D.S., on Tuesdays and Thursdays at 5 p.m. (Summer). (Demonstrator—A. HOPEWELL SMITH, M.A., B.C. Cantab., F.R.C.S.)

*Dental Surgery and Pathology*—WILLIAM HERN, M.R.C.S., L.D.S., on Tuesdays and Fridays, at 8 a.m. (Summer). (Demonstrator—R. HERSCHELL, L.D.S.)

*Mechanical Dentistry*—E. LLOYD WILLIAMS, L.R.C.P., M.R.C.S., L.D.S., L.S.A., on Wednesdays at 5.30 p.m. (Winter).

*Metalurgy and its application to Dental Purposes*—Dr. FORSTER MORLEY, M.A., F.I.C., F.C.S., on Thursdays at 5 p.m. (Winter). (Demonstrator—PERCY RICHARDS, F.I.C., F.C.S.)

The Hospital is open both morning and afternoon. During the Sessions the Surgeons of the day will give demonstrations at stated hours.

The Medical Tutor holds classes before each Examination for the L.D.S.

The House Surgeons attend daily while the Hospital is open.

The Saunders Scholarship of £20 per annum and Prizes are open for competition.

Fee for two years' Hospital Practice required by the Curriculum, including Lectures, £50 in one payment, or 50 guineas in two yearly instalments. The Curriculum requires two years to be passed at a General Hospital. The fee for this is about £55. Both Hospitals can be attended simultaneously.

The fee for three years' Tuition in Mechanical Dentistry is 150 guineas.

The Calendar and further particulars will be sent on application to the DEAN.

MORTON SMALE, *Dean*.

## ROYAL COLLEGES OF SURGEONS AND PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Copies of Regulations for the Triple Qualification of this Board (L.R.C.S.E., L.R.C.P.E., and L.P.P. & S.G.), containing dates of Professional Examinations for year 1900-1901, Curriculum, &c., may be had on application to JAMES ROBERTSON, Solicitor, 48 George Square, Edinburgh, Inspector and Treasurer for Edinburgh; or from ALEXANDER DUNCAN, B.A., LL.D., Faculty Hall, 242 St. Vincent Street, Glasgow, Inspector and Treasurer for Glasgow. In applying for copies, please state the date of commencement of medical study.

## ST. MARY'S HOSPITAL MEDICAL SCHOOL, PADDINGTON, W.

The WINTER SESSION will commence on October 1st, with an Introductory Lecture by H. S. COLLIER, Esq., F.R.C.S.

The HOSPITAL is in close proximity to Paddington Station, Great Western Railway; to the terminus of the Great Central Railway; and to several stations of the Metropolitan, District, and Central London Railways. The Medical School provides complete preparation for the Degrees of the Universities and other Higher Examinations. The Hospital affords every facility for clinical work in all branches of Medicine and Surgery, and in the various Special Departments. A register of residences for students in the vicinity of the Hospital is kept in the office of the Medical School.

ENTRANCE SCHOLARSHIPS IN NATURAL SCIENCE.—One of £145, two of £78. 15s., one of £52. 10s., two of £57. 15s. (open to students from Oxford and Cambridge) are awarded annually by Examination in September.

IMPROVED LABORATORIES.—The Physiological Laboratories have been further extended, and a special Physiological Lecture Room, adapted for advanced Practical Classes, has been added. A complete re-organization of the Pathological Department has taken place, including the provision of new Laboratories for Pathology and Bacteriology; a new Laboratory Class Room, fitted with electric light and every modern improvement, for Practical Classes in these subjects; and a new Museum. The Chemical Laboratory has been extended, and a Special Laboratory for Public Health Courses and for the study of Pathological Chemistry has been added.

SPECIAL TUITION.—In addition to systematic Courses of Lectures and Demonstrations, special tuition is provided for the Intermediate and Final M.B. Examinations of the Universities of Oxford, Cambridge, and London without additional fees.

CLINICAL APPOINTMENTS.—The numerous Clinical Appointments in the Hospital are free to all students, and the Resident Medical Officers are appointed by competitive Examination. Of the latter, eighteen are appointed annually.

NEW OUT-PATIENTS' DEPARTMENT.—The New Out-patients' Department in the Clarence Wing, with its extensive accommodation and modern equipment, possesses exceptional advantages for clinical work.

PRELIMINARY SCIENTIFIC COURSE.—Special Classes, including Lectures and Laboratory work, are held throughout the year.

For Calendar apply to the SCHOOL SECRETARY.

## THE LONDON HOSPITAL MEDICAL COLLEGE.

The WINTER SESSION commences on October 2nd. The Annual Dinner will be held in the College Library on Monday, October 1st, Dr. GILBERT SMITH in the Chair.

The Hospital is the largest in the Kingdom; nearly 800 beds are in constant use, and no beds are closed. Being the only general hospital for East London—i.e., for a million and a half people—the practice is immense. In-patients last year, 13,234; out-patients, 189,638; accidents, 20,068; major operations, 2,508.

APPOINTMENTS.—Owing to the enormous number of patients, more Appointments, salaried and resident, are open to students than at any other hospital. Sixty qualified Appointments are made annually, and more than 150 Dressers, Clinical Clerks, &c., appointed every three months. All are free to students of the College. Holders of Resident Appointments have free board.

SCHOLARSHIPS AND PRIZES.—Thirty-four Scholarships and Prizes are given annually. SEVEN ENTRANCE SCHOLARSHIPS will be offered in September.

Special Classes are held for the University of London and other Higher Examinations. Special entries for Medical and Surgical Practice can be made. Qualified Practitioners will find excellent opportunities for studying the rarest diseases.

A reduction of 15 guineas is made to the sons of members of the profession.

ENLARGEMENT OF THE COLLEGE.—The New Laboratories and Class Rooms for Bacteriology, Public Health, Operative Surgery, Chemistry, Biology, &c., and the New Clubs Union Rooms are now in full use.

The Clubs Union Athletic Ground is within easy reach of the Hospital.

Luncheons and dinners at moderate charges can be obtained at the Students' Club.

The Metropolitan and other Railways have stations close to the Hospital and College.

For prospectus and information as to residence, &c., apply, personally or by letter, to

Mile End, E. MUNRO SCOTT, *Warden*.

## ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

The WINTER SESSION will begin on Monday, October 1st, 1900.

Students can reside in the College within the Hospital walls subject to the collegiate regulations.

The Hospital contains a service of 750 beds.

Scholarships and prizes of the aggregate value of nearly £900 are awarded annually.

The Medical School contains large Lecture Rooms and well-appointed Laboratories for practical teaching, as well as Dissecting Rooms, Museum, Library, &c.

The Amalgamated Clubs Ground (ten acres) is at Winchmore Hill, within easy reach of the Hospital.

For further particulars apply personally or by letter to the WARDEN of the College, St. Bartholomew's Hospital, E.C. A handbook forwarded on application.

## EXCEPTIONAL OPENING FOR A BOARDING SCHOOL.—BROADSTAIRS.—

A pair of handsome Queen Anne Houses, each 12 rooms, besides baths and all modern appliances. Sanitation, gas and water supply perfect. Garden, with spacious open fields in the rear. Half-way between Town and North Foreland. Facing the Sea and East Esplanade, and two minutes' walk from the Beach. On Lease at £120 per annum; or Freehold, £2,000, of which half can remain. Separate Class-room, 22 ft. square, convertible. (Photo.) \* \* \* Each House can be let during the Season at Seven Guineas per week.—THOMAS LAURIE, 13 Paternoster Row, E.C.

**THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.**

The WINTER SESSION, 1900-1901, will commence on Monday, October 1st.

Two Entrance Scholarships (value £100 and £60) will be competed for September 25th, 26th, and 27th.

One Entrance Scholarship (value £60), open to students of the Universities of Oxford and Cambridge will be competed for on September 25th and 26th. Notice in writing to be sent to the Dean on or before September 18th.

There are annually eighteen Resident Hospital Appointments open to Students without extra fee.

Composition Fee for general Students for whole Medical Curriculum 135 guineas; for Dental Students, 54 guineas.

Special terms in favour of University Students who have commenced their medical studies, and of University of London Students who have passed Prelim. Sci.

The Residential College adjoins the Hospital, and provides accommodation for thirty students.

Prospectuses and all particulars may be obtained from  
W. PASTEUR, M.D., Dean.

**ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.**

Principal—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

**THE ANSTAY PHYSICAL TRAINING COLLEGE**

OFFERS a professional Training in Swedish Gymnastics (both educational and medical) to Ladies of good education.

The Course begins in September, and lasts two years. Age of admission, 18 to 30. The work is particularly interesting and healthful, and is remunerative, there being more openings for trained teachers than can be filled.

Apply, for illustrated prospectus, to THE PRINCIPAL, The Leasowes, near Halesowen, Worcestershire.

**ENGINEERING AND CHEMISTRY.**

**CITY AND GUILDS OF LONDON INSTITUTE.**

SESSION 1900-1901.

The Courses of Instruction at the Institute's CENTRAL COLLEGE (Exhibition Road) are for Students not under 16 years of age; those at the Institute's TECHNICAL COLLEGE, FINSBURY, for Students not under 14 years of age. The Entrance Examinations to both Colleges are held in September, and the Sessions commence in October. Particulars of the Entrance Examinations, Scholarships, Fees, and Courses of Study, may be obtained from the respective Colleges, or from the Head Office of the Institute, Gresham College, Basinghall Street, E.C.

**CITY AND GUILDS CENTRAL TECHNICAL COLLEGE.**

(EXHIBITION ROAD, S.W.)

A College for higher Technical Instruction for Day Students not under 16 preparing to become Civil, Mechanical, or Electrical Engineers, Chemical and other Manufacturers, and Teachers. Fee for a full Associate-ship Course, £25 per Session. Professors:—

Civil and Mechanical Engineering—W. C. UNWIN, F.R.S., M.Inst.C.E.

Electrical Engineering—W. E. AYRTON, F.R.S., Past Pres. Inst. E.E.

Chemistry—H. E. ARMSTRONG, Ph.D., LL.D., F.R.S.

Mechanics and Mathematics—O. HENRICI, Ph.D., LL.D., F.R.S.

**CITY AND GUILDS TECHNICAL COLLEGE, FINSBURY.**

(LEONARD STREET, CITY ROAD, E.C.)

A College for Intermediate Instruction for Day Students not under 14, preparing to enter Engineering and Chemical Industries, and for Evening Students. Fees, £15 per Session for Day Students. Professors:—

Physics and Electrical Engineering—S. P. THOMPSON, D.Sc., F.R.S., Principal of the College.

Mechanical Engineering and Mathematics—W. E. DALBY, M.A., B.Sc., M. Inst. C.E.

Chemistry—E. MELDOLA, F.R.S., F.I.C.

JOHN WATNEY, Hon. Secretary,  
City and Guilds of London Institute,  
Gresham College, Basinghall Street, E.C.

**JOINT AGENCY FOR WOMEN TEACHERS.**

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

**JOINT AGENCY FOR ASSISTANT-MASTERS.**

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c. &c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

**SESAME HOUSE FOR HOME-LIFE TRAINING.**

43A ACACIA ROAD, N.W.

Established on the lines of the Pestalozzi-Froebel House at Berlin, and managed by a committee appointed by the Sesame Club. In connexion with their practical work with the children, the Students learn the Theory and History of Education, the Development of the Child, Natural Science, Simple Gardening, Hygiene, Household Management, Kindergarten Games and Occupations, &c.

Primary Course £6. 6s. per term. Higher Course £8. 8s. per term. Board and Residence £1. 1s. per week.

Ladies desirous of engaging certificated lady-nurses for their children are invited to apply before the end of each term.

For full particulars apply to the Principal—Miss SCHEPEL.

**A BERDARE HALL, CARDIFF.—**

RESIDENCE FOR WOMEN STUDENTS OF THE UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

Principal—Miss KATE HURLBATT.

Fees 30 guineas and 40 guineas per annum. College tuition fees £10 per annum. Scholarships of £35, £25, and £20, and Exhibitions of £10, will be obtainable on result of Scholarship Examination to be held September. A Medical School and Department for Secondary and Elementary Training are attached to the College. Apply to the PRINCIPAL.

**SEATON, DEVON (Seaside), SCHOOL FOR GIRLS.**

Pupils under 12 years of age, £36 a year.

Pupils from 12 to 16, £46 a year.

Pupils over 16, £56 a year.

No extras. Resident Governesses.

Drawing, Painting, and Music taught by Visiting Masters.

Apply to the Principal, Miss MARY GROVER, Seaton, Devon.

**SCHOOL TRANSFERS.**

The Scholastic, Clerical, and Medical Association (Limited),

8 LANCASTER PLACE, STRAND, W.C.,

undertakes the Transfer of Schools and the Negotiation of Partnerships.

For particulars as to terms, &c., apply to the Manager,

R. J. BEEVOR, M.A.,

8 Lancaster Place, Strand.

Telegraphic Address—"Triform, London."  
Telephone No. 1854 (Gerrard).

**THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.**

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

**TRINITY COLLEGE, LONDON.**

(Inst. 1872.)

President—

THE RIGHT HON. LORD COLERIDGE, M.A., Q.C.

Warden—EDMUND H. TURPIN, Mus.D.

Michaelmas Term commences Tuesday, September 25, when the individual tuition in all Practical and Theoretical Musical Subjects, as well as Class Tuition in the Theory and History of Music, during the day and evening, to professional and amateur students, will be resumed.

Lessons in the Theory and History of Music will also continue to be given by correspondence.

The College Choir, conducted by Dr. H. T. PRINGUER, is open to non-students, and meets on Tuesdays at 5.

The Orchestra meets on Mondays at 4.30 p.m.

Prospectus and Students' entry form on application.

By Order,  
SHELLEY FISHER, Secretary.

Mandeville Place, Manchester Square, W.

**KELLAND TRAINING COLLEGE FOR TEACHERS, LEICESTER.**

Principals—Miss MORGAN, N.F.U. (Higher),  
Miss J. MORGAN, B.A. (Lond.).

Preparation for the National Froebel Union Certificates. Cambridge Teacher's Diploma. Entrance Scholarships. Grounds comprise Tennis Court, Croquet Lawn, &c. STUDENT-TEACHER required for September 18th. Premium 25 guineas.

**SCHOOL BOARD FOR LONDON.**

The Board are about appoint an ORGANIZER OF HOUSEHOLD MANAGEMENT upon a scale of £250, rising by £5 annual increases to £300 per annum, together with £50 per annum for travelling expenses. The duties of such officer will be to organize and supervise the work of the School Board for London in the subjects of instruction, Cookery, Housewifery, and Laundry-work, under the new Code of the Board of Education. Applicants must apply on the proper form, to be obtained at the Head Office, and must report any certificates that they possess in connexion with the teaching of Cookery, Housewifery, Laundry-work, or Domestic Economy, and any other educational qualifications, including certificates of the Science and Art Department. They should also state what has been their experience in connexion with the supervision and teaching of domestic subjects. Applications must be sent in not later than the 25th August, 1900, addressed to the CLERK OF THE BOARD, School Board for London, Victoria Embankment, W.C., marked outside "Household Management."

FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**  
BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

281 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1899, 56 with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P.**, **L.C.P.**, and **F.C.P.**

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.

## HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

## OXFORD LOCAL SHAKESPEARE, 1901.

DINGLEWOOD SHAKESPEARE MANUALS, BY STANLEY WOOD, M.A.

**HENRY THE FIFTH, QUESTIONS AND NOTES. 1s.**

"A little brochure of some fifty pages, which will suggest some useful thoughts to masters teaching the play."—*Journal of Education*.

**MERCHANT OF VENICE, QUESTIONS AND NOTES. 1s.**

"Cannot but prove useful to candidates for whom these plays are set."—*Scotsman*.

## CAMBRIDGE LOCAL SHAKESPEARE, 1900.

**AS YOU LIKE IT, QUESTIONS AND NOTES. 1s.**

"They will tend rather to discourage 'cram' than otherwise. . . . We can recommend the book as a distinctly useful 'aid.'"—*Guardian*.

Each of the Manuals contains about 250 Questions, of which all the most difficult (about one-third of the whole number) are fully answered as models.

JOHN HEYWOOD, LONDON AND MANCHESTER.

OLAPHAM HIGH SCHOOL FOR GIRLS,  
G.P.D.S.C.

**THE LONDON INSTITUTE FOR THE ADVANCEMENT OF PLAIN NEEDLEWORK** will grant a Certificate showing that Candidates have passed an Examination in the Theory and Practice of Needlework Teaching.

Miss SACH, Diplômée of the London Institute for the Advancement of Plain Needlework (gold seal) will conduct a Year's Course for Kindergarten Students Lower School Mistresses, and others, in preparation for the above, beginning September 26th. Fee for the Year's Course £1. 1s. Further particulars may be obtained from Mrs. WOODHOUSE, 63 South Side, Clapham Common.

**ARMY SCHOOLMASTERS.**—There are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Board of Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

**WANTED (B.Sc. Durham) Engage-**ment as VISITING MISTRESS to teach Botany, Zoology, or Physics. Coaching by Correspondence. Near Newcastle. Apply to—C. HEPPLÉ, B.Sc., 8 Spring Terrace, North Shields.

**THE Behnke Method of Voice** Training for Speakers, Singers, and Stammerers. Apply to Mrs. EMIL BEHNKE, 18 Earl's Court Square, London.

"Pre-eminent success."—*Times*.

"Highly successful methods."—*Medical Times*.

"I have confidence in advising speech sufferers to place themselves under the instruction of Mrs. Behnke."—Editor, *Medical Times*.

"Mrs. Behnke is well known as a most excellent teacher upon thoroughly philosophical principles."—*Lancet*.

*Small Classes for Voice Training for Teachers and others.*

"STAMMERING," 1s., post free.

**ASPIRANT.**—College of Preceptors, Matriculation, Civil Service, and all Students should read the *Aspirant*, a Weekly Journal, Review, and Catalogue of these and all Examinations. No student who requires coaching up for his examination should be without the coaching which is afforded by this Journal. Numerous testimonials from subscribers and readers. A Subscriber says: "I have received more benefit, for the price of 1d. weekly, from your Coaching Journal than I did for 30s. for a course of tuition under a certain tutor." Saturdays, 1d. Bo. 11, Lavender Hill, London, S.W.

AUGUST NUMBER NOW READY.

## THE SCHOOL WORLD.

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE SIXPENCE. Annual Subscription, including postage, 8s. net.

### LEADING CONTENTS.

**MANUAL INSTRUCTION IN WOODWORK.** (Illustrated.) By A. GODFREY DAY, A.M.I.M.E.—**A CHAT ABOUT HEADMASTERS.** By the Rev. CANON FOWLER, M.A.—**PRACTICAL SOLID GEOMETRY.** By Prof. G. B. MATHEWS, M.A., F.R.S.—**SOME CENTURY-ENDS.** By C. S. FEARENSIDE, M.A.—**OBSERVATIONAL ASTRONOMY. A Series of Notes upon the Positions and Apparent Motions of Celestial Bodies.** (Illustrated.) By Prof. R. A. GREGORY, F.R.A.S.—**THE SOCIAL STATUS OF WOMEN SCHOOL-TEACHERS.** By CAMILLA JEBB.—**PRACTICAL WORK IN PHYSICAL GEOGRAPHY. Experiments and Observations for the New Schedule of the Cambridge Junior Local Examination.** (Illustrated.) By Dr. A. J. HERBERTSON, F.R.G.S.

MACMILLAN & CO., LTD., LONDON.

Headmasters should apply for

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

## DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

Gold Medals,  
Paris, 1878,  
1889.

# JOSEPH GILLOTT'S

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping) 659 (Drawing);  
& (for Vertical Writing) 1045, 1046.

# STEEL PENS.

**ST. ANNE'S-ON-SEA.—BOARDING** SCHOOL, fronting Promenade Gardens (near pier) to be Let Unfurnished. Rent £95. First-class Health Resort. Further particulars from Mr. W. WHITTINGHAM, 28 South Drive, St. Anne's-on-Sea.

**SCHOOL APPOINTMENTS.**—Principals and Assistants are requested to kindly state their requirements to the SECRETARY, M. C. M. AND SCHOLASTIC ASSOCIATION, LTD., 8 King Street, Manchester.

## EPPS'S COCOA.

GRATEFUL. COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 4-lb. and 1-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homœopathic Chemists, London.

BREAKFAST. SUPPER.

## EPPS'S COCOA.

Digitized by Google



**New.**

**New.**

# GILL'S "CARTOGRAPHIC" WALL MAPS FOR SECONDARY SCHOOLS.

*Edited by GEORGE GILL, F.R.G.S.*

Size,  
80 x 60 in.

NOT OVER-CROWDED, NOT UNDER-SIZED, BUT BOLD AND CLEAR.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Price 16s.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

\*ENGLAND AND WALES.  
\*SCOTLAND.

\*IRELAND.  
\*EUROPE.

INDIA.  
\*AFRICA.

ASIA.  
\*N. AMERICA.

\* The Set Geography for the Local Examinations.

## Class Text-Books for the Examinations in 1900.

<b>GEOGRAPHY.</b>	<i>s. d.</i>	<b>ENGLISH AND ENGLISH GRAMMAR.</b>	<i>s. d.</i>
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition	4 6	Shakespeare, As You Like It. Second Edition ( <i>in the press</i> ). Edited by the Rev. F. MARSHALL, M.A. Most suitable for Junior Students	1 6
Physical, Descriptive, Political, Industrial, Commercial, Social.		Macaulay, Lays of Ancient Rome. By the Rev. G. PRESTON, M.A.	1 6
<i>Also published in Sections as follows:—</i>			
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section II. British Isles. 1s. 6d.—Section III. Asia, Africa, America, and Australasia. 2s. 6d.—Section IV. Asia. 1s.—Section V. Africa. 1s.—Section VI. America. 1s. 6d.—Section VII. Australasia. 9d.		Scott, Marmion. Edited by the Rev. F. MARSHALL, M.A., and similar to the above. Containing Introduction, Text, Appendix, Notes, and Maps. ( <i>In the press</i> )	2 6
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes. New edition	2 6	The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A.	1 0
The O. and C. Geography (Revised Edition). By GEORGE GILL. With numerous Coloured Maps	1 0	Preparation Papers in English Grammar. By the Rev. G. PRESTON, M.A. Per packet	0 8
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms)	1 0	Exercises in Composition, Dictation, and Letter Writing	1 0
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies	2 6	The O. and C. Spelling Book	1 0
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps	1 0	2,345 Words	0 2
<b>MATHEMATICS AND ARITHMETIC.</b>			
Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A.	2 6	<b>RELIGIOUS KNOWLEDGE.</b>	
Marshall's Examination Euclid. Books I.-IV.	1 0	Marshall's St. Luke. Edited by the Rev. F. MARSHALL, M.A.	1 6
The O. and C. Algebra	1 6	Marshall's Acts of the Apostles (complete)	2 6
Preparation Papers in Algebra. By A. CUDWORTH, M.A.	0 8	Marshall's Acts of the Apostles. Part II.: Chapters XIII.-end	1 6
The O. and C. "Practical Arithmetic." 176 pp., crown 8vo (New Edition), cloth, enlarged. (With Answers, 1s. 6d.)	1 0	Church Catechism. With Notes. By the same Author	1 6
The O. and C. "Tests in Arithmetic." (With Answers, 1s. 6d.)	1 0	The O. and C. Genesis	1 0
A Graduated Examination Arithmetic. 160 pp., cloth	1 0	The Preparation Papers on St. Luke and the Acts of the Apostles are now ready. Per packet	0 8
The Metric System, Practical Guide to. Containing Appendix, &c.	0 2	<b>LATIN AND FRENCH. s. d.</b>	
The Metric Chart (60 by 40). In Four Tints, mounted and varnished	10 6	The O. and C. Latin, Part I. (Accidence)	1 0
The Long Tot Book. By the Rev. CHARLES BROOKE, M.A.	0 3	The O. and C. Latin, Part II. (Exercises)	1 0
The Cross Tot Book. By the Rev. CHARLES BROOKE, M.A.	0 3	The O. and C. Latin, Part III. (Translations)	1 0
Cambridge Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per pkt.	0 8	Commercial French Correspondence	1 0
<b>BOOK-KEEPING.</b>			
Sarill's Practical Book-keeping. 128 pp., cloth	1 0	The O. and C. French, Part I.	1 0
An Elementary Text-Book, illustrating the arrangement of the Bought, Sales, Cash, Bill Books, and Ledger: consisting of Graduated Exercises, followed by Examination Papers set by the College of Preceptors, accompanied by <i>full-worked</i> and <i>outline keys</i> .		The O. and C. French, Part II.	1 0
Sarill's Double-Entry Book-keeping. 256 pp., cloth	2 0	Phœdrus, Books I. and II.	1 0
Sarill's Exercises in Double-Entry Book-keeping. 128 pp., cloth	1 0	Eutropius, Books I. and II.	1 0
The above with <i>all</i> introductory matter, <i>full</i> explanations, <i>outline keys</i> , &c.		Cæsar, Book VI.	1 0
Manuscript Books published to accompany the above.		Vergil, Æneid, Book VI.	1 0
For Practical:—Cash Book	5d.	Cicero, De Senectute	1 0
Ledger (100 Accounts)	7d.	Preparation Papers in French	0 8
For Double Entry:—Journal	5d.	Preparation Papers in Latin	0 8
Short and Introductory Exercises	7d.	<b>MUSIC.</b>	
Key to Double-Entry Book-keeping	3 0	Theory of Music, Part I.	1 0
Key to Practical Book-keeping	2 0	Theory of Music, Part II.	1 0
		Imperial Theory of Music	2 6
		<b>NATURAL SCIENCE.</b>	
		Physical Measurements	2 6
		or in Three Parts	each 0 9
		Elementary Physics	2 6
		Applied Mechanics	2 6
		Mechanics of Solids	2 0
		Mechanics of Fluids	2 0
		Magnetism and Electricity	2 6
		Physiological Charts. Set of Three	21 0
		Elementary Chemistry	2 6
		Chemical Laws and Problems	2 6
		Chemistry of Common Objects	2 6
		Chemistry Notes	1 0
		<b>DRAWING.</b>	
		Science and Art Geometry, Part I.	1 4
		Science and Art Geometry, Part II.	1 4
		The School of Art Geometry	1 0
		New Government Drawing Copies, per packet	1 4
		South Kensington Demonstration Sheets, the set	15 0

# GILL'S MILITARY DRILL.

ARRANGED IN FOUR PARTS.

2/6 Part I.—Squad Drill. Part II.—Company Drill. Part III.—Bayonet Exercise. 2/6  
Part IV.—Manual Exercise for Rifle, and Bayonet Exercise.

WITH CHORAL MARCHES EASILY AND SIMPLY ARRANGED.

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens of Class Text-Books only will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# MESSRS. BELL'S NEW BOOKS.

## BELL'S SCIENCE SERIES.

New Volumes. Crown 8vo.

- THE STUDENT'S DYNAMICS.** Comprising Statics and Kinetics. By G. M. MINCHIN, M.A., F.R.S. Professor of Applied Mathematics in the Royal Indian Engineering College, Cooper's Hill. Crown 8vo, 3s. 6d.
- AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE ANATOMY OF ANIMALS.** By GILBERT C. BOURNE, M.A., F.L.S., Fellow and Tutor of New College, Oxford; University Lecturer in Comparative Anatomy. Vol. I.—Animal Organization. The Protozoa and Coelenterata. Crown 8vo, 288 pages, 4s. 6d.

## BELL'S ILLUSTRATED CLASSICS.

New Volumes. Pott 8vo, with or without Vocabularies, 1s. 6d. each.

- VIRGIL'S ÆNEID.** Selections from Books VII.—XII. Edited by W. G. COAST, B.A., Assistant-Master at Fettes College.
- VIRGIL'S ÆNEID.** Book VI. Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley.
- HORACE—ODES.** Book III. Edited by H. LATTEK, M.A., Assistant-Master at Cheltenham College.
- OID.—TRISTIA.** Book III. Edited by H. R. WOOLRYCH, M.A., Headmaster of Blackheath School.
- XENOPHON'S ANABASIS.** Book I. Edited by E. C. MARCHANT, M.A.

## INTERMEDIATE SERIES.

With Numerous Illustrations and Maps. Crown 8vo.

- SOPHOCLES.—ANTIGONE.** Edited, with Introduction and Notes, by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School. With numerous Illustrations. 3s. 6d.
- Crown 8vo, 3s. 6d.
- ESSAYS AND ESSAY WRITING FOR PUBLIC EXAMINATIONS.** By A. W. READY, B.A., Army and University Tutor, formerly Scholar of Wadham College, Oxford.

## BOOKS FOR SPECIAL EXAMINATIONS.

### UNIVERSITY OF LONDON, 1901.

*Matriculation (January and June, 1901).*

- VIRGIL'S ÆNEID.** Book II. Edited by L. D. WAINWRIGHT, M.A. With Illustrations. Pott 8vo, with or without Vocabulary, 1s. 6d.
- VIRGIL'S ÆNEID.** Books I. and II. CONINGTON'S Edition, Abridged. 1s. 6d.
- VIRGIL'S ÆNEID.** Books I. and II. Translated by A. HAMILTON BRYCE, LL.D. 1s.
- VIRGIL.** Text only, Complete. Edited by CONINGTON. 2s.
- ÆSCHYLUS.—PROMETHEUS VINCTUS.** Edited by F. A. PALEY, LL.D. 1s. 6d.
- SALLUST.—CATILINE.** With Notes by the late GEORGE LONG. New and Revised Edition. By J. G. FRASER, M.A. Trinity College, Cambridge. 2s.

### OXFORD LOCAL EXAMINATIONS, 1901.

- CÆSAR.** Book VI. Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. With Two Maps and Twenty-two Illustrations. With or without Vocabulary. 1s. 6d.
- CÆSAR.** Books VI. and VII. With Notes by GEORGE LONG, M.A. 1s. 6d.
- CÆSAR.** Books V.—VII. Translated by W. A. McDEVITT, B.A. 1s.
- CÆSAR.** Complete Text only. Edited by GEORGE LONG, M.A. 1s. 6d.
- VIRGIL'S ÆNEID.** Book I. Edited by the Rev. E. H. S. ESCOTT, Assistant-Master at Dulwich College. With Two Maps and Twenty-two Illustrations. With or without Vocabulary. 1s. 6d.
- VIRGIL'S ÆNEID.** Books I. and II. CONINGTON'S Edition, Abridged. 1s. 6d.
- VIRGIL'S ÆNEID.** Books I. and II. Translated by A. HAMILTON BRYCE, LL.D. 1s.
- VIRGIL.** Complete Text only. By J. CONINGTON, M.A. 2s.
- XENOPHON'S ANABASIS.** Books I. and II. Edited by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School. With Coloured Map and Plans and Illustrations. With or without Vocabulary. 1s. 6d. each.
- SOPHOCLES.—ANTIGONE.** Edited by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School. With numerous Illustrations. Crown 8vo, 3s. 6d.
- SOPHOCLES.—ANTIGONE.** Translated by E. P. COLERIDGE, M.A. 1s.
- SOPHOCLES.** Complete Text only. By F. A. PALEY, M.A. 2s. 6d.
- NOTES ON SHAKESPEARE'S HENRY V.** By T. DUFF BARNETT, B.A. 1s.
- NOTES ON SHAKESPEARE'S MERCHANT OF VENICE.** By T. DUFF BARNETT, B.A. 1s.
- BYRON'S CHILDE HAROLD.** Cantos III. and IV. With Introduction and Notes. By H. G. KENN, M.A., C.I.E. Sewed, 1s. 9d.

London: GEORGE BELL & SONS, York Street, Covent Garden.

## A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd. ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

## THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

### REVIEWS I—

*Saturday Review.*—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."

*Daily Telegraph.*—"Julius Cæsar" "... is invaluable as an aid to the study of the play."

*South Africa.*—"What a handy 'book of the play' they form!"

*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."

*Athenæum.*—"Essentially books for students."

*Educational News.*—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

*AS YOU LIKE IT ... ..	2 0
*CORIOLANUS ... ..	2 6
*HAMLET ... ..	2 6
*HENRY V. ... ..	2 6
*JULIUS CÆSAR ... ..	2 0
*KING JOHN ... ..	2 0
*KING LEAR ... ..	2 0
*MACBETH ... ..	1 6
*MERCHANT OF VENICE ... ..	1 6
*MIDSUMMER NIGHT'S DREAM ... ..	2 0
*RICHARD THE SECOND ... ..	1 6
*TEMPEST ... ..	2 0
*TWELFTH NIGHT ... ..	1 6

\* For Current Examinations.

## BACON.

*Schoolmaster.*—"The edition will stand as an exemplar." s. d.

**BACON'S ESSAYS. Part 1** ... .. 2 6

Essays I.—XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

## MILTON.

*Practical Teacher.*—"Marked by those features of almost exhaustive annotation." s. d.

\*PARADISE LOST. Books 1 and 2. (Just published.) 2 0

\*SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENNEROSO 1 4

\* For Current Examinations.

## SCRIPTURE.

Edited by B. J. WOOD, B.A.

*Educational Times.*—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

## FRENCH.

**FRENCH COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

## GERMAN.

**GERMAN COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

Type in German character.  
*Educational Times.*—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

## MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director. Works: Johnson's Court, Fleet Street.

CONTENTS.

	Page		Page
A Bill and a Committee.....	303	The Latter End of Assistant Mastering .....	317
Useful Evidence .....	304	Reviews.....	318
Notes .....	304	Our Best Book of Reference ; Greek Education ; School Geographies ; Hellenica ; Ruskin ; a French Glossary.	
Summary of the Month .....	306	General Notices .....	321
Half-yearly General Meeting of the College of Preceptors ...	308	Correspondence .....	323
The Consultative Committee .....	310	Cambridge University Extension Summer Meeting ; St. Paul's School ; London Inter. Arts.	
A Symposium on Education .....	311	Adjourned Meeting of the Council of the College of Preceptors	323
Forecasts and Comments :—Fixtures .....	313	Teachers' Diploma Examination.—Pass List.....	324
Education Gossip .....	313	Mathematics.....	325
Appointments and Vacancies.....	314	List of Candidates who have passed the Midsummer Certificate and Junior Forms Examinations of the College of Preceptors .....	333
Literary Gossip.....	315		
The Greek Play at Bradfield. By E. C. Marchant, M.A. ....	284		
John Webster. By Professor Foster Watson .....	316		

The Educational Times.

*A Bill and a Committee.*

THE Government Bill "to make better provision for enabling County Councils and other Local Authorities to aid forms of Education not being Elementary," and the Order in Council establishing "a Consultative Committee of the Board of Education," were both circulated in the closing days of June. The result was that we were able to do no more, in our July number, than mention the introduction of the Bill, whilst the list of the Committee would be in the hands of our readers on the same day as our article lamenting the prolonged delay in its appearance. Perhaps most of our readers, when they saw the list, were disposed to wish that the delay had been further prolonged. It is not an ideal list, and the pity of it is that such a little more would have sufficed to make it excellent. The President of the Board of Education appears to have consulted his official advisers and relied on his own judgment; and we readily admit that five-sixths of the names on the Committee agree pretty closely with what we should expect as the outcome of an open vote of teachers and parents, of the professional organizations and the bodies which administer education.

The organized professional and administrative bodies were not consulted—the Duke of Devonshire did not think that it was his duty to take this means of securing an even representation of the interests and authorities concerned in education. He may have been right in taking this view of his duty, and at any rate he is the person mainly responsible under the Act. The odd thing is that his list has been criticized because it does, in many respects, appear to represent the various bodies and organizations, and does not, in the opinion of these critics, include a sufficient number of detached and uncommitted personal judgments. Others, again, have urged that technology, and the important interests of technical institutions and schools—with which the Duke of Devonshire is known to be in close and warm sympathy—are inadequately represented. The Universities might well have spared a place on the Committee for a prominent technologist.

Our own criticism is more definite and specific; and we urge it with the greater freedom because we consider the list decidedly strong in all but one particular. If the Consultative Committee is to be representative in any sense of the word—

representing all interests because it has to deal with all interests, and specially representative of interests with which it is specially enjoined by Parliament to deal—then there is a strange and inexplicable gap in its constitution. Of the eighteen members of the Committee, not one is associated or concerned with private or unendowed secondary education. Mr. Acland, Sir W. Hart Dyke, and Mr. Hobhouse are, or have been, in the public service. Dean Maclure, Archdeacon Sandford, and Dr. Waller are concerned in the administration or management of schools chiefly elementary. Mr. Gray is a spokesman of the elementary teachers in the House of Commons. Miss Manley is the principal of a training college for elementary teachers. The remaining ten hold appointments in endowed Universities, colleges, or schools. Not one can be regarded as representing, or as specially qualified to speak on behalf of, the distinct majority of secondary teachers.

Why this marked exclusion? We do not for a moment imagine that it was intentional, because it is so precisely calculated to defeat the objects of the Board of Education Act and the new Education Bill. The Act enjoins that the Consultative Committee shall be consulted before the appointment of inspectors of secondary schools desiring to be inspected. The schools chiefly tending to be inspected are those which are local and unendowed, and which have not been under the Charity Commissioners. It is public policy to induce them to undergo inspection; and the Board of Education begins a delicate task by omitting to place on the Consultative Committee a single person who would naturally induce the confidence of unendowed schools. Again, the Act enjoins the Committee to frame regulations for a register. You can register straight away the elementary teachers, and a large majority of teachers in the endowed schools. It is public policy to induce private teachers to present themselves for registration, and to complete their qualifications if these are not already sufficient. Yet the Board of Education omits to place on the Committee a single member who can be counted on to remind his colleagues of some of the most intricate difficulties of registering a whole profession for the first time. Nothing could be better calculated to make the new departure in secondary education, difficult at the best, still more difficult. Private schoolmasters, as a whole, have met the public demand for efficiency with admirable public spirit. The Board of Education—unwittingly, we quite believe—ignores them and their spirit as matters of no account.

We understand that these considerations have been brought before the President of the Board, and we have little doubt that what must have been an unintentional omission will be supplied before the first meeting of the Committee.

We print the text of the new Education Bill in our "Summary of the Month." Its main purpose is to entrust the Education Committees of the County and Borough Councils, including members who are not on the Councils, with the expenditure on any form of education other than elementary of the local taxation grants, and of a further sum of money to be raised by rate, provided that the rate does not exceed twopence in the pound. The Committees are to submit schemes of administration to the Board of Education; but, as to the character of such schemes, the Bill itself does not afford much guidance. No public money is to be directly expended for the purpose of religious instruction; but the Councils are not debarred from aiding schools in which such instruction is given. It is also provided that aid may be given to a school conducted for private profit—any grant under this head being subject to the sanction of the Board. Before erecting new secondary schools, or aiding such as already exist, the Councils are to have regard to the existing supply of efficient schools within their area. Finally, there is provision for an appeal to the Board of Education, wherever the manager or managers of a school may feel aggrieved by the action of any Council, on the ground that it operates unequally or unfairly with respect to the school. It will be generally admitted that this is a fair outline of a Bill for the establishment of Local Secondary Authorities. It may need to be filled in, but it is liberal in conception, and affords a basis on which it will be possible to build. The Duke of Devonshire has introduced this measure at a season which allows ample time for its discussion. We by no means object to leisurely progress in the task of secondary organization, provided that the clear and logical outcome of discussion on the problems set before us is permitted to have its due weight in the ultimate decisions of the Department.

*Useful Evidence.* A WELL written and comprehensive summary of the present condition of education in the United Kingdom has been prepared by the Education Sub-Committee of the Royal Commission appointed in connexion with the International Exhibition at Paris. It provides accurate information for all who take an interest in the subject, especially for foreigners, who know little or nothing of our complicated system of education. From this "Descriptive Handbook"—which is published by Messrs. Eyre & Spottiswoode—we quote one or two passages on English secondary education in private schools—partly as *pièces justificatives* for what has been said in the preceding article.

As far as can be calculated from such statistics as have been collected, about 40 per cent. of the boys receiving secondary education in England are to be found in private schools under no sort of public control. From what has been said on a former page as to the English feeling in favour of the freedom of all parents to select the course of education which they think best for their children, and when it is remembered that, not only are there social conditions to be satisfied, but also greater divergencies of religious belief probably than exist in any other country, it will be understood that private schools are likely for a long time to continue to play a considerable part in the English educational system. They appear to include every grade of educational aim and merit, and are occasionally the trial-ground of interesting experiments. They are sometimes found competing, not unsuccessfully, with local endowed schools. Recently there

has been a movement among them in favour of securing some authoritative certificate of efficiency, so that a clear line may be drawn between the good and the bad. Under the Board of Education Act, 1899, they can, if they so desire, apply for inspection by the State. The best of them already make use of the local examinations conducted by the Universities.

We have more than once dwelt on the necessity of remembering the highly efficient preparatory schools in all arguments touching the interests of private education in England. This is what the "Descriptive Handbook" has to say about them:—

One class of private schools deserves especial mention here—viz., the *preparatory schools*, so called because they prepare boys from the age of eight to thirteen or fourteen for the great public schools. These schools may thus be regarded as a part of the public-school system, which, through entrance and scholarship examinations, exercises a predominating influence over their curricula. Their fees are usually high, and many of them maintain a standard of equipment unequalled even by the foremost public schools. The statistics sent to the Paris Exhibition, collected from 240 of the most prominent of these preparatory schools, show that the number of boys averages about thirty-six to each school; that each school has four or five classes, as a rule, and that the total aggregate number of boys gives an average of about eight boys to each teacher. It will thus be seen that the conditions favour an amount of individual attention to each pupil which is desirable when dealing with very young boys, but, unfortunately, cannot be provided by poorer schools. They are, with very few exceptions, boarding schools, and probably more than half of them exclusively so. Schools started and carried on by companies, or some sort of combined voluntary effort, have a tendency to pass into the ranks of endowed schools, but they play an important part in the provision of secondary education. They are in many instances denominational in character. There is a Church Schools Company, and the Roman Catholics, Wesleyans, and the Society of Friends have their own organizations for secondary education.

With regard to girls, "more than 70 per cent. of the girls receiving secondary education are to be found in private schools." Taking boys and girls together, it is safe to say that 60 per cent. of them are educated in schools which the Board of Education do not consider it necessary to represent on their Consultative Committee.

## NOTES.

THE floor of the House of Commons is not a satisfactory arena for the discussion of questions of educational policy, and the recent debates on the Irish Intermediate Education Bill fully illustrate its unsuitability. The Bill purports to carry out certain recommendations of the late Intermediate Education Commission with a view to make the education given more thorough and the examinations less tainted with mere mark-registering characteristics. It also proposes formally to recognize two distinct courses of modern and grammar school education. Mr. John Redmond made a strong appeal to the Government to follow the precedent of the English Act by establishing a Consultative Committee to assist the Irish Board of Education with their advice. There was, however, no real discussion on the provisions of the Bill. The debate on the second reading turned mainly on the grievances which Irishmen are supposed to suffer owing to the absence of provision for the compulsory teaching of the Irish language in the schools. The same rather hollow discussion was renewed on a subsequent day in Committee of Supply, on the Vote for Elementary Education in Ireland.

We admit that a determination of the right policy of our National Boards of Education towards the different provincial

languages still spoken in these islands is a matter of some nicety and importance. It is, however, not likely to be attained by the perfervid oratory of Irish Nationalist members in the House of Commons. One would naturally look for full discussion in educational conferences before a particular course is decided upon. The drawbacks involved in haphazard Parliamentary discussion are clearly seen in this case. Some members debated the matter as if the question at issue were the compulsory and universal teaching of Irish, while others advocated only the utilizing of Irish for the more effective teaching of English, by what is now called "the bilingual method." Mr. Bryce strongly urged the latter course, and Mr. Gerald Balfour was prepared to accept such a modified proposal. Indeed, given a competent teacher, there is nothing to prevent his using a pupil's knowledge of Erse to teach him English equivalents. Such a plan is pursued with advantage in some Welsh and Scottish Gaelic-speaking districts. But it is only found necessary in a few places, even in Wales. It would certainly be ridiculous at this day to make the learning of Irish compulsory. That some of the Irish members should have pressed such a demand shows what a gulf separates them from their Scottish and Welsh colleagues, when a choice has to be made between sentiment and utility.

THE President of the Board of Trade, on his recent journey to Liverpool, was able to pay a visit to the cadet ship "Conway," for the purpose of giving away the prizes. The day, we hope, is not far distant when the Board of Education will rise to a sense of its responsibility for the proper education of boys who intend to become officers in our mercantile marine. At present only a very small proportion of the premium apprentices taken into the merchant service receive any technical instruction before they join a ship, and it is quite time that other training ships for merchant marine officers should be added to the "Worcester" and "Conway." Mr. Ritchie, like all who know the facts, bewailed the steady increase in the number of foreign sailors in our merchant ships, and there is good reason to believe that there is a similar increase in the number of foreign officers employed. The German clerk has been a very real bogey in commercial education: it is time that we should recognize even another in the form of the Scandinavian sailor. The Duke of Argyll, when giving away the prizes on board the "Worcester," suggested that the tone of the officers affected the supply of English seamen. Nothing would tend more to the raising of the officers' tone than that their early training should be obtained on a good training ship.

THE remedy, after all, is not far to seek; but the co-operation of both the Board of Trade and the Board of Education is necessary. The latter must recognize seamanship and navigation as technical subjects for instruction in which, on board training ships, proper provision must be made in seaport towns; and the Board of Trade must pursue its present policy of improving the conditions of a sailor's life on board ship. We have only recently admitted that "factory legislation" is as necessary on sea as it is on land. Again, the number of free training ships for boys who intend to become ordinary seamen should be increased. They are now a luxury provided only for Poor-law children. It is to be hoped that something will be

done before our ships are entirely manned by Lascars and *id genus omne*, generically called "Dutchmen" by the British seaman.

MISS STANSFELD, in her Report, issued by the Local Government Board, on the Industrial Training of Girls, disapproves strongly of "half-timers." School duty and house-work on alternate days is, she thinks, bewildering. Certainly anything that tends to a lack of method in girls' education is a very serious evil, since women in the home are never forced by circumstances into the punctuality and order which is a *sine qua non* in nearly all the occupations of men. But in house-work method is as pleasant and economical as it is in anything else, and its absence spells overwork and ill-temper. Now Miss Stansfeld prefers the Poor-law schools to the cottage homes, because the strict routine and discipline of the former are better educative influences than the *laissez faire* of the latter. Of course, *laissez faire* is the arch enemy; but, on the other hand, we doubt whether routine in itself is a producer of method. Once the rules are relaxed, the pupil is apt to be as helpless as the slaves in Liberia. The ideal seems rather the cottage home, where the girls might be induced to draw up their own time-tables, and be definitely instructed in the art of doing one thing while another is in progress, and thus learn to manage with method even the smallest establishment. As in every branch of life, it is the ounce of thought that is worth the pound of industrious pottering.

THE London School Board is, apparently, earnest in its endeavour to make really effective the teaching of domestic economy. It is about to appoint a lady at a substantial salary to superintend this subject throughout its schools. We hope that whoever is appointed will correct some of the absurdities that now exist. From the folly of teaching chiefly how to cook cakes and sweetmeats, the other extreme seems to have been reached. We have just heard of a little girl of ten, very full of enthusiasm at joining the cookery class—her first morning of two and a half hours was entirely spent in cleaning a huge stove, and she reached home so dirty and exhausted that she could not attend afternoon school. Her indignant mother stopped the cookery idea at once, to the child's bitter disappointment. Of course, mothers are very unreasonable, and cleaning a grate is as important as anything else in cooking, but surely there was a plentiful lack of wisdom in selecting such work for a first performance.

THE Court of the Merchant Taylors' Company advertise for a new Headmaster in Holy Orders, or who intends to take Orders, and under forty years of age. The conditions, we fear, will greatly limit the choice of the Court: in other words, they are not likely to get as good a headmaster as they doubtless desire to get. What can a clerical head of a London day school effect which a lay head could not? Prebendary Baker is doubtless an excellent headmaster, but not by virtue of his being a clergyman. As for the condition of age, it would have excluded Dr. Wood when he went to Harrow, Mr. Walker when he went to St. Paul's, and many another ripe schoolmaster who has made history in his fifth and sixth decades. The Court have their preferences, and perhaps reason for their preferences; but they are certainly narrowing their field of choice.



An interesting experiment was made by the London School Board at their annual musical display, at Queen's Hall, on the 4th of last month. In place of the usual vocal competition between its schools, it submitted the pick of them to the severe test of showing what they could make of a grand oratorio. One school was selected from each of the ten divisions, and these two hundred and fifty children forming the sopranos and altos, with the staff of the Board supplying tenors, basses, orchestra, and soloists, went satisfactorily through nearly the whole of "Judas Maccabæus." Making all due allowance for the strong support given by the excellent body of tenors and basses, the children acquitted themselves in a most creditable manner. Much volume of sound could not be expected, but their leads were taken up clearly and pursued unfalteringly, and there was never any sign of a breakdown. Once only Mr. Cowley got upon his feet and waved with desperate determination, but almost immediately he was free to resume, with a smile, his measured and confident beat.

For all that, we trust that the Board will be satisfied with the display as a proof of what can be attained by the teaching in its schools, and will not be encouraged by its success to let such performances regularly take the place of simple competitions. The latter are more suitable for children, both as being less likely to be injurious to their voices and as being more conducive to the acquisition of good and refined singing. We are the more inclined to this opinion by the singing of certain numbers by particular schools, to which, consequently, particular attention had been given, such as the duet "Hail, Judea!" by the Ecclesbourne Road boys, and the duet "O Lovely Peace!" by the Haselrigge Road girls. These were after all the most enjoyable features of the afternoon's performance, being sung in perfect time and with good tone and expression. Still, the effect of the whole was to make us very hopeful with regard to the future of choral singing in London.

We commend the following adventures in grammar to the various societies for the study of childhood. We think the subtlety of the child-mind has, perhaps, not yet been fully diagnosed. Teacher: "What is the gender of *viande*?" Pupil: "That depends on what gender the animal was." Teacher: "Why have you made *enfant* feminine?" Pupil: "I did it to make it agree with its mother." The former opens up endless possibilities of delicate suggestion in a *menu*, while the latter has a moral element the origin of which still remains to be traced.

## SUMMARY.

### THE MONTH.

THE Government Education Bill, "to make better provision for enabling County Councils and other Local Authorities to aid forms of Education not being elementary," was introduced in the House of Lords by the Duke of Devonshire in the last days of June. It will be convenient in view of future discussion, to place the text of this measure on record.

1.—(1) So much of the residue under Section 1 of the Local Taxation (Customs and Excise) Act, 1890, as is paid to any county or borough fund shall be applied for the purposes of education, and shall, after adequate provision has been made for technical and manual instruc-

tion, and subject to the like conditions and restrictions as are imposed by the Technical Instruction Act, 1889, as amended by this Act, with respect to the aid thereby authorised, be applicable to the purposes of any other form of education.

(2) The money so applied shall be administered by the Council of the county or borough through an Education Committee of the Council constituted in accordance with a scheme made by the Council and approved by the Board of Education.

(3) Every such scheme may provide for including in the Education Committee persons, male or female, who are not members of the Council.

(4) The Education Committee of a Council shall not raise money by loan or by rate, and shall not spend any money beyond the sum allowed by the Council.

(5) A scheme made under this section may provide for a joint Education Committee of two or more Councils, and may make such other provisions, including provisions with respect to the powers and duties of the Committee, and its relation to the Council or Councils by which it is appointed, as may appear necessary or expedient for carrying this Act into effect within the county or borough, or any part thereof.

(6) If the Board of Education approve any such scheme without modification, or with any modifications agreed to by the Council, the scheme shall have effect as if enacted by this Act, but shall be subject to revocation or alteration by a scheme made in like manner.

(7) If the Council do not submit a scheme within twelve months after the passing of this Act, or within such further time as may be allowed by a special order of the Board of Education, or if the Council have, at the expiration of twelve months after submitting a scheme, failed to agree with the Board of Education as to any modifications suggested by the Board, that Board may make a scheme which shall have effect as if made by the Council and approved by the Board.

2.—(1) Money raised by a rate under the Technical Instruction Acts 1889 and 1891, shall, after adequate provision has been made for technical and manual instruction, and subject to the like conditions and restrictions as are imposed by the Technical Instruction Act, 1889, as amended by this Act, with respect to the aid thereby authorised, be applicable to the purposes of any other form of education.

(2) Where money is so raised by a Council of a county or county borough it shall be administered through an Education Committee established under this Act.

(3) The amount of the rate to be raised in any one year by a Local Authority for the purposes of the Technical Instruction Acts, 1889 and 1891, and this Act shall not exceed the sum of 2d. in the pound, and the rate levied under those Acts by the Council of a borough or urban district shall not, when combined with the rate levied thereunder by the Council of a county, exceed the said limit.

(4) Paragraph (g) of Section 1 of the Technical Instruction Act, 1889, is hereby repealed.

3.—(1) A school shall not be deemed to be aided within the meaning of the Technical Instruction Acts, 1889 and 1891, and this Act, by reason only that—

(a) Any scholarship or exhibition granted or supplemented under any of the said Acts is held at that school; or

(b) The use of any museum, laboratory, workshop, or apparatus established, or maintained, or equipped wholly or in part under any of the said Acts, or the instruction given by any technical or scientific instructor paid wholly or in part under any of the said Acts, is available to scholars of the school equally with other students.

(2) A Council in the performance of their duties with respect to education shall not give any preference or advantage to any school on the ground that it does or does not belong to, or is or is not in connexion with or under the management of, any particular church, sect, or denomination, or that religious instruction is or is not given in the school.

Provided that aid shall not be given under this Act to any school in respect of religious instruction, and for the purposes of this Act this restriction shall be substituted for the restriction imposed by paragraph (c) of Section 1 of the Technical Instruction Act, 1889.

(3) Notwithstanding the proviso to paragraph (f) of Section 1 of the Technical Instruction Act, 1889, aid may be given to a school conducted for private profit to such extent and under such conditions as the Board of Education may, having regard to the special circumstances of the case, think expedient.

(4) For the purpose of determining the restrictions and conditions imposed by this Act, Section 1 of the Technical Instruction Act, 1889, shall be construed as if—

(1) References to aid out of the local rate were references to aid out of any fund or rate applicable to education under this Act; and

(2) References to technical and manual instruction were references to any form of education which is aided under this Act; and

(3) References to the Technical Instruction Act, 1889, and to Section 1 thereof were references to this Act.

4.—(1) Every Council shall make such reports and returns and give such information to the Board of Education with respect to their pro-

ceedings under the Technical Instruction Acts, 1889 and 1891, and this Act as that Board may require.

(2) Every Council shall, in the exercise of their powers of establishing and aiding schools under the said Acts, have regard to the existing supply of efficient schools and to the existing application of money applicable to purposes of education.

5.—(1) If the governing body of any school feel aggrieved by the action of any Council on the ground that it operates unequally or unfairly with respect to the school, or is otherwise prejudicial to the school, they may complain to the Board of Education, and that Board, after communicating with the Council, shall determine the matter, and the Council shall comply with any order made by the Board of Education for removing the ground of the complaint.

(2) For the purposes of this section the expression "governing body" shall include any corporation, trustees, or other persons managing a school.

6.—Nothing in this Act shall affect any, certified industrial, day industrial, or reformatory school, or any Poor Law school.

7.—In the application of this Act to Wales and Monmouthshire, the county governing body under the Welsh Intermediate Education Act, 1889, shall take the place of the Education Committee under this Act.

8.—(1) This Act may be cited as the Education Act, 1900.

(2) It shall not extend to Scotland or Ireland.

(3) It shall come into operation on the 1st day of April, 1901.

In response to an influentially signed convening circular, a meeting was held on the last day of June, Mr. Arthur Sidgwick presiding, "to consider the feasibility of establishing a permanent Federal Educational Council, consisting of accredited representatives of all forms of educational effort, for the purpose of expressing the united opinion of the country in public resolutions and of pressing such resolutions upon the attention of all authorities responsible for the conduct of education." The following resolutions were passed:—

1. That, in the opinion of this Conference, it is desirable to establish some permanent Council which will be able to speak on behalf of organizations identified with educational effort in this country, and yet in no way interfere with existing agencies and efforts.

2. That, in order to elicit and formulate the opinion of such organizations in respect of the broader issues without interference with special points of view, it is desirable that such a Council should consist mainly of accredited representatives of existing educational bodies.

3. That the Federal Educational Council be constituted as follows:—(a) Representatives, in no case exceeding two, shall be appointed by each of the bodies named on a list to be subsequently prepared by the Organizing Committee; (b) the Council shall meet not less than twice a year, and may meet whenever it shall seem desirable to the Chairman of the Council to summon it; (c) at its first ordinary meeting in each year the Council shall elect a Standing Committee; (d) the duties of the Standing Committee shall be (i.) to consider such questions as may come up in the intervals between the meetings of the Federal Council and report to it, and (ii.), if so instructed by the Council, to carry out in the intervals between its meetings such of its resolutions as may require to be promptly dealt with; (e) the Council and its Standing Committee shall be composed of both men and women.

4. That the function of the Federal Council shall be public discussion and the publication of all resolutions adopted.

5. That a Committee of twenty-five, with power to co-opt five others, be formed, for the following purposes:—(a) To consider and formulate suggestions for financing the Federal Council; (b) to prepare a list of educational bodies to be represented on the Federal Council; (c) to approach and invite these bodies to appoint and send representatives each to a second Conference at an approved date and place; (d) to formulate in detail the constitution of the Federal Council to be submitted for ratification to this second Conference.

A MEETING of the two Councils of the Provinces of Canterbury and York on Secondary Education was held in the Church House, Westminster, on July 6, at the close of the joint sessions of the two Convocations. The Archbishops of Canterbury and York presided. There were present besides the Archbishops, the Bishops of Winchester, Durham, Hereford, Newcastle, Coventry, Hull, and Beverley, the Dean of Manchester, Lord Hugh Cecil, M.P., Sir F. S. Powell, M.P., Prof. Sir R. Jebb, M.P., Mr. Stanley Leighton, M.P., Mr. J. G. Talbot, M.P., and others, with the Archdeacon of Exeter and Canon Maitland Wood, hon. secretaries. The following resolutions were passed:—

1. That the Law Committees of the two Councils be requested to submit a joint report on the Government Education Bill, 1900, at a

session of the two Councils to be held during the month of November ensuing.

2. That these Committees be instructed to consider the proposals of the Bill generally, and especially to consider whether under them the interests of religious education are or can be adequately secured.

3. That it is desirable that there should be some organization in every diocese for the encouragement of religious instruction and training in the matter of secondary education, for the maintenance of Church teaching in the secondary schools in which it is now given, and for securing complete liberty of religious teaching in any schools to be hereafter founded.

THE Secretary of the Local Examinations Board of Edinburgh University intimates that the examinations will be discontinued after June, 1901. On May 25 last the Senatus sent a remit to the Local Examinations Board requesting a report on the possibility of continuing the scheme without further and increasing drafts upon the capital fund. The Board, at a meeting held on June 12, instructed the secretary to reply that it was their opinion that the steady decline in the number of candidates, due to the operation of the Government Leaving Certificate Examinations, would continue, and that they would incur further annual loss. They therefore recommended that the last examination should take place in June, 1901, and that a circular to this effect should be issued to all interested parties. The Senatus accepted this recommendation on June 29 last, and ordered the terms to be published by the Local Examinations Board.

THE Board of Education having refused the application of the London School Board for the recognition of the existing seventy-nine higher elementary Board schools under the Minute of the Department on the ground that the establishment of so large a number in London alone would be inconsistent with the intention of the Minute, the School Board have addressed a letter to the Department in defence of their position. Their two main contentions are as follows:—

They have applied for recognition of forty-three separate schools for boys and girls in seventy-nine departments. The Board of Education say that so large a number of higher elementary schools in London alone would be inconsistent with the intention of the Minute. The School Board point out that London has a population of about 4,500,000. The School Board are, therefore, proposing one school for higher elementary education for a unit of more than 100,000 population. The School Board await the decision of the Board of Education in other towns, but they will be much surprised if towns of much less than 100,000 inhabitants do not obtain such schools, and if larger towns, like Manchester, do not obtain several. They contend that in no case should London be treated worse in proportion to its population than other parts of the country, and, further, that an allowance of one such school to 100,000 population is, so far from being excessive, much less than is required to bring the opportunities of the most efficient education within the reach of all who desire and deserve it. . . . Those who are acquainted at first hand with the educational needs of London, whether Her Majesty's inspectors or the members and officials of the Board, or of the Technical Education Board, are agreed that it would be disastrous to accept in London the need for schools of science as a measure of the need for higher elementary education. The Board, therefore, rely on a fair opportunity being given them to substantiate the claims of all schools which they have submitted, both in regard to premises, equipment, and staff, and the existing proficiency of the scholars.

THE members of the Head Teachers' Association held their quarterly meeting on July 14, in the St. Bride's Institute, the principal business being the delivery of an address by Dr. William Garnett, M.A., Secretary of the Technical Education Board of the London County Council, on "Higher Elementary Education." Dr. Garnett said he did not believe in class differences in connexion with educational work.

As teachers, the world was their parish, and they must look after the interests of all classes alike. Schools, however, must differ, and pupils must separate in accordance with the future that was intended for them. It ought to be the business of every one to seize on genius wherever found, and never to allow a lack of means to interfere with a child entering into that society for which his talents qualified him. His own belief was that a very large supply of free places in our great public schools, with a very liberal allowance in maintenance grants, so as to enable the poorer children from public elementary schools to climb the educational ladder, was the real solution of the difficulty connected with higher education. He deprecated the commercial

spirit of the age, so far as it applied to education; and, though he did not say it was raining education, he was bound to declare it an increasing danger.

EARLY in the month the foundation-stone of the new building for the London School of Economics and Political Science, to be erected in Clare Market, was laid by the Bishop of London, who hoped that the school would have a vigorous life, for one of its objects would be to equip politicians rather better than they were equipped at present for the work they had to do. In coming forward to assist in the scheme for this hall, Mr. Edwards had set an example to the citizens of London which, it was to be hoped, would be followed, for the new University would require large aid from private sources if it was to do its work and undertake the teaching of the multitudes who needed and wished to be taught. Mr. Bryce proposed a vote of thanks to the London County Council, which, he said, had done many good, wise, and bold things, for which, as usually happened in such cases, it had received a good deal of censure; but it had never done anything which showed more foresight and insight than when it undertook to give a subvention and its countenance to a school of political science. The recognition given by the University of London to the subjects there to be taught would, he hoped, react on the older Universities, and induce them to do likewise. A studentship of £100 for one year has been awarded to a candidate who is prepared to devote himself to the study and investigation of the question of compensation in relation to the amendment of the laws regulating the sale of intoxicating liquors.

THE Leysian School Mission is managed entirely by former students of the Leys School at Cambridge. For fourteen years it has worked in narrow premises in a narrow street, but it has now been decided to buy a site at the corner of City Road and Old Street at a cost of £36,000. A hostel is to be built to accommodate about sixteen residents, and to have in addition some spare rooms for Old Leysians passing through London. Adjoining is to be placed a building named Moulton House, providing a residence for about forty young men engaged in business who can devote some of their spare hours to the work of the mission. One of the large halls will seat fifteen hundred people, and a smaller one four hundred. Thirty class-rooms will also be erected, a spacious drill-hall and gymnasium, club-rooms for men and women, a room for the Boys' Brigade, a girls' parlour and rooms where the very poor may receive medical and surgical aid. The total cost will reach at least £60,000.

THE results of the L.L.A. Examination of the University of St. Andrews, which was held at numerous centres in Great Britain and Ireland, France, Germany, Belgium, Switzerland, Italy, Malta, Turkey, Natal, Cape Colony, New South Wales, and the United States, have been published by the University, from which it appears that 980 candidates entered for the examination at 84 centres this year, as compared with 959 at 77 centres in 1899, and 950 at 74 centres in 1898. 319 candidates entered this year for the first time; and, from the commencement of the scheme in 1877, 5,108 candidates in all have been entered for examination. 136 candidates have this year completed the requisite number of subjects, and will receive the L.L.A. diploma of the University.

At Bedford College, London, Miss F. C. Johnson, B.A., has been appointed the Reid Fellow for two years. The following entrance scholarships have been awarded:—The Reid Scholarship in Arts to Mary Fox, the Henry Tait in Science to Winifred Gibson, the Pfeiffer in Science to Agnes Mary Cooke. Mildred O. Power has obtained the certificate of the Sanitary Inspectors Examination Board, qualifying for sanitary inspectorships in the metropolis. The Early English Text Society's Prize has been awarded to Grace A. Wilson and Ethel Strudwick jointly. The Council will in December award a Gilchrist Travelling Studentship of the value of £70; and, in June, 1901, will award the Gladstone Memorial Prize. M. L. Dale has passed the M.A. Examination in Branch I., Classics.

THE Governors of Holloway College have offered bursaries of the value of £30 a year each for three years to E. C. Sexton and

F. Pocock, from the City of London School for Girls. The Mitchell and Davies Scholarships at the same school have been awarded to C. Brock, H. Robbins, and V. Webb. The Annual Distribution of Prizes by the Lady Mayoress will be held on October 10. The scholarships to be awarded include presentations from the following City companies:—The Grocers', Drapers', Salters', Broderers', Merchant Tailors', and Leathersellers'.

THE following entrance scholarships have been awarded at Holloway College:—Scholarships of £60 a year, for three years, to Miss M. Biden, mathematics, Sydenham High School; Miss E. East, mathematics and physics, Sheffield High School; Miss P. Fischer, German and French, Liverpool High School; Miss E. Heaton-Smith, English, private study; Miss M. Riley, classics, Ormeau School, Newcastle, Staffordshire. Scholarships of £50 a year, for three years, to Miss E. Brock, mathematics, Bromley High School; Miss M. Quixley, English, Sydenham High School; Miss A. Shove, French, Blackheath High School; Miss M. Sladden, mathematics, St. Stephen's High School, Clewer.

THE following is a list of the scholarships now annually awarded by the Technical Education Board of the London County Council:—600 junior county scholarships, 70 intermediate county scholarships, 5 senior county scholarships (besides a certain number of free places at London colleges), 30 schools of art scholarships, 30 artisan art scholarships, 100 junior artisan evening art exhibitions, 200 evening exhibitions in science and technology. 2 Swanley horticultural scholarships, 7 junior scholarships in practical gardening (for boys), 9 domestic economy training scholarships (for young women), 780 domestic economy scholarships (for girls), 32 cookery scholarships (for girls), 20 commercial scholarships (for boys). The Board has also awarded the following scholarships during the past year:—2 scholarships in sanitary science tenable at the pathological laboratory of Claybury Asylum, 3 special scholarships for teachers tenable at commercial institutions on the Continent (for men), 2 special art scholarships for deaf pupils (for boys). In all cases, except where otherwise specified, the above scholarships are apportioned between boys and girls or young men and young women.

### COLLEGE OF PRECEPTORS.—HALF-YEARLY GENERAL MEETING.

THE Ordinary Half-Yearly General Meeting of the members of the Corporation was held at the College on Saturday, July 21.

The Secretary having read the notice convening the meeting, Dr. WORMELL was appointed Chairman.

The report of the Council was laid before the meeting, and was taken as read, a copy having previously been sent to every member of the College. It was as follows:—

#### REPORT OF THE COUNCIL.

The Council beg to lay the following Report of their proceedings for the past half-year before the Members of the College:—

1. They have to report that the number of candidates entered for the Midsummer Examination for Certificates is about 3,900, while the number of entries for the Junior Forms Examination is about 1,400. These figures show a considerable falling off in the Certificate Examination, while there is a slight increase in the entries for the Junior Forms Examination. The Public Distribution of Prizes and Certificates to the successful candidates at the last Christmas Examination took place on the 21st of March, when the chair was occupied by the Dean of the College.

2. The Professional Preliminary Examination for intending medical students and others was held as usual in the second week in March, and was attended by 82 candidates. In the uncertainty that existed respecting the action of the Medical Council with regard to recognition of the College Second Class Certificate, it was only to be expected that the number of entries for this Examination would compare unfavourably with the entries for the corresponding Examinations in previous years. The Council of the College had been given to understand that the question at issue between them and the Medical Council as to the comparative standard of the various "Junior" Examinations would be submitted to experts whose services had been called in to assist the Education Committee of the Medical Council in arriving at a just conclusion on a highly technical matter. Every facility was afforded by the College to the English expert in conducting his inquiries, and the Council have been expecting to be informed by the Medical Council as to the result of his investigation; but, although his report was sent in

several months ago, no communication has been received, and the College is still left in doubt as to whether recognition will henceforth be confined to the First Class Certificate, or whether the Second Class will also be accepted by the Medical Council as qualifying for registration as a medical student.

3. For the Midsummer Examination of Teachers for the College Diplomas 280 candidates have entered (including 14 who enter for the practical Examination for Certificates of Ability to Teach). This number shows a very large increase as compared with the number of teachers who presented themselves for the corresponding Examination last year, and is larger than at any previous Diploma Examination conducted by the College. The forthcoming Examination will be held in London, and at the following Local centres:—Birmingham, Bristol, Leeds, Manchester, Cheltenham, Jersey, Florence, Lapford, Workington, and Belleville (Ontario).

4. In addition to their own Examinations of pupils and teachers, and the Examination of a number of Schools by Visiting Examiners, the Council have conducted during the past half-year the Preliminary Examinations of the Pharmaceutical Society of Great Britain. This Society has decided, after July next, to discontinue its special Preliminary Examination, and to accept in lieu of it the College Second Class Examination, for which candidates will be able to enter four times a year as heretofore.

5. The Thirty-first Annual Series of Lectures to Teachers on "The Science and Art of Education" commenced on the 22nd of February with a Course of Twelve Lectures on "Intellectual Education" by Prof. James Sully, M.A.; and a Course of Twelve Lectures on "The Practice of Education" will be delivered in the autumn by H. L. Withers, Esq., M.A., Professor of Education at Owens College, Manchester. The Council propose to arrange for a Winter Meeting of Teachers to be held in January, 1901, similar to the Meetings held in January, 1898 and 1899, with courses of lectures on special departments of education, to take place during the next Christmas vacation.

6. The usual Monthly Evening Meetings of the Members have been held during the past half-year, at which the following lectures have been delivered:—"The Licensing of Teachers in the Past," by Prof. Foster Watson, M.A.; "School Maps," by H. O. Arnold-Forster, Esq., M.P.; "Commercial Education," by A. Kahn, Esq., M.A.; "Unsettled Questions of Method in the Teaching of Elementary Science," by R. Wormell, Esq., D.Sc., M.A.; "The Inspection of Secondary Schools," by R. P. Scott, Esq., M.A., LL.D. The lectures and the discussions on them have been reported, as usual, in the *Educational Times*.

7. The Board of Education Act came into operation on the 1st of April last, and almost immediately an important Minute was issued, which, in authorizing the establishment of Higher Elementary Schools, on certain well defined conditions, may be regarded as a considerable step towards the delimitation of Primary and Secondary Education. The requirement of two years' attendance at a public elementary school antecedent to admission to the Higher Elementary School, the limitation of the "attendance grant" to pupils in such schools who are not over fifteen years of age, and the requirement of evidence of the need of such a school for the circumstances of the locality will, the Council consider, tend to prevent overlapping and interference with existing secondary schools, and they trust that the Government will not be induced to make any material modification in the provisions of the Minute. The Bill relating to Secondary Education, introduced by the Duke of Devonshire in the House of Lords on the 26th of June, will receive the careful consideration of the Council.

8. During the past half-year, the Diploma of Fellow has been conferred on two candidates, that of Licentiate on eight, and that of Associate on seventy-two, who had passed the required examinations. Twenty-seven new members have been elected, and notice has been received of the withdrawal of five. The Council regret to have to report the death of one of the oldest members of their body, Dr. C. A. Buchheim, F.C.P.; and also of the following members:—Dr. D. A. Altschul, Mr. J. H. Burton, Mr. W. R. Lee, Mr. J. S. Patmer, and Mr. W. Smith.

In reply to Mr. Brown, the CHAIRMAN said that the Second Class having been used for some years by candidates for the medical profession, and it having got abroad that the Second Class Certificate was no longer accepted as a qualification for registration, a good many who would have appeared as candidates in that class had gone elsewhere.

Mr. BROWN said he did not think that this entirely accounted for the falling off. His own impression was that the standard which the College had been adopting for the Second Class during the last few years had tended in great measure to restrict the number of entries for that class. He had called attention to this matter before, and he believed that, if the returns year by year were analyzed, it would be found that there was a considerable difference in the proportion of passes in the Second as compared with the other classes. These two facts taken together would account for the falling off. It was partly due to the action of the Medical Council, and partly to the action of

the College itself in raising the standard of the Second Class Examination.

Mr. ORCHARD said it had appeared to him for some time past that some of the papers set at the Certificate examinations had been unduly difficult; but he was bound to say that on this occasion no objection could, in his opinion, be fairly taken to the papers as a whole.

Mr. BECKTON asked whether, since the Report was drawn up, there had been any communication made by the Medical Council.

The CHAIRMAN replied that the communications with the Medical Council had been almost continuous for the past two years, and they were still going on. As far as the College was concerned, the discussion with the Medical Council had not come to an end.

In reference to paragraph 7, Mr. BROWN said that attention was drawn to the Minute which had been issued by the Board of Education regarding higher elementary schools. He thought they would all be agreed that this was a step in the right direction, and he hoped that whatever pressure might be brought to bear on the Board to neutralize that Minute would be firmly resisted. It was the first step towards delimitation. With regard to the Secondary Education Bill, this Bill was drawn on very generous lines towards private teachers, and no doubt attempts would be made to alter some of the clauses of that Bill by those who were not too well disposed towards private schools. He would like to ask whether the College, representing as it did private teachers, was prepared to use the influence it possessed to preserve this feature of the Bill in the event of it being attacked. He noticed that on the Consultative Committee which had recently been appointed there was no representative of the first organization representing secondary education in this country. They were told that the Committee was not intended to represent interests, but the views of those interested in secondary education. The College of Preceptors did not represent interests. It could not be said that it represented exclusively private teachers, or that it aimed at doing so. But, if the College did not represent interests, it must be acknowledged by everybody that its experience of every phase of secondary education was second to none, and, moreover, its position had been recognized by the Government. Looking, however, at the names on the Committee, he maintained that it did represent interests, inasmuch as the chief mouthpieces of various associations were to be found upon it. As was stated in a leading article in one of the daily papers, there was nobody on the Committee who could speak in a reliable way for the private schools which did more than half the work of secondary education in this country. If that was so, it was evident that, though there might be no desire on the part of the Government to deal otherwise than justly with private schools, yet it was most important that means should be afforded for securing the fullest information from those best qualified to speak on their behalf. For this, if for no other reason, the College ought certainly to be represented on the Committee.

Mr. EVE said this matter had recently been considered by the Council, when it was agreed that a courteous representation should be made to the authorities, pointing out the fact that there was no one on the Consultative Committee who could be said to represent the views of teachers in private schools. He was glad to hear that Mr. Brown agreed that the Bill did, in fact, give nearly all that private schoolmasters could reasonably ask for. It would not, of course, be possible to make grants of public money to private undertakings. It was further distinctly implied that, in making provision for the supply of secondary education in any district, all efficient existing schools should be considered, without regard to their being public or private. Of course, regard would have to be had to the circumstances of parents, and an undoubtedly efficient school in a particular neighbourhood might be found to be too expensive. But, assuming that the Bill was amended in the spirit in which it seemed to be drawn, he could not see that private schools had much to fear from its operation.

The CHAIRMAN said he was one of those who maintained that their Charter remained in its main provisions as unimpaired now as on the day it was granted. In particular the College was commissioned to look after the training of teachers, especially those engaged in private schools; and it could not, therefore, be denied that it was their proper province to look after the interests of those schools.

Dr. SCOTT said it was well known that the Bill could not become law this year, but he had no doubt that next Session would see it through. The Minute as to the higher elementary

schools could not fail to have an injurious effect on secondary schools, if it were not supplemented by the creation of proper local authorities. The safeguard lay in the syllabus; but nothing was said in the Minute with regard to a syllabus.

The Report of the Council was then adopted.

The DEAN then presented his Report, which had been printed and distributed among the members present. He explained that the statistics—which it was impossible to fill in, in consequence of the lateness of the examination—would be given when the report was published in the *Educational Times*.

#### THE DEAN'S REPORT.

In addition to the general statement of the examination work of the College during the past half-year, which has been embodied in the Report of the Council, I have now to submit to you, in detail, the statistics and results of the various examinations.

The Midsummer Examination of candidates for Certificates took place on the 3rd to the 7th July at 151 Local Centres and Schools. In the United Kingdom the Examination was held at the following places:—Aldeburgh, Alvechurch, Ashford (Kent), Aylesbury, Barnstaple, Bath, Belfast, Belper, Bentham, Berwick-on-Tweed, Betley, Birmingham, Blackpool, Borden, Boston Spa, Bournemouth, Brighton, Bristol, Broxbourne, Bruff (Co. Limerick), Camborne, Camelford, Cardiff, Carnarvon, Castle Cary, Cheltenham, Cheshunt, Coleraine, Cork, Croydon, Deal, Dublin, Dumfries, Durham, Ealing, East Grinstead, Eaton Socon, Eccles, Edgbaston, Ely, Exeter, Eye (Suffolk), Fakenham, Falmouth, Faversham, Forest Hill, Frome, Goudhurst, Greenwich, Grimstargh (Preston), Halton (Bucks), Handsworth, Hanley Castle, Hartlepool, Hastings, Hatfield, Havant, Hereford, Herne Bay, Horsmonden, Huddersfield, Hutton (Preston), Jersey, Kingston-on-Thames, Kingston (Herefordshire), Launceston, Leeds, Lewes, Liskeard, Liverpool, Llandudno, London, Lynsted, Manchester, Margate, Market Bosworth, Market Harborough, Matlock, New Brighton, Newcastle-on-Tyne, New Malden, Newtownbarr, Northwich, Nottingham, Oswestry, Painswick, Pencader, Plymouth, Porthcawl, Portsea, Portsmouth, Ramsgate, Richmond, Ripley (Surrey), Rochester, Ruabon, Ruthin, Rye, St. Austell, St. Leonards-on-Sea, Sandwich, Seaford, Shebbear, Sheffield, Sidcup, Slough, Southampton, Southend, Southport, Spalding, Stroud, Sunderland, Tamworth, Taplow, Taunton, Thirsk, Torquay, Uppingham, Wells (Somerset), Weston-super-Mare, Winchcombe, Wirksworth, Woodstock, Worthing, Yarmouth, Yeovil, York. The Examination was also held at Colombo (Ceylon), Gibraltar, and Constantinople.

The total number of candidates examined (not including 12 examined at Colombo) was 3,725—2,395 boys and 1,330 girls.

Taking the Christmas and Midsummer Examinations together, the total number of candidates examined during the year ending Midsummer, 1900 (not including those who attended the supplementary examinations in March and September), has been 10,952.

The following table shows the proportion of the candidates at the recent Midsummer Examination who passed in the class for which they were entered:—

	Entered.	Passed.	Percentage.
First Class .....	453 .....	222 .....	49
Second Class .....	1,252 .....	736 .....	59
Third Class .....	2,020 .....	1,414 .....	70

This does not take account of those candidates who obtained Certificates of a lower class than that for which they were entered.

The number of candidates entered for the Junior Forms Examination (not including 10 examined at Colombo) was 1,310—828 boys and 482 girls. Of these, 1,066 passed, or 81 per cent.

At the Professional Preliminary Examination for First and Second Class Certificates, which was held on the 6th to 8th of March, in London and at four Provincial Centres, viz., Birmingham, Bristol, Leeds, and Liverpool, 78 candidates presented themselves.

The Examination of Teachers for the College Diplomas took place on the 10th of July and three following days in London and at the following Local Centres:—Birmingham, Bristol, Cheltenham, Jersey, Lafford, Leeds, Manchester, and Workington. The Examination was also held at Belleville (Ontario) and at Florence (Italy). It was attended by 253 candidates—173 men and 80 women. In addition to these, 13 candidates (11 men and 2 women) were examined for Certificates of Ability to Teach. The subjects of examination included the Theory and Practice of Education, Scripture History, English Language, English History, Geography, Arithmetic, Algebra, Euclid, Trigonometry, Analytical Geometry, Differential and Integral Calculus, Mechanics, Physics, Latin, French, German, Italian, Animal Physiology, Geology, Botany, Astronomy, Chemistry, Drawing, and Music. On the results of this Examination, 4 candidates have obtained the Diploma of Licentiate, and 107 that of Associate; while 8 candidates have obtained Certificates of Practical Ability to Teach.

The Preliminary Literary Examinations of the Pharmaceutical Society have been held, as usual, at the times appointed. The number of candidates examined during the past half-year was 1,096.

The Report was adopted.

A vote of thanks to the Chairman concluded the proceedings.

#### THE CONSULTATIVE COMMITTEE.

THE Consultative Committee of the Board of Education, to which we refer in our leading columns, was appointed by Order in Council at the beginning of July. The text of the Order is as follows:—

1.—(1) There shall be established a Consultative Committee of the Board of Education consisting of eighteen members.

(2) The following persons shall be the first members of the Committee:—Rt. Hon. Arthur Herbert Dyke Acland, Sir William Reynell Anson, Bart., M.P., Prof. Henry Armstrong, Mrs. Sophie Bryant, Rt. Hon. Sir William Hart Dyke, Bart., M.P., Sir Michael Foster, K.C.B., M.P., Mr. James Gow, Litt.D., Mr. Ernest Gray, M.P., Mr. Henry Hobhouse, M.P., Mr. Arthur Charles Humphreys-Owen, M.P., Sir Richard Claverhouse Jebb, M.P., Hon. and Rev. Edward Lyttelton, Very Rev. Edward Craig Maclure, D.D., Dean of Manchester, Miss Lydia Manley, the Venerable Ernest Grey Sandford, Archdeacon of Exeter, Mrs. Eleanor Mildred Sidgwick, Prof. Bertram Coghill Alan Windle, M.D., Rev. David James Waller, D.D.

2.—(1) Subject to the provisions of this Order as to the retirement of the first members of the Committee, the term of office of a member of the Committee shall be six years.

(2) On the first day of October in every second year six members of the Committee shall go out of office and their places shall be filled by such persons as the President of the Board of Education appoints.

(3) A person going out of office may be reappointed.

3.—(1) The Committee shall elect a chairman, who shall hold office until the next day for the retirement of members of the Committee, but, if he continues to be, or is re-appointed, a member of the Committee, he may be re-elected chairman:

Provided that, if during his term of office the chairman ceases to be a member of the Committee, the Committee shall elect a new chairman.

(2) The chairman shall preside at every meeting of the Committee at which he is present.

4. Such person as the President of the Board of Education appoints shall be the secretary to the Committee and shall hold office during the pleasure of the President of that Board.

5.—(1) The Committee shall meet at such times, and notice of meetings shall be given to the members of the Committee in such manner, as the President of the Board of Education appoints.

(2) At a meeting of the Committee six shall be a quorum.

(3) Subject to the provisions of this Order a Committee may regulate their own procedure.

(4) No act or proceeding of the Committee shall be questioned on account of any vacancy in their body.

6. The President of the Board of Education may for special purposes appoint sub-committees of the Committee, and any sub-committee so appointed may, within the limits authorized by the President, add to their number persons not being members of the Committee.

7. If a member of the Committee is absent from two consecutive meetings of the Committee, except for some reason approved by the President of the Board of Education, his office shall become vacant.

8. On a casual vacancy occurring in the Committee by reason of the death, resignation, or absence of a member, the President of the Board of Education shall appoint another person in his place, and the person so appointed shall hold office until the time when the person in whose place he is appointed would regularly have gone out of office, and shall then go out of office.

9. In making appointments under this Order, the President of the Board of Education shall have regard to the requirements of the Board of Education Act, 1899, that the Committee shall consist, as to not less than two-thirds, of persons qualified to represent the views of Universities and other bodies interested in education.

10. The President of the Board of Education may fix the times of retirement of the members of the Committee appointed by this Order, so that six of them shall retire on the first day of October, one thousand nine hundred and two, six on the first day of October, one thousand nine hundred and four, and six on the first day of October, one thousand nine hundred and six.

11. The Interpretation Act, 1889, applies for the purpose of the interpretation of this Order as it applies for the interpretation of an Act of Parliament.

12. This Order may be cited as the Board of Education (Consultative Committee) Order in Council, 1900, and shall come into operation on the first day of October, one thousand nine hundred.

We add some particulars as to the personal qualifications of the members of this Committee, which will doubtless play a prominent part in reorganizing the system of secondary education in England and Wales. Its duties will be to advise the Board of



Education in regard to the inspection, &c., of secondary schools, with other matters referred to it by the Board, and to frame regulations for the creation of a Register of Teachers.

- Rt. Hon. A. H. D. Acland. Formerly M.P. and Vice-President of the Committee of Council on Education. (Official element.)
- Sir W. E. Anson, Bart.... M.P. Oxford University. (University Literary Education.)
- Prof. Henry Armstrong. City and Guilds Institute, South Kensington. (Technical.)
- \*Mrs. Sophie Bryant ..... D.Sc.; Headmistress North London Collegiate School for Girls; Headmistresses' Association; Member of Council, College of Preceptors. (Girls' Endowed Literary Schools.)
- Right Hon. Sir W. Hart Dyke, Bart. .... M.P.; formerly Vice-President of the Committee of Council. (Official element.)
- Sir Michael Foster, K.C.B. M.P. London University; Professor of Physiology, Cambridge; Sec. Royal Society. (University and Scientific Education.)
- James Gow, Litt.D. .... Headmaster, High School, Nottingham; Headmasters' Association. (Literary "Conference" and "Association" Schools.)
- Ernest Gray, M.A. .... M.P. (State-aided Elementary Schools.)
- \*Henry Hobhouse ..... M.P.; Ecclesiastical Commissioner. (Official element.)
- A. C. Humphreys-Owen. M.P. (Welsh County Council, Intermediate Literary Education.)
- \*Sir Richard Jebb ..... M.P. Cambridge University; Professor of Greek at Cambridge. (University Literary Education.)
- \*Hon. and Rev. Canon E. Lyttelton ..... Headmaster of Haileybury; Chairman of Teachers' Guild. (Literary "Conference" Schools.)
- \*Very Rev. E. C. Maclure, D.D. .... Dean of Manchester. (Elementary Schools; School Board Administration.)
- Miss Lydia Manley ..... Principal of Stockwell Training College; British and Foreign School Society. (Women Elementary Teachers' Training.)
- Ven. E. G. Sandford..... Archdeacon of Exeter. (Church of England Voluntary Schools.)
- \*Mrs. E. M. Sidgwick..... Principal of Newnham. (Women's University Education.)
- Prof. B. C. A. Windle, M.D. Dean of Medical Faculty, Birmingham. (Roman Catholic; University Scientific and Technical Education.)
- Rev. D. J. Waller, D.D... Secretary of the Wesleyan School Conference. (Nonconformist Denominational Schools.)

\* These six were members of the Royal Commission on Secondary Education.

**A SYMPOSIUM ON EDUCATION.**

BEING "A MIDSUMMER NIGHT'S DREAM."

It was late at night as I sat in my easiest arm-chair musing over the latest number of the *Pedagogic Review* and the educational problems of the hour. Gradually I was conscious of a drowsy feeling stealing over me: my thoughts became vague and indistinct, and my body ceased to be to me a matter of any importance. When I awoke I found myself in a curious cave by the banks of a sluggish stream, in the midst of a strangely varied assembly.

"We were talking about education," explained one of their number politely to me, as I opened my eyes. "I scarcely know how you have come amongst us—evidently not by the usual river-way," continued the speaker, indicating with a wave of his hand the waters of the Styx flowing by; "but, at any rate, you must have later information than we have, and your views would certainly be listened to with sympathy and respect."

"What is this ridiculous nonsense I hear about 'genetic psychology,'" broke in a stentorian voice, "these lucubrations of which I have heard on the philosophy of education? How these pedagogues waste their time! What were my words to Boswell these hundred years ago and more?—'Education is as well known, and has long been as well known, as ever it can be.' There is no philosophy of education, save in the imagination of these men. How much time do you suppose I

should have had to complete my Dictionary, Sir, had I frittered away my time in idle and vacuous discussion of this kind?"

The good Doctor glared round on the occupants of the cave so fiercely as he said this that for a few moments nobody dared to make reply; though I observed a gentle-looking old man in one corner showing unmistakable signs of disagreement with the opinions so dogmatically expressed.

"Have you not thought, Sir," began he mildly, "of the infinite delicacy of the mind of a little child, and the mysterious unfolding of its nature? We have learnt that it is the work of the educator to bring about the harmonious development of all the faculties, and this is surely an advance since your day!"

"Sir," said Dr. Johnson, "I hate by-roads in education. Speak not to me of kindergartens; I will have none of your modern fantasies."

"Come, let us live for our children," murmured Froebel sadly to himself, in his humble seat by the river; but the Doctor did not hear him, as he had just risen abruptly and changed his seat. "I would I could take him through the pleasant paths of my kindergarten, and show him there my fair and fragrant flowers, opening in the sunshine."

"Many things have I seen and many things heard," exclaimed the deep voice of a determined and imperious-looking Oriental, "yet have I never heard of such cockering ways in the training of the young. Nought but evil can result from such up-bringing. 'Spare the rod and spoil the child' was ever my motto, and I have yet to learn that a better system of youthful training has been discovered."

"Hear, hear!" cried Dr. Busby, who had taken no part in the debate up to this point. "It was good enough for Westminster in my day, and should be good enough for the world to-day. Why, I flogged the poet Dryden and the philosopher Locke, and more than half a Bench of Bishops, in their youth. I flogged some of the finest men in England, and I tell you, Sir, they owed their greatness largely to the keenness of my birch."

"The now Prime Minister agrees with you, Sir," broke in a quiet voice from the back of the cave. "I was in the Press Gallery on the night of the debate on the Youthful Offenders' Bill, and I can assure you that his views were perfectly sound on the question." The pale-faced young man with the gentle voice turned out to be an over-worked journalist lately come across the river for reasons of health, not unconnected with the ventilation of our Houses of Parliament.

"And, by the way," he continued, "it may interest you to know that the Association for Child-Study is being severely criticized just now, and there promises to be a reaction against the modern craze for philosophic education. The writer of a brilliant article in a well known magazine has recently shown, to his own perfect satisfaction, that there is no such thing as a science of teaching, but only an art; that the best kind of schoolroom is one in which buckets full of tears are shed by the pupils, and that it is only the incompetent teacher who attempts that impossible feat to teach a child to think. A child's business is to learn what he has been set to learn, whether he likes it or not, and there's an end of the whole matter. An education is a perfectly simple and easy thing."

"Young man," said Dr. Johnson, "I should like to be brought acquainted with the writer. He is a man of sound sense and understanding."

"And have you nothing to say?" said another speaker, sharply turning to me, the silent listener to the debate. "We should like to hear what you have to tell of the latest developments. What is the conception of education now held by the experts?"

I expressed myself as very deeply interested in the discussion; but was bound to confess that, though there were still some who held enthusiastically to the views of Froebel and Pestalozzi, and there was an occasional controversy on the subject of corporal punishment in certain circles, the real interest of educationalists now centred round a very different point. The questions now being asked on all hands were these: "How shall we train our boys to be good Imperialists; and what equipment shall we give them for a life of national defence? Who will pay the cost of rifle corps, and what are the objections to conscription in schools?"

"But you should read the educational papers and talk to the headmasters."

"Rifle-shooting and cadet corps; leaving certificates of military proficiency; technical education," muttered the journalist, abstractedly, in a curious interjectional manner, as of one mentally jotting down heads for a newspaper article.

"But Lord Salisbury has just told us that rifle-shooting is not to be accepted as technical education," put in another new comer, who had just caught the remarks of the last two speakers.

"That may be so," said the other; "but it is likely to stand for every other kind of education—elementary, secondary, and University—if one can trust the signs of the times. We are all soldiers nowadays, and Mr. Kipling writes our educational treatises. . . ."

At that point I lost consciousness of my surroundings; the voices in the cave died away into a far distance, and the last thing I saw dimly through the oncoming darkness was the perplexed and troubled face of Friedrich Froebel, poring over the pages of "Stalky & Co." in the newest edition.

## Blackwoods' Illustrated Classical Texts.

General Editor—H. W. AUDEN, M.A., Assistant-Master at Fettes College.

NOW READY.

**CÆSAR.—GALLIC WAR. BOOKS IV., V.** By St. J. B. WYNNE WILLSON, M.A., Assistant-Master at Rugby. *With or without Vocabulary.* 1s. 6d. Vocabulary separate, 3d.

(Prescribed for the Oxford Local, London Matriculation, and College of Preceptors Examinations, 1900.)

"Mr. Willson has certainly succeeded in giving boys all the information and help they could possibly desire for translating Caesar, and we may say that a thorough acquaintance with the contents of this volume would be a considerable step towards a knowledge not only of Latin, but of Roman history and antiquities in general. . . . The notes are copious and accurate; while an appendix of proper names, with historical and geographical notes, is a good feature."—*Journal of Education.*

"A very attractively edited volume, with some quite successful pictures and good notes which reach a really high level of merit."—*Guardian.*

"We wonder how it can all be done at the price."—*Public Schools Magazine.*

**VIRGIL.—GEORGICS. BOOK IV.** By J. SARGEANT, M.A., Assistant-Master at Westminster. 1s. 6d.

(Prescribed for the Cambridge Higher Local Examinations, 1900, 1901.)

"A noteworthy book. . . . No boy with a live brain could fail to derive great benefit both in knowledge and stimulus from this book."—*Guardian.*

"The book is the best we have seen of the new type of school-books. If Messrs. Blackwood keep up to this standard, their series will stand high."—*Literature.*

"There is a pleasing freshness about this volume."—*Athenæum.*

"A most attractive edition."—*Journal of Education.*

**CICERO.—IN CATALINAM. BOOKS I.—IV.** By H. W. AUDEN, M.A., Assistant-Master at Fettes College. 1s. 6d.

"A good feature of the book is to be found in the illustrations, which will help the young reader to realise."—*Spectator.*

"Some striking illustrations. . . . A good section on the life of Cicero."—*Athenæum.*

"A very useful school edition. The notes are good, and the introduction upon Cicero particularly so. The illustrations which enliven the text are relevant and interesting."—*Public Schools Magazine.*

**OVID.—METAMORPHOSES (SELECTIONS).** By J. H. VINCE, M.A., Assistant-Master at Bradfield. 1s. 6d.

**DEMOSTHENES.—OLYNTIACS I.—III.** By H. SHARPLEY, M.A., formerly Assistant-Master at Marlborough. [Immediately.]

**XENOPHON.—ANABASIS. BOOKS I., II.** By A. JAGGER, B.A., Hymer's College, Hull. [Immediately.]

Other Volumes to follow.

## Blackwoods' English Classics.

With Frontispieces. In fcap. 8vo Volumes, cloth.

General Editor—J. H. LOBBAN, M.A., Editor of "English Essays," formerly Examiner in English in the University of Aberdeen.

**MACAULAY.—LIFE OF JOHNSON.** By D. NICHOL SMITH, M.A., Editor of "King Henry VIII." (Warwick Shakespeare). 1s. 6d.

"A most desirable edition. The introduction includes the life of the author, together with an excellent appreciation of his style and critical methods, whilst the one difficulty in Macaulay—his fondness for allusion—is overcome by a complete and interesting set of notes, involving considerable research in eighteenth century biography."—*Educational News.*

**GOLDSMITH.—TRAVELLER, DESERTED VILLAGE, AND OTHER POEMS.** By J. H. LOBBAN, M.A. 1s. 6d.

"Goldsmith has never appeared in more attractive garb than he does here, type and binding being alike beautiful. Nor do the literary accompaniments of the text, in the shape of introduction and notes, deserve less praise. . . . The editor's remarks on the poems are full of fine feeling and discrimination. . . . In short, this is not only an ideal edition for schools, but is well worthy of a place on the student's bookshelf."—*Educational News.*

**SCOTT.—LADY OF THE LAKE.** By W. E. W. COLLINS, M.A. 1s. 6d.

**MILTON.—PARADISE LOST. BOOKS I.—IV.** By J. LOGIE ROBERTSON, M.A., First English Master, Edinburgh Ladies' College. 2s. 6d.

"Introduction and notes show everywhere this writer's [Mr. J. Logie Robertson] scholarship in English literature, and experience in adapting his knowledge to educational purposes."—*Scotsman.*

"A most valuable text."—*Literary World.*

**COWPER.—THE TASK, AND MINOR POEMS.** By ELIZABETH LEE, Author of "A School History of English Literature." 2s. 6d.

"The notes in this volume are excellent."—*Literary World.*

**JOHNSON.—LIVES OF MILTON AND ADDISON.** By Prof. J. W. DUFF, M.A., the Durham College of Science, Newcastle-upon-Tyne. 2s. 6d.

**CARLYLE.—ESSAY ON BURNS.** By JOHN DOWNIE, M.A. 2s. 6d.

Other Volumes to follow.

**FIRST LATIN SENTENCES AND PROSE.** By K. P. WILSON, M.A., Assistant-Master at Fettes College. 2s. 6d. [Just published.]

**LOWER LATIN PROSE.** By K. P. WILSON, M.A. 2s. 6d.

\* KEY, 5s. net.

**LOWER GREEK PROSE.** By K. P. WILSON, M.A. 2s. 6d.

WILLIAM BLACKWOOD & SONS, EDINBURGH AND LONDON.

## OXFORD UNIVERSITY PRESS.

**Milton.—Areopagitica.** With Introduction and Notes by JOHN W. HALES, M.A. 3s.

— **Poems.** Edited by R. C. BROWNE, M.A. In Two Volumes. 6s. 6d.

Sold separately: Vol. I., 4s.; Vol. II., 3s. In paper covers: Lycidas, 3d.; Comus, 6d. Edited, with Notes, by O. ELTON, B.A.: Lycidas, 6d.; L'Allegro, 4d.; Il Penseroso, 4d.; Comus, 1s.

— **Paradise Lost.** Book I. Edited by H. C. BERCHING, M.A. 1s. 6d.; in parchment, 3s. 6d.

— **Paradise Lost.** Book II. Edited by E. K. CHAMBERS, B.A. 1s. 6d. Books I. and II. combined, 2s. 6d.

— **Samson Agonistes.** Edited, with Introduction and Notes, by J. CHURTON COLLINS, M.A. 1s.

**Scott.—The Tallman.** Edited, with Introduction, Notes, and Glossary, by the Rev. H. B. GEORGE, M.A. 2s.

— **Marmion.** Edited, with Introduction and Notes, by T. BAYNE. 3s. 6d.

**A Latin Prose Primer.** By J. Y. SARGENT, M.A. 2s. 6d.

**Passages for Translation into Latin.** Selected by J. Y. SARGENT, M.A. 2s. 6d.

\* A KEY to the above, price 5s. net. Supplied to Teachers only on application to the Secretary, Clarendon Press, Oxford.

**Cicero.—De Senectute.** Edited, with Introduction and Notes, by L. HUXLEY, M.A. 2s.

**Livy.** Books XXI.—XXIII. With Introduction and Notes. By M. T. TATHAM, M.A. Second Edition, Enlarged. 5s.

— Book XXI. By the same Editor. 2s. 6d.

**Plato.** With Introduction and Notes by ST. GEORGE STOCK, M.A. 8vo.

— **The Apology.** Third Edition. 2s. 6d.

— **Crilo.** 2s.

**Xenophon.—Anabasis.** Book II. With Notes and Map. By C. S. JERRAM, M.A. 2s.

**Lessing.—The Laocoon.** With English Notes by A. HAMANN, M.A. Revised, with an Introduction, by L. E. UPCOTT, M.A. 4s. 6d.

**Schiller.—Wilhelm Tell.** A Drama. Large Edition. With Map. By C. A. BUCHHEIM, Ph.D. 3s. 6d.

— **Wilhelm Tell.** School Edition. With Map. By the same Editor. 2s.

— **María Stuart.** A Drama. By the same Editor. 3s. 6d.

**Short German Plays for Reading and Acting.** With Notes and Vocabulary. By E. S. BUCHHEIM. 3s.

**Elementary German Prose Composition.** With Notes, Vocabulary, &c. By the same Editor. Cloth, 2s.; stiff covers, 1s. 6d.

**A Primer of Italian Literature.** By F. J. SNELL, M.A. 3s. 6d.

**Cervantes.—The Adventure of the Wooden Horse and Sancho Panza's Governorship.** Edited, with Introduction, Life, and Notes, by CLOVIS BÉVENOT, M.A. 2s. 6d.

**A Primer of the Gothic Language.** With Grammar, Notes, and Glossary. By JOSEPH WRIGHT, M.A., Ph.D. Cloth, 4s. 6d.

**Nixon.—Elementary Plane Trigonometry.** By R. C. J. NIXON, M.A. 7s. 6d.

**Elementary Mechanics of Solids and Fluids.** By A. L. SELBY, M.A. 7s. 6d.

**An Elementary Treatise on Heat.** With numerous Woodcuts and Diagrams. By BALFOUR STEWART, F.R.S. 8s. 6d.

**Hydrostatics and Elementary Hydrokinetics.** By G. M. MINCHIN, M.A. 10s. 6d.

**Geometry for Beginners.** By the same Author. 1s. 6d.

**Practical Work in General Physics.** By W. G. WOOLLCOMBE, M.A., B.Sc. 2s.

**Practical Work in Heat.** By the same Author. 2s.

**Practical Work in Light and Sound.** By the same Author. 2s.

**Practical Work in Electricity and Magnetism.** By the same Author. 2s.

Full Catalogues post free on application.

LONDON: HENRY FROWDE,  
OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.

# COLLEGE OF PRECEPTORS' EXAMINATIONS.

SUITABLE BOOKS IN THE  
**University Tutorial and Preceptors' Series.**

## English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. Low, M.A. Lond., and ARNOLD WALL, M.A. Lond. [*In the press.*]  
**The English Language: Its History and Structure.** By W. H. Low, M.A. Lond. With 320 Test Questions. *Fifth Edition.* 3s. 6d.  
**History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, and numerous Chronological and other Tables. By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.

## French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.  
**FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. es Sc., Univ. Gall. 1s. 6d.  
**French Prose Composition.** By E. WEEKLEY, M.A. Lond. 3s. 6d.  
**FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. *Second Edition.* 1s. 6d.  
**French Prose Reader.** Edited by S. BARLET, B. es Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. *Third Edition.* 2s. 6d.

## Latin Grammar, &c.

- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [*In the press.*]  
**Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Fourth Edition.* 3s. 6d. **Exercises and Test Questions on.** 1s. 6d.  
**Latin Composition.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fifth Edition.* 2s. 6d.  
**Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.  
**LATIN READER, THE PRECEPTORS'.** [*In preparation.*]

## Mathematics and Science.

- Algebra, The Tutorial.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Based on the *Algebra* of RADHAKRISHNAN. Part II.: Advanced Course. 6s. 6d.  
**Algebra, A Middle.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.  
**Arithmetic, The Tutorial.** By W. P. WORKMAN, M.A. [*In preparation.*]  
**Biology, Text-Book of.** By H. G. WELLS, B.Sc. Lond., F.Z.S., F.C.P. Part I.: Vertebrates. *Second Edition.* 2s. 6d. Part II.: Invertebrates and Plants. 2s. 6d.  
**Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d. Exercise Books ruled Ledger, Journal, or Cash. 3d.  
**BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [*In preparation.*]  
**Botany, First Stage.** By A. J. EWART, D.Sc. Lond. 2s.  
**Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, LL.D., M.A., F.C.S. Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.  
**Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. Interleaved. 1s. 6d.  
**Euclid. Books I.-IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.  
**Hydrostatics, An Elementary Text-Book of.** By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. *Second Edition.* 2s.  
**Magnetism and Electricity, Text-Book of.** By R. W. STEWART, D.Sc. *Fourth Edition.* 3s. 6d.  
**MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.  
**Mensuration of the Simpler Figures.** By WM. BRIGGS, LL.D., M.A., F.C.S., and T. W. EDMONDSON, M.A. *Second Edition.* 2s. 6d.  
**Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. Lond. 2s.  
**Trigonometry, The Tutorial.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.  
**TRIGONOMETRY, THE PRECEPTORS'.** Edited by WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', London University, Science and Art Department, and other Examinations, free on application.

London: UNIVERSITY TUTORIAL PRESS (University Correspondence College Press).  
W. B. CLIVE: 13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	2 10 0	.....	"	8 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 8s. 6d. for 6 lines, or 4s. 6d. the inch.  
Situations Vacant and Wanted—80 words or under, 2s.; each additional 10 words, 5d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

August 1, 1900.

A COURSE of twelve lectures on "The Practice of Education" will be delivered at the College of Preceptors by Prof. Withers, of Owens College, beginning in the first week of October.

THE Council of the College are arranging for a Winter Meeting of Teachers, to be held in January, 1901, with courses of lectures and demonstrations on various subjects.

THE RIGHT HON. A. J. BALFOUR, M.P., will inaugurate the Summer Meeting of University Extension Students at Cambridge on Thursday, August 2, by an address in the Senate House.

THE Geoffrey Fellowship, and possibly another, will be awarded at Newnham College in August. Applications from former students of the college are invited, and should be sent on or before August 3, to the Principal, from whom the conditions of tenure can be obtained.

A PUBLIC HEALTH CONGRESS will be held at Aberdeen from August 2 to 7, under the auspices of the Royal Institute of Public Health. Among the papers promised may be mentioned the following:—"Disinfection," by Prof. Delépine; "Sewage," by Prof. Percy Frankland, F.R.S.; and "The Origin and Treatment of Malarial Fever," by Dr. Patrick Manson. There will also be submitted and discussed a report on the inquiry made into the chemical and bacteriological condition of the air in the London Board schools.

THE National Home-Reading Union is holding a Summer Meeting at Edinburgh, which will be concluded on Saturday next.

ON October 9 Convocation of London University will proceed to elect sixteen members of the Senate. The election of Senators by the various Faculties is fixed for October 12. The first meeting of the Senate under the new constitution will take place on October 24.

DR. WARRE, of Eton, has raised a lively educational controversy by his proposal to "enrol, for the purpose of instruction in drill, manœuvres, and the use of arms," all young men at the Universities and boys at the public secondary schools over the age of fifteen who are capable of bearing arms." Eighty-three out of a hundred and two headmasters who have been consulted say ditto to Dr. Warre; but, in the course of the correspondence, the "capable of bearing arms" has been altered to "willing and able to bear arms." Is all this "epoch making," or only a sort of *fougus de khaki*?

PROF. ARMSTRONG, a member of the Consultative Committee, has taken part in this correspondence mainly by way of advocating science teaching as the foundation, not merely of neo-militarism, but apparently of all education. Speaking of last year's Joint Board Certificate Examination, he says:

Winchester and Eton College head the list, the former gaining sixty-eight and the latter fifty-nine certificates; of these Winchester gained

two in "science" but Eton none, although in 1898 and 1897 Eton had the distinction each year of gaining one certificate in a scientific subject. Bradford Grammar School and Oundle were the only two schools to score double figures in science in 1899; yet they did as well as Eton in Latin and Greek. I have no wish to exaggerate the value of such figures, but they at least show the way the wind blows, and also afford some indication of the extent to which Huxley's advice to make science "a foundation of education" is taken in the school.

\* \* \*

THE BISHOP OF LONDON, when he opened the new buildings of the Kilburn Grammar School, practically supported the plea for better scientific method in our teaching. The necessity for this, he said, had been impressed on his mind by what had been happening in South Africa, where, though the raw material was as good as ever it was, yet it was impossible not to feel that there were great blanks in the capacity of some. Somehow or other we had not cultivated knowledge, and the application of the best knowledge to whatever had to be done.

\* \* \*

THE endowment fund of Birmingham University now exceeds £400,000. Sir James Chance has given £50,000, and Lord Calthorpe has bestowed on the University some twenty-five acres of land, valued at between £15,000 and £20,000.

\* \* \*

A COUNTY COUNCIL can hardly be a pious donor; though, no doubt, its members may be held pious in their regard for education. The Bangor Council has offered six acres as the site of new buildings for Bangor University College, on the erection of which a sum of £20,000 will be expended.

\* \* \*

HERE is the University athletic record for the past year:—To the credit of Oxford: Boxing and fencing, Association football, billiards double, billiards single, golf, point-to-point steeplechase, athletic sports, racquets double, racquets single, lawn tennis single, and ice hockey—total, 11. The Cambridge successes are: Cross-country, Rugby football, hockey, chess, Boat Race, swimming, &c., lawn tennis double, tennis double, and tennis single—total, 9.

\* \* \*

WE mentioned some time ago that the London School Board had asked the Charity Commission to facilitate in various ways the entrance of their scholars, by the scholarship ladder, into St. Paul's School. They invited the Commissioners to provide that English grammar might be regarded as an alternative for Latin grammar in the entrance scholarship examinations; but the Commissioners have not been able to comply with this request.

\* \* \*

AT the St. Paul's Apposition, on July 25, the High Master, referring to the new scheme of the Commissioners, said there was much in it which did not commend itself to his judgment; but, taking it as a whole, the present Commissioners had done what their predecessors failed to do, and had put an end to a state of things which was very damaging to St. Paul's.

\* \* \*

THE Almoners of Christ's Hospital, whilst proceeding with the erection of new school buildings for boys, on the estate recently acquired by them at Horsham, where it was also intended to build a school for girls, have, it is said, induced the Charity Commissioners to vary their scheme so far as to sanction the retention of the girls' school at Hertford, and to increase it by the addition of new class-rooms.

\* \* \*

THE Canadian Government makes an interesting invasion of the mother country by offering bronze medals for competition in British and Irish schools, by an examination to be held at Christmas in the history and geography of Canada.

Appointments and Vacancies. THE Chair of Moral and Mental Philosophy in the University of Cambridge, vacated by the resignation of Dr. Henry Sidgwick, has been filled by the appointment of Mr. Sorley, Professor of Moral Philosophy in Aberdeen University.

\* \* \*

MR. WALTER RALEIGH, of University College, Liverpool, has been appointed to succeed Mr. Bradley (resigned) as Professor of English Language and Literature in the University of Glasgow.

\* \* \*

THE QUEEN has appointed Prof. McCall Anderson, Professor of Clinical Medicine in the University of Glasgow, to the Chair of Systematic Medicine, vacant by the resignation of Sir W. Gairdner.

\* \* \*

THE Council of King's College, London, have elected the Rev. A. Nairne, M.A., late Fellow of Jesus College, Cambridge, to the Professorship of Hebrew and Exegesis of the Old Testament, in succession to the late Dr. Stanley Leathes.

\* \* \*

THE Council of King's College have also appointed Mr. H. G. Atkins, M.A., First Class Honours (with special distinction in German), Medieval and Modern Languages Tripos, Cambridge, Instructor at the Royal Naval College, Greenwich, to the Professorship of German, in succession to the late Dr. Buchheim.

\* \* \*

IN October the electors to the Chichele Professorship of Modern History will proceed to the election of a Deputy-Professor. Candidates should send in their names to reach the Registrar of the University before August 31. The stipend is fixed at half the emoluments of the present Professor (Mr. Burrows), and the half will amount to about £500 per annum. The Deputy-Professorship will cease when the present Professor's tenure of office expires, and at the next vacancy the payment of the Professorship will be fixed at £900 a year. The Professor is required to lecture and give instruction principally on the History of Great Britain and Ireland, and the British Colonies and Dependencies. He may also treat of other parts of Modern History.

\* \* \*

THE Scottish Education Department have appointed Principal Grant-Ogilvie, of the Heriot-Watt College, Edinburgh, to be the Director of the Museum of Science and Art, Edinburgh.

\* \* \*

THE Governors of St. Peter's School, York, have appointed the Rev. E. C. Owen, assistant-master at Bromsgrove School since 1893, to the Headmastership of the school. Mr. Owen was formerly a scholar of Pembroke College, Oxford, and graduated with a First Class in the Final Classical School in 1892. He will take up his work at the commencement of next term.

\* \* \*

MR. R. T. ROBINSON, M.A., B.Sc., late scholar of Peterhouse, Cambridge, and senior mathematical master of the Wyggeston School, Leicester, has been appointed Headmaster of the Grammar School, Burton-on-Trent.

\* \* \*

MR. H. REDMOND THOMPSON, M.A. Oxon., assistant-master at Sherborne, has been appointed Headmaster of Eastbourne College, in succession to the Rev. M. A. Bayfield, whose retirement is due to ill health.

\* \* \*

MR. C. CARGILL, B.A., of Ilminster School, has been appointed Headmaster of Mirfield Grammar School, in succession to the Rev. C. T. Raynham, retired.

\* \* \*

THE REV. J. W. DAVISON, M.A., of Shaftesbury Grammar School, succeeds Mr. R. Stead, B.A., as Headmaster of Folkestone Grammar School.

\* \* \*

At the annual meeting of Old Taylorians at the end of June Prebendary Baker announced that he would retire from the Headmastership of Merchant Taylors' School next Christmas. Mr. Baker will then have completed a term of thirty years as Headmaster.

\* \* \*

THE Headmastership of Bedford Modern School will be vacant next Christmas by the resignation of the Rev. Dr. Poole.

\* \* \*

WE regret to note the death of the Rev. A. R. Vardy, Headmaster of King Edward's School, Birmingham, at the early age of fifty-nine. Mr. Vardy had been Headmaster for twenty-one years.

\* \* \*

MISS FRANCES H. MELVILLE, M.A. Edin., has been appointed to the post of Warden of the University Hall, St. Andrews, recently rendered vacant. Miss Melville was the first woman to take the M.A. degree at the University of Edinburgh with First Class Honours in Philosophy. For three years she acted as assistant to Prof. Seth, of Edinburgh, and latterly occupied the position of Lecturer in Mental and Moral Science at the Ladies' Training College, Cheltenham.

\* \* \*

THERE have been some notable changes in the staff of the girls' high schools. Miss H. M. Jones having retired from the Notting Hill School, she has been succeeded as Headmistress by Miss E. Gavin (Girton), Headmistress at Shrewsbury. Miss Wise, assistant-mistress at Notting Hill, has been appointed to succeed Miss Gavin. The new Head of Kensington High School is Miss Home, of Clapham High School. Notting Hill loses four of its assistants in addition to Miss Jones.

\* \* \*

THE International Association of Academies is now constituted, and it includes the eighteen following Academies:—Academy of Sciences, Amsterdam; Prussian Academy of Sciences, Berlin; Academy of Sciences, Literature, and the Fine Arts, Brussels; Hungarian Academy of Science, Budapest; Academy of Sciences, Christiania; Society of Sciences, Göttingen; Academy of Sciences of Denmark, Copenhagen; Academy of Sciences of Saxony, Leipzig; Royal Society, London; Academy of Sciences of Bavaria, Munich; Academy of Inscriptions and Literature, Paris; Academy of Sciences, Paris; Academy of Moral and Political Sciences, Paris; Academy of Sciences, St. Petersburg; Accademia dei Lincei, Rome; Swedish Academy of Sciences, Stockholm; Academy of Sciences, Washington; Academy of Sciences, Vienna. The Association is divided into two sections, one of Literature and the other of Science. There will be a general international meeting once in three years.

\* \* \*

THE London Mathematical Society send us their "Complete Index of all the Papers printed in the Proceedings of the Society" (Francis Hodgson). The "Proceedings" occupy thirty volumes; and, without a general index, the search for particular papers must often have been a tedious occupation. The date of the earliest paper, we note, is 1865.

\* \* \*

WE need hardly say that this list of papers includes some of the most brilliant output of the most original mathematicians of this country during a third of a century, including Cayley, W. K. Clifford, A. De Morgan, Clerk Maxwell, H. J. S. Smith, Sylvester, and others. We note a contribution of Mrs. Bryant's, "On the Ideal Geometrical Form of Natural Cell-Structure," and several early indications of the genius of the ill-fated Arthur Buchheim, son of the late Prof. Buchheim.

\* \* \*

THE *English Historical Review* for July continues Mr. R. S. Rait's study of "The Scottish Parliament before the Union," and Mr. Basil Williams's "Foreign Policy of England under Walpole." Mr. Henry Bradley, noting the variants which are

found in old manuscripts of the Latinized name of Manchester, makes a somewhat fanciful suggestion of "Mammium"—or, in Celtic form, "Mammion"—as the original name—"a derivative, perhaps, of *mammā*, 'mother.'" Anyhow, Mr. Bradley bids us discard "Mancunium." We will take it *ad referendum*.

\* \* \*

A VOLUME of much interest has been compiled by Mr. Horace Hart, M.A., Printer to the University of Oxford. It is entitled, "Notes on a Century of Typography at the University Press, Oxford, 1693-1794, with Annotations and Appendices." Mr. Hart's knowledge of the printing art is extensive. He is probably the greatest living authority on the subject, and the information which he gives is, therefore, most valuable.

\* \* \*

THE Copyright Bill, which had almost passed the House of Lords, has gone by the board, owing to the old-fashioned fallacy that Parliament has not time to carry into law as many measures as may be required for public purposes in each succeeding Session.

\* \* \*

TEACHERS and their pupils buy more books than any other class of readers, and they will be interested in the statement that the booksellers are urging the publishers—who will be nothing loth—to produce a larger percentage of "net books." The Booksellers' Association have just addressed the Publishers' Association to that effect. A circular with the suggestion is being sent round the members of the latter body, and no doubt there will be some result. Scientific and technical books, it is argued, should be brought under the net system.

\* \* \*

VERY good prices were paid at a recent sale of children's books at Messrs. Sotheby's. A Horn Book of the seventeenth century, covered in leather, with a figure of Charles I. on horseback, fetched £23. 5s.; while a somewhat similar one of the same century, with a nearly obliterated figure of St. George and Dragon, although silvered on the back, only reached £15. To us, a more human interest seems to attach to the nearly obliterated St. George than to the more perfect alphabet decorated with the figure of Charles. Tiny fingers must have often wandered from the dreary letters to the exciting picture for a solace which the Charles I. Horn Book, although containing the full alphabet, with an additional S, could not give.

\* \* \*

THESE books, with many others, were the property of the late Mr. Andrew Tuer, whose recent works on children's books are well known. Charles and Mary Lamb's "Poetry for Children" realized £81. Perhaps there is still a glorious future for many an old battered "Public School Latin Primer."

## THE GREEK PLAY AT BRADFIELD.

By E. C. MARCHANT, M.A.

I do not propose to set before the readers of this journal a detailed criticism of the "Agamemnon" as performed at Bradfield during the last days of June—to indicate over again the several degrees of success with which Clytæmnestra and the King, Talthybius, best of heralds, and the ill-starred Cassandra overcame the difficulties that beset them. Perhaps at no season of the year is *crambe repetita* so unwelcome a dish as in the torrid heat of August. But, now that the stage picture has faded, it may not be amiss to attempt to estimate the effect of these unique performances at Bradfield on those who take part in them and on those who watch them.

The story of the Bradfield plays is known to everybody. A disused chalk-pit, delightfully situated, and in close proximity to the college, has been transformed by the energy of Dr. Gray into a most pleasant open-air theatre, wherein everything may very well pass for Greek. The seating capacity of the auditorium cannot fall far short of two thousand; and the seats are sufficiently uncomfortable to put one in mind of the jests in Aristophanes. In the centre of the orchestra there is an altar of Dionysus, and the stage and its buildings are elaborate enough to shock Dr. Dörpfeld. None but the extreme purist will quarrel with these concessions to the modern taste. More doubtful is



the seating for the musicians, that occupies the extreme corner of the stage on the O.P. side, where Mr. Abdy Williams, looking quite genuine as a tragic poet, directs in modern fashion his white-robed minstrels. It is no easy task, this direction of the music—for the members of the chorus cannot see Mr. Williams, and so not infrequently it happens that the singers go before and the minstrels follow after, or *vice versa*. But nobody who has had to do with school music will deny that Mr. Williams overcomes the considerable difficulties that beset him in a masterly fashion. It may indeed be here set down that the critics are too apt to overlook the many awkward problems involved in casting a Greek play entirely with English schoolboys. One who has both figured in a Greek play and directed a school band and choir is glad to record here that the Bradfield performances are a monument to the patience and care of those concerned in their production.

The centre of the stage presents the palace of Agamemnon, and on the right is the watch-tower, from which the beacon was desecrated. The watchman, be it noted, was not portrayed as a low comedian such as some of the editors regard him. He did not even execute a breakdown when he delivered the passage "I will dance the prelude." I believe that this view of the part is correct, and that Æschylus did not intend his watchman to be such a funny fellow as the editors are apt to make him.

The chorus streamed in by a single *parodos* on the spectators' right. Instead of twelve—which is supposed to be the correct number in the "Agamemnon"—there were fourteen singers and a leader, according to the number doubtless adopted in ancient reproductions of the "Oresteia."

The proceedings of the Bradfield chorus are somewhat curious. When they are not striding through their evolutions they lead the slackest existence possible, lolling about the steps that communicate with the stage, utterly heedless of what is doing before them, despite the bustling, fussy, interventions of the *coryphaeus*. At times the leader seems to be making frantic efforts to galvanize his followers into life; but they presently relapse again into the old listlessness. Clytæmnestra's harangue on Marconi signalling; the herald's account of the storm and the loss of Menelaus; the arrival of their monarch, with whom they profess to sympathize so deeply; the Queen's embarrassment, so marvellously conveyed in a speech directly addressed to the chorus; the ravings, coherent or incoherent, of inspired Cassandra; nay, the very murder of their sovereign lord—all these things pass before the old gentlemen like pictures in a dream, and leave them slumbering on, until, on a sudden, they start out of their lethargy in the same unaccountable way as a man awakes from a dream, bustle about, and discuss, with energy transient enough, what is to be done. Presently this show of interest fades away, and the latter portion of the play becomes a mere dialectical dispute, in which the chorus delegate their part to their spokesman, and once more recede out of the action. The effect of this detachment of the chorus is that the choric songs themselves seem to the spectator wholly irrelevant. They do not blend with the rest of the play, but gape apart from it; one gets heartily sick of the doddering old fellows, and feels thankful enough that the authorities have cut down their part. No doubt Greek acting was statuesque, quiet, restrained; but really the persons who bear an important part in the play, and whose presence is essential to the working out of the plot, must have displayed in action some signs that they were not merely bored spectators. How would the Bradfield chorus manage the two remaining plays of the "Oresteia"?

The stage picture when Agamemnon entered in his chariot, dragged by slaves, followed by attendants, and attended by two companies of soldiers, was worthy of the highest praise. The King preserved the requisite dignity in a trying situation while Clytæmnestra got through her long speech. This is, perhaps, the most difficult part of the play to perform, the speech making as great demands on the actor's skill as the famous counterfeiting business in "As You Like It." It is not to be expected that the Bradfield players should rise to heights seldom reached on the professional stage. But they handicapped themselves unnecessarily by taking the whole play at one unvarying pace. Distinctness of enunciation is commendable, but too much is sacrificed to it when it becomes impossible for the spectator to detect the confusion of Clytæmnestra. She spoke the rapid verses as deliberately as a judge pronounces a verdict. The effect of this extreme deliberation on the spectator is an impression of monotony; and those who are without a knowledge of Greek sufficient to supplement the deficiencies of the actors frankly admit that they are bored. But not only is the utterance in parts excessively slow; the words are spoken in a detached manner which is wholly unlike the Greek method. The Greeks, as we know, ran their words into one another—there were no gaps. Aristophanes tells us that an actor made *γαλῆνὰ δρῶ* sound like *γαλῆνι δρῶ*—no doubt because he detached the words just as they do at Bradfield. One very ugly result of this method is that the elided enclitics are separated from the word that precedes and attached closely to that which follows. But, apart from the general question of pronunciation, it is manifest that some lines in Clytæmnestra's greeting require to be delivered more rapidly than others.

Of what value are these performances? First they leave an indelible impression on the minds of those who take part in them, and who watch them. Despite the absence of mask and buskin, and other necessary

concessions, they enable the student to understand the Greek drama much better than he understood it before. No doubt the necessary preparation breaks into the ordinary school work and causes considerable inconvenience. But masters who object on this ground to such occasional variations of the routine forget that the lessons learned from the Greek or Latin play stay in the mind throughout life, and are at least of no less value than the lessons that it temporarily supplants. That the Bradfield authorities are partly prompted by a mere sordid motive would be a wholly unjustifiable statement. But any outsider who sets himself to weigh the *pros* and *cons* cannot fail to see that the value of the advertisement secured is not to be overlooked. Notices in the newspapers before and after, special trains conveying multitudes of persons from remote towns, the display of the school and its surroundings to many who otherwise would never have visited the place—such things must count for much. As for the spectators, the function is one which they are glad to have attended. The natural beauty of the surroundings, the soft colours of the dresses set off by the green of the trees, the twittering of the Greek lyres, the birds flying in and out among the players, the concrete seats successfully defied with the aid of a little pad; these, and many other details, are the source of pleasant memories thereafter.

### JOHN WEBSTER.

By Prof. FOSTER WATSON.

PROF. CROOM ROBERTSON, in his monograph on Holles, thus refers to Webster. Early in the year 1654, "came forth a work entitled 'Examen of Academies,' by the Rev. John Webster, an army chaplain, inveighing, in the fashion of the day, against the whole system of academic study, and, in the fashion of the century, against Aristotle as answerable for it all." Prof. Robertson has prominently before his mind the clever reply of Ward, and hardly, I think, does justice to Webster. He is evidently impressed by the first half of Webster's title-page: "Academiarum Examen; or, the Examination of Academies. Wherein is discussed and examined the Matter, Method, and Customs of Academic and Scholastic Learning, and the insufficiency thereof discovered and laid open."

But the second half is more suggestive: "As also some Expedients proposed for the Reforming of Schools, and the perfecting and promoting of all kind of Science. Offered to the judgements of all those that love the proficiencie of Arts and Sciences, and the advancement of Learning (1654)."

Webster's chief objection to academic learning is that it seems to pose as a substitute for religion—with which it has nothing to do. School theology he abhors. Even the teaching of languages seems to him a *pis aller*. Webster, in his fantastical manner, longs for the universal language of all living things. "The mind receiveth but one single and simple image of everything, which is expressed in all by the same motions of the spirits, and doubtlessly in every creature hath radically, and naturally the same sympathy in voice and sound, but, men not understanding these immediate sounds of the soul, and the true schematism of the internal notions impressed, and delineated in the several sounds, have instituted and imposed others, that do not altogether concord, and agree to the innate notions, and so no care is taken for the recovery and restauration of the catholic language in which lies hid all the rich treasury of Nature's admirable and excellent secrets."

The labour which is spent in learning foreign languages Webster looks upon as disproportionate to the results. He insists that, even if a man had perfect knowledge of many, nay, all languages, so that "he could give unto man, beast, bird, fish, plant, mineral, or any other numerical creature, or thing, their distinct and proper names in twenty several idioms or dialects, yet knows he no more thereby than he that can only name them in his mother tongue, for the intellect receives no other nor further notion thereby, for the senses receive but one numerical species or ideal-shape from every individual thing, though by institution and imposition, twenty, or one hundred names be given unto it, according to the idiom of several nations."

The mental discipline of language study does not appeal to Webster. He admits that by reading other languages the intellect may be enriched by the gathered knowledge. But it is knowledge of things, rather than words, that constitutes the treasure. "Excellent," says he, "and worthy was that attempt of the renowned and learned Comenius in his 'Janua Linguarum' (if it had been as well understood and seconded by others) to lay down a platform and seminary of all learning and knowable things, that youth might as well in their tender years, receive the impression of the knowledge of matter and things, as of words, and that with as much ease, brevity, and facility."

Webster points out the fact that, by use and exercise, those who travel and live in divers countries will learn two or three languages, whilst we are "hard tugging" to gain one by rule and method. How necessary, therefore, if a language is to be learned by grammatical rules, to choose the simplest and most certain way! He praises the Clausulary Method\* of Dr. Webbe, which would enable students, he

\* Account of Webbe—reference to teaching of the dumb.

thinks, to obtain perfection in a comparatively short time; and he is of opinion that, if that system had been followed, the advantage to the nation would have been incredible. "But we are in this like tradesmen, who all bandy and confederate together to suppress any new invention, though never so commodious to the Commonwealth, lest thereby their own private gain should be obstructed or taken away." It is, therefore, the dark and confused method of teaching Latin which is obnoxious to Webster. He has praise for Comenius as a reformer. So, too, he speaks of the elaborate pains of our countryman, Mr. Brinsley, who therein deserves great commendation. Yet it is for the universal language he longs, so as to repair the ruins of Babel. He listens with more than half-belief to the traveller's story, told by Sir Kenelm Digby, of one in Spain, deaf and dumb, yet taught to speak and understand others. Examples from the Chinese and the Rosicrucians are quoted to show the possibility of a primordial language of Nature.

With regard to language, therefore, Webster's position is: the universal language of Nature for all living beings if possible; failing that, simplification of method of teaching foreign languages. The fact is that Webster's interest is in the practical. He objects to logic, because it leads men to "babble, argue, and say very much, but still to remainnescious and ignorant." His complaint against mathematics is that the treatment is that of argumentation without any solid practice; whereas he affirms that "their superlative excellency transcends most of all other sciences in their perspicuity, veritude, and certitude, and also in their uses and manifold benefits." He advocates more arithmetic and geometry. Music, which he includes in mathematics, he complains is only developed on that vulgar and practical side "which serves as a spur to sensuality and voluptuousness, and seems to be the companion of melancholics, fantastics, courtiers, ladies, taverns and tap-houses . . . yet for the mysterious part thereof, which consists in the discovering the nature, quality, distinction, sympathy, dispathy, significancy, and effects of all sounds, voices, and tones that are in Nature, these are altogether unknown and neglected; as also how far it might be serviceable to Natural Philosophy, and the laying open of the universal harmony of the whole mundane fabric, that remains untried and unattempted."

Astrology receives high praise from Webster, who greatly admired Mr. Ashmole, Mr. William Lilly, Mr. Booker, Mr. Sanders, and Mr. Culpepper. The other parts of mathematics of which he approves are statics, architecture, pneumatarithmetic, stratarithmetic—these arts were praised, he tells us, by Dr. John Dee. He asks if to be supinely neglectful of these is consistent with a nation being the fountain of learning and well-spring of science.

He makes a vigorous attack on the scholastic philosophy. He is wroth because magic is condemned. He claims that chemistry or pyrotechny deserves more study. So, too, medicine and surgery require better study. The Universities do not study the inner nature of things, nor magnetical philosophy, towards which Dr. Gilbert had done so much. From all which he concludes that Aristotle ought to be superseded.

Webster offers remedies or "expedients" in theology, grammar, logic, and mathematics. In theology he wishes that men no longer style themselves "divines," that they do not pretend through their learning to a knowledge of God's Word; and that what can be discovered of God and supernatural things by the power of reason and the light of Nature may be handled as a part of natural philosophy. In grammar, again, he recommends Brinsley and Comenius. In logic, he expresses the desire that induction, which is the chiefest and most beneficial part, may be serviceable and helpful for the discovering of science. In mathematics, he wants to see Copernicus, Kepler, Tycho Brahe, Galileo take the place of Aristotle and Ptolemy.

His expedients or suggestions concerning custom and method must be given at length.

1. Webster desires that men may not be tied up all to one method or way, lest, however good it may be, it shall hinder them from following a better. "It is clear," he says, "that there may be many ways to one place and divers methods for attaining the same end of knowledge, so that we would not exclude men from trials that they may find out the best; so we would not tie them to any one, lest it prove the worst."

2. "That time be not misspent or trifled away, which is an irreparable loss and utterly irrevocable and therefore I could wish that Apelles' motto might be had in everlasting remembrance, *Nulla dies sine linea*; and therefore long vacations and intermissions are to be looked upon as Scylla and Charibdis, the rocks and shelves whereon young men may easily suffer shipwreck."

3. "That degrees should be given according to merit, industry, and proficiency, and not according to years, sufficiency, and formality."

4. "That exercises should be not only verbal and disputative, but practical and operative. As Nature has given them two hands and but one tongue, so they may learn to work more and speak less."

5. "That exercises be in English as well as other tongues."

6. "That neither antiquity nor novelty may take place above verity, lest it debar us from a more diligent search after truth and science. Neither is it fit that Authority (whether that of Aristotle or any other) should enchain us, but that there may be a general freedom to try all things and to hold fast that which is good, that so there might

be a philosophical liberty to be bound to the authority of none, but truth itself; then will men take pains, and arts will flourish."

7. "That the order of studying subjects be: Mathematics, Natural Philosophy and other Sciences, the Tongues, Physics, Logic, Metaphysics, &c."

In answer to Webster's book appeared a tract with the title: "Histrio-Mastix: A Whip for Webster (as 'tis conceived) the quondam Player. 1654." This *examen examinis* is written by Thomas Hall, B.D., Pastor of King's Norton. He contends that Webster lands himself in contradictions—by at one moment approving of human learning, and the next saying that human learning disables men for the ministry. And, again, he argues that Webster forbids teaching children by grammar rules, whilst he "cries up" Mr. Brinsley's way of teaching, "which every one knows hath reference to rules." Hall makes much fun of Webster's advocacy of magic and astrology as studies. He goes on: "Add to this his praising the study of Physiognomy as an excellent, laudable, and profitable science (which yet the learned judge vain and foolish); also his extolling of chemistry and preferring it before Aristotelian philosophy and advising scholars to leave their libraries and fall to laboratories, putting their hands to the coals and furnace (so they may quickly find, *pro thesauro, carbones*, beggary instead of learning, and, walking thus in the sparks of their own fire, lie down in sorrow. Isaiah 1. 11)." So, too, Webster is criticized for his attitude to Galen: "Having railed on Aristotle, the prince of philosophers, next he falls foul on Galen, the father of physicians, only for building on Aristotle's principles; out of his ignorance he calls him an ignorant pagan, an idol, a blind guide."

Thomas Hall was the master of the Grammar School at King's Norton. He is said to have been a contributor and collector of books for the library at Birmingham Grammar School. He founded a similar library in his own school at King's Norton. He edited in 1651 "Wisdom's Conquest," and in 1655 "Phaeton's Folly," both consisting of translations from Ovid, in which he followed, as a confessed disciple, the pedagogic method of John Brinsley. He wrote many theological books. His most famous work was the "Vindiciæ Literarum: The Schools Guarded; or, The excellency and usefulness of Arts, Sciences, Languages, History, and all sorts of humane Learning, in subordination to Divinity and preparation for the Ministry, by ten arguments evinced, ten cavils against it, by Familists, Anabaptists, Antinomians, Lutherans, Libertines, &c., are repelled and answered and many calculations to prevent all mistakes are added."

It is from the consideration of such men's writings that one sees how much the educational reformers had to accomplish. Hall was a University man, with a good deal of force of character, which is seen on the educational side by his founding of school-libraries and his acceptance of Brinsley's leading in classical translations. He pronounced himself a lover of learning; yet the advocacy by Webster of experimental science study is contemptuously met by *pro thesauro, carbones*. Nor is there any recognition of Webster's suggestions for improvement in language teaching.

It is interesting to note the mixture of what we now recognize as sound and unsound in Webster, and to see how neatly Hall avoids the reforms, and hits on Webster's weak points of astrology and magic. It must be in transitional ages, and, indeed, in all ages, that some reformers carry along with them the *impedimenta* which it never occurs to them to throw away or exchange, although their use is gone. Truth and error are clung to with equal constancy, and progress is thus retarded. Yet, even the Websters help; their weak points are discredited by the Halls. Lover of learning as is Thomas Hall, John Webster, in his own generation, and later, counts for even more, viz., as a lover (it is his delight to call himself so) of the *advancement* of learning. It is on account of this attitude, rather than from any material contribution of his to pedagogy, that I venture to speak of him in higher terms than does Prof. Croom Robertson.

In histories of movements we chiefly have our attention drawn to the few clear-sighted, and often one-ideaed men, who stand out as leaders. But, when an impetus in any particular direction arises, there are always men who should be included in a comprehensive survey, who unite in themselves different grades of combinations of the new truth with the older errors. It is difficult to estimate how much is due to these. They bridge over the transition from the old to the new by retaining something of what is familiar. They help us to realize how strong is the sense of continuity. Hence they carry along with them to the new truth others who are on a similar plane of thought with themselves.

### THE LATTER END OF ASSISTANT-MASTERING.

[We take the following article to be a somewhat pessimistic estimate of the position of assistant-masters in English schools—or the record of an unfortunate experience. But we print it because it is vouched for as a true statement by a former assistant and headmaster.—EDITOR.]

WHAT becomes of our assistant-masters? The evidence of one observer may be interesting, and perhaps throw a little light on the

subject. I will describe something of the later history of certain assistant-masters whose career has come under my personal observation.

I started my scholastic life in a country grammar school, of about ninety boys, which mustered a staff of five assistants under the direction of a headmaster. Salaries ran from £30 to £60, the senior assistant receiving an unknown sum, which we ordinary assistants had good reason to believe did not exceed £100. These were "resident" salaries, and therefore additional to board and residence, but not washing. One of the five was a German of the paternal government and military discipline type. He believed in all the boys kneeling down to pray in the dormitory at a given signal, and concluding the prayer at another signal. As the headmaster declared that he would have no rules in the school, because a boy once used the book receptacle of his desk as a spittoon, and excused himself on the ground that there was no rule against such an act, our German and his headmaster soon parted company. For one term he lived "on tick" in a friendly lodging house. Then he obtained a post in a private school in the North, which practised co-education on the strict separation system. One day the girls, under the headmaster's wife, met the boys, under our German, in the public streets. The boys "passed by on the other side" and did not raise their hats to the girls. The head's wife remonstrated. Our German backed his flock, and wrote me a long letter, in support of his conduct, teeming with misogynist criticisms. On my urging the "inexpediency" of quarrelling with your head's better half, whatever the abstract merits of the quarrel may be, I received a curt letter terminating our acquaintance on account of my unworthy complaisance. Thereafter only the gods know what became of this Don Quixote among pedagogues. But, as his views on matrimony, which he thought should be not a mating of passion but something after the nature of Prof. Sully's "pædotrophic partnership," cut him off from the refuge of a wealthy marriage, and as his views on life and death were distinctly peculiar, he has probably long since "shuffled off this mortal coil."

He was replaced by a Swiss, who claimed to be of high birth, affected the dress and manners of a Mayfair dandy, and asserted, in his fits of pseudo-righteous indignation, that he must be made of different flesh from his colleagues. At first our head took to him and advanced even to the familiarity of his Christian name. But it was presently discovered that our friend had entered on a flirtation with a lady who was among those unofficial *attachés* to be found in the entourage of every country boarding school. There was never, I believe, any real evidence on the matter, but the headmaster thought there was, and the Swiss followed the German. I heard of him again in a wealthy Jews' college, and soon after in a small sea-side school, obviously a step down. Once I saw him on the beach of another sea-side town; but the refuge of a friendly bathing-shed spared me a meeting. Lastly I heard he was travelling about with a small circus company. Doubtless he is still circulating upon ever lower rungs of social status, whence he is not likely, I fear, to rise again. This man had powers, but no backbone. The third assistant retired to the serene air of journalism. There, I was given to understand, he "made more" than ever he did as a schoolmaster. He referred, of course, to pounds, not pupils. Later I learnt that he was a thorn in the flesh of his editor for his irregularity, but indispensable for his "champagne style," whenever he could be induced to supply copy. The remaining members of this staff, including another Swiss, who replaced the dandy, pursued less chequered careers. The Swiss is still an assistant. Two others are headmasters of public schools. One, passing through two years of stormy conflict in the headmastership of a proprietary school eventually slain by the united competition of polytechnics and Board schools, entered the ranks of journalism and now sits in an editorial chair.

Another school of which I had some knowledge was a first-grade public school. Here there appeared to be four exits for assistant-masters—a headmastership, retirement (not on a pension, but on savings), suicide, and death. One only, to my knowledge, personally released himself from the prospect of penury-cum-senility; but many passed out of assistant-mastering by the narrow way through which there is no re-admittance.

The last staff that came under my observation was that of the proprietary school already mentioned. When my friend took up the headship he did not forget the days of his assistant-mastering. He was a man belonging to the class called "viewy." He endeavoured to put new wine into old bottles, and had quixotic notions of profit-sharing. His assistants drew full salaries to the last day. He himself received as his last term's salary fifteen shillings, and started life again with a wife and child and £150 in the Savings Bank. Him also journalism saved from the workhouse. The junior assistant on the staff handed over to him, when he became a headmaster, was drawing £40 non-resident, and left very shortly to "work for a degree." The senior assistant, who was drawing £100 non-resident, took a curacy under the out-going head. The two others remained with my friend. They came, however, to look upon the profit-sharing plans, not as a benevolence, but as a mere concession of bare justice, and his new wine soon burst their old wine-skins. They set up a college in a private house, and have there attained the measure of success reserved for private

ventures in a poor neighbourhood with mean ideals of the dignity and usefulness of education. Of the two men who replaced them, one is still an assistant, the other has recently attained to the honour and toils of a headmastership—perhaps also (which Heaven forbid!) to its latter end of poverty and despair.

These men I knew, and their careers, so far as I know them, I have sketched from personal observation. But one does not pass through several schools without hearing the fate of many men besides those with whom one comes into personal contact. Thus several figures rise before me, as if appealing for some word of sympathetic mention. Sad faces all, and marked with the brand of a mute despair, they have passed through the rough ways of assistant-mastering, and sat in the coveted seat of honour that is built up of capitation fees. Now they have fallen once more upon evil days. One, late a secondary-school headmaster, now teaches in a Board school, and ekes out his salary by lecturing in a polytechnic, so often, it would seem, an asylum for secondary-school failures. Another—only the gods know how he lives—but he stands and makes his plaint in the forefront of every discussion on the right of appeal from governors to some central board. Yet another, bowed down by years, gray-haired and grim, who once was buoyant and commanding, ekes out a small pension with any educational odd job that sympathetic spectators can send to his door. Another, I remember well, came seeking work at the hands of his old pupils and finding none. All these were once—in their youth, I presume—held to be good men and true. All, without exception, maintained their dismissal to be an outrage on gratitude and common justice. No one of them admitted either honest incapacity or approaching senility. Yet even the attainment of headmastership has not preserved them from an old age of penury, humiliation, and despair.

The humiliation of a headmaster fallen upon evil days, with "none so poor to do him reverence"—who shall gauge its bitterness? Outside of Russia no man stands in such a post of despotic exaltation as the English headmaster, and, when he slips upon the treacherous paths of scholastic reputation, his fall is proportionately heavier and his humiliation proportionately more profound. Some are luckier, and, falling, glide gently into the lap of literature, art, or even commerce. Of those who do not fall, but release themselves from the bondage of the blackboard and the ferule, many rise to eminence. One of our greatest modern dramatists once sat on the pedagogue's stool. Mr. H. G. Wells, the latter-day Poe among English novelists, is also, I believe, blood-brother of the race of ushers. Another, who mingles dramatic essays with the conduct of a junior form in a small public school, told me recently that it is surprising how many minor actors once played the pedagogue's rôle on the boards of a less public stage. Many assistant-masters, as all the world knows, find a haven from the persecutions of schoolboy malice—but not, I fear, from the pinch of poverty—in the broad bosom of the Church or the humbler sphere of the Nonconformist pulpit. One I have known who found rest and security in a wealthy marriage.

Such variety is there even in the small company that one man embraces in his experience. Could the witness of others be added to it, how intensely interesting would be the recital, how strange the diversity of fate! Even the travelling circus, I fear, is not the lowest circle of the *inferno* of unsuccessful or superannuated teaching. Who has not, at times, suspected the *quondam* usher in the stately bow, grave glance, and measured voice that accompanied the presentation of that vulgar necessity of life, a tram ticket? And many a sandwich-board, we know, has covered the manly breast that was once the "glass of fashion and the mould of form" to admiring, if tremulous, youth. But these have fallen, being tripped up by the snares of weakness and indulgence. Those I have portrayed above were honest men, and, withal, Christians and gentlemen. If they were incapable—a point not always proven—their incapacity was honest, and they fell beneath the heel of circumstances, not of crime; and to that extent they have a claim against the State that allowed them to be lured on by the semblance of security to an old age of penury without any provision against the caprice of fate, and a just grievance against the eternal laws of right.

QUILL PEN.

## REVIEWS.

### OUR BEST BOOK OF REFERENCE.

*The Dictionary of National Biography.* In Sixty-three Volumes. Edited by Leslie Stephen and Sidney Lee. Vol. LXIII. (Smith, Elder, & Co.)

This colossal cyclopædia of British biography is now brought to a close, and the title which has appeared in our review columns for more than fifteen years past will appear there no more. We have so constantly recognized the exceptional value of this contribution to the written annals of Great Britain and Ireland, and spoken of the place which it must occupy amongst our historical and literary authorities, that we have only to repeat and confirm our former judgments in dealing with the work as a whole.

The concluding volume is prefaced by a statistical account of the Dictionary, and contains many interesting details of its conception and achievement. The number of separate notices amounts to 29,120, and the varying character of the lives thus recorded is analyzed with much care by the writer of the "statement":—

It is believed that the names include all men and women of British or Irish race who have achieved any reasonable measure of distinction in any walk of life; every endeavour has been made to accord admission to every statesman, lawyer, divine, painter, author, inventor, actor, physician, surgeon, man of science, traveller, musician, soldier, sailor, bibliographer, book-collector, and printer whose career presents any feature which justifies its preservation from oblivion. No sphere of activity has been consciously overlooked. Niches have been found for sportsmen and leaders of society who have commanded public attention. Malefactors whose crimes excite a permanent interest have received hardly less attention than benefactors. The principle upon which names have been admitted has been from all points of view generously interpreted; the epithet "national" has not been held to exclude the early settlers in America, or natives of these islands who have gained distinction in foreign countries, or persons of foreign birth who have achieved eminence in this country.

The notables who have found their way into these volumes number 36 to the end of the fifth century, 81 in the sixth century, 134 in the seventh century. After that the number falls again. In the fourteenth century it is 678, in the fifteenth, 659; in the sixteenth, 2,138; in the seventeenth, 5,674; in the eighteenth, 5,789. The nineteenth century has 12,608 names of distinction. Comparing these numbers with the total of the population who may be supposed to have reached the age of four-and-twenty, we may say that about one in five thousand has gained distinction; but in the nineteenth century—partly, no doubt, because the records are more abundant—the rate has risen to about one in four thousand.

Eighteen articles in the Dictionary are over twenty pages in length. Mr. Lee's Shakespeare runs to 49 pages; Col. Lloyd's Duke of Wellington, 34; Dr. Gardiner's and Dr. Fowler's Bacon, 32; Mr. Firth's Cromwell, 31; Dr. Jessop's Queen Elizabeth, 28; Mr. Leadam's Walpole, 28; Mr. Stephen's Marlborough, 26, and his Scott, 25. Of the whole Dictionary (29,000 pages), Mr. Sidney Lee has written 1,370 pages, Mr. Leslie Stephen and Professor Laughton, 1,000 each; and altogether thirty-four contributors have written over two hundred pages. The occasional contributors are naturally more numerous than those who have written the greater part of the Dictionary. They include men like Canon Ainger, Mr. Sidney Colvin, the late E. A. Freeman, Professors Hales, Herford, Jebb, Goldwin Smith, Silvanus Thompson, and Tyndall, Sir Alfred Milner, Mr. John Morley, and the Deans of Ripon and Winchester, who have given us memoirs of well known men based on their personal acquaintance and kindred experience.

On the whole, the editors of this invaluable work of reference justly claim that it may be held to serve the national and beneficial purpose of helping the present and future generation to realize the character of "their ancestors' collective achievement, of which they now enjoy the fruits." In some countries a work of this magnitude and general utility has been produced under the auspices of a State-aided Academy, or subsidized from the national exchequer. The "Dictionary of Biography" has cost its publisher, Mr. George Smith, something like £150,000, and has been written by the literary men of the last two decades, and privately edited, without the dignity or rewards of an Academy. Mr. Smith could not have devoted his wealth to a better purpose. He has performed a national service, and has earned the thanks of every individual Englishman.

#### GREEK EDUCATION.

*The Education of the Young in the Republic of Plato.* Translated into English, with Notes and Introduction, by Bernard Bosanquet, M.A., LL.D. (Cambridge University Press.)

The author of the "Companion to Plato's Republic" here supplies an introduction to Plato's ideas which ought to be very helpful to beginners in the study of the philosophy of education. This introductory work contains only a portion of the educational scheme of Plato. It translates part of Book II. and Books III. and IV., but the translation is supplemented by a very suggestive commentary and by versions from the author's own hand. Like Plato's own work, these comments are partly descriptive and partly speculative. Plato, in the first instance, discussed the education of the young as he found it in his day, and later on he tried to sketch an ideal scheme of education which would carry

the human mind to the fullest practical and theoretical efficiency. It is the former part of the work, namely, that which dealt with actualities, that is considered here. The question to be solved is not how to make the very best of a human mind and human society, but how to explain on theory the why and the wherefore of the methods of the Greek educators. Plato thought the originators of the system of his day builded better than they knew. Of the true principles which underlay their work they themselves were unconscious, and these Plato sought to reveal. We may, in these days, envy the simplicity of the task. The Greek citizen's son, in the best age of Greece, was taught reading and writing, a little practical arithmetic, and the elements of geometry; he was taught to sing and to play, and was instructed in dancing and in athletic exercises by special teachers. Then, as now, "efficiency in war was a duty, and a fine physical development an end in itself." True, the arithmetical notation in use was cumbersome, and books were costly. Words were not separated, and the learner had to acquire the power of interpunction, or dividing word from word within the sentence, as he learnt to read. These were, therefore, simple matters in the simple curriculum which would occupy time, but which, our author points out, would also have educational value in the then condition of the human mind.

The author reminds us that "we suffer from an *embarras de richesses* in the intellectual world; and we can hardly see the wood for the trees." One of the most useful hints he draws for us from Plato is that, instead of teaching a number of things at the same time as the most convenient way of making room for all that seems necessary to learn, we should aim at bringing before the growing mind just so much, and no more, of the best experience as it is able to appropriate with advantage to its growth. This lesson he enforces by deriving the word "school" from a Greek word meaning "leisure." This conception of leisure is not that of amusement or holiday making. It is opposed both to this and to the pressure of bread-winning industries, and indicates the space and atmosphere needed for the human plant to throw out its branches and flowers in their proper shape. "To have leisure for any occupation was to devote yourself to it freely because your mind demanded it; to make it, as it were, your hobby. It does not imply useless work; it implies work done for the love of it. Wherever a mind is really and truly growing, the spirit of leisure must be there."

#### SCHOOL GEOGRAPHIES.

- (1) *A School Geography of the World.* By Lionel W. Lyde, M.A., F.R.G.S. (Black.) (2) "Royal Osborne Geography Readers."—VI. *The British Empire.* (Nelson.) (3) *Object Lessons in Geography and Science, Part II.* By David Frew, B.A. (Blackie.)

(1) Teachers of advanced geography have long been seeking a satisfactory text-book to put in the hands of their pupils. The best of lessons and lectures without a book are apt to be unsatisfactory in their results—even when copious notes are taken. What is required is a text-book that provides the nucleus of lessons, rather than the lessons themselves—one that suggests lines of thought, rather than pursues them, leaving a large share of research to the pupils—one that is well arranged, without being a mere catalogue—one that is readable, without being "chatty"—full of information, without being dull. All this, we think, and more, will be found in Mr. Lyde's manual. Perhaps he has shown his greatest wisdom in his omissions. Geography is so inexhaustible that text-books which attempt to be complete always succeed in being confusing. To name, for instance, all the exports of Hamburg is to induce stupidity. Statistical tables can always be referred to, if necessary, but they are out of place in a school book. Mr. Lyde has not only avoided this very common error, but has shown remarkable restraint in every direction, so that, although attractive enough, the book leaves the cream of the interest for the teacher to develop in the class. Thus any paper taken at random might be set to pupils (who had "done" their various countries in lower forms) to work out by themselves, with the help of a good atlas. We are pleased to note, by the way, that no space is wasted with maps, the pupils being evidently intended to use an atlas intelligently. The matter is sometimes so condensed as to be obscure to the average pupil, but the lessons would elucidate everything; and we hardly think this kind of obscurity a drawback in advanced forms. That the book is intended exclusively for elder pupils is obvious from the problem paper at the end, which, we hope, will cause astonishment and reformation in many a headmaster who has



hitherto considered any one of his staff competent to teach geography. There is no new method in all this, but it is geography treated rationally, and calculated to become, as our author says, second only to literature in educational value.

(2) There is little in the "Royal Osborne" volume to distinguish it from a host of other geographical readers—the usual attempt to attract the pupil who has no foundation of knowledge, by flashes of "interesting" facts, graphically presented statistics, and descriptions couched in rather oppressively ornate language, with ordinary illustrations and maps. The chapters, however, are full of information and far from dull. No doubt this book will be found useful to those who have no time allowed for treating geography properly. Standards VI. and VII. must be very peculiar in their mental requirements to judge by the "Notes." Very many simple words (*e.g.*, "abruptly," "vividly") are explained, while such words as "plateau," "diameter," "the movement of a port," are left to the standards' imagination.

(3) The second part of Mr. Frew's "Geography and Science" is as practical and ingenious as the first. The aim throughout is to arouse the interest of young children in the world around them, and to connect ideas of locality and geography with constant observation and experiment. Good teachers will be thankful for the hints and aids which are given them in this volume. The method is unquestionably based on a scientific principle. Used intelligently, it can hardly fail to make the geography lesson interesting.

#### HELLENICA.

*A Commentary on the Hellenica of Xenophon.* By G. E. Underhill. (Clarendon Press.)

We do not like the "Hellenica." Take it as a whole, it is a singularly dull and confused work, though relieved here and there by a bright and interesting episode. It would, indeed, require a genius for dullness to write an uninteresting account of the trial of the Generals and the trial of Theramenes. Of such great topics as the restoration of Athenian democracy, the rise of Thebes, and the peace of Antalcidas Xenophon has made nothing; and large portions of his history are calculated to depress and repel all who are not forced to consult it. The work is formless and without any definite plan—casual, slipshod, unworthy of the respectable talents of its author. In short, we unhesitatingly subscribe to all the hard things that modern writers have written of it. And Mr. Underhill does not demur to this unfavourable judgment; but sets himself, in an elaborate discussion of the circumstances under which the "Hellenica" was composed, to explain the grounds on which it rests. This section and, indeed, the whole of the introduction are a valuable contribution to the study of the subject. Mr. Underhill has brought together the views of the modern experts, and, after a long discussion, he arrives at the following conclusion:—

Xenophon was animated, like many another man, with an irresistible impulse to write a history of his own times. For nearly half a century he must have kept a diary, or common place book. These notes at various times in his life he attempted to work up into a more or less continuous history. But he never succeeded . . . in viewing the course of events from a high and lofty watch-tower. In many of them he played no inconsiderable part himself, and in all he takes no pains to conceal his own personal feelings and predilections.

What is all this but an admission that Xenophon had not the qualifications of a historian? Mr. Underhill, it is true, makes this excuse for him, that he is a more accurate authority for the period than the orators, than Diodorus and Plutarch. But, after all, this amounts merely to this, that a contemporary historian, however bad, is necessarily a better authority for the facts of history than a contemporary advocate or than a very bad historian and a memoir writer who wrote centuries later.

In another section of the introduction Mr. Underhill struggles manfully with the muddled chronology of Xenophon, and does all that can be done to put things straight. This is a matter in which it is easy to gauge the competence of Xenophon for the task that he felt such an irresistible impulse to undertake. And of the chronology he has contrived to make such a tangle as is well-nigh inextricable. Mr. Underhill has drawn together all the information that has been brought to bear on this unspeakably dull subject, and has done all that can be done to clear up the many problems that Xenophon has set us.

In an appendix Mr. Underhill deals in a masterly way with several historical points—the political history of Athens between the Four Hundred and the close of the Peloponnesian War; the

internal and external history of Sparta during the period covered by the "Hellenica"; the efforts of Athens to recover her lost empire; and other matters of less magnitude but equal interest. In dealing with every one of these intricate questions Mr. Underhill displays the results of wide research and a ripened judgment; and the information he gives in a convenient compass will be a boon to all students of this period. Mr. Underhill has doubtless dedicated many years to his task, and, were it not that Xenophon is the author of much better works than the "Hellenica," we should say that the rich diadem with which Mr. Underhill has crowned him is a great deal more than he deserved to receive.

RUSKIN.

*John Ruskin.* By Mrs. Meynell. (Blackwood.)

An essay of three hundred pages, intended to be "principally a handbook of Ruskin" was a well-nigh impossible task, and we hardly think the difficulty has been lessened by the mode of treatment. The chief *desiderata* are clear ideas of Ruskin in his separate capacities of art critic, social reformer, and writer of English, with some guidance as to the order in which his books should be approached. Instead of this, we have the twenty-seven chapters devoted one by one to his chief books taken chronologically, and very slight expository and critical notes on the points, apparently, that struck Mrs. Meynell as interesting, with the inevitable extracts. Considering the small space at her command, and the mass of material to be dealt with, some of her over-nice criticisms of Ruskin's English seem misplaced, even whimsical, and we could wish that she had devoted more of her book to such good material criticisms as she gives us on "The Two Paths," and to such interesting glimpses of Ruskin's endeavours to carry out his principles as she gives in the chapter on "Fors Clavigera." To those who know their Ruskin the book will prove very inadequate, and to those who do not it will be to a great extent unintelligible. But there is a large class of readers who know him a little, and know that little wrong, and to them Mrs. Meynell's chapters ought to be helpful, for she points out how he has been misunderstood, and reconciles his apparent inconsistencies wherever she can, and this, too, in a judicial spirit.

It must be admitted, however, that Ruskin is the last person to need expository treatment. Lucid as daylight (in spite of his tendency to use "which" instead of "that"), he only needs to be read, and to be read "exquisitely closely," to use Mrs. Meynell's happy expression. As for comments, he has made them quite delightfully himself, and as for inconsistencies and exaggerations they are half his charm. In short, "you must love him ere to you he shall seem worthy of your love." All he has suffered from are the misunderstandings and misrepresentations of second-hand acquaintances, and we fear that this volume may add to their number.

#### A FRENCH GLOSSARY.

*French Words and Phrases.* By J. G. Anderson and F. Storr. (Rice.)

This *vocabulaire systématique* has been put together to meet a want felt by the compilers in their teaching, and has had the advantage of some years' practical use in a less complete form. Like many teachers, they have been struck with the gaps in the vocabulary of schoolboys, however carefully their reading may have been directed, and have returned to the plan, which used to be commoner than it now is, of making a systematic catalogue of words. One or two such vocabularies of Latin and Greek words have, if we remember right, been recently published. The book is arranged under the ordinary headings, including "social" and "political and civil," which ought to be very useful. Perhaps the best chapter, as it certainly must have been the most difficult to compile, is that entitled "Sentiments," including phrases like *faire la part de, se demander si, à contre-cœur, &c.* A good deal of space is given to games, among them Rugby football—probably "socket" has not yet acquired *droit de cité* in France. In another edition chess, draughts, and cards might be included. Perhaps ladies would like a little more attention given to their dress, which is treated with somewhat Spartan simplicity—we mean that of *Sparte sans Hélène, or Paris sans Froufrou*. A "dress," by the way, is rather *toilette, or costume*, than *robe*. Other minor points are—*un fort en thèmes*, rendered "a promising scholar," which is often used in rather a depreciatory sense, of a good mark-getter without much real ability; *distingué*, "of good address," which really means a little more, and approaches more nearly to "a perfect gentleman." The last phrase appears as the rendering for *un galant homme*, not much used in that sense in modern



French. *Professeur de rhétorique*, so often mistranslated, might also be inserted under the heading "Education." But the book is, on the whole, extremely well put together, and supplies a real want. The idioms and proverbs in the concluding chapters are well selected.

## GENERAL NOTICES.

### CLASSICS.

The *Aeneid* of Virgil, *Books VII.-XII.*, edited by T. E. Page (Macmillan), is the third and concluding volume of Mr. Page's "Virgil," in the "Red Series." Notwithstanding the great number of editions in existence, this skilful and able editor has not failed to find a place for himself; and his commentary will be consulted with pleasure and profit by readers who appreciate the combination of learning and literary skill that he has at his command. Mr. Page once more exhibits his familiarity with Latin poetry, and his sound common sense, that prompts him to brush aside pedantic and strained explanations, however strongly supported by his predecessors. To the interpretations that he substitutes for those which he rejects we do not always assent. Thus, for example, at X. 361, *haeret pede pes densusque viro vir*, he tells us that *haeret pede*, "is held gripped with foot," is parallel with *densus viro vir*, "close locked with man." Both the manner of Virgil and the Homeric parallel which Mr. Page quotes seem rather to show that *haeret* belongs also to *viro*; but it is not to be denied that the current "ways of taking" the line are not free from objection. Mr. Page occupies a considerable amount of space in setting Conington right, and he occasionally comes down somewhat heavily on Mr. Sidgwick. At XII. 283, *diripuerunt aras*, which "all the editors explain of despoiling the altars so as to get lighted brands to fight with," means, says Mr. Page, "the altars are hastily broken up." Part of his very interesting note on this passage we here transcribe: "While overhead the 'whirling tempest' and 'iron hail' of missiles fill the air, in the centre of the plain we see . . . the scared snatching at the sacred vessels to save them, while Latinus himself secures the images of the gods and flies." All this looks plausible enough, and, no doubt, if we accept in detail his paraphrase of the lines, "the picture," as Mr. Page says, becomes "absolutely clear." But, when we read the Latin, we at once begin to doubt, if only because "the whirling tempest and the iron hail" are sandwiched by Virgil between *diripuerunt aras* and *craterasque foscose ferunt*. There appears to be no "striking contrast," such as Mr. Page finds between the action of the altar-breakers and that of the fighting men. He should have noted, too, that Servius already explained *diripuerunt* as *dejecerunt*, *dissipaverunt*; and surely there must be good reason why "all editors" have agreed to reject the interpretation which Mr. Page regards as self-evident. We cannot help thinking that in this case the ingenious editor has neglected one half of his favourite *castigatque auditque dolos*; he has remembered to "chastise," but has perhaps forgotten to give a patient hearing to the subtleties of the critics. Every reader, however, will find in this edition much to instruct, and not a little to amuse. As to the soundness of Mr. Page's brilliant suggestions each will judge for himself.

*Cæsar, de Bello Civili, Book III.*, edited by A. G. Peskett (Cambridge University Press) is a careful and thorough piece of work well worthy of its position in the "Pitt Press Series." Mr. Peskett is well acquainted with the works of all the chief authorities, both on the matter and the diction of Cæsar; but he is able, whenever there is any call for it, to exercise an independent judgment. The historical notes are particularly thorough, and the grammatical are adequate. The insertion of *rebus* after *quibus cognitis* in chapter 62, is a good emendation; for Cæsar "nowhere else uses the neuter *quibus* in the sense of 'which things.'" Of course such a use is essentially silver. Mr. Peskett has used such books as Mensel's "Lexicon" and Dräger's "Historical Syntax" with diligence and discrimination. In textual matters he is conservative.

*Ovid, Metamorphoses, Selections*, edited by J. H. Vince (Blackwood), is one of the neat volumes of an illustrated series that is very suitable for middle forms. Mr. Vince endeavours to interest the pupil in magic and mythology. The selection is a good one, and the editing is competent and thorough. We think, however, that the critical notes and the parallel passages, which are plentiful in the volumes of this series, might well be cut down. Young pupils learn very little from such comments. The type, paper, and illustrations leave nothing to be desired.

*Easy Greek Syntax and Exercises*, by H. E. Haig Brown (John King), is a little collection of elementary rules made by the editor for the special benefit of his own pupils. The book reaches the standard of the scholarship examinations in public schools. The rules are illustrated by brief exercises. This book will not be of any use to average pupils, for it covers a great deal of ground in a very few pages. We cannot but regret that the severe competition among scholarship candidates necessitates such publications, which are entirely opposed to sound educational methods. In matters of scholarship Mr. Haig Brown is not a safe guide. Thus, he confuses  $\lambda\acute{\epsilon}\gamma\omega$  and

$\phi\eta\mu\acute{\iota}$  in his examples; writes *οὐδὲν οὐκ ὀφείλει . . . οὐδὲν* for *οὐδὲν οὐδὲν ὀφείλει*; gives *οὐ σὲ ἀποκτενῶ καὶ εἰ ἐχθρὸς εἰ* where he means *οὐδ' εἰ ἐχθρὸς εἰ*; and so on. But, despite its defects, the book will enable the poor, clever boy to scramble over a lot of ground in a short time. Whether he will assimilate much of this pemmican we doubt.

### MODERN LANGUAGES.

*Le Bourgeois Gentilhomme*. Edited by F. Spencer. (Dent.)  
The preface to this edition contains a very questionable sentence:—"The difficulties of French grammar must indeed be overcome, and the art of intelligent translation acquired, by a process of more or less laborious training. But this training should be obtained elsewhere than in the masterpieces of literature." No doubt there is some truth in this as far as grammar is concerned, but surely the masterpieces of literature are the very field for acquiring the art of intelligent translation. It is just those masterpieces which will bear close and comparatively slow reading; whereas second-rate stories about the adventures of a *piou* or a showman's apprentice hardly deserve it. The notes consist mainly of renderings, mostly good, of difficult phrases, but they are too apt to leave the pupil without any indication of how they are arrived at. Thus *chatouillantes* is simply rendered "flattering," and *vous avez le caquet bien agilé*, "you chatter very glibly," without any hint of how the words come to have the sense given to them. There are a few grammatical notes, good of their kind, but sometimes expressed in rather too technical language for schoolboys. We should have liked to see a little more in the way of illustration; for example, attention should have been called to the sly humour of the contrast between M. Jourdan's good old song "Je croyais Jeanneton . . ." and the affected nonsense of his tutor. Nor would a very simple explanation of the "categories" and the syllogism, or of "*carte and tierce*" have been out of place.

*First French Book for Children*. By V. Spiers. (Simpkin.)

This book has the advantage of being written directly for English children, and not adapted from the German. Thus, no use is made of Hölzel's wall pictures, which, as the author points out, are specially adapted to an agricultural population. The course consists of thirty lessons. Each deals with some point of elementary grammar, and most of them contain a short piece of poetry or a song to be committed to memory. The grammatical part of the lessons is really a series of practical suggestions to teachers how to frame exercises securing constant repetition. The suggestions are well adapted to their purpose, and ought to produce lively lessons. All the "stage directions" are in French, which may be suggestive to the teacher; they are hardly likely to benefit his pupils. The songs, vocabularies, and other important parts of the lessons are given in an appendix in phonetic spelling for those who desire to use it. There is music for several of the songs, and the book concludes with an elementary grammar, summing up the points taught in detail, and written in English. The range is that of the Third Class of the College of Preceptors. There are some pretty illustrations, one of the prettiest being to the song "La Ville de Paris renversée." Altogether, the book, in the hands of a teacher who will take the trouble to follow its directions, and will not spare himself, ought to produce good results in a class of children. Perhaps it does not quite solve the problem for schoolboys as distinguished from children—it is a singularly difficult one.

*A Short History of French Literature*. By L. E. Kastner and H. G. Atkins. (Blackie.)

Without doubt a convenient handbook of French literature is needed—one which would tell the story of the great writers in a thoroughly attractive form, and which would incorporate the results of the latest research without any show of erudition. The writer would require a fair share of the critical faculty, but he would do well not to write in too subjective a strain. The book before us, while evidently compiled with considerable care, hardly succeeds in supplying adequately what is wanted. For purposes of reference it is not sufficiently full. There are a number of Gallicisms, due no doubt to the authors' familiarity with French literary criticism. There are, on the other hand, very few errors in matters of fact, and it is quite clear that much time and thought has been given to the book.

*F.-M. Luzel's Deux Légendes Bretonnes*. Edited by J. Duhamel. (Rivingtons.)

The stories of "La Princesse du Soleil" and "Mao Kergerac" are Breton folk-tales, taken down and translated faithfully into French by Luzel, who was himself a Breton deeply interested in the life and ways of the simple people of Brittany. The legends, edited with good notes by Mr. Duhamel, are excellent specimens of their kind, and they form a welcome addition to our stock of reading books for beginners. The text runs to only thirty-six pages; there is no vocabulary.

*Longmans' Elementary French Unseen*. By T. H. Bertenshaw. (Longmans.)

This is a collection of seventy-five extracts, mostly from modern authors, the average length being about twenty-five lines. A few notes at the bottom of the page call attention to the unusual pronunciation of certain words; there are further notes dealing with matters

of grammar, or actually suggesting translations. A vocabulary is added, so that the book contains a good deal more than the title would lead one to suspect. There is also a "Teachers' Edition," published at a slightly higher price, and containing a dozen pages of additional notes. The idea is a good one, and the editor has done his work carefully: the pieces are suitable and the notes are well expressed.

*Histoires d'Animaux.* Selected from A. Dumas. Edited by T. H. Bertenshaw. (Longmans.)

An amusing reading book, with good illustrations by H. J. Ford and Lancelot Speed. The stories are taken from "Le Capitaine Pamphile" and the "Histoire des mes Bêtes." They are annotated in much the same way as the "Elementary Unseens" noticed above. There are in this book also a number of "imitative exercises," phrases and sentences for translation into French. The "Teachers' Edition" contains the translation of these passages, as well as additional notes on subjects suggested by them. The practice of issuing separate editions for teachers should be extensively followed.

*Le Songe d'Or, and other Stories.* Edited by E. Weekley. (Blackie.) This "reader for middle and upper forms" is edited on somewhat novel lines. It contains five tales: Nodier's "Le Songe d'Or," Töpffer's "Le Lac de Gers," "Méricée's "L'Enlèvement de la Redoute," Gautier's "Le Pied de Momie," and Nerval's "Emilie," and they are all capital representatives of the French short story. The notes are in French. We believe that only one other school edition has appeared in England in which this feature also occurs; the idea is a sound one, as is the advice given by Prof. Weekley in his preface: "Each tale should be read aloud and used as the basis of some simple conversational practice before being translated into English." There is an appendix, containing sentences for retranslation, taken from the text, and illustrating "what most teachers perhaps find to be the four constructions which present most difficulty to their pupils, viz., the subjunctive, the use of *on*, the use of *en*, and the inversion after the accusative relative."

*A Simplified French Conversational Manual.* By Louise Littla. (David Nutt).

This is a handy little book, intended to assist the traveller by providing vocabularies and useful sentences. It also describes the principal routes to Paris and places of interest in the French capital. There are some hints on pronunciation which would have been better omitted. "Zhr krawr" is a poor change for "Je crois." Phonetics run mad again!

(1) *Russisches Lesebuch.* (2) *Deutsch-russisches Wörterbuch u. Gesprächsbuch.* By Prof. L. Fuchs. (Frankfurt: Carl Jügel.)

The study of the Russian language, which has hitherto been neglected in this country, seems now, by reason of commercial requirements, to be gradually asserting its claims to attention. It is noticeable that at the last examination of the Society of Arts several candidates presented themselves offering Russian, and the needs of commercial students are being met by the provision of teachers at various educational institutes, whilst the old Universities now provide for the higher study of this language. Probably those who foster commercial education as a means of promoting British trade interests conceive that, if Germans are able to secure an advantage over British competitors in the Russian markets mainly through knowledge of the language of the country which fits them for the work of commission agents and travellers, Englishmen should not shrink from the difficulties it presents in order to win back lost ground. The books under notice respectively afford practice in reading and in conversation, and should be extremely useful to any who have previously learnt German. The reader is provided with an excellent vocabulary at the end, whilst the conversation book is divested of everything trivial, and supplies just the materials wanted for practical purposes. As things are, English students stand in need of some grammar of Russian better than any yet in the market. We trust that this will ere long be supplied.

We have also received Keys to the Appendices to several volumes of the series edited by Prof. Siepmann, viz.:—"La Tour des Maures," "L'Émeraude des Incas," "Die Humanisten," and "Herr Walthier von der Vogelweide" (Macmillan).

#### MISCELLANEOUS.

(1) *Analysis of English History.* With Appendix and Maps. By W. C. Pearce and Dr. S. Hague, LL.B. Revised by W. F. Baugust, of the United Westminster Schools. (Thomas Murby.) (2) *Chambers's School History of the Colonies: Greater Britain, its Rise and Growth.* With many Illustrations and Coloured Maps. (W. & R. Chambers.) (3) *Alfred: the Model of English Kings.* (Cassell.) (4) *Theal's Little History of South Africa.* (T. Fisher Unwin.) (5) "Chambers's School History of the Victorian Era."—*The Reign of Queen Victoria.* (W. & R. Chambers.)

These five little books are examples of the various forms which text-books on history must take to meet the requirements of the times. No. 1 is a complete compendium of English history. Pearce and Hague's history has had a course and a popularity very much like

the more ancient Ince's "Outlines," and the latest revision gives it new life, bringing it up to the needs of the moment. Nos. 2 and 4 are histories of portions of space, 3 and 5 of portions of time. The former deal with the English colonies and the district of special interest at the present moment—namely, South Africa—the latter with the two greatest sovereigns this island has seen—Alfred the Great and Victoria the Good. All are low priced and within the reach of elementary schools. To Theal's "Little History of South Africa" is added a very reasonable account of the origin of the present war.

*A First Geometry Book.* By J. G. Hamilton, B.A., and F. Kettle, B.A. (Edward Arnold.)

Every thoughtful attempt to smooth the entrance on systematic geometrical reasoning deserves to be encouraged. A preliminary training which will make the mind really acquainted with the elementary properties of lines and figures is a necessity for quick and smooth success. Such a preliminary course should, however, foreshadow the processes to follow, and in no cases should it create new difficulties by the introduction of methods of reasoning not in conformity with the methods to be used subsequently. This work of Messrs. Hamilton and Kettle fulfils these conditions, and is a carefully prepared and useful contribution to an important and always interesting educational problem.

*The Contents of the Fifth and Sixth Books of Euclid.* Arranged and explained by M. J. M. Hill, M.A., D.Sc., F.R.S. (Cambridge University Press.)

Many have been the attempts to replace Euclid's difficult Fifth Book by a reasoned system of proportions equally sound and applicable to the Sixth, and, at the same time within the comprehension of ordinary students. Such attempts have not succeeded; and the Fifth Book is still omitted, with the exception of the fifth definition, required for the first and thirty-third propositions of the Sixth Book. Prof. De Morgan's suggestions on the subject have probably found most favour; and Prof. Hill bases his treatment and notation on those of De Morgan. He reduces the number of definitions required, and, by the use of the Theory of Relative Multiple Scales, proves all that Euclid does, and more. The abstract character of the Fifth Book in part accounts for its difficulty; hence Prof. Hill mixes the two books by taking up propositions from the Sixth as soon as a sufficient number of propositions from the Fifth have been established. It is not easy to prophesy on this subject, but the difficulties seem to be almost wholly cleared away in Prof. Hill's work.

*The Metric System. A Practical Manual.* By Léon Delbos, M.A. (Methuen.)

The metric system has usually been imperfectly treated in chapters that are mere appendices to the arithmetical text-books. Here it receives full and adequate treatment. The problems are numerous and well arranged.

"Builders of Greater Britain."—*Sir Stamford Raffles: England in the Far East.* By Hugh Edward Egerton, M.A. (Fisher Unwin.)

In writing the biography of a famous Englishman, Mr. Egerton has made use of a considerable number of papers preserved at the India Office, some written by, and some relating to, Raffles; in addition to which he has drawn on a large mass of correspondence. The abundance of materials has enabled him to produce a full and trustworthy account of a man who was highly popular with his countrymen early in the century, and to whose adventurous energy and firm administration we owe the acquisition and building up of our Straits Settlements, and especially of Singapore. Apart from his connexion with the East India Company and his service to the nation, Raffles won much distinction as a naturalist. The foundation of the Zoological Society, in which he was associated with Sir Humphry Davy, was his idea, and he did more than any one else to make it a success from the beginning. The volume is good reading. It would have been improved by a serviceable map or two. Those actually printed are useless for the general reader, even though they were the work of Raffles.

*The Economics of Modern Cookery; or, a Younger Son's Cookery Book.* By M. M. Mallock. (Macmillan.)

This is a revised edition of a sensible, well written, and very instructive cookery-book, which was published four years ago under the second of the two titles printed above. It is well adapted for the practical teaching of intelligent young householders.

*Handbooks of English, I.-IV.* (Blackie & Son.)

Elementary class-books, containing poetry for recitation, rules and exercises in English grammar, paraphrase and composition, with spelling and word-building. They are well arranged, on a simple progressive plan.

*Text-Book for Holy Communion, Baptism, and Confirmation.*

By Rev. Septimus Buss. (Livingtons.)

Mr. Buss has written an explanatory comment on three Offices in the Book of Common Prayer, intended both for the general reader and for students. It gives a clear account of the origin of the various services

or sacraments, and the changes through which they have passed into their present form.

*Studies of Heads, after the Originals by Henry Ryland, R.I. (C. W. Faulkner.)*

Four black-and-white studies on plate-marked folio sheets, very suitable for copying with pencil or crayons. They are delicately drawn and excellently printed.

Amongst the reprints of the month are Jane Austen's *Sense and Sensibility*, with an introduction by Austin Dobson, and illustrations by Hugh Thomson (Macmillan); Charles Kingsley's *At Last: a Christmas in the West Indies* (Macmillan); Sir Walter Scott's *Quentin Durward*, with introduction and notes by H. W. Ord. B.A. (A. & C. Black); George Borrow's *Lavengro*, with an introduction by Theodore Watts-Dunton (Ward, Lock, & Co.); Captain Marryat's *Snarleyyou*, with an introduction by David Hannay (Macmillan); Charles Kingsley's *Glaucus, or the Wonders of the Shore* (Macmillan); Defoe's *Robinson Crusoe*, with introduction by Henry Kingsley (Macmillan); Captain Marryat's *The Pirate and The Three Cutters* (Macmillan); Jane Austen's *Pride and Prejudice* (Macmillan).

An excellent text with notes is Mr. Nicklin's *Old Mortality* (Cambridge University Press). A short introduction gives us a few pages on the novel before Scott, a life of Scott, and an estimate of this particular "tale of my landlord." The text is elucidated by footnotes, and Mr. Nicklin has added a historical appendix and a glossary. In "Blackwoods' English Classics" we have Johnson's *Lives of Milton and Addison*, edited by J. Wight Duff; Macaulay's *Life of Johnson*, edited by D. Nichol Smith; and Scott's *Lady of the Lake*, edited by W. E. W. Collins. Mr. Nicol Smith also edits Dryden's *Essay of Dramatic Poesy* (Blackie & Son). In the "Swan Edition" of Shakespeare (Longmans) we have a good edition of *King Henry V.*, by D. Ferguson. Messrs. Nelson & Son print, with a few notes, *Little Nell*, from "The Old Curiosity Shop," and *David Copperfield's Boyhood*. Goldsmith's *Traveller*, with ample notes on every page, is reprinted by Messrs. Moffatt & Paige.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*University Correspondence College Calendar, 1900* (Burlington House, Cambridge)—with articles on the "special subjects" for 1901.

*Synopsis of Townsend Warner's Brief Survey of British History* (Blackie)—a *multum in parvo*, very useful for private students.

*The Laws of Law*, by T. Baty (Effingham Wilson)—a valuable essay on the basis of the science of law.

*Early English Church History for Elementary Schools*, by the Rev. F. L. H. Millard, M.A. (Kendal: T. Wilson)—an excellent little record of National Church history.

*A Rational Manual of Spelling*, by F. H. Shoosmith, Ph.D. (A. G. Dawson); *Kindred Idea Spelling for the Lower Classes* (same publisher)—two useful helps for the specific teaching of spelling.

*Little Stories for Little Readers* (W. & R. Chambers)—a first reading-book.

*Passing Thoughts*, by Mrs. Septimus Buss (Elliot Stock)—a book of amiable verse, dedicated to the memory of Frances Mary Buss.

*Elements of Algebra*, by W. W. Beman and D. E. Smith (Boston: Ginn & Co.).

CORRESPONDENCE.

CAMBRIDGE UNIVERSITY EXTENSION SUMMER MEETING.

To the Editor of the Educational Times.

SIR,—I venture in the name of the Syndicate to ask you to do us the kindness of permitting me, through your columns, to inform such of your readers as are intending to come up to Cambridge for the Summer Meeting in August that they should make application without delay. The general subject chosen for this year's gathering is so appropriate to the closing year of the century that the number of applications for admission already received is largely in excess of the number at the corresponding period on the last occasion. It is possible the Syndicate may have to restrict the numbers, in view of the limited accommodation. Already it has been found necessary to refuse all applications for special admission to the inaugural address to be delivered by Mr. Balfour in the Senate House on August 2, and to confine the admission to members of the Meeting. The accommodation offered by certain colleges is already allotted, but convenient lodgings will easily be obtainable in the town. I shall be glad to give further information to any who may be desirous of attending the Meeting.—I am, &c.,

R. D. ROBERTS.

Syndicate Buildings, Cambridge.  
July 14, 1900.

ST. PAUL'S SCHOOL.

To the Editor of the Educational Times.

DEAR SIR,—I thank you for the kindly mention of my name in your last number of the *Educational Times*; but the rumour of my resignation is baseless. I still find my happiness in my work. Perhaps the mistake has arisen from a confusion of St. Paul's with Merchant Taylors'.—Faithfully yours,

St. Paul's School, West Kensington, W. FRED. W. WALKER.  
July 1, 1900.

[We relied on a weekly contemporary. Apparently all headmasters were expected to resign at the close of the century: Mr. Walker is the third or fourth victim of unfortunate vaticination.—EDITOR.]

LONDON INTER. ARTS.

To the Editor of the Educational Times.

SIR,—The following is taken from the afternoon mathematical paper set at the recent Inter. Arts Examination of the London University:—

"The whole surface of a cone is 20 square feet, and the radius of the inscribed sphere is 3 feet. Show that the volume is 20 cubic feet."

The volume of a sphere of radius 3 feet is given by

$$\frac{4}{3}\pi r^3 = \frac{4}{3} \times \pi \times 27 = 113 \text{ cubic feet approximately.}$$

How can such a sphere be inscribed in a cone the volume of which is 20 cubic feet?

Indignor quandoque bonus dormitat Homerus.

Derby, July 23.

W. P. GOUDIE.

ADJOURNED MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

AN adjourned meeting of the Council was held at the College on July 21. Present: Dr. Wormell (Vice-President) in the Chair; Mr. Barlet, Rev. J. O. Bevan, Mr. Bidlake, Mr. Butler, Mr. Charles, Mr. Eve, Mr. Harris, Mr. Leatham, Mr. Pinches, Dr. R. P. Scott, Mr. Sergeant, Rev. J. Stewart, and Mr. Walmsley.

It was resolved that a memorial should be sent in to the President of the Board of Education, in reference to the constitution of the Consultative Committee.

Diplomas were awarded to the successful candidates at the Midsummer Examination of Teachers as follows:—

<i>Licentiate ship.</i>		
Clark, R.	Skelly, T. W. K.	Sterrey, C. E.
Jones, R. J.		
<i>Associate ship.</i>		
Acock, Miss A. F.	Gwinn, F.	Neill, J. C.
Baldock, Miss L.	Hall, Miss B.	Nevin, R.
Beattie, R.	Hampson, W.	Nevin, Mrs. B. J.
Bermingham, Miss M. E.	Handsford, H.	Peppiette, C. H.
Blakemore, W.	Harris, A. E.	Pilkington, G. O.
Boughey, Miss M. E.	Ineson, J. S.	Pye, W. H.
Brinnicombe, J. R. M.	Jones, S.	Rahztz, F. J.
Bury, Miss H.	Jordan, A. V.	Reynolds, Miss E.
Carter, E.	Kearns, Miss A. C.	Robson, J.
Cheetham, W. H.	Ketcher, Miss F. F.	Roe, A.
Claxton, W. J.	Kibblewhite, V. G.	Roff, Miss M. A.
Cook, T. H. P.	Knight, Miss A. M.	Rogers, Miss M. H.
Cooke, R.	Knight, Miss L. M.	Sharpe, H. E.
Cooper, H.	Lacey, H. C.	Shimwell, Miss J. E.
Cushing, J. H.	Lambert, W.	Sillett, W. E.
Davies, G.	Leeming, W. T.	Simon, W. H.
Davies, D. N.	Leighton, F. T.	Skinner, G. E. A.
Day, Miss C. C.	Lelliott, J. E.	Snape, A.
Debenham, Miss E. M.	Lindsay, A. S.	Stapley, Miss J.
De Levante, Miss F. M.	Longstaff, J. L.	Stark, Miss A. L.
Dyall, Miss E.	Lorriman, J.	Stephens, H. H.
Dyer, S. H.	Lowe, J. E.	Stroud, T.
Eley, G. C.	McLay, G.	Taylor, A.
Ellidge, Miss E. A.	Marsh, J.	Taylor, F.
Ellison, T. W.	Mason, A. J.	Tucker, Miss A.
Enderby, J. E.	Mather, Miss E. M.	Twigg, T. L.
Evans, W.	Mercer, A.	Wagg, H. J.
Fish, Miss H. M.	Minchington, C. H.	Walker, M. F.
Frost, E.	Mold, Miss H.	Walton, W.
Gedge, C.	Morgan, E. J.	Ware, Miss A. M.
Gillham, Miss E. G.	Morris, D. L.	Watkin, S.
Giedhill, J. R.	Mulrooney, W.	Willbee, Miss A. S.
Glenny, Miss E. F.	Naumann, Miss E.	Young, A. W.
Greentree, Miss A.		

Certificates of Ability to Teach were awarded to the following, who had passed the required practical examination:—G. T. Aston, S. I. Butler, A. E. Jobbins, F. A. King, A. Lane, E. F. W. Mondy, F. J. Rahtz, A. E. Roberts.

## TEACHERS' DIPLOMA EXAMINATION—PASS LIST, JULY, 1900.

*Theory and Practice.*

## LICENTIATESHIP.

Henderson, B. L. K.  
Sterrey, C. B.

## ASSOCIATESHIP.

Acock, Miss A. F.  
Armstrong, J.  
Badlock, Miss L.  
Beattie, R.  
Birmingham, Miss M. E.  
Bessant, J. E. J.  
Blakemore, W.  
Booth, E. R.  
Boughhey, Miss M. E.  
Bury, Miss H.  
Carrack, W. S.  
Carter, E.  
Cheetham, W. H.  
Claxton, W. J.  
Cole, Miss M. H.  
Colley, J. B.  
Cook, T. H. P.  
Cooke, R.  
Cooper, H.  
Craig, D.  
Cushing, J. H.  
Davies, G.  
Davies, D. N.  
Day, Miss C. C.  
Debenham, Miss E. M.  
De Levanté, Miss F. M.  
Dent, J. G.  
Dering, Miss V.  
Dyall, Miss E.  
Dyer, S. H.  
Eley, G. C.  
Ellidge, Miss E. A.  
Enderby, J. E.  
Evans, W.  
Fish, Miss H. M.  
Frost, E.  
Gillham, Miss E. G.  
Gledhill, J. R.  
Glenny, Miss E. F.  
Gray, G. H.  
Greentree, Miss A.  
Hall, Miss B.  
Hampson, W.  
Hansford, H.  
Harris, A. E.  
Heath, C.  
Holmyard, I. B.  
Ineson, J. S.  
Johnstone, E. M.  
Jones, S.  
Jordan, A. V.  
Keurns, Miss A. C.  
Kemp, A.  
Ketcher, Miss F. F.  
Kibblewhite, V. G.  
Knight, Miss A. M.  
Knight, Miss L. M.  
Lane, E. E.  
Leeming, W. T.  
Leighton, P. T.  
Lelliott, J. E.  
Lindsay, A. S.  
Longstaff, J. L.  
Lorrinan, J.  
Lowe, J. E.  
Lucas, Miss M. A.  
McLay, G.  
Marsh, J.  
Mason, A. J.  
Mather, Miss E. M.  
Mercer, A.  
Minchington, C. H.  
Mold, Miss H.  
Morgan, E. J.  
Morris, D. L.  
Mulrooney, W.  
Naumann, Miss E.  
Neill, J. C.  
Nevin, R.  
Nevin, Mrs. B. J.  
Oldfield, Miss E.  
Pass, G. J.  
Poppiette, C. H.  
Pickard, T.  
Pilkington, G. O.  
Pye, W. H.  
Rahtz, F. J.  
Roe, A.  
Roff, Miss M. A.  
Rogers, Miss M. H.  
Schuck, Miss M. A.  
Scriven, Miss M. E.  
Sharpe, H. E.  
Shimwell, Miss J. E.  
Sillet, W. E.  
Skinner, G. E. A.  
Snape, A.  
Stanley, J.

*Theory & Practice—contd.*

Stark, Miss A. L.  
Stephens, H. H.  
Stroud, T.  
Taylor, A.  
Taylor, F.  
Tucker, Miss A.  
Twigg, T. L.  
Varcoe, J. T. S.  
Walker, M. F.  
Walton, W.  
Ware, Miss A. M.  
Watkin, S.  
Wilbee, Miss A. S.  
Young, A. W.

*English Language.*

Barr, T.  
Beattie, R.  
Bennett, W.  
Bessant, J. E. J.  
Brimicombe, J. R. M.  
Bruhn, Miss E.  
Bryan, T. J.  
Calway, T.  
Clementson, G.  
Colley, J. B.  
Craig, D.  
Dent, J. G.  
Eley, G. C.  
Felix, H. D.  
Garner, E.  
Gwinn, F.  
Hassall, H.  
Holmyard, I. B. (hon.).  
James, Miss E.  
Jeffkins, Miss E. O'M.  
Johnstone, E. M.  
Jones, A. H.  
Jordan, A. V.  
King, F. A.  
Kitchener, E. E.  
Lamb, J.  
Leighton, F. T.  
Lucas, Miss M. A.  
Mitchell, Miss S. H.  
Morgan, Miss E.  
Morrell, J. A.  
Oldfield, Miss E.  
Read, C.  
Rogers, T. A.  
Portsmouth, Miss F. L.  
Sawyer, Miss K.  
Schuck, Miss M. A.  
Stanley, J.  
Stiling, Miss M. T.  
Sykes, A.  
Twigg, T. L.  
Vane, Miss M. A.  
Varcoe, J. T. S.  
Ward, R.  
Williams, F. B.

*English History.*

Beattie, R. (hon.).  
Beer, Miss E. B.  
Bennett, W.  
Boughhey, A. W. D.  
Bryan, T. J.  
Calway, T.  
Claxton, W. J.  
Clementson, G.  
Dent, J. G.  
Eley, G. C.  
Ellison, T. W. (hon.).  
Forrester, T. C.  
Gedge, C. (hon.).  
Gillett, Miss M. F.  
Goddard, C.  
Griffiths, J.  
Gwinn, F. (hon.).  
Hackett, W.  
Hall, T. W.  
Harkness, A.  
Hassall, H.  
Johnstone, E. M.  
Jordan, A. V.  
Kitchener, E. E. (hon.).  
Lacey, H. C.  
Lambert, W. (hon.).  
Leighton, F. T.  
Mitchell, Miss S. H. (hon.).  
Morrell, J. A.  
Naish, J.  
Oldfield, Miss E.  
Parr, J. R. K.  
Pass, G. J.  
Proffitt, H.  
Read, C.  
Ream, Miss A.  
Rider, J. B.  
Rogers, Miss J.

*English History—contd.*

Scriven, Miss M. E.  
Simon, W. H.  
Smith, Miss F. R.  
Stanley, J. (hon.).  
Stroud, T.  
Twigg, T. L. (hon.).  
Varcoe, J. T. S.  
Waite, A.  
West, Miss M. E.

*Geography.*

Beattie, R.  
Bessant, J. E. J.  
Briard, C. M.  
Bryan, T. J.  
Clementson, G.  
Cole, Miss M. H.  
Colley, J. B.  
Craig, D.  
Dent, J.  
Dent, J. G.  
Eley, G. C.  
Hackett, W.  
Harrison, Miss A. M. (hon.).  
Hassall, H.  
Holmyard, I. B.  
Jordan, A. V.  
Kitchener, E. E.  
Leighton, F. T.  
Lucas, Miss M. A.  
Mitchell, Miss S. H.  
Naish, J.  
Oldfield, Miss E.  
Parr, J. R. K.  
Read, C.  
Rider, J. B.  
Robson, J.  
Stanley, J.  
Twigg, T. L.  
Varcoe, J. T. S.  
Ward, R.

*Arithmetic.*

Abbott, W. L.  
Barr, T.  
Beattie, R.  
Bennett, W.  
Boughhey, A. W. D.  
Briard, C. M.  
Bryan, T. J.  
Calway, T.  
Clementson, G.  
Cole, Miss M. H.  
Colley, J. B.  
Craig, D.  
Dent, J.  
Dent, J. G.  
Drake, R. A.  
Eley, G. C.  
Ellison, T. W.  
Goddard, C.  
Hackett, W.  
Harkness, A.  
Hassall, H.  
Holmyard, I. B.  
James, Miss E.  
Jordan, A. V.  
Kendall, W. C.  
Lamb, J.  
Lane, E. E.  
Leighton, P. T.  
Mathers, Miss M. J.  
Minchington, C. H.  
Morrell, J. A.  
Oldfield, Miss E.  
Parr, J. R. K.  
Pass, G. J.  
Pille-Phelps, W.  
Portsmouth, Miss F. L.  
Proffitt, H.  
Read, C.  
Rider, J. B.  
Smith, Miss F. R.  
Stanley, J.  
Stiling, Miss M. T.  
Timney, Miss M. E.  
Twigg, T. L.  
Varcoe, J. T. S.  
Ward, R. (hon.).

*Algebra.*

FELLOWSHIP.  
Morris, W. R.  
LICENTIATESHIP.  
Skelly, T. W. K.  
Sterrey, C. E.

*Algebra—continued.*

## ASSOCIATESHIP.

Beattie, R.  
Bryan, T. J.  
Clementson, G.  
Dent, J. G.  
Harkness, A.  
Hassall, H.  
Holmyard, I. B. (hon.).  
Morrell, J. A.  
Pass, G. J.  
Pille-Phelps, W.  
Reynolds, Miss E.  
Skinner, G. E. A.  
Twigg, T. L.  
Ward, R.  
Wagg, H. J.

*Euclid.*

## LICENTIATESHIP.

Morgan, W.  
Skelly, T. W. K.

## ASSOCIATESHIP.

Beattie, R.  
Bryan, T. J.  
Clementson, G.  
Harkness, A.  
Hassall, H.  
Holmyard, I. B.  
Kemp, A.  
Kitchener, E. E.  
Lamb, J.  
Lane, E. E.  
Pass, G. J.  
Sillet, W. E.  
Stanley, J.  
Twigg, T. L.  
Ward, R.

*Trigonometry.*

## FELLOWSHIP.

Morris, W. R.

## LICENTIATESHIP.

Haycock, G. S.  
Jones, R. J.

*Mechanics.*

## LICENTIATESHIP.

Henderson, B. L. K.

## ASSOCIATESHIP.

Calway, T.  
Craig, D.  
Gedge, C. (hon.).  
Stroud, T.  
Varcoe, J. T. S.

*Conic Sections.*

## LICENTIATESHIP.

Haycock, G. S.  
Jones, R. J.  
Skelly, T. W. K.  
Sterrey, C. E.

*Astronomy.*

None passed.

*French.*

LICENTIATESHIP.  
Henderson, B. L. K. (hon.).

## ASSOCIATESHIP.

Beer, Miss E. B. (hon.).  
Briard, C. M.  
Fischer, T. J.  
Jeffkins, Miss E. O'M.  
Johnstone, E. M.  
Portsmouth, Miss F. L.  
Reynolds, Miss E.  
Schmitt, O. P. (hon.).  
Stapley, J.

*German.*

## LICENTIATESHIP.

Clark, R.

## ASSOCIATESHIP.

Fischer, T. J. (hon.).  
Schmitt, O. P.  
Schuck, Miss M. A.  
Shimwell, Miss J. E.

*Italian.*

## ASSOCIATESHIP.

Anderson, W. A. (hon.).  
Fischer, T. J.

*Latin.*

## ASSOCIATESHIP.

Leighton, F. T.

*Experimental Physics.*

## FELLOWSHIP.

Richardson, C. W. H. (hon.).

## LICENTIATESHIP.

Goss, R. J.

## ASSOCIATESHIP.

Eley, G. C.  
Felix, H. D.  
Hackett, W.  
Hands, Miss E. M.  
Skinner, G. E. A.

*Chemistry.*

## LICENTIATESHIP.

Oakley, T. P. (hon.).

## ASSOCIATESHIP.

Eley, G. C.  
Mitchell, Miss S. H.  
Pass, G. J.

*Animal Physiology.*

## LICENTIATESHIP.

Clark, R. (hon.).  
Goss, R. J.  
Henderson, B. L. K.  
James, T. E.

## ASSOCIATESHIP.

Abbott, W. L.  
Bessant, J. E. J.  
Calway, T.  
Cole, M. H.  
Colley, J. B.  
Craig, D.  
Dent, J. G.  
Felix, H. D.  
Furneaux, Miss R. N.  
Hackett, W.  
Hands, Miss E. M.  
Hansford, H.  
Jordan, A. V.  
Kemp, A.  
Kennedy, W.  
Kitchener, E. E.  
Mitchell, Miss S. H.  
Naish, J.  
O'Connor, Miss M. (hon.).  
Oldfield, Miss E.  
Parr, J. R. K.  
Proffitt, H.  
Reynolds, Miss E. (hon.).  
Robinson, Miss E.  
Shimwell, Miss J. E.  
Stiling, Miss M. T.  
Twigg, T. L.  
West, Miss M. E.

*Botany.*

## LICENTIATESHIP.

Friend, A. J.

## ASSOCIATESHIP.

Clark, A. C.  
Jordan, A. V. (hon.).  
O'Connor, Miss M.  
Reynolds, Miss E.  
West, Miss M. E.

*Geology.*

## LICENTIATESHIP.

Clark, R. (hon.).

*Scripture History.*

Wilbee, Miss A. S.

*Drawing.*

Calway, T.  
Davies, D. N.  
Hassall, H.

*Music.*

None passed.

MATHEMATICS.

14481. (H. M. TAYLOR, M.A., F.R.S. Suggested by Quest. 14382.)—On the sides of a triangle A'B'C', triangles B'C'A, C'A'B, A'B'C are constructed similar to three given triangles. Having given the triangle ABC and the three triangles, reconstruct the triangle A'B'C'.

Solution by the PROPOSER.

ABC (Fig. 1) is the given triangle having been formed by constructing on the sides of the triangle A'B'C' the triangles AB'C', BC'A', CA'B' similar and homologous to the given triangles LX Y, MXY, NXY

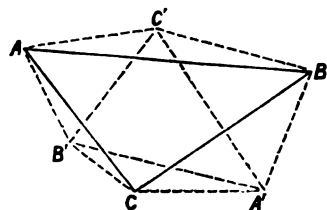


Fig. 1.

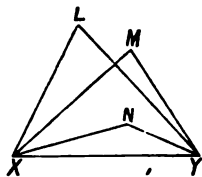


Fig. 2.

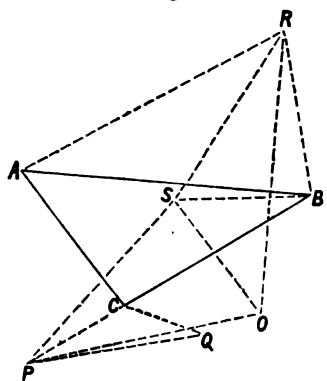


Fig. 3.

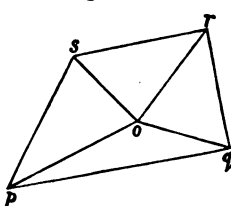


Fig. 4.

(Fig. 2) respectively; it is required, from these data, to reconstruct the triangle A'B'C'.

[The triangles ABC in Figures 1 and 3 are identical, but they are drawn apart merely for the sake of clearness.]

Construction.—Take any point P (Fig. 3), and construct  $\Delta PCQ$  similar and homologous to  $\Delta XNY$ ; and  $\Delta QAR$  similar and homologous to  $\Delta XLY$ ; and  $\Delta RBS$  similar and homologous to  $\Delta XMY$ .

Next take a point o (Fig. 4), and describe  $\Delta poq$  similar and homologous to  $\Delta PCQ$ ,  $\Delta qor$  similar and homologous to  $\Delta QAR$ ,  $\Delta ros$  similar and homologous to  $\Delta RBS$ .

Now (in Fig. 3) describe  $\Delta POS$  similar and homologous to  $\Delta pos$  of Fig. 4. We shall prove O to be coincident with A'.

[The rest in Volume.]

14511. (JOHN C. MALET, M.A., F.R.S.)—If, in the sextic algebraic equation  $x^6 - p_1x^5 + p_2x^4 - p_3x^3 + p_4x^2 - p_5x + p_6 = 0$ ,

the sum of three roots is equal to the sum of the other three, (1) prove

$$4p_6Q_4 - Q_4Q_6^2 - p_6Q_2^2 + p_6Q_3Q_3 - p_6^2 = 0,$$

where  $Q_2 \equiv p_2 - \frac{1}{3}p_1^2$ ,  $Q_3 \equiv p_3 - \frac{1}{3}p_1p_2 + \frac{1}{3}p_1^3$ ,  $Q_4 \equiv p_4 - \frac{1}{3}p_1p_3 + \frac{1}{3}p_1^2p_2 - \frac{1}{18}p_1^4$ ; (2) solve the equation.

I. Solution by the PROPOSER; H. W. CURJEL, M.A.; and Prof. SANJANA.

(1) Let  $x_1, x_2, x_3, x_4, x_5, x_6$  be the roots of the equation; then

$$x_1 + x_2 + x_3 = x_4 + x_5 + x_6 = \frac{1}{3}p_1.$$

Let now  $x_1x_2 + x_2x_3 + x_3x_1 = u_1$ ,  $x_4x_5 + x_5x_6 + x_6x_4 = u_2$ ,

$$x_1x_2x_3 = v_1, \quad x_4x_5x_6 = v_2;$$

and we find

$$u_1 + u_2 = Q_2 \dots \dots \dots (i).$$

$$v_1 + v_2 + \frac{1}{3}p_1(u_1 + u_2) = p_3; \text{ therefore } v_1 + v_2 = Q_3 \dots \dots (ii).$$

$$u_1u_2 + \frac{1}{3}p_1(v_1 + v_2) = p_4;$$

therefore

$$u_1u_2 = Q_4, \quad v_1u_2 + v_2u_1 = p_5, \quad v_1v_2 = p_6 \dots (iii., iv., v.).$$

From (i.) and (iii.), we have

$$2u_1 = Q_2 + \sqrt{(Q_2^2 - 4Q_4)}, \quad 2u_2 = Q_2 - \sqrt{(Q_2^2 - 4Q_4)};$$

and from (ii.) and (v.),

$$2v_1 = Q_3 + \sqrt{(Q_3^2 - 4p_6)}, \quad 2v_2 = Q_3 - \sqrt{(Q_3^2 - 4p_6)};$$

Substituting for  $u_1, u_2, v_1, v_2$  in (v.) and rationalizing, we get the required condition.

(2) The roots of the sextic are the roots of the cubics

$$2x^3 - p_1x^2 + \{Q_2 \pm \sqrt{(Q_2^2 - 4Q_4)}\}x - \{Q_3 \pm \sqrt{(Q_3^2 - 4p_6)}\} = 0.$$

II. Solution by G. H. HARDY, B.A.

It is interesting to consider this equation from the point of view of the GALOIS theory.

The function  $\phi_1 \equiv x_1 + x_2 + x_3 \equiv [123]$  has, in general, 20 values, viz.: [123], [124], [125], [126], [134], [135], [136], [145], [146], [156], [234], [235], [236], [245], [246], [256], [345], [346], [356], [456]; and satisfies an equation  $\phi_{20}(\phi) = 0 \dots \dots \dots (i).$  The group of  $\phi_1$  is of order  $(3!)^2 = 36$ ; and the solution of (i.) involves the complete solution of the sextic, for, if  $x_1 + x_2 + x_3, \dots$  are known, so are  $x_1, x_2, x_3, \dots$

[The rest in Volume.]

14534. (W. S. COONEY.)—Let  $O_1, O_2, O_3$  be the centres of squares described externally, and  $\omega_1, \omega_2, \omega_3$  the centres of squares described internally on the sides  $a, b, c$ , respectively, of triangle ABC. Join  $O_1$  to  $\omega_2$  and  $\omega_3$ , meeting side BC in P, P';  $O_2$  to  $\omega_3$  and  $\omega_1$ , meeting CA in Q, Q';  $O_3$  to  $\omega_1$  and  $\omega_2$ , meeting AB in R, R'. Prove that A', B', C', the intersections of P'R, Q'P, R'Q are the centres of the insquares of ABC, and that, if AA', BB', CC' meet sides of A'B'C' in  $\alpha, \beta, \gamma$ , then triangle  $\alpha\beta\gamma$  is similar to ABC.

Solution by the PROPOSER.

From Quest. 14473 and from figure,

$\Delta AO_2\omega_3 = \Delta A\omega_2O_3$ ; therefore the perpendiculars AD and AE are equal. Draw O<sub>1</sub>S perpendicular to AC and O<sub>1</sub>T to AB.  $\Delta CQO_2$  is similar to  $\Delta CP'O_1$ , and  $\Delta DQ$  is similar to  $\Delta CSO_1$ . Therefore

$$\frac{CQ}{CP'} = \frac{CO_2}{CO_1} = \frac{AC}{BC};$$

therefore QP' is parallel to AB, and, similarly, PR' and RQ' are parallel respectively to CA and BC.  $\Delta DQ$  and  $\Delta CSO_1$  are similar. Therefore

$$\frac{AQ}{AD} = \frac{CO_1}{SO_1};$$

also

$$\frac{AR'}{AE} = \frac{BO_1}{TO_1};$$

but AD = AE

$$\text{and } CO_1 = BO_1;$$

therefore

$$\frac{AQ}{AR'} = \frac{TO_1}{SO_1},$$

therefore diagonal of completed parallelogram P'QAR'P passes through O<sub>1</sub> and also through A' (since Q'R is parallel to PP', and bisects QR' in  $\alpha$ . Similarly, BO<sub>2</sub> and CO<sub>3</sub> pass through B' and C', bisecting P'R and P'Q' in  $\beta$  and  $\gamma$ . Therefore sides of  $\alpha\beta\gamma$  are parallel to sides of ABC. Angles of  $\Delta BR'O_3$  are  $45^\circ, 90^\circ - B$ , and  $45^\circ + B$ . Therefore

$$\frac{BR'}{(c \cos B)/(B)}, \text{ where } (B) = \sin B + \cos B.$$

$$\text{Also } \frac{AR}{(c \cos A)/(A)} \text{ and } \frac{RR'}{(c \cos C)/(C)}.$$

$$\text{Similarly, } \frac{QQ'}{(b \cos B)/(A)(C)}, \frac{PR'}{(b/c)BR'} = \frac{(b \cos B)/(B)}{(b/c)BR'}$$

$$\frac{\sin BAB'}{\sin CAB'} = \frac{R'B' AQ}{B'Q AR'} = \frac{PR' TO_1}{QQ' SO_1} = \frac{(A)(C) \sin(B + 45^\circ)}{(B) \sin(C + 45^\circ)} = \frac{(A)(C)(B)}{(B)(C)}$$

$$= (A) = \frac{\sin(A + 45^\circ)}{\sin(45^\circ)} = \frac{\sin BA O_2}{\sin CA O_2}.$$

Therefore A. BB'CO<sub>2</sub> is a harmonic pencil, as is also C. BB'AO<sub>2</sub>. Therefore lines drawn through B' parallel to AO<sub>1</sub> and CO<sub>3</sub> will make angles of  $45^\circ$  with AC, and have the parts intercepted by the sides AC and AB, and AC and CB bisected at B'. Therefore B' is centre of insquare to AC. Therefore, &c.

14222. (Professor ELLIOTT, F.R.S.)—If  $P + a_0Q$ , in which P and Q are free from  $a_0$ , is annihilated by  $a_0 \frac{\partial}{\partial a_1} + 2a_1 \frac{\partial}{\partial a_2} + 3a_2 \frac{\partial}{\partial a_3} + \dots$  to  $\infty$ ,

show that  $\frac{\partial}{\partial a_1} Q = 0$ , and that, when  $m > 1$ ,

$$\frac{\partial}{\partial a_m} Q = -\frac{1}{2} \sum_{r=1}^{m-1} \frac{\partial^2}{\partial a_r \partial a_{m-r}} P.$$

Solution by G. D. WILSON, B.A.

By hypothesis,  $(a_0 \frac{\partial}{\partial a_1} + \sum_{n=1}^{\infty} (n+1) a_n \frac{\partial}{\partial a_{n+1}})(a_0Q + P) \equiv 0$ ,

and P and Q are free from  $a_0$ . Hence

$$\frac{\partial Q}{\partial a_1} = 0, \quad \frac{\partial P}{\partial a_1} + \sum_{n=1}^{\infty} (n+1) a_n \frac{\partial Q}{\partial a_{n+1}} = 0, \quad \sum_{n=1}^{\infty} (n+1) a_n \frac{\partial P}{\partial a_{n+1}} = 0$$



Therefore  $0 = \frac{\partial^2}{\partial a_r \partial a_{m-r} n+1} \sum_{n=1}^{\infty} (n+1) a_n \frac{\partial P}{\partial a_{n+1}}$  [from (iii.)]  
 $= \sum_{n=1}^{\infty} (n+1) a_n \frac{\partial^2 P}{\partial a_{n+1} \partial a_r \partial a_{m-r}} + (r+1) \frac{\partial^2 P}{\partial a_{r+1} \partial a_{m-r}}$   
 $+ (m-r+1) \frac{\partial^2 P}{\partial a_r \partial a_{m-r-1}}$

Therefore

$$\sum_{n=1}^{\infty} (n+1) a_n \frac{\partial}{\partial a_{n+1}} \left( \sum_{r=1}^{m-1} \frac{\partial^2 P}{\partial a_r \partial a_{m-r}} \right) = -2 \sum_{r=1}^{m-1} (r+1) \frac{\partial^2 P}{\partial a_{r+1} \partial a_{m-r}}$$

$$= -2 \sum_{r=2}^m r \frac{\partial^2 P}{\partial a_r \partial a_{m+1-r}}$$

But, from (ii.),  $\sum_{n=1}^{\infty} (n+1) a_n \frac{\partial}{\partial a_{n+1}} \frac{\partial Q}{\partial a_m} = - \frac{\partial^2 P}{\partial a_1 \partial a_m} - (m+1) \frac{\partial Q}{\partial a_{m+1}}$ ;

hence  $\sum_{n=1}^{\infty} (n+1) a_n \frac{\partial}{\partial a_{n+1}} \left( \sum_{r=1}^{m-1} \frac{\partial^2 P}{\partial a_r \partial a_{m-r}} + 2 \frac{\partial Q}{\partial a_m} \right)$   
 $= -2 \sum_{r=1}^m r \frac{\partial^2 P}{\partial a_r \partial a_{m+1-r}} - 2(m+1) \frac{\partial Q}{\partial a_{m+1}}$   
 $= -(m+1) \left( \sum_{r=1}^m \frac{\partial^2 P}{\partial a_r \partial a_{m+1-r}} + 2 \frac{\partial Q}{\partial a_{m+1}} \right)$

Putting  $m = 1, 2, \dots$ , &c., in this, we obtain the result stated.

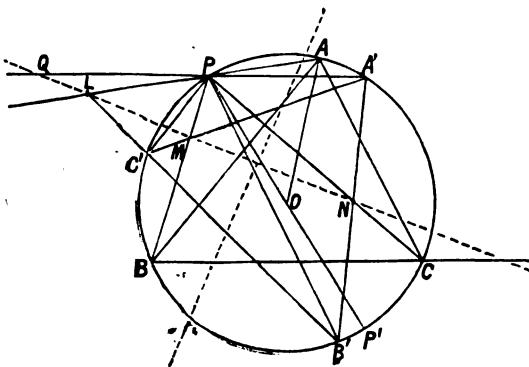
**14532.** (Rev. J. CULLEN, P.)—Let  $\Delta$  be any conic in the plane of a given triangle ABC. A point P is taken on  $\Delta$ , and parallels through P to BC, CA, AB meet  $\Delta$  again in  $A', B', C'$ . Prove that AP, BP, CP intersect  $B'C', C'A', A'B'$  in three collinear points L, M, N. (A particular case is that the intersections of the symmedian lines with the corresponding sides of BROCARD'S triangle are collinear.)

Prove also that, if  $\Delta$  be the circumcircle, then LMN is at right angles to the SIMSON-line of P.

Remarks by Professor SANJANA.

The first part is proved readily by trilinears. I append a geometrical proof of the last part.

The triangle  $A'B'C'$  is inversely similar to ABC. Hence  $\angle MA'N = A = BAC = MPN$ ;  
 therefore M, P, A', N are concyclic; so also are N, P, L, B' and L, P, M, C'. Thus  $\angle PMN = 180^\circ - \angle PA'N = 180^\circ - \angle PC'L = 180^\circ - \angle PML$ ,  
 so that LM, MN are in a straight line.



Let the arc PA subtend an angle  $\alpha$  at the circumference; let LMN meet  $A'P$  in Q; and let  $POP'$  be the diameter. The angle made by LMN with BC =  $\angle PQL = \angle PLM - \angle APA' = \angle PB'A' - \angle APA' = \alpha = \frac{1}{2} \angle POA$ . But the angle which the SIMSON-line of P makes with BC =  $\frac{1}{2} \angle POA$ ; hence LMN is at right angles to the SIMSON-line. See the Lemma on p. 73, Vol. LXVII.

**14454.** (Professor SANJANA, M.A.)—Solve, in rational numbers, the equation  $M^2 - 2xN^2 = x^2 - 1$ , where  $x$  stands for any one of the natural numbers 2, 3, 4, 5, 6, ... [The solution gives  $N^2 + 1$  as the difference of two squares. I have reason to believe that 5 is the only small value of  $x$  admissible. For the method see CHRISTAL, xxxiii., §§ 15-19.]

Solution by H. W. CUMJEL, M.A., and Lt.-Col. ALLAN CUNNINGHAM, R.E.  
 $x$  cannot be even, for  $M^2 + 1$  cannot be divisible by 4; and, since  $M^2 + 1 \equiv 0, \text{ mod } x$ , all the prime factors of  $x$  must be of the form  $4n + 1$ .

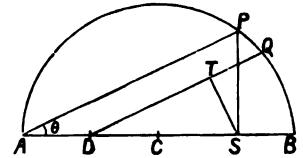
A large number of values of  $x$  will be excluded by the condition that  $2x$  must be a quadratic residue of all factors which occur in  $x^2 - 1$  to an odd power. This condition excludes the following values less than 100: 13, 25, 29, 41, 53, 61, 73, 85, 89, 97;  $x = 5, 17, 37, 65, 101$  give solutions  $x = 5, M = 8, N = 2$ , the remaining solutions may be deduced with the help of  $19^2 - 10 \times 6^2 = 1$ ;  $x = 17, M = 72, N = 12$ , the remaining solutions with the help of  $35^2 - 34 \cdot 6^2 = 1$ ;  $x = 37$ , all solutions are easily deduced from  $43^2 - 5^2 \cdot 74 = -1$  and  $6^2 - 74 = -38$ , since 74 is a non-residue of 9;  $x = 65$ , all solutions from  $8^2 - 130 = -66$  and

$57^2 - 5^2 \cdot 130 = -1$ ;  $x = 101$ , all solutions from  $10^2 - 202 = -102$ , and  $3141^2 - 202 \times 221^2 = -1$ , since 202 is a non-residue of 25.

**14188.** (SALUTATION.)—Bisect AB (= unity) in C, and AC in D; on AB describe a semicircle; from A, D draw parallel lines intersecting the semicircle in P, Q respectively; S, T being the projections of P on AB, and of S on DQ, prove that  $4ST$  is the sine of an angle =  $3PAB$ .

Solution by G. BIRTWISLE, B.A.;  
 Professor T. SAVAGE; and many others.

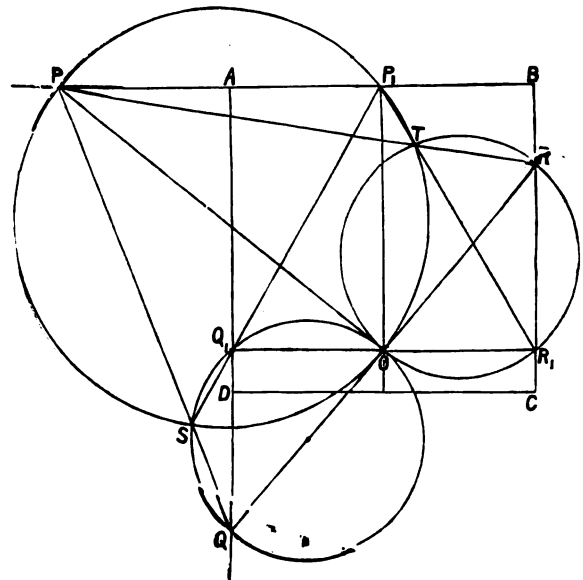
$AP = \cos \theta$ ;  
 therefore  $AS = \cos^2 \theta$ ;  
 therefore  $DS = \cos^2 \theta - \frac{1}{4}$ ;  
 therefore  $ST = \sin \theta (\cos^2 \theta - \frac{1}{4})$ ;  
 therefore  $4ST = \sin \theta (3 - 4 \sin^2 \theta)$   
 $= \sin 3\theta$ .



**14299.** (Rev. T. MITCHESON, B.A.)—Let  $P_1Q_1R_1$  be an equilateral triangle such that  $P_1$  is on one side of a square,  $Q_1$  and  $R_1$  on the adjacent sides,  $Q_1R_1$  parallel to the other side, and O the mid-point of  $Q_1R_1$ ; and let PQR be any other equilateral triangle, whose angular points are the same sides, QR passing through O, and let  $P_1Q_1$  meet PQ in S,  $P_1R_1$  meet PR in T. Then the circle passing through P, P<sub>1</sub>, S, T touches QR in O, and circles passing through O, T, R,  $R_1$  and O, S, Q,  $Q_1$ , respectively, are each one third of the first circle. (An echo of Quest. 14235.)

Solution by I. ARNOLD and the PROPOSER.

Let ABCD be the square, and  $P_1Q_1R_1$  an equilateral triangle inscribed; O the mid-point of  $Q_1R_1$ , and QR passing through it meeting BC in R and AD in Q. From O draw OP perpendicular to QR meeting BA in P; then is RPQ the other equilateral triangle. A circle described on OP as diameter passes through PSTP<sub>1</sub>, touching QR in O.



It is also evident that QO is the diameter of the circle passing through QSQ<sub>1</sub>O, and that OR is the diameter of the circle passing through OR<sub>1</sub>RT<sub>1</sub>, and these diameters are equal. But  $OP^2$  is equal to  $3OR^2$ , and, circles being as the squares of their diameters, this makes either of the smaller circles one third of the larger circle.

QUESTIONS FOR SOLUTION.

**14623.** (Professor G. B. MATHEWS, F.R.S.)—Prove that

$$\sum E(\frac{1}{2}n) x^n = (x^2 + x^3) / \{(1-x)(1-x^2)\},$$

and show how to find a similar expression for  $\sum E\{an/(a+b)\} x^n$ . [As usual, E(x) is the integer defined by  $E(x) \leq x < E(x) + 1$ .]

**14624.** (Professor E. LEMOINE.)—Soit en coordonnées normales  $a(m-n), b(n-l), c(l-m)$  les coordonnées d'un point M de la droite de LEMOINE; soit  $A_1B_1C_1$  le triangle formé par les perpendiculaires abaissées de M respectivement sur BC, CA, AB; soit un triangle  $A'B'C'$  homothétique à  $A_1B_1C_1$ . (1) Si  $AA', BB', CC'$  concourent en O, le lieu de O est une hyperbole équilatère circonscrite à ABC; si  $AB', BC', CA'$  concourent en O', ou  $AC', BA', CB'$  concourent en O'', les lieux de O' et de O'' sont aussi des hyperboles équilatères circonscrites à ABC. (2) Donner les équations des trois courbes.

**14625.** (Professor E. J. NANSON.)—Tangents are drawn from  $x'y'z'$ ,  $x''y''z''$  to conics touching the lines  $x = 0, y = 0, z = 0, lx + my + nz = 0$ ; show that the locus of their intersection is  

$$(lx + my + nz) \{ l(x''/x) + m(y''/y) + n(z''/z) \}$$

$$= (lx' + my' + nz')(lx'' + my'' + nz'').$$

**14626.** (Professor NEUBERG.)—Une ellipse de grandeur invariable se déplace dans son plan de manière que ses foyers glissent sur deux droites données. Construire le point de contact de cette ellipse avec son enveloppe.

**14627.** Professor S. SIRCOM.—Trace the curve  

$$(x-2)^2 \{ (x-2)y^2 - (6-x)x^2 \}^2 = 64(3-x)x^2y^2,$$
 with special reference to its shape in the neighbourhood of the origin.

**14628.** (Professor FRANZ ROGEL.)—Prove that the number of all numbers  $< n$  and prime to  $n$

$$\phi(n) = n + 2 \left[ \left( \frac{1}{4 \cdot 2! S_2} - \frac{1}{2 \cdot 3!} \right) (2\pi)^2 - \frac{S_2}{S_2} \right] n^3$$

$$- 2 \left[ \frac{1}{4 \cdot 4! S_2} - \frac{1}{2 \cdot 5!} \right] (2\pi)^4 - \frac{(2\pi)^2 S_2 + S_4}{3! S_3 + S_6} n^5$$

$$+ 2 \left[ \left( \frac{1}{4 \cdot 6! S_2} - \frac{1}{2 \cdot 7!} \right) (2\pi)^6 - \frac{(2\pi)^4 S_2 + (2\pi)^2 S_4 + S_6}{5! S_3 + 3! S_5 + S_7} \right] n^7 \dots,$$

where  $S_r$  denotes  $\frac{1}{1^r} + \frac{1}{2^r} + \frac{1}{3^r} + \frac{1}{4^r} + \frac{1}{5^r} + \dots$

**14629.** (J. A. THIRD, M.A., D.Sc.)—If a variable conic touch the sides BC, CA, AB of a triangle at X, Y, Z, and if the locus of its centre be the join of the symmedian point and the GERGONNE point, show that the locus of the point of concurrence of AX, BY, CZ is the circumscribed equilateral hyperbola having as centre the point of contact of the nine-point circle and the in-circle. Similar theorems hold for the ex-circles.

**14630.** (Professor COCHEZ.)—Courbe  $\rho = 2 \tan \omega / (1 - 2 \sin \omega)$ .

**14631.** (Professor SANJANA, M.A.)—A, B, C being the angles of a triangle, prove that

$$\cos A \sin^2 A \sin^4 (B - C) + \cos B \sin^2 B \sin^4 (C - A) + \cos C \sin^2 C \sin^4 (A - B)$$

$$= \sin A \sin B \sin C \{ \sin^2 (A - B) \sin^2 (C - A) + \sin^2 (B - C) \sin^2 (A - B) + \sin^2 (C - A) \sin^2 (B - C) \}.$$

**14632.** (Professor UMES CHANDRA GHOSH.)—Determine the area of the quadrilateral formed by joining the feet of the four normals drawn from a given point to a central conic.

**14633.** (D. BIDDLE.)—A certain group of cubic equations of the form  $x^3 + qx + r = 0$ , where  $q$  and  $r$  are both minus quantities, is capable of transformation into  $y^3 - 2y - 2 = 0$ , by taking  $y = mx$ . Prove that, with the same values of  $q$  and  $r$  respectively,  $x^3 + x^2 + \frac{1}{2}(q \pm r) = 0$  and  $x^3 - x^2 - \frac{1}{2}(q \mp r) = 0$  have a root in common. Also, from the foregoing law, deduce a method of finding either of the two equations in  $x$ , having given the fellow to it only.

**14634.** (R. TUCKER, M.A.)—O' is the in-centre of ABC. AO' produced meets the circum-circle in A'. Tangents from A' to the in-circle meet the circum-circle in  $a_1, a_2$ . Prove that  $Aa_1 = Aa_2 = AO'$ , and that the in-circle of ABC is also the in-circle of A'a<sub>1</sub>a<sub>2</sub>. (Analogous results, of course, for B and C.) Also

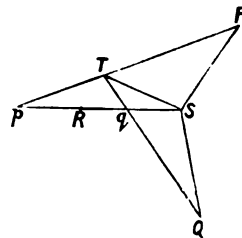
$$\sin \frac{1}{2} A \cdot \sin \frac{1}{2} A' = r/2R; \quad Aa_1 \cdot BA' = 2Rr = AO' \cdot O'A' = \&c.$$

**14635.** (R. F. DAVIS, M.A.)—Prove that (1) the trilinear coordinates of the foci of the ellipse touching the sides of the triangle of reference ABC at the feet of the perpendiculars are given by the equations  $\beta/\gamma + \gamma/\beta = t \cos A, \gamma/\alpha + \alpha/\gamma = t \cos B, \alpha/\beta + \beta/\alpha = t \cos C$ , where  $t^2 \cos A \cos B \cos C - t + 2 = 0$ ; (2) these foci all lie on the conics  $a^2 \cot A + \beta\gamma \operatorname{cosec} A = \dots$ ; (3) F is a focus when, HL being drawn perpendicular upon AG (Quest. 13878), KF is taken a mean proportional between KA and KL, and bisects the angle between them. [G = centroid, H = orthocentre, K = symmedian point.]

**14636.** (R. C. ARCHIBALD, M.A.)—Given a parabola  $y^2 = 4ax$ , with focus S, a circle  $x^2 - 10ax + y^2 + 9a^2 = 0$ , and the fixed point  $(-3a, 0)$ . If any line through the fixed point cuts the parabola in  $P_1, P_2$ , and the circle in  $P_3, P_4$ , show that (1) the circle  $SP_1P_2$  touches the parabola; (2) the circle  $SP_3P_4$  touches the parabola in  $P_1$ ; (3) the circle  $SP_4P_2$  touches the parabola in  $P_2$ ; where the lines  $P_1P_3, P_2P_4$  do not intersect without being produced. Conversely, a circle touching a parabola and passing through its focus S cuts the curve in two points  $P_1, P_2$  such that the line  $P_1P_2$  passes through a fixed point. The circle through S, tangent to the parabola at  $P_1$ , meets the line in  $P_3$ , and the circle through S, tangent to the parabola at  $P_2$ , meets the line  $P_1P_3$  in  $P_4$ . The points  $P_3, P_4$  lie on a fixed circle through S.

**14637.** (EDWARD V. HUNTINGTON, A.M. Generalization of No. 14134 and No 14608.)—Let two equal epi- or hypo-cycloids be so situated on the same fixed circle that a cusp A of one and a vertex V of the other lie in line with the centre O. Call OA = a and OV = h; a and h need not be commensurable. Then (1), if A and V are on the same side of O, a line of length  $h - a$ , sliding between the curves, will envelop an epi-

or a hypo-cycloid according as  $h - a$  is positive or negative; (2) if A and V are on opposite sides of O, a line of length  $h + a$  will envelop an epi- or a hypo-cycloid according as  $h - 3a$  is positive or negative. In either case the enveloped curve has twice as many cusps per circumference as the given curves.



**14638.** (Rev. T. ROACH, M.A.)—Let TP be a tangent to a parabola meeting the axis in p. Prove the following construction for the second tangent:—Centre S, radius ST, describe circle cutting Sp in R, and let

$$Sp : SR = SR : Sq;$$

then Tq is the second tangent.

**14639.** (G. H. HARDY, B.A.)—If  $\sum_0^\infty u_n(X)$  be a summable divergent

series, having the sum  $\int_0^\infty e^{-ax} u(X, a) da$ , where  $u(x, a) = \sum_0^\infty \frac{a^n}{n!} u(X)$ ,

prove that it may be integrated term by term in  $(x_0, X)$ , provided (i.)  $u(X, a)$  may be integrated term by term, and (ii.) the order of integration in  $\int_0^\infty e^{-ax} da \int_{x_0}^X u(X, a) dX$

may be changed. Deduce, and verify independently, that if

$$\phi(x, a) = e^{-a(1+\cos X)} \cos(X - a \sin X),$$

$$\psi(x, a) = e^{-a(1-\cos 2mX)} \cos(mX + a \sin 2mX) / (1 + X^2);$$

then  $\int_0^{2\pi} dX \int_0^\infty \phi da = \pi, \int_0^\infty da \int_0^{2\pi} \phi dX = 0;$   
 $\int_0^\infty dX \int_0^\infty \psi da = 0, \int_0^\infty da \int_0^\infty \psi dX = \frac{1}{2} \frac{\pi}{e^{2m} - e^{-2m}}.$

**14640.** (R. P. PARANJPE, B.A.)—A pseudo-periodic function  $\phi(u)$  satisfies the equations  $\phi(u + 2\omega) = \phi(u) + 2a, \phi(u + 2\omega') = \phi(u) + 2\beta$ , and has no essential singularity at a finite distance. Find its most general expression. [ $a$  and  $\beta$  are any constant quantities.]

**14641.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Solve in integers in a general form the equation  $N_1 N_3 = N_2 N_4$ , where

$$N_r = (x^r + 3^r y^r) / (x^r + 3y^r),$$

and give numerical examples.

**14642.** (ROBERT W. D. CHRISTIE.)—Establish directly, by use of the quintic roots of minus unity, Dr. REUSCHLE's *Einfach Factor* of the prime 11, and, if possible, extend same to other primes.

**14643.** (J. J. BARNIVILLE, B.A.)—Prove that

$$\frac{1}{1+11} - \frac{1}{4-11} + \frac{1}{11+11} - \frac{1}{29-11} + \dots = \frac{1}{2\sqrt{5}},$$

$$\frac{1}{1+19} - \frac{1}{5-19} + \frac{1}{19+19} - \frac{1}{71-19} + \dots = \frac{5}{22\sqrt{3}},$$

$$\frac{1}{1+71} - \frac{1}{9-71} + \frac{1}{71+71} - \frac{1}{559-71} + \dots = \frac{\sqrt{3}}{22\sqrt{5}},$$

$$\frac{1}{1+1} - \frac{1}{17-1} + \frac{1}{271+1} - \frac{1}{4319-1} + \dots = \frac{\sqrt{7}}{6},$$

$$\frac{1}{1+1} - \frac{1}{19+1} + \frac{1}{341+1} - \frac{1}{6119-1} + \dots = \frac{1}{\sqrt{5}}.$$

**14644.** (V. DANIEL.)—If a chord of the parabola  $y^2 = 4ax$  and the tangents at its extremities form a triangle of constant area  $\frac{1}{2}\lambda^2 a^2$ , the pole of the chord lies on the parabola  $y^2 = 4ax + \lambda^2 a^2$ .

**14645.** (W. R. HUGHES.)—PP', PM are diameters of an ellipse and a circle, osculating at P, and MP' meets the ellipse again in Q. Prove that the tangents at M and Q and the common chord PR meet in a point.

**14646.** (R. KNOWLES.)—Prove that the sum of the first  $r$  terms in the expansion of  $(1-x)^{-n}$  is

$$\left[ 1 - 1/(n-1)! \{ (r+1)(r+2)(r+3) \dots (r+n-1) x^r \right.$$

$$- p_1 r(r+2)(r+3) \dots (r+n-1) x^{r+1} + p_2 r(r+1)(r+3) \dots (r+n-1) x^{r+2}$$

$$\pm p_{n-2} r(r+1) \dots (r+n-3)(r+n-1) x^{r+n-2}$$

$$\left. \mp r(r+1)(r+2) \dots (r+n-3)(r+n-2) x^{r+n-1} \right] + (1-x)^n,$$

in which  $p_r$  is the coefficient of  $x^r$  in the expansion of  $(1+x)^{n-1}$ , for instance, if  $n = 5, p_1 = 4, p_2 = 6, p_3 = p_{n-2} = 4$ .

**14647.** (SALUTATION.)—ABC being any plane triangle, produce CA to A', AB to B', and BC to C', so that A'B'C' may be similar to another given triangle, and  $m$  times as large as ABC.

**14648.** (Prebendary WHITWORTH, M.A.)—If a straight line be divided at random into four parts, the expectation of the sum of the squares on the greatest and least parts is to the expectation of the sum of the squares on the other two parts as 53 to 19. (Solution by Algebra.)

**14649.** (H. W. CURJEL, M.A.)—If in hyperspace of  $n$  dimensions we call the hypersphere of highest possible dimensions simply a sphere, and a space of  $(n-1)$  dimensions simply a plane, and the figure corresponding to a triangle in space of 2 dimensions and a tetrahedron in space of 3 dimensions a  $(n+1)$ -hedroid, prove that the following theorem is true if  $n$  is even and not true if  $n$  is odd:—In space of  $n$  dimensions the  $n+2$  spheres circumscribing the  $n+2$   $(n+1)$ -hedroids determined by  $n+2$  planes meet in a point.

**14650.** (Professor LANGHORNE ORCHARD, M.A., B.Sc.)—An oblate spheroid, of mass  $m_1$  and angular velocity  $\omega$ , describes under gravity an ellipse about another oblate spheroid, of mass  $m_2$ , placed at one focus, which last spheroid itself is simultaneously describing, with velocity  $v$ , a similar ellipse about a mass  $m_3$  placed at one focus. Find the whole velocity of  $m_1$  at any point on its path.

#### OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6672.** (J. GRIFFITHS, M.A.)—If four pairs of points are so arranged on a plane that any three of the pairs form a group of six points on a conic, prove that (1) the four pairs must all lie on the same conic; and hence (2) the eight points of contact of two conics with their common tangents lie on another conic.

**6675.** (C. TAYLOR, M.A.)—Find the positions of a chord of a given curve of the  $n$ th degree which subtends angles equal to  $\alpha$  and  $\beta$  at given points A and B respectively.

**6679.** (Rev. T. R. TERRY, M.A., F.R.A.S.)—Show that the value of the continued fraction  $\frac{N}{1 + \frac{N_1}{1 + \frac{N_2}{1 + \frac{N_3}{\dots}}}}$ , where  $N = nx$  and  $N_r = \frac{n^2 - r^2}{(2r-1)(2r+1)} x^2$ , is  $\frac{(1+x)^n - (1-x)^n}{(1+x)^n + (1-x)^n}$ .

**6684.** (R. A. ROBERTS, M.A.)—Show that an ellipse, inscribed or circumscribed to a triangle self-conjugate with regard to a conic, cannot meet the conic in more than two real points.

**6685.** (W. R. WESTROFF ROBERTS, M.A.)—Show that, if, in the plane  $lx + my + nz = \phi$ ,  $l, m, n, \phi$  be functions of two variables of the form  $ax^2 + by^2 + 2cxy + 2dpx + 2fpy + e$ , then the plane will envelope a cubic surface in which curves of the families  $u = \text{constant}$ ,  $v = \text{constant}$  will be touched at their intersection by conjugate tangents of the surface.

**6689.** (J. R. HARRIS, M.A.)—A tetrahedron is cut by a plane so that the section shall be a rhombus. Prove that the side of the rhombus is half the harmonic mean between a pair of opposite edges.

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

#### THE LONDON MATHEMATICAL SOCIETY.

At the October meeting (1899) of the Council it was agreed that an "Index" to the first thirty volumes of the Society's "Proceedings," and a complete List of Members from the foundation of the Society should be drawn up by the Secretaries in consultation with the Treasurer.

The "Index" of papers, which was recently issued to members, consists of three parts. In the first part the papers are arranged in alphabetical order of authors' names; in the second part they are classified under subject headings; and in the third part the titles of the papers contained in the several volumes are arranged in the order in which they are printed.

Further, at the March meeting, it was ordered that one thousand copies of the first part of the "Index" should be printed for gratuitous distribution. Upwards of five hundred copies have been so distributed by Mr. F. Hodgson, 89 Farringdon Street, E.C. Mr. Tucker (Hon. Sec.) will be happy to receive a limited number of names of gentlemen who are members of scientific societies to whom this part is likely to be of service.

The "List of Names" has also been issued, and shows that about four hundred and forty persons have at one time or other been on the roll. The complete "Index" (112 pages), and the "List of Names" (16 pages), can be obtained from the Society's publisher, at the above address, for the respective sums of 2s. 6d. and 6d.

## CAREY'S "GRADUS AD PARNASSUM,"

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

# CASELL'S EDUCATIONAL BOOKS.

## THE BEST AND CHEAPEST DICTIONARIES.

**CASELL'S FRENCH DICTIONARY.** (French-English and English-French.) 575th Thousand. 1,150 pages. Cloth, 3s. 6d.; half-morocco, 5s.

**CASELL'S GERMAN DICTIONARY.** (German-English and English-German.) 237th Thousand. 1,120 pp., demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 122nd Thousand. Cheap Edition, 3s. 6d.; half-morocco, 5s.

### OUR GREAT CITY: or, London the Heart of the Empire.

By H. O. ARNOLD-FORSTER, M.P. About 300 pages. Crown 8vo. With a Series of Full-page Illustrations. Strongly bound in cloth, price 1s. 9d.; or, bound in cloth, with gilt edges, for presentation, 2s. 6d.

"I have carefully been through 'Our Great City,' and have concluded that it is the best and most useful of the School History Readers at present on the market."—Mr. F. RICHARDSON, Cowley's Foundation School.

Cheap Edition, now ready, price 6d.

**THE COMING OF THE KILOGRAM.** By H. O. ARNOLD-FORSTER, M.P. A Plea for the Adoption of the Metric System of Weights and Measures.

Third Edition, Revised, 5s.

**A HISTORY OF ENGLAND.** By H. O. ARNOLD-FORSTER, M.P. Fully Illustrated. Extra crown 8vo, 816 pp. Or, bound in cloth, with gilt edges, for presentation, 6s. 6d.

Entirely New and Revised Edition.

**CASELL'S LESSONS IN FRENCH.** Part I., containing 240 pp., crown 8vo, bound in cloth, 2s. Part II., containing 260 pp., crown 8vo, bound in cloth, 2s. Or, Complete in One Vol., 3s. 6d.

"After a careful examination of this revised edition, we cordially recommend it as a very suitable book for pupil teachers and candidates generally preparing for examination in French."—*Pupil Teacher.*

Cassell's Educational Catalogue will be sent, post free, on application.

CASELL & CO., LTD., LUDGATE HILL, LONDON, E.C.

## NEW TEXT-BOOKS ON THE SCIENCE AND ART OF EDUCATION.

By JOSEPH H. COWHAM

(Lecturer on Education, Westminster Training College, S.W.).

**COWHAM'S SCHOOL JOURNEY.** Fully illustrated. Price 2s. 6d. A new method of teaching Geography, Physiography, and Elementary Science.

"This is the best way to teach Geography."—*Sir Evelyn Oakeley, H.M.I.*

**COWHAM'S NEW SCHOOL METHOD.** (Complete.) Price 4s. 6d.

"I know of no manual so thorough and practical."—*Sub-Inspector of Schools.*

"We certainly like the book."—*Journal of Education.*

**GRAPHIC LESSONS IN PHYSICAL AND ASTRONOMICAL GEOGRAPHY.** Price 4s. 6d. "A Teacher's model lesson book." With 200 Outline Blackboard Sketches. Invaluable for teaching purposes.

"Exceedingly well done."—*Journal of Education.*

**PRINCIPLES OF ORAL TEACHING AND MENTAL TRAINING.**

Being an Introduction to Psychology and Ethics for Teachers. Price 3s. 6d.

"The best for students."—*Journal of Education.*

*The late R. H. Quick wrote:*—"A young teacher who digested half your book would have a good insight into the theory of his calling."

**SCHOOL ORGANIZATION, HYGIENE, AND DISCIPLINE.**

(SCHOOL ETHICS.) Price 3s. 6d.

"This manual will be most valuable, for it is founded on practical experience."—*Daily Telegraph.*

Westminster School Book Depot, S.W.; also of Simpkin, Marshall, Hamilton, Kent, & Co., Limited, and all Booksellers.

## EXAMINATION PAPER

AS USED BY THE

## COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets... .. per Ream, 2s. 6d.

" " 960 " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

HEWARD & SHELBOURNE, Wholesale and Retail Stationers,  
63 HIGH HOLBORN, LONDON, W.C.

# MACMILLAN & CO.'S EDUCATIONAL PUBLICATIONS.

*Text-Books suitable for the College of Preceptors and other Examinations.*

## GRADUATED SERIES OF ENGLISH GRAMMARS.

By J. C. NESFIELD, M.A. *For use in Secondary Schools.*

**The Uses of the Parts of Speech.** Price 6d., cloth.

A general outline, with a large number of Exercises, showing the main purpose or purposes for which each part of speech is used in the construction of a sentence. For the use of students up to the age of ten or thereabouts.

**Outline of English Grammar.** Price 1s. 6d., cloth.

A short and easy guide to Accidence, Parsing, Analysis of Sentences, Conversion of Sentences from one form to another, Sequence of Tenses, Analysis of Words, the Sounds, Symbols, and Spellings in present use, the origin and history of the chief inflections and of words in common grammatical use. With copious and carefully graded Exercises throughout.

**A Short History of English Literature.** By Prof. G. SAINTSBURY. 8s. 6d.

**Children's Treasury of Lyrical Poetry.** Selected by F. T. PALGRAVE. Part I. 1s.

**Shakespeare.—As You Like It.** With Introduction and Notes. By K. DEIGHTON. 1s. 9d.

**Milton.—Paradise Lost.** Books III. and IV. With Introduction and Notes. By M. MACMILLAN, B.A. 1s. 3d. each; sewed, 1s. each.

**Scott.—The Lay of the Last Minstrel.** With Introduction and Notes. By G. H. STUART, M.A., and E. H. ELLIOT, B.A. Cantos I. to III., 1s. 3d.; sewed, 1s.

**Marmion.** With Introduction and Notes. By M. MACMILLAN, B.A. 3s.; sewed, 2s. 6d.

**Macaulay.—Lays of Ancient Rome.** With Introduction and Notes. By W. T. WEBB, M.A. 1s. 9d. (Contains the Prophecy of Cyprius, Ivry, and The Armada.)

**English Grammar.** By Rev. R. MORRIS. 1s.

**Exercises on Morris's Primer of English Grammar.** By JOHN WETHERELL, M.A. 1s.

**English Grammar Exercises.** By R. MORRIS, LL.D., and H. C. BOWEN, M.A. 1s.

**Elementary Lessons in Historical English Grammar.** By Rev. R. MORRIS, LL.D. 2s. 6d.

**A Method of English for Secondary Schools.** By JAMES GOW, Litt.D., Headmaster of the Nottingham High School. 2s.

**Word-Building and Composition.** By R. S. WOOD. Book VII. 1s.

**A First Book in Writing English.** By E. H. LEWIS, Ph.D. 3s. 6d.

**A First Manual of Composition.** By E. H. LEWIS, Ph.D. 3s. 6d.

**Primer of English Composition.** By Prof. NICHOL. 1s.

**Questions and Exercises on English Composition.** By Prof. NICHOL and W. S. McCORMICK. 1s.

**Principles of English Composition** through Analysis and Synthesis. By P. GOYEN, Inspector of Schools, New Zealand. 2s. KEY, 4s. net.

**Primer of English Literature.** By STOPFORD BROOKE, M.A. 1s.

**A First Sketch of English History.** Part I.: 449-1307. Part II.: 1307-1689. Part III.: 1689-1895. By E. J. MATHEW, M.A. 2s. each. Complete, 3s. 6d.

**History of England.** By EDITH THOMPSON. 2s. 6d.

**A History of England for Beginners.** By A. B. BUCKLEY. 3s.

**A Primer of English History.** By A. B. BUCKLEY. 1s.

**Short History of the English People.** By J. R. GREEN, M.A. 8s. 6d. Also, in FOUR PARTS, with Analysis. I.: 607-1265. II.: 1265-1540. III.: 1540-1689. IV.: 1660-1873. 3s. each.

**A Short Geography of the British Islands.** By J. B. GREEN, LL.D., and A. S. GREEN. With Maps. 3s. 6d.

**Geography of the British Isles.** By Sir A. GEIKIE, F.R.S. 1s.

**The Elementary School Atlas.** By J. BARTHOLOMEW, F.R.G.S. 1s.

**Class-Book of Geography.** By C. B. CLARKE, F.R.S. 2s. 6d.; sewed, 2s.

**Class-Book of General Geography.** By H. P. MILL, D.Sc. 3s. 6d.

**Geography of Europe.** By J. SIME, M.A. Illustrated. 2s.

**Geography of India, Burma, and Ceylon.** By H. F. BLANFORD. 2s.

**Geography of Africa.** By EDWARD HEAWOOD. 2s. 6d.

**Man and his Markets.** By LIONEL W. LYDE. Illustrated. 2s.

**Easy Arithmetical Exercises for Beginners.** By J. G. BRADSHAW, M.A. 2s. With Answers, 2s. 6d.

**A School Arithmetic.** By R. F. MACDONALD. 2s. 6d.

**Manual of English Grammar and Composition.** Price 2s. 6d., cloth. KEY, 2s. 6d. net.

A Guide to Parsing and Analysis, Composition, the Figures of Speech, Enlargement of the Vocabulary by Affixes and Metaphors, the main divisions of Prose Composition, the peculiarities of Poetic Diction, and an outline of the History of the Language. With copious and carefully graded Exercises.

**English Grammar Past and Present.** Price 4s. 6d., cloth. KEY, 2s. 6d. net.

A full account of Modern English Grammar, some peculiarities of Idiom and Construction, the Origin and Growth of English, a History of Sounds, Symbols, Spellings, and Accents, the Growth of Accidence from Anglo-Saxon and other sources, the origin and use of Prefixes and Suffixes. With Appendices on Prosody, Synonyms, the Changed Meanings of Words, and other outlying subjects. With copious and carefully graded questions selected from the London Matriculation Examinations.

**Arithmetic in Theory and Practice.** By J. BROOKSMITH, LL.B. 4s. 6d. KEY, 10s. 6d.

**Arithmetic for Beginners.** By J. and E. J. BROOKSMITH. 1s. 6d. KEY, 6s. 6d.

**Rules and Examples in Arithmetic.** By Rev. T. DALTON, M.A. With Answers, 2s. 6d.

**Arithmetic for Schools.** By S. L. LONEY, M.A. With and without Answers. 4s. 6d. Examples, 3s. Answers, 6d.

**Arithmetic for Schools.** By Rev. BARNARD SMITH, M.A. 4s. 6d. KEY, 8s. 6d.

\* \* \* *The same, Revised by Prof. W. H. Hutson, 4s. 6d.*

**Arithmetic for Schools.** By Rev. J. B. LOCK, M.A. New Edition, Revised and Enlarged. 4s. 6d. Examples, 3s. Answers, 6d. KEY, 10s. 6d.

**Arithmetic for Beginners.** By Rev. J. B. LOCK, M.A. 2s. 6d. KEY, 8s. 6d.

**Arithmetical Exercises and Examination Papers.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. 2s. 6d.

**Shilling Book of Arithmetic for National and Elementary Schools.** By Rev. BARNARD SMITH, M.A. Answers, 6d. With Answers, 1s. 6d. KEY, 4s. 6d.

**Rules and Examples in Algebra.** By Rev. T. DALTON, M.A. Part I., 2s. Part II., 2s. 6d. KEY to Part I., 7s. 6d.

**Algebraical Exercises.** By Rev. C. A. JONES, M.A., and C. H. CHEYNE, M.A. 2s. 6d. SOLUTIONS, 7s. 6d.

**Algebra for Beginners.** By I. TODHUNTER. New Edition, thoroughly Revised by S. L. LONEY, M.A. 3s. 6d. With Answers, 4s. 6d. KEY, 8s. 6d.

**Algebra for Beginners.** By I. TODHUNTER, F.R.S. 2s. 6d. KEY, 6s. 6d.

**Elementary Algebra.** By C. SMITH, M.A. 4s. 6d. KEY, 10s. 6d.

**A Treatise on Algebra.** By C. SMITH, M.A. 7s. 6d. KEY, 10s. 6d.

**Algebra for Beginners.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. 2s. With Answers, 2s. 6d.

**Elementary Algebra for Schools.** By H. S. HALL, M.A., and S. R. KNIGHT, B.A. Seventh Edition, 3s. 6d. With Answers, 4s. 6d. Answers, 1s. KEY, 8s. 6d.

**Algebraical Exercises and Examination Papers.** By the Same. 2s. 6d.

**Higher Algebra.** By the Same. 7s. 6d. KEY, 10s. 6d.

**A Text-Book of Euclid's Elements.** By H. S. HALL, M.A., and F. H. STEVENS, M.A. Globe Bvo. Book I., 1s.; Books I. and II., 1s. 6d.; Books I.-III., 2s. 6d.; sewed, 2s.; Books II. and III., 2s.; Books I.-IV., 3s.; Books III.-IV., 2s.; Books III.-VI., 3s.; Books IV.-VI., 2s. 6d.; Books V., VI., XI., and XII., Props. 1, 3, 2s. 6d.; Books I., VI., XI., and XII., Props. 1, 3, 4s. 6d.; Book XI., 1s. KEY to Books I.-IV., 6s. 6d. KEY to VI. and XI., 3s. 6d. KEY to I.-VI. and XII., 8s. 6d.

**A First Step in Euclid,** consisting of the First Twelve Propositions. By J. G. BRADSHAW, B.A. 1s. 6d.

**Euclid's Elements of Geometry.** By CHARLES SMITH, M.A., and SOPHIE BRYANT, D.Sc. Book I., 1s.; Books I. and II., 1s. 6d.; Books III. and IV., 2s. Books I.-IV., 3s.

**Exercises in Euclid, Graduated and Systematized.** By W. WEEKS. 3s. Or, separately—Book I., 1s.; Books I.-III., 1s. 9d.; Book II., 9d.; Books I., VI., 1s. 9d. Complete, 3s.

**The Elements of Euclid.** By I. TODHUNTER, F.R.S. New Edition. Revised by S. L. LONEY, M.A. 4s. 6d. Book I., 1s.; Books I. and II., 1s. 6d.; Books I.-IV., 3s.

**The Elements of Euclid.** By I. TODHUNTER, F.R.S. 3s. 6d. Books I. and II., 1s. KEY, 6s. 6d.

**Practical Plane and Solid Geometry.** By J. HARRISON, M.Inst.M.E., and G. A. BAXANDALL. Elementary. 2s. 6d. *See next page.*

# MACMILLAN & CO.'S EDUCATIONAL PUBLICATIONS—(Continued).

*Text-books suitable for the College of Preceptors and other Examinations.*

- First Lessons in Book-keeping.** By J. THORNTON. 2s. 6d. KEY, 10s. 6d.
- Exercise Books to First Lessons in Book-keeping.** No. 1, for Lessons I.-IX., 9d.; No. 2, for Test Exercises, 9d.; No. 3, for Test Exercises, 1s. 6d.; No. 4, for Lessons XIII. and XIV., 1s. 6d. Cases to contain all the above, 6d.; complete set with case, 5s. No. 5, Condensed Edition for Working out a Selection on all the Lessons, 2s.; No. 6, Journal, 6d. Examination Papers in Book-keeping, 9d. KEY to Examination Papers, 2s.
- Primer of Book-keeping.** By the Same. 1s. KEY, 2s. 6d.
- Exercise Books to Primer of Book-keeping.** Part I., Ledger; Part II., Journal. The Set, 1s.
- Easy Exercises in Book-keeping.** By J. THORNTON. 1s.
- A Manual of Book-keeping.** By J. THORNTON. 7s. 6d.
- Examination Papers in Book-keeping.** By J. THORNTON. 9d. KEY, 2s.
- Advanced Examination Papers in Book-keeping.** By J. THORNTON. 1s. KEY, 2s. 6d.
- 
- Cæsar.—Gallic War.** With Notes and Vocabulary. **Book V.** By C. COLBECK, M.A. 1s. 6d. **Book VI.** By C. COLBECK. 1s. 6d.
- Cicero.—De Senectute.** With Notes and Vocabulary. By E. S. SHUCKBURGH, M.A. 1s. 6d.
- Eutropius. Books I. and II.** With Notes and Vocabulary. By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- Horace.—Odes. Book III.** With Notes and Vocabulary. By T. E. PAGE, M.A. 1s. 6d. Edited by the Same. 2s.
- Livy. Book XXII.** With Notes and Vocabulary. By Rev. W. W. CAPES, M.A., and J. E. MELHUSH, M.A. 1s. 6d.
- Phædrus.—Fables.** With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.
- **Select Fables.** With Notes and Vocabulary. By Rev. A. S. WALPOLE, M.A. 1s. 6d.
- Virgil.—Æneid.** With Notes and Vocabulary. **Book VI.** By T. E. PAGE, M.A. 1s. 6d. **Book IX.** By Rev. H. M. STEPHENSON, M.A. 1s. 6d.
- Macmillan's Latin Course.** By A. M. COOK, M.A., and W. E. P. PANTIN, M.A. **First Part,** 3s. 6d. **Second Part,** 4s. 6d.
- Shorter Latin Course.** By the Same. **Part I.,** 1s. 6d. KEY, 4s. 6d. net. **Part II.,** 2s. KEY, 4s. 6d. net.
- Macmillan's Latin Reader.** By H. J. HARDY, M.A. 2s. 6d.
- A First Latin Grammar.** By M. C. MACMILLAN, M.A. 1s. 6d.
- Macmillan's Elementary Latin-English Dictionary.** To the Prose Writings of Cæsar, Sallust, Nepos, Livy, Eutropius, and Portions of Cicero; and the Poems of Catullus, Vergil, Horace, Ovid, and Phædrus. For use in Preparatory Schools and Junior Forms. By Rev. G. H. NALL, M.A. 3s. 6d.
- First Steps to Latin Prose Composition.** By Rev. G. RUST, M.A. 1s. 6d. KEY, 3s. 6d. net.
- Short Exercises in Latin Prose Composition.** By Rev. H. BELCHER, LL.D. **Part I.,** 1s. 6d. KEY, 3s. 6d. net. **Part II.,** 2s. KEY, 3s. net.
- Latin Accidence and Exercises.** Arranged for Beginners. By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- Latin Prose Exercises based upon Cæsar's Gallic War.** By C. BRYANS. 2s. 6d. KEY, 4s. 6d. net.
- Latin Prose after the Best Authors.** By F. B. SIMPSON, B.A. **Part I.,** CÆSARIAN PROSE. 2s. 6d. KEY, 5s. net.
- A First Latin Verse Book.** By W. E. P. PANTIN, M.A. 1s. 6d. KEY, 4s. net.
- Sermo Latinus.** A Short Guide to Latin Prose Composition. By Prof. J. P. POSTGATE, Litt.D. 2s. 6d. KEY, 4s. 6d. net.
- Exercises in Unseen Translation in Latin.** By W. WELCH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.
- 
- Euripides.—Medea.** With Notes and Vocabulary. By Rev. M. A. BAYFIELD, M.A. 1s. 6d.
- Kenophon.—Anabasis.** With Notes and Vocabulary. **Book III.** By Rev. G. H. NALL, M.A. 1s. 6d. **Book V.** By Rev. G. H. NALL. 1s. 6d.
- Macmillan's Greek Course—**
- First Greek Grammar.** By Rev. W. G. RUTHERFORD, LL.D. **Accidence,** 2s. **Syntax,** 2s. Complete, 3s. 6d.
- Easy Exercises in Accidence.** By H. G. UNDERHILL, M.A. 2s.
- A Second Exercise Book.** By Rev. W. A. HEARD, M.A. 2s. 6d.
- Easy Exercises in Syntax.** By Rev. G. H. NALL, M.A. 2s. 6d.
- 
- Greek Reader.—Stories and Legends.** With Notes, Vocabulary, and Exercises. By F. H. COLSON, M.A. 3s.
- Passages for Greek Translation for Lower Forms.** By G. H. PEACOCK, M.A., and E. W. W. BELL, M.A. 1s. 6d.
- An Introduction to Greek Prose Composition.** By H. PITMAN, M.A. 2s. 6d.
- The Gospel according to St. Luke.—The Greek Text.** With Introduction and Notes. By Rev. J. BOND, M.A. 2s. 6d.
- The Acts of the Apostles.** Authorized Version, with Notes. By T. E. PAGE, M.A., and Rev. A. S. WALPOLE, M.A. 2s. 6d.
- The Greek Text.** With Notes. By T. E. PAGE, M.A. 3s. 6d.
- 
- Lessons in French.** By H. COURTHOPE BOWEN, M.A. 1s.
- The Study of French according to the Best and Newest Systems.** By A. F. EUGÈNE and H. E. DURIAUX. 3s. 6d. Exercise Books, in Eight Books, 6d. each.
- Macmillan's Progressive French Course.** By G. E. FASNACHT. **FIRST YEAR,** 1s. Supplementary Exercises to First Year, 1s. **SECOND YEAR,** 2s. **THIRD YEAR,** 2s. 6d. KEYS, 4s. 6d. net each.
- Macmillan's Progressive French Readers.** By the Same. **FIRST YEAR,** 2s. 6d. **SECOND YEAR,** 2s. 6d.
- Macmillan's French Composition.** By the Same. **Part I.,** 2s. 6d. KEY, 4s. 6d. net. **Part II.,** 5s. KEY, 5s. net.
- Kroeh's French Course.** A Three-Year Preparatory Course. By C. M. KROEH, A.M. **FIRST YEAR,** 3s. 6d. **SECOND YEAR,** 3s. 6d. **THIRD YEAR,** 5s.
- A Historical French Grammar.** By A. DARMESTETER. Edited by E. MURET and L. SUDRE. Authorized Translation by Prof. A. HARTOG. 12s. 6d.
- Selections of French Idioms for English Readers.** By Madame PH. PLAN. With a Preface by F. F. ROGET. 3s. 6d.
- An Abridged French Grammar for Schools.** By G. E. FASNACHT. 2s. 6d.
- A Compendious Dictionary of the French Language.** By Prof. ALFRED ELWALL and GUSTAVE MASSON. 3s. 6d.
- 
- A German Primer.** By OTTO SIEPMANN. 3s. 6d. KEY, 3s. 6d. net.
- Macmillan's Progressive German Course.** By G. E. FASNACHT. **FIRST YEAR,** 1s. 6d. **SECOND YEAR,** 3s. 6d. KEYS, 4s. 6d. net each.
- Macmillan's Progressive German Readers.** By the Same. **FIRST YEAR,** 2s. 6d.
- Macmillan's German Composition.** By the Same. **Part I.,** 2s. 6d. KEY, 4s. 6d. net.
- A Compendious German and English Dictionary.** By Prof. WHITNEY and A. H. EDGREN. 5s. **German-English,** 3s. 6d.
- 
- Elementary Physics and Chemistry.** By R. A. GREGORY and A. T. SIMMONS. 1s. 6d.
- Exercises in Practical Physics.** By R. A. GREGORY and A. T. SIMMONS. In Two Parts, 2s. each.
- Elementary General Science.** By A. T. SIMMONS and L. M. JONES. 3s. 6d.
- Elementary Practical Physics.** By R. A. GREGORY. 2s. 6d.
- An Introduction to Practical Physics.** By D. RINTOUL, M.A. 2s. 6d.
- Heat, Light, and Sound.** By D. E. JONES. 2s. 6d.
- Heat for Advanced Students.** By E. EDSEK. 4s. 6d.
- Electricity and Magnetism for Beginners.** By F. W. SANDERSON, M.A. 2s. 6d.
- Magnetism and Electricity for Beginners.** By H. E. HADLEY. 2s. 6d.
- Chemistry for Organized Schools of Science.** By S. PARRISH. 2s. 6d.
- Inorganic Chemistry for Beginners.** By Sir H. E. ROSCOE and J. LUNT. 2s. 6d.
- Inorganic Chemistry for Advanced Students.** By Sir H. E. ROSCOE and A. HARDEN. 4s. 6d.
- Study of Chemistry.** By W. H. PERKIN and B. LEAN. 2s. 6d.
- Physiology for Beginners.** By Sir M. FOSTER, K.C.B., and L. E. SHORE. 2s. 6d.
- Botany for Beginners.** By E. EVANS. 2s. 6d.

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.

London: Printed by C. F. HODGSON & SON, 2 Newton Street, High Holborn, W.C.; and Published by FRANCIS HODGSON, 89 Farringdon Street, E.C.



# Blackie's Illustrated Latin Series

**General Editor—Professor R. Y. TYRRELL, Litt.D.**

Examiner to the Universities of London and Glasgow, &c.

This new Series, issued under the editorship of Professor TYRRELL, is distinguished by several important features for the first time introduced into English school books.



Palladium, from the West Pediment of the Temple of Aigina. Sixth century B.C.

Illustrated with full-page coloured reproductions of vase paintings, &c.: photographs of bas-reliefs, statues, and famous paintings; and numerous black and white illustrations specially drawn for this Series. Crown 8vo, cloth.

THE PUBLISHERS WILL BE PLEASED TO SEND SPECIMEN COPIES TO TEACHERS WITH A VIEW TO INTRODUCTION.

**Eutropius.—Books I. and II.** Edited by W. CECIL LAMING, M.A., Classical Master in Edinburgh Academy. 1s. 6d.

**Livy.—Book V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.

**Tacitus.—Agricola.** Edited by W. C. FLAMSTEAD WALTERS, M.A., formerly of Christ's College, New Zealand. 1s. 6d.

**Virgil.—Aeneid III.** Edited by Professor SANDFORD, M.A., Queen's College, Galway. 1s. 6d.

**Horace.—The Odes. Books I., II., III., and IV.** Edited by STEPHEN GWYNN, B.A., late Scholar and Hulmean Exhibitioner of Brasenose College, Oxford. 1s. 6d. each.

**Cicero.—The First Catiline Oration.** Edited by Professor C. H. KEENE, M.A., Queen's College, Cork. 1s. 6d.

**Cicero.—The Catiline Orations. (COMPLETE.)** Edited by C. H. KEENE, M.A. 2s. 6d.

**Sallust.—The Catiline Conspiracy.** Edited by the Rev. W. A. STONE, M.A., Assistant-Master in Bristol Grammar School. [In September.]

**Virgil.—Georgics I.** Edited by S. E. WINBOLT, M.A., Assistant-Master in Christ's Hospital. 1s. 6d. [In September.]

**Livy.—Book VI.** Edited by W. CECIL LAMING, M.A. [In September.]

## FORTHCOMING VOLUMES.

**Livy.—Book I.** Edited by Professor JOHN BROWN, Wellington University, New Zealand.

**Caesar.—The Gallic War. Books I. and V.** Edited by Professor JOHN BROWN.

**Livy.—Books XXI and XXII.** Edited by G. G. LOANE, M.A., Assistant-Master in St. Paul's School.

**Virgil.—Georgics II.** Edited by S. E. WINBOLT, M.A., Assistant-Master in Christ's Hospital.

**Virgil.—Aeneid VI.** Edited by H. B. COTTERILL, M.A., formerly Assistant-Master at Haileybury.

**Virgil.—Aeneid II.** Edited by Professor SANDFORD.

**Cicero.—Pro Lege Manilia.** Edited by W. J. WOODHOUSE, M.A., formerly Assistant-Lecturer in Classics, University College of North Wales.



Dardan Shepherds, wearing the tunic, Phrygian cap, cothurnus, and carrying the baculus.

# CAMBRIDGE UNIVERSITY PRESS.

## COLLEGE OF PRECEPTORS' EXAMINATIONS, 1900.

### THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

*Athenaeum*.—"The Pitt Press Shakespeare can stand in competition with any of the numerous editions of the sort now showered upon reviewers."

*Guardian*.—"Mr. Verity is an almost ideal editor of school texts."

**As You Like It.** With Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge. 1s. 6d.

*Guardian*.—"Mr. Verity, the editor, has provided material for all sorts of students. For the beginner we have the notes and a reprint of Charles Lamb's outline of the story. For older readers we have copious extracts from Lotze's 'Rosalynde.' For the examinee, the etymologist, and the curious student, we have the glossary, the index of the important words and phrases, and the notes on metre and on the date and sources of the play. All of these aids evince patient research, accurate scholarship, and thoughtful judgment."

### CAMBRIDGE MILTON FOR SCHOOLS.

*Guardian*.—"This edition will, we feel sure, long continue to be the standard school text of 'Paradise Lost.'"

**Paradise Lost, Books III. and IV.** Edited, with Introduction and Notes, by A. W. VERITY, M.A. 2s.

### PITT PRESS SERIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Macaulay.....	Lays of Ancient Rome (with Ivory and The Armada) .....	J. H. Flather .....	s. d. 1 6
<i>School World</i> .—"In thorough keeping with the other volumes of this series, an evidence of patient labour, and no mean tribute to Macaulay himself. . . . The notes are brief and pointed, and two useful maps are appended. The introduction is brief, but exceedingly well done."			
Scott .....	Marmion .....	J. H. B. Masterman... ..	2 6
<i>Guardian</i> .—"Far and away the best school edition of the poem we have seen; and it will be difficult, probably impossible, to improve on it."			
Scott .....	Lay of the Last Minstrel .....	J. H. Flather .....	2 0
<i>Guardian</i> .—"It is one of the very best edited school-texts ever placed before the public."			
Caesar .....	De Bello Gallico, Books IV.-V. (Subject, Bk V.) .....	A. G. Peskett .....	1 6
" .....	De Bello Gallico, Book VI. ....	" .....	1 6
Cicero .....	De Senectute .....	J. S. Reid .....	3 6
Horace .....	Odes, Book III. ....	J. Gow .....	2 0
Livy .....	Book XXII. ....	M. S. Dimsdale .....	2 6
Vergil .....	Aeneid, Books VI. and XII. ....	A. Sidgwick .....	each 1 6
Euripides .....	Medea .....	C. E. S. Headlam .....	2 6
Lucian .....	Menippus and Timon .....	E. C. Mackie .....	3 6
Xenophon .....	Anabasis, Books III. and V. ....	A. Pretor .....	each 2 0

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Lecturer on Education in Victoria University.

#### The Education of the Young in the Republic of Plato.

Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo, 2s. 6d.

*Literature*.—"A scholarly translation, with notes and an introduction, sketching well and concisely the history of Greek education."

#### The Making of Character: some Educational Aspects of Ethics.

By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, cloth, 2s. 6d.; cloth extra, gilt top, 3s. 6d.

*Literature*.—"An acute and thoughtful book."

#### A Short History of the Expansion of the British Empire, 1500-1870.

By W. H. WOODWARD, Christ Church, Oxford; now the Principal of University (Day) Training College, Liverpool, and Lecturer on Education in Victoria University. With 7 Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenaeum*.—"Thoroughly to be recommended."

#### Educational Aims and Methods. Lectures and Addresses by Sir

JOSHUA FITCH, M.A., LL.D., late Her Majesty's Inspector of Training Colleges, and Author of "Lectures on Teaching," "The Arnolds and their Influence on English Education." Crown 8vo, 5s.

*Speaker*.—"There is an admirable chapter on grammar schools, an account of Thring's life and work, and a discussion of the modern provision for women's education. The volume is full of instruction and suggestion for students of education in all its aspects."

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*School Guardian*.—"Exact and scholarly, and at the same time simple, text-books. The University Press are to be congratulated upon having secured as editors such eminent scholars; their names are a guarantee of their work. These text-books will find their way into numberless preparatory schools and lower forms of public schools; they deal so thoroughly and clearly with the subject in each case that nothing better could be desired by master or pupil. Among others, there is this immense advantage: each volume is its own note-book and dictionary; the student, however elementary his knowledge, needs only the book in hand and a simple grammar."

The following editions have COMPLETE VOCABULARIES.

AUTHOR.	WORK.	EDITOR.	PRICE.
Caesar .....	De Bello Gallico, Books V. and VI. ....	E. S. Shuckburgh .....	each s. d. 1 6
Vergil .....	Aeneid, Books VI. and XII. ....	A. Sidgwick .....	" 1 6
Xenophon .....	Anabasis, Books III. and V. ....	G. M. Edwards .....	" 1 6

\*.\* *Cambridge Editions of Caesar, Vergil, and Xenophon*.—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the *Pitt Press Series* and the *Cambridge Series for Schools and Training Colleges*. The Editions in the *Cambridge Series for Schools and Training Colleges* have *Complete Vocabulary*s. If, in ordering, the Edition required is not specified, the *Pitt Press Edition*, without vocabulary, will be sent.

### ENGLISH GRAMMAR.

New and Enlarged Edition (Thirty-sixth to Forty-fifth Thousand).

**The Elements of English Grammar.** By A. S. WEST, M.A., Trinity College, Cambridge. Fcap. 8vo, 2s. 6d.

*Prefatory Note to the Enlarged Edition*.—Some hundreds of additional Questions and Examples are given in the present edition, and in a few places the wording of the text has been altered. The numbers of the paragraphs remain the same.

*School World*.—"The larger work shows a master hand. It is adapted to the higher forms, and its historical survey contains just what is wanted for examination purposes. . . . Both books deserve a large sale."

**An English Grammar for Beginners.** By A. S. WEST, M.A. 1s.

*School World*.—"The smaller of these two works ought to be extensively used for the teaching of junior forms. Its matter is arranged with the greatest care, its explanations are full and easily adapted to juvenile intelligences. . . . Altogether the book is worthy of high commendation."

#### Geometrical Drawing. With Notes and Examples. By W. H.

BLYTHE, Jesus College. Part I. Plane and Elementary Solid. 2s. 6d.—Part II. Solid or Descriptive Geometry. 2s.

*Extract from Preface*.—"Part I. contains Plane Geometrical Drawing and Solid Geometry, so far as it is included in the Syllabus, Geometrical Drawing (Art), Subject 1A, page 231, *Science and Art Directory*, 1899. In Part II. is added a course of instruction in Solid Geometry suited to the Elementary Stage of Science Subjects as given on page 78 of the above Directory. This book will also be found of use to all Army Candidates."

#### Geometry for Young Beginners. An Introduction to Theoretical

and Practical Geometry. By F. W. SANDERSON, Headmaster of Oundle School. 1s. 4d.

### PITT PRESS SERIES.—NEW VOLUMES.

**Scott**.—*Old Mortality*. Edited, with Introduction, Notes, and Glossary. By J. A. NICKLIN. 2s. 6d.

**Caesar**.—*De Bello Civili. Book III.* Edited by A. G. PESKETT, M.A., Fellow of Magdalene College, Cambridge. 2s. 6d.

# CLASS LIST

## OF PUPILS WHO HAVE PASSED THE MIDSUMMER EXAMINATION OF THE COLLEGE OF PRECEPTORS.

[Throughout the following List, bracketing of names implies equality.]

### PRIZES.

- General Proficiency.\***  
 1. Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.  
 2. Isherwood, F. T. V. Dr. Isherwood, University School, Southport.  
 3. de Minville, C. d'E. Rev. Brother Elst, St. Aloysius College, Hornsey Lane, N.  
 4. Adamson, R. B. Messrs. Butler and Brown, Tollington Park College.
- English Subjects.†**  
 1. Isherwood, F. T. V. Dr. Isherwood, University School, Southport.  
 2. {Cummings, H. L. Mr. Hanna, Argyle House School, Sunderland.  
 {Langdale, Miss D. M. Miss Cowper, Durham House, Crouch Hill.
- Mathematics.‡**  
 1. Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.  
 2. Isherwood, F. T. V. Dr. Isherwood, University School, Southport.

- Modern Foreign Languages.§**  
 Mr. Dickes, Beechen Cliff, The Gardens, Peckham Rye.  
 Mr. Spurgo, Jersey Modern School, St. Heliers.
- Classics.||**  
 Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.  
 Rev. R. H. Chambers, Christ's College, Brecon.
- Natural Sciences.**  
 Messrs. Butler and Brown, Tollington Park College.  
 Rev. T. J. Cunningham, Hutton Grammar School.

- Taylor-Jones Prize for Scripture History.**  
 Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.
- Pitman Medals for Shorthand.¶**  
 Mr. Gubb, Taunton's Trade School, Southampton.  
 Rev. Brother Elst, St. Aloysius College, Hornsey Lane, N.

\* Miss A. F. Marks, private tuition, was disqualified for the First Prize for General Proficiency in consequence of being over 18 years of age at the commencement of the Examination.  
 † Miss B. Fry, Red Maids' School, Bristol, was disqualified for the Second Prize for General Proficiency in consequence of being over 18 years of age at the commencement of the Examination.  
 ‡ Miss A. Pearce, Red Maids' School, Bristol, was disqualified for the Third Prize for General Proficiency in consequence of being over 18 years of age at the commencement of the Examination.  
 § Miss A. Pearce, Red Maids' School, Bristol, was disqualified for the First Prize for English Subjects in consequence of being over 18 years of age at the commencement of the Examination.  
 ¶ Miss A. F. Marks, private tuition, was disqualified for the First Prize for Mathematics in consequence of being over 18 years of age at the commencement of the Examination.

§ H. Joly, St. Joseph's Academy, Kennington Road, was disqualified for the First Prize for Modern Foreign Languages in consequence of being over 18 years of age at the commencement of the Examination.  
 || Miss A. F. Marks, private tuition, was disqualified for the First Prize for Classics in consequence of being over 18 years of age at the commencement of the Examination.  
 ¶ A. S. Hurst, private tuition, was disqualified for the Silver Medal for Shorthand in consequence of being over 18 years of age at the commencement of the Examination.

### SCHOLARSHIPS FOR INTENDING TEACHERS.

- Marks, Miss A. F. Private tuition. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.

#### List of the Candidates who were FIRST and SECOND In each Subject of Examination.

- |  |   |   |
|--|---|---|
| <p><b>Scripture History.</b><br/>                 1. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.<br/>                 {Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.<br/>                 2. {Marks, Miss A. F. Private tuition.<br/>                 {Whyham, Miss E. M. Miss Leys, Royal Naval School, Twickenham.</p> <p><b>English Language.</b><br/>                 1. Marks, Miss A. F. Private tuition.<br/>                 2. {Langdale, Miss D. M. Miss Cowper, Durham House, Crouch Hill.<br/>                 {Pearce, Miss A. Miss Bowen, Red Maids' School, Bristol.</p> <p><b>English History.</b><br/>                 1. Pearce, Miss A. Miss Bowen, Red Maids' School, Bristol.<br/>                 2. Marks, Miss A. F. Private tuition.</p> <p><b>Geography.</b><br/>                 1. Isherwood, F. T. V. Dr. Isherwood, University School, Southport.<br/>                 2. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.</p> <p><b>Arithmetic.</b><br/>                 1. Marks, Miss F. A. Private tuition.<br/>                 2. Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.</p> <p><b>Algebra.</b><br/>                 1. Marks, Miss A. F. Private tuition.<br/>                 2. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.</p> <p><b>Euclid.</b><br/>                 1. Marks, Miss A. F. Private tuition.<br/>                 {Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.<br/>                 2. {Pearce, Miss A. Miss Bowen, Red Maids' School, Bristol.</p> <p><b>Trigonometry.</b><br/>                 1. Marks, Miss A. F. Private tuition.<br/>                 2. Isherwood, F. T. V. Dr. Isherwood, University School, Southport.</p> <p><b>Mechanics.</b><br/>                 1. Hurst, A. W. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.<br/>                 2. {Benians, S. P. Messrs. Kendon, Son, &amp; Benians, Bethany House School, Goudhurst.<br/>                 {Isherwood, F. T. V. Dr. Isherwood, University School, Southport.</p> | <p><b>Book-keeping.</b><br/>                 1. Burr, F. M. Messrs. Butler and Brown, Tollington Park College.<br/>                 2. {Devine, R. Private tuition.<br/>                 {Harris, Miss E. Misses Laphorn, St. Bernard's, Southsea.</p> <p><b>Mensuration.</b><br/>                 1. Pilcher, A. M. Mr. Telfer, Wreight's School, Faversham.<br/>                 2. {Cotton, R. Mr. Waldnesley, Grammar School, Eccles.<br/>                 {Midmer, T. W. Mr. LaTouche, Hastings Grammar School.</p> <p><b>French.</b><br/>                 1. {Dorey, G. Mr. Spurgo, Jersey Modern School, St. Heliers.<br/>                 {Walton, W. Rev. T. J. Cunningham, Hutton Grammar School.</p> <p><b>German.</b><br/>                 1. Joly, H. Rev. Brother Alphonsus, St. Joseph's Academy, Kennington Road.<br/>                 2. Wedgwood, J. L. Private tuition.</p> <p><b>Spanish.</b><br/>                 1. Posso, E. Rev. P. C. Murphy, Christian Brothers' College, Gibraltar.<br/>                 2. {Santos, H. Messrs. Brabham and Selicks, The Gables, Burstow, Horley.<br/>                 {Vasquez, A. J. Rev. P. C. Murphy, Christian Brothers' College, Gibraltar.</p> <p><b>Latin.</b><br/>                 1. Marks, Miss A. F. Private tuition.<br/>                 {Choyce, J. C. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.<br/>                 2. {Isherwood, F. T. V. Dr. Isherwood, University School, Southport.</p> <p><b>Greek.</b><br/>                 {Choyce, J. C. Rev. L. H. Pearson, Dixie Grammar School, Market Bosworth.<br/>                 1. {Soumes, J. H. Mr. Skerry, Skerry's College, Chancery Lane, W.C.<br/>                 {Thomas, T. G. Rev. R. H. Chambers, Christ College, Brecon.</p> <p><b>Hebrew.</b><br/>                 1. Ades, A. Dr. Isherwood, University School, Southport.</p> | <p><b>Sound, Light, and Heat.</b><br/>                 1. {Anderson, Miss M. Miss Warnock, Brynderwyn Ladies' School, Coleraine.<br/>                 {Crocker, W. Mr. Parkinson, Queen's Park College, Harrow Road, W.</p> <p><b>Electricity and Magnetism.</b><br/>                 1. Dibben, F. J. Mr. Gubb, Taunton's Trade School, Southampton.<br/>                 2. Carmichael, F. J. Mr. Gubb, Taunton's Trade School, Southampton.</p> <p><b>Chemistry.</b><br/>                 1. Knollys, F. N. A. R. Mr. Thurnham, Borden Grammar School, Sittingbourne.<br/>                 2. Hunter, A. E. Private tuition.</p> <p><b>Natural History.</b><br/>                 1. Burr, F. M. Messrs. Butler &amp; Brown, Tollington Park College.<br/>                 2. Shaw, E. H. Private tuition.</p> <p><b>Drawing.</b><br/>                 1. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.<br/>                 2. Guzel, A. Mr. Wells, Battersea Polytechnic Science School.</p> <p><b>Music.</b><br/>                 {Morris, G. E. Mr. Morley, Horsmonden School, Kent.<br/>                 1. {Poulter, Miss M. Miss Poynting, Upper Mount, Southsea.<br/>                 {Powelson, T. H. Mr. Jones, The Tutorial School, Penarth.<br/>                 {Sackville, Miss E. Miss Sackville, Eastgate School, Stafford.</p> <p><b>Political Economy.</b><br/>                 1. Fry, Miss B. Miss Bowen, Red Maids' School, Bristol.<br/>                 2. Bonnezen, R. T. B. Private tuition.</p> <p><b>Shorthand.</b><br/>                 1. {Hurst, A. S. Private tuition.<br/>                 {Pillely, W. C. Mr. Gubb, Taunton's Trade School, Southampton.</p> <p><b>Domestic Economy.</b><br/>                 1. Colson, Miss P. C. Miss Parkes, Wincham Hall College, Northwich.<br/>                 2. Starkey, Miss A. Miss Grover, Friedenheim, Seaton, Devon.</p> |
|--|---|---|

GENERAL CLASS LIST—BOYS.

N.B.—The small italic letters denote that the Candidate to whose name they are attached was distinguished in the following subjects respectively:—

- a. = Arithmetic. al. = Algebra. b. = Botany. bk. = Bookkeeping. ch. = Chemistry. d. = Drawing. do. = Domestic Economy. e. = English. el. = Electricity. eu. = Euclid. f. = French. g. = Geography. geo. = Geology. ge. = German. gr. = Greek. h. = History. he. = Hebrew. i. = Italian. l. = Latin. m. = Mechanics. me. = Mensuration. mu. = Music. na. = Natural History. p. = Political Economy. ph. = Physiology. s. = Scripture. sl. = Sound, Light, and Heat. sh. = Shortland. sp. = Spanish. tr. = Trigonometry. w. = Welsh. z. = Zoology.

The small figures 1 and 2 prefixed to names in the Second and Third Class Lists denote that the Candidates were entered for the First and Second Classes respectively.

In the addresses, Acad. = Academy, C. or Coll. = College, Coll. S. = Collegiate School, Comm. = Commercial, End. = Endowed, Found. = Foundation, H. = House, Inst. = Institute, Int. = International, Inter. = Intermediate, Prep. = Preparatory, S. = School, Tech. = Technical, Univ. = University.

First Class.—Honours Division.

- Hurst, A.W. s.e.h.a.u.eu.fl.ch. Dixie Gram. S., Market Bosworth
Isherwood, F.T.V. e.h.g.al.tr.fl. University S., Southport
de Minville, C.D.E. a.d.bk.f.sh. St. Aloysius Coll., Hornsey Lane, N.
Adams, R.B. h.z. Tollington Park Coll.
Sherrin, H.G. f.sh. Private tuition
Pilcher, A.M. b.al.ms.f.sl.sh. Wreight's S., Faversham
Cozens, W.G. e.d. Taunton's Trade S., Southampton
Creedy, H.D. Ealing Gram. S.
Midmer, T.W. al.ms.f. Hastings Gram. S.
Rothera, L. al.d. Dixie Gram. S., Market Bosworth
Burr, F.M. bk.z. Tollington Park Coll.
Wilson, H. s. Wreight's S., Faversham
Cotton, R. a.ms.f. Gram. S., Eccles
King, H.H. Tollington Park Coll.
Yates, J.W. o.al.d. Dixie Gram. S., Market Bosworth
Bastard, H.R. sd. Camelford Gram. S.
Wells, E.L. d. Hastings Gram. S.
Tuck, F.L.N. l. Taunton S., Taunton
Morris, G.E. mu. Horsmonden S., Kent
Haslam, J. G. Wirksworth Gram. S.
Jack, W.A.M. f. Dulwich Coll.
Argent, S.W.H. h. Stafford Coll., Forest Hill
Wildsmith, S.P. ge.sh. St. Aloysius Coll., Hornsey Lane, N.
Bryan, J. al.f. 37 Alcester St., Stoke, Devonport
Allward, F.L. d. Tollington Park Coll.
Warren, C.F. Polytechnic Inter. S., W.
Spicer, J.C. Sandwich Gram. S.
Pilley, W.C. sh. Taunton's Trade S., Southampton
Kay, A.A. f. Hutton Gram. S.
Tendall, A.A. d. Taunton's Trade S., Southampton
Walton, W. f. Hutton Gram. S.
Russell, C.H. Sandwich Gram. S.
Benians, S.P. al.sd. Bethany H., Goudhurst
Dorey, G. f. The Jersey Modern S.
Devine, R. bk.f.ch. Private tuition
Cummings, H.L.sh. Argyle H., Sunderland
Squire, A.E. al.ch. Yorkshire Society's S., S.E.
Sturdy, G. f. Hutton Gram. S.

First Class.—Pass Division.

- McSweeney, D.L. al.bk. St. Joseph's Coll., Dumfries
Row, R.W.H. Mt. Radford S., Exeter
Woodhouse, C.W. f. Private tuition
Weston, F.G. Hastings Gram. S.
Choyce, J.C. lgr. Dixie Gram. S., Market Bosworth
Chubb, J.F. f.mu. St. John's Choir S., St. Leonards
Hinge, S. sh. Wreight's S., Faversham
Kordik, A.C. ge.d. St. Aloysius Coll., Hornsey Lane, N.
Doo, H. fl. Private tuition
Chalmers, H.J. Tollington Park Coll.
Horton, W.C. l. Private tuition
Craddock, F.J. l. Bath Coll.
Wolwood, J.L. ge. Private tuition
Kitto, B.T. Tollington Park Coll.
Metcalfe, W.S. Yorkshire Society's S., S.E.
Soames, J.H. gr. Skerry's Coll., Chancery Lane, W.C.
Dale, A.R. Private tuition
Cullen, W.G. Polytechnic Inter. S., W.
Dibben, F.J. d. Taunton's Trade S., Southampton
Gray, M.I.W. f. Private tuition
Bequet, G.P. f.sh. St. James's Coll. S., Jersey
Stuttard, V.A. Stafford Coll., Forest Hill
Brady, P.J. Private tuition
Hobson, H.G. Dulwich Coll.

- Aveling, C.J. al. Private tuition
Evans, D.G. Kingswood S., Bath
Day, E.W. sh. Tollington Park Coll.
Wright, H.G.H. Tollington Park Coll.
Brown, A. St. Joseph's Coll., Dumfries
Sullivan, B.M. d. Hastings Gram. S.
Briggs, A. Tollington Park Coll.
Gibb, J.G. Private tuition
Roberts, D.S. Bible Christian Coll., Shebhear
Sale, T.W. sd.d. Marylebone Central Hr. Grade Tech. S.
Stirling, K. f. Private tuition
Tobin, J.A. Private tuition
Barker, W. Hutton Gram. S.
Johnson, J.H. King Charles I. S., Kidderminster
Oldfield, G.K. Sandwich Gram. S.
Smith, S.G. University S., Southport
King, N.A. Ealing Gram. S.
Richford, E.P. f. Sandwich Gram. S.
Bouch, E. Trafalgar H., Lee-on-the-Solent
Woodhouse, R.W. d. Charterhouse S., Godalming
Miles, W. Farnham Gram. S.
Pask, E.H.A. Taunton S., Taunton
Harris, J.C. ch. Private tuition
White, O.D. d. Highfield, Wandsworth Comm.
Sprawson, F.E. Private tuition
Moss, R.D. d.sh. Tollington Park Coll.
Sanders, L. B. Sandwich Gram. S.
Scales, J.E. l. Ruthin Gram. S.
Innes, R.F. Bible Christian Coll., Shebhear
Farrant, J.A.P. Taunton's Trade S., Southampton
Houwick, H. ge. Private tuition
Monson, J.H. Polytechnic Inter. S., W.
Wattmough, E.H. Weymouth Coll.
Parsons-Smith, E.M. Sandwich Gram. S.
Roberts, H.H. f.l. Ruthin Gram. S.
Matthews, A. Tollington Park Coll.
Wiggell, H. Harlesden Coll., N.W.
Donnellan, J.A. Private tuition
Austin, J. S. Private tuition
Powell, C.W. sh. Comm. Coll., York
Browne, R.R. West Cliff H., Dawlish
Cooper, E. Christ's Coll., Blackheath
Crowley, C. l. Portsmouth Gram. S.
Nicoll, J. University S., Southport
Chapman, A.D. Winchester H., Redland Rd., Bristol
Jackson, T. The Western Coll., Harrogate
Jones, H.H. sh. Private tuition
Yates, M.W. Cambridge H., Margate
Smith, A.W. Tollington Park Coll.
Bage, A.A. Private tuition
Pierce, W.R. Wesley Coll., Sheffield
Scott, G.B. Royal Naval S., Lee-on-the-Solent
Waters, A.B. Horsmonden S., Kent
Yates, G.H. Fartown Gram. S., Huddersfield
Patterson, W. Private tuition
Lord, C.R. al. Gram. S., Eccles
Maile, C.G. Wm. Ellis S., Gospel Oak
Turner, J. Sandwich Gram. S.
Garner, C.Q. f. Hastings Gram. S.
Taylor, R.T. Private tuition
Buzess, C.W. Bethany H., Goudhurst
Lienard, L. Borden Gram. S., Sittingbourne
Thomas, T.G. lgr. Christ Coll., Brecon
Chipman, H.B. Sandwich Gram. S.
Beswick, R. E. Belmont S., Exmouth
Hayes, L.C. Private tuition
Ades, A. f.he. University S., Southport
Calway, F.H.F. Taunton S., Taunton
Keovil, R. St. John's Coll., Brixton
Todd, A.H. f. Knowsley, Torquay
Gill, R. Bath College
Lewis, R.P. Kingsholme S., Weston-s-Mare
Roberts, H.E. Ruthin Gram. S.
Whitfield, A.A. St. Aloysius Coll., Hornsey Lane, N.
Taylor, R. Hutton Gram. S.
Turner, A.J. h. Private tuition
Daunter, G.A. Comm. Coll., York

- Gyllencrutz, J.R. Ruthin Gram. S.
Smith, M.R. Private tuition
Parker, J.W. Central Chambers, Working St., Cardiff
Clarke, R.W.L. Private tuition
Highatt, F.W. Trafalgar H., Lee-on-the-Solent
Peaty, C.R.M. d. Private tuition
Shovelton, W. Gram. S., Eccles
Riddle, F. f. Broomwood Coll., Battersea
Kingswood S., Bath
Higgins, J. Private tuition
Jacob, L.H. Borden Gr. S., Sittingbourne
Morgan, W. Lady Hawkins' Gram. S., Kington
Ollerhead, H.S. f. Newton Coll., Newton Abbot
Medhurst, H. Horsmonden S., Kent
Temple, E.E. d. Holme S., Norwood Hill
Iggleden, G.F. Borden Gram. S., Sittingbourne
Brown, J.W.H. d. Singleton H., Newcastle-on-Tyne
Herbert, F.W. Private tuition
McGhee, J. f. Private tuition
Weller, R.D. Bedford Gram. S.

Second Class.—1st Division.

- Smith, O.C. e.al.d.bk.f.ge. Tollington Park Coll.
Walker, E. e.al.f.ch.d. Wirksworth Gram. S.
Quin Harkin, A.T. al. St. Aloysius Coll., Hornsey Lane, N.
Russell, S.A. Taunton's Tr. S., Southampton
Button, A. g.a.al.eu.d. Sth Hornsey S., N.
Mead, E.A. d. Taunton's Tr. S., Southampton
Meares, C.H. N. Bible Christian C., Shebhear
Burley, G.A. al.f.ge.d. Hastings Gram. S.
Macmillan, A. d. Hutton Gram. S.
Wolfehead, H.K. e.d.sh. Hornsey Gram. S.
Cudron, E. g.a.al.d. South Hornsey S., N.
Dyson, E.T. s.e.g. Ruthin Gram. S.
Craddock, G.J. Bible Christian C., Shebhear
Baschwitz, P. a.f.ge. Hythe S., Kent
Ley, E. Bible Christian Coll., Shebhear
Fox, C.B. D. Elmhurst S., Kingston-on-Thames
Smith, F. F. l.ch. Sandwich Gram. S.
Alier, P. sh.al.f. The Jersey Modern S.
Hewitt, H.W. g.a.d. Tollington Park Coll.
Lee, A.J. al.d. Bible Christian C., Shebhear
Storer, F. al.ch.d. Dixie Gram. S., Market Bosworth
Owen, J.A. al.eu.d. Central Found. S., E.C.
Scowercroft, B.A. University S., Southport
Tucker, G.A. ch. Taunton's Trade S., Southampton
Wilson, V. s.g. Wreight's S., Faversham
Adolphus, E.M. s. Brighton Modern S.
Brown, C.M. D. Singleton H., Newcastle-on-T.
Etheridge, F.P. Hastings Gram. S.
Marly, G. f. Hutton Gram. S.
Fisher, C.H. d. St. Aloysius C., Hornsey Lane, N.
Rowell, W. al.eu.d. Dixie Gram. S., Market Bosworth
Sleeman, R.P. d. Taunton's Trade S., Southampton
Walker, A.E. al.f. Wirksworth Gram. S.
Craughton, F.E. al. Gram. S., Belper
Culverwell, J.F. f. St. John's Coll., Brixton
Brinkman, H.G. St. Aloysius Coll., Hornsey Lane, N.
Roberts, A.F. Chandos Gram. S., Winchcombe
Berry, J.F. St. Joseph's Coll., Dumfries
Broad, G.L. Lewes Gram. S.
Lake, H.W. Eastbourne Coll.
Perry, B. g.bk.d. Queen's Pk.C., Harrow Rd.
Sturt, R.W. d.sh. Skerry's Coll., Chancery Lane, W.C.
Wearing, D.G. Taunton S., Taunton
Muller, P.W. ge.d. Leytonstone Coll.

- Chart, E. Littlestone Coll., Kent
Morris, W.O. a.al. Northgate S., Winchester
Shopland, W.K. a.al.eu.d. Tavistock Gr.S.
Butters, J.H. d. Taunton's Trade S., Southampton
Claxton, A.O. d. a. Eye Gram. S.
Cooke, H.W. al.ch.d. Wreight's S., Faversham
Ellis, F. Hastings Gram. S.
Hills, H.J. Dover College
Peace, S.M. Yorkshire Society's S., S.E.
Nezet, R. f. St. Joseph's Coll., Dumfries
Procter, C.J. Private tuition
Borrow, E.J. d. Tollington Park Coll.
Jemmett, V. a.eu.d. Wreight's S., Faversham
Williams, R.T. s.h. Ruthin Gram. S.
Bone, A. ch.d. Wreight's S., Faversham
De Meza, A. Tollington Park Coll.
Gibbons, L.R.W. al.d. The Jersey Modern S.
Criswick, A.M. Tollington Park Coll.
Knighton, W.T.G. Cambridge H., Margate
McKay, J. St. Joseph's C., Dumfries
Combridge, H.J. d. Hornsey Gram. S.
Gallard, W. The Modern S., E. Grinstead
Shepperd, H.A. Richmond Hill S.
Angliss, A.H. a.d. Hastings Gram. S.
Kenup, B. Wreight's S., Faversham
Lewis, C.G.G. Bath College
Ashley, A.J. Private tuition
Shepherd, E. Dixie Gram. S., Mkt. Boswth
Stevens, P.A. f. Hastings Gram. S.
Hogben, W. al. Wirksworth Gram. S.
Stone, W. Wirksworth Gram. S.
Taylor, W.T. Wirksworth Gram. S.
Wivell, W.D. Hutton Gram. S.
Cornish, F.W. Tollington Park Coll.
Dennis, J.D. Wreight's S., Faversham
Macdonald, A.H. Felix Inlet, Lavender Hill, S.W.
Stacc, E.C. Hastings Gram. S.
Witberger, F.P. Tollington Park Coll.
Honthaus, S. ge. Dunstable Gram. S.
Livingstone, H.L. Tollington Park Coll.
Styring, C. University S., Southport
Urquhart, G. al.f. Polytechnic Inter. S., W.
Dew, J.W. al. St. Catharine's S., Broxbourne
Gregory, H.E. s. Hastings Gram. S.
Cole, E.H. al. Tavistock Gram. S.
Drabble, H. bk.d. Cavendish S., Marlock
Nye, E. Horsmonden S., Kent
Rawlinson, C.S. Dixie Gram. S., Market Bosworth
Roberts, C.D. Seaford College
Towler, R.A.G. Bath College
Walthall, L. d. Gram. S., Belper
Foster, T. d. Bethany H., Goudhurst
Hutchinson, A.B. al. Sandwich Gram. S.
Lock, C.R. Taunton S., Taunton
Lonsdale, H. University S., Southport
Muirhead, J.A. The Jersey Modern S.
Slinn, G.V. d. Collett H., Bourne-mouth
Davy, G. s. Wreight's S., Faversham
Evans, J.J.W. Aske's Hatcham S., S.E.
Parrott, D.F. Seaford College
Elkington, N. Taunton's Trade S., Southampton
Harvey, J.G. Sandwich Gram. S.
Palchett, A.N. Clayesmore S., Eridge
Slater, H.B. University S., Southport
Watkinson, C.E. d. Fartown Gram. S., Huddersfield
Whiteley, E.P. s. Private tuition
Hall, F. Dixie Gram. S., Market Bosworth
Johnson, G.M. Huntly H., Southsea
Pritchard, R. al. Hastings Gram. S.
Shaw, E.H. ph. Private tuition
Bisiker, F.W. Tollington Park Coll.
Holmes, F.A. Bible Christian C., Shebhear
White, C. d. Newcastle Modern S.
Atkinson, H.G. Ashford Gram. S.
Cates, A.H. al.d. Hillmartin Coll., Camden Rd., N.W.
Duff, K. d. Deal College
Holgson, E.W. Tollington Park Coll.
McIntyre, M.F. St. Aloysius Coll., Hornsey Lane, N.

BOYS, 2ND CLASS, 1ST DIV.—Continued. Bosworth, A. W. Dixie Gr. S., Mkt. Bosworth

Delahunty, P. Catholic Coll. Inst. M'chester. Edwards, K. J. F. Borden Gram. S., Sittingbourne

Lester, H. L. W. Hastings Gram. S. Thomas, A. R. Ruthin Gram. S. Wrenn, A. B. s. Private tuition

Lightbown, A. S. Gram. S., Eccles. McConkey, R. Hillmartin Coll., Camden Rd., N. W.

Boney, T. K. Tollington Park Coll. Bush, A. T. Hoe Gram. S., Plymouth

Collins, W. T. d. Holt H., Cheshunt. Odell, C. d. Hasland H., Penarth

Foot, S. Hoe Gram. S., Plymouth. Garner, G. H. Ruthin Gram. S. Nicholson, C. H. Fartown Gram. S., Huddersfield

Reeves, F. S. Hastings Gram. S. Thomas, T. T. d. Hampton Gram. S., Glasbury-on-Wye

Walker, W. d. The Academy, Wakefield. Bell, G. A. Taunton Trade S., Southampton

Chittick, W. H. Montrose C., Brixton Hill. Davies, O. W. King Charles I. S., Kidderminster

Fuller, J. d. Gram. S., Lynn. Harris, A. d. South Hornsey S., N.

Hartley, R. N. f. Wigan Inst., Wigan. Haworth, M. B. Montrose C., Brixton Hill

Anderson, J. G. d. Tollington Park Coll. Denham, H. Y. Hutton Gram. S.

Russell, B. H. Sandwich Gram. S. Vincent, J. H. Taunton's Trade S., Southampton

Barber, C. D. Deal College. Bettridge, S. W. Taunton S., Taunton

Bonnezen, R. T. B. Private tuition. Fairclough, J. Catholic Coll. Inst., M'chester

Griffith, E. S. Penwerris Gram. S., Falmouth. Hall, H. P. Paddington High S. for Boys

Le Cornu, H. J. The Jersey Modern S. Page, L. A. d. Taunton's Trade S., Southampton

Sparks, J. B. Mercer's S., Holborn, E. C. Spice, W. d. Hastings Gram. S.

Avery, B. St. James's S., Keyham, Devonport. Pover, L. Wreight's S., Faversham

Webber, C. H. d. Bible Christian Coll., Shebbear. Done, J. B. H. St. John's Coll., Grimsargh

Moseley, H. O. Dixie Gram. S., Market Bosworth. Pinhey, W. K. Horsnonden S., Kent

Wilkinson, E. J. Southport Comm. Coll. Wyard, S. Hasland H., Penarth

Balkwill, A. W. Taunton S., Taunton. Maynard, W. T. d. St. Winifred's S., Torquay

Miskin, J. B. D. Kent. Coll., Canterbury. Brooker, W. d. Hastings Gram. S.

Galloway, N. Private tuition. Herbert, C. Bethany H., Goudhurst

Jennings, W. F. Manor H., Havant. Kinch, A. G. St. Catherine's C., Richmond

Morson, A. C. Private tuition. Sing, J. Queen's Park Coll., Harrow Rd.

Alexander, C. E. University S., Rochester. Gilbert, T. F. d. Camelford Gram. S.

Griffin, F. V. Mercer's S., Holborn, E. C. Perkins, G. E. Bath College

Price, C. M. St. John's Coll., Brixton. Ratsey, W. C. Bible Christian C., Shebbear

Coles, H. C. Taunton S., Taunton. Crook, T. W. Bible Christian C., Shebbear

Harding, C. A. S. Taunton's Trade S., Southampton. James, B. E. W. A. d. St. Aloysius Coll., Hornsey Lane, N.

Langley, G. F. St. Aloysius Coll., Hornsey Lane, N. Palmer, H. J. Ashford Gram. S.

Brooklesby, H. M. Hillmartin Coll., Camden Rd., N. W.

Goodrich, E. E. Tollington Park Coll. Lewis, S. F. Taunton's Trade S., Southampton

Beadnell-Gill, R. Private tuition. Birtill, J. M. Private tuition

Davis, R. T. Private tuition. Felton, A. Sandwich Gram. S.

Gunn, B. M. Kensington Park Coll., W. Guy, C. R. Deal College

Peet, J. University S., Southport. Watt, E. G. Hastings Gram. S.

Grammer, F. a. Private tuition. Grime, A. J. University S., Southport

Jackman, R. O. Borden Gram. S., Sittingbourne. Jones, H. S. Gram. S., Eccles

Kennedy, L. Ashford Gram. S. Lingham, P. E. d. University S., Rochester

Smits, A. St. Joseph's Coll., Dumfries. Wait, W. A. Lonsbury Coll., Up. Clapton

Baker, M. B. Lewes Gram. S. Blackburne, P. Yorkshire Society's S., S. E.

Culverwell, R. H. Taunton S., Taunton. Fearnside, F. Comm. Coll., York

Fox, A. R. Brooklyn Villa, Sheffield. Harrison, W. N. Horsnonden S., Kent

Hughesdon, A. H. Tollington Park Coll. Jackson, G. B. Hutton Gram. S.

Morris, C. W. Grove H., Highgate. Nichols, C. E. Taunton S., Taunton

Sanson, W. E. R. Sandwich Gram. S. Shaw, G. c. Rutherford C., Newcastle-on-T.

Bennett, J. W. Middlesex Coll., Tottenham. Clague, J. A. Crescent S., Sheffield

Dalman, H. G. Holt H., Cheshunt. Revill, A. A. Hastings Gram. S.

Wilson, C. J. V. Gram. S., Longsight, M'chester

Second Class.—3rd Division.

Baker, H. R. Sandwich Gram. S. Charlton, T. F. Arlington Villa, Eastern Rd., Brighton

Chilton, G. C. Hutton Gram. S. Dickinson, R. E. Grove H., Highgate

Entwistle, J. Ruthin Gram. S. Fogarty, S. C. Taunton's Trade S., Southampton

Jennings, H. E. R. Manor H., Havant. Matson, H. B. The Modern S., E. Grinstead

Mead, A. Arlington Villa, Eastern Rd., Brighton. Shirvell, E. A. 37 Alcester St., Stoke, Devonport

Bailey, E. Hutton Gram. S. Davies, G. Ruthin Gram. S.

Fielder, T. J. G. Private tuition. Frankenstein, M. E. Peterborough Lodge S., Finchley Rd.

Ge, G. St. John's Coll., Brixton. Pritchard, W. J. g. London C. Gram. S., Holloway Rd., N.

Bolster, W. H. St. John's Coll., Grimsargh. Eberhardt, R. C. Broomwood C., Battersea

Eland, G. E. Old Elvet S., Durham

Second Class.—2nd Division.

Brown, F. G. Hutton Gram. S. Burniston, H. H. Hartley Coll., Southampton

Davy, H. Wreight's S., Faversham. Dixon, L. F. The School, Eaton Socon



BOYS, 2ND CLASS, 3RD DIV.—Continued. Addison, W.R.F. Horsmonden S. Kent Crespin, H. Hillmartin Coll., Camden Rd., N.W. Cumming, H. Taunton S., Taunton Edwards, E.R. Birkbeck S., Kingsland Haworth, H.R. Lytham Coll., Lanes. Hill, F.C.R. Montrose Coll., Brixton Hill Hilton, G. Avenue S., Leigh, Lanes. Lowe, C.E.D. Loughton S.

Bell, A.L. High S., Camborne Bush, A.S. Elmhurst S., Kingston-on-Thames Davis, T.R. Lancaster Coll., W. Norwood Ramsbottom, J. d. University S., S'hpport Slack, R.A. Comm. Coll., York Woodcock, R.S. Private tuition

Bound, A.L. Taunton's Trade S., Southampton Denley, H.B. St. Philip's Gr. S., Edgbaston Sheford, H.M. Oxford H., Sutherland Av., W. White, W. al. Private tuition

Belbin, D.W. d. Tollington Park Coll. Capurro, A. Christian Bros. Coll., Gibraltar Gasten, H. S. for Sons of Officers, Woolwich Meikle, W.E. S. Albion Rd., North Shields Robinson, H.H. High S., Camborne Rothwell, P. Ryde H., Ripley, Woking Shaw, A. Wright's S., Faversham Treasure, E.H.M. Arnold H., Hove Turner, T.S. Bible Christian C., Shebbear

Bowen, J.S. Pencader Gram. S., Carmarthen Carless, S. Worcester Cathedral King's S. Cherry, J.W. Gram. S., Eccles Leach, C.C. Holly Bank S., Cheetham Hill, M'chester Reynolds, A.J. St. Catherine's C., Richmond Wood, A.L. University S., Southampton

Barlow, E. Waltham Coll., Waltham Cross Harvey, C.P.R. Private tuition Roper, W. St. Joseph's Coll., Dumfries Thorne, F.J. Taunton S., Taunton

Dodds, W.F. Ventnor Coll. S. Steel, W.H. Kingsholme S., Weston-s.-Mare

Vasquez, A.J. Christian Bros. C., Gibraltar Vincent, E. Taunton's Trade S., Southampton

Bridger, H. New Coll., Worthing Gray, H. Gram. S., Bentham Prince, S. Taunton's Trade S., Southampton Stokes, J.G. Borden Gram. S., Sittingbourne

Ayris, S.B. Ashford Gram. S. Butters, F.R. Private tuition Franks, W. Yorkshire Society's S., S.E. Hore, W.E. University S., Rochester Rumfitt, A. Private tuition Simpson, A. The Academy, Wakefield

Benrose, R. Boys' High S., Iron-Bridge Horrocks, R.C. Wilmslow Gram. S. Roberts, R.A. Missionaries' Sons' S., Blackheath

Baker, H. Halbrake S., Wandsworth Com. Dinnis, G.H. Kensey S., Launceston Gardner, S.E. al. Hanley Castle Gram. S. Orr, J.F. Catholic Coll. Inst., Manchester Sherwood, T.B. Gram. S., Eccles

Barnace, G.A.S. d. St. John's C., Grimsargh Leach, N. The Jersey Modern S. Pritchard, R.A. London Coll. Gram. S., Holloway Rd., N.

Barnes, O.F. Horsmonden S., Kent Casey, E.R. Private tuition Geach, B. Penwerris Gram. S., Falmouth Jenkins, T.R. Private tuition Millard, H.J. Bible Christian C., Shebbear Perret, A.G. St. Philip's Gr. S., Edgbaston

Beech, J.F. Ruthin Gram. S. Coldridge, F. Bradley High S., Newton Abbot Knowlson, L.A. Yorkshire Society's S., S.E. Low, M.A. Ruthin Gram. S.

Mason, J.H. Private tuition Smith, F.E. Grove H., Highgate

Austen, R.B. d. Selhurst Park Coll., S.E. Chadwick, H. University S., Southport Church, E. Bailey S., Old Elvet, Durham Milligan, C.C. Fartown Gr. S., Huddersfield

Adams, G.A. Private tuition Asplen, H.L. St. Joseph's Coll., Dumfries Harkness, A.T. Elmhurst S., Kingston-o.-T. Hooper, F.J. d. The Gram. S., Launceston Horner, J.E.B. Tollington Park Coll. Johnson, W.B. Old Elvet S., Durham Le Quesne, C. Charing Cross S., St. Heller's, Jersey Pattinson, I.G. Holly Bank S., Cheetham Hill, M'chester Smith, F.G. The Huish Gram. S., Taunton Moss, C. University S., Southport Knight, T. Oxford H., Herne Bay Smith, G.E. St. John's Coll., Grimsargh Speed, S.C. Elmhurst S., Kingston-on-Thames

Easton, L.S. Borden Gram. S., Sittingbourne McKenna, G.A. St. Joseph's Coll., Dumfries

Slade, J.O. Lawn H., Clapham Rd. White-Corbett, T.J. Douglas S., Cheltenham Albemarle Coll., Penge With, P.A. The Mount Acad., Malton Bolster, F. St. John's Coll., Grimsargh Brooking, P.W. Private tuition Fletcher, J.H.V. Gram. S., Eccles

Third Class.—1st Division.

Joly, H. g.o.f.g.e.d. St. Joseph's Acad., Kennington Rd., S.E. Allman, T. g.o.f. Beechen Cliff, Peckham Rye Weller, C. Private tuition Bulkeley, C.A. St. Helen's Coll., Southsea Sheppard, C.W. Private tuition Knollys, F. N.A.R. ch. Borden Gram. S., Sittingbourne Solomon, R.S. Sandwich Gram. S. Jee, J.P. al. Dixie Gram. S., Market Bosworth

Statham, R.S. f. Bradfield Coll., Berks. Godtery, G.M. Mt. Radford S., Exeter Eskell, P.R. Bath College Munro, J.E. Royal Naval S., Eltham Balchin, E.J. Private tuition Macdonald, D. Hastings Gram. S. Le Morvan, R. a.o.f. St. Joseph's Acad., Kennington Rd., S.E. Mills, P.E. d. Hornsey Gram. S. Fort, F.J. e.g.o.al.eu.f.l. Wirksworth Gram. S.

Starforth, A.W. Wesley Coll., Sheffield Witty, B. Hutton Gram. S. May, P. g.o.al.f. Tollington Park Coll. Pointer, E.H.R.F. Kingsholme S., Weston-s.-Mare Burgess, E.W. Broomwood Coll., Battersea Seton, A.B. Seaford College

Beesley, F.M. Wirksworth Gram. S. Curtis, E.A. Hornsey Gram. S. Flack, A. South Hornsey S., N. Grover, R.V. e.al.eu. Tollington Park Coll. Skinner, A.J. Private tuition

Golden, A. Taunton's Trade S., Southampton Roberts, W.D. Ruthin Gram. S. McCormack, P. e.al.f. Catholic Coll. Inst., Manchester Slater, W.P. g.o.al.d. University S., Southport

Valandry, G.E. f. Bethauy H., Goudhurst Hodge, T.D. Tollington Park Coll. Foote, G.D. Tonbridge S. Balcomb, C.A. ch. Borden Gram. S., Sittingbourne Curtis, J. Hutton Gram. S. Twiss, P.J. f. d. St. Joseph's Coll., Dumfries Jackman, H.C. High S., St. Luke's Rd., Torquay

Jones, F. g.f. l. Wirksworth Gram. S. Russ, F.V. Bible Christian Coll., Shebbear Vey, G. d. Queen's Park Coll., Harrow Rd. Cowie, R. a. Barnstaple Gram. S. Green, V.H. Dixie Gr. S., Market Bosworth Burr, E.G. e.al. Tollington Park Coll. Mather, J.H. g.o.al.f. Tollington Park Coll. Matthews, A.E. a.d. People's Coll. Hr. Grade S., Nottingham

Adcock, J.P. Bath College Faulk, H.G. e.d. People's Coll. Hr. Grade S., Nottingham Leigh, W. g.o.al.f. Wirksworth Gram. S. Soper, R. g.o.al.f. Taunton's Trade S., Southampton

Hughes, H.T. e.g.al. Oswestry Gram. S. Magor, H.B. Bible Christian C., Shebbear Nickinson, E. St. John's Coll., Brixton McDonald, G.J. e.g.a.d. Wright's S., Faversham

South, C.H. d. Alvechurch Gram. S. Whitehead, R.S. Hutton Gram. S. Adams, J. e.al.eu.f. Deal College Cliff, W.P. f. High S., St. Luke's Rd., Torquay Colbham, H. Private tuition Eastman, A. d. Taunton's Trade S., Southampton

Lacey, W.S. e.al.f. l. Park H., Broadstairs Oliver, C.B. e.al.f. Newcastle Modern S. Simson, J. a.o.f. Ramsgate Smith, P.P. f. a.o.f. High Pavement S., Nottingham Thomas, G. Barnstaple Gram. S.

Amy, S.L. The Jersey Modern S. Bradshaw, J.A. St. Joseph's C., Dumfries Davenport, E.J. Bath College Jones, W.D. Pencader Gram. S., Carmarthen Sawyer, T.A. Taunton's Trade S., Southampton Wills, P.J. f. High S., St. Luke's Rd., Torquay

Ligate, W.G. al.f. d. Wirksworth Gram. S. Powelson, T.H. a.m. Tutorial S., Penarth Stann, F.O. Dixie Gram. S., Mkt. Bosworth

Ward, C. Hastings Gram. S. White, W. d. Marylebone Central Hr. Grade Tech. S. Bishop, A. Ryde H., Ripley, Woking Burrage, C. Borden Gram. S., Sittingbourne Cole, T. H. Hastings Gram. S. Goodyer, A. g.d. People's Coll. Hr. Grade S., Nottingham

Heynes, D.H. Taunton S., Taunton Jemmett, C.W. a.o.f. Worthing High S. Penney, C. People's Coll. Hr. Grade S., Nottingham Snaaylam, R. Hutton Gram. S. Winckler, F. Ryde H., Ripley, Woking Dutton, T. Gram. S., Longsight, M'chester Harding, P.S. Taunton's Trade S., Southampton Hayward, C.H. s.o.al.eu. The School, Eaton Socon Thomas, W.F.G. The Douglas S., Cheltenham Walsh, T. e.al. Beaconfield Coll., Plymouth

Collier, F.C. g.f. l. Wirksworth Gram. S. Collins, F.C. a.d. Taunton's Trade S., Southampton Crawford, D. McP. e.g.al.f. Gram. S., Eccles Curd, C. g.f. St. Aloysius Coll., Hornsey Lane, N. Hibbert, F. d. Gram. S., Eccles Kettle, R. a. Comm. & Civ. Service High S., Forest Gate Main, J.R.T. Dagmar H., Hatfield Ray, C.L. Fernie Coll., Highgate Roberts, W.L. e.g.a.eu. Ruthin Gram. S. Young, C.S. Bath College

Atkins, W.H. Eye Gram. S. Boaden, W.F. g.e.v. Tollington Park Coll. Brander, J. The Bronshill S., Torquay Irving, S.G. g.e.u. Tollington Park Coll. Roberts, V. Ruthin Gram. S. Rolley, H.E. d. High Pavement S., Nottingham Sanders, W. g. Barnstaple Gram. S. Theobalds, H.L. g.o.d. Wright's S., Faversham

Travers, G. al. Catholic C. Inst., M'chester Twiss, J.O. St. Joseph's Coll., Dumfries Wood, F.M. a.d. People's Coll. Hr. Grade S., Nottingham

Adam, S.D. Oxford H., Sutherland Av., W. Ball, J.L. al. South Hornsey S., N. Batkin, W.C. Wirksworth Gram. S. Burton, F.W. al.eu. Tollington Park Coll. Edwards, V.G. e.g. Tollington Park Coll. Faulkner, R.N. sh. Cusack Inst., Moorfields Flack, W. eu. South Hornsey S., N. Jenkins, R.E. g.o.f. Taunton S., Taunton Jones, W.R. al.eu.f. Gram. S., Eccles Parry, S.P. g.o. Oswestry Gram. S. Reagano, H. Christian Bros. C., Gibraltar Theobald, H.W. J. St. Aloysius Coll., Hornsey Lane, N. Warde, J.M.G. e.al.d. Finsbury Park C., N. Whitehead, F.W. s.e.o. Sandwich Gram. S. Williams, T.H. a.eu. Gram. and Coll. S., Carnarvon Willis, J.H. e.l. Dixie Gram. S., Market Bosworth

Budgen, S.N. d. Borden Gram. S., Sittingbourne Edmondson, W. a. Oswestry Gram. S. Fielding, F. Stanwell H., W. Hamstead Goss, L.S. f. l. The Chilterns, Halton, Tring Usher, H. Hutton Gram. S.

Butter, S.E. g.o. Wright's S., Faversham Croft, N.T. a. Montrose Coll., Brixton Hill Eskell, R.L. Bath College Farjeon, H. g.e. Peterborough Lodge S., Finchley Rd. Gillies, A.M. Tollington Park Coll. Hodge, H.F. a. Gram. S., St. Ives, Cornwall Nicoll, F. d. South Hornsey S., N. Sanderson, B.R. St. Dominic's Gram. S., Haverstock Hill Sutton, A. f. People's Coll. Hr. Grade S., Nottingham

Bilney, A.R. a.al. University S., Rochester Morgan, F.J. a. Tollington Park Coll. North, B. e.al. Tollington Park Coll. Wallington, R.F. St. Joseph's Coll., Dumfries Wise, W.C. Lancaster Coll., W. Norwood Wood, E.E. High Pavements S., Nottingham

Burton, W. d. People's Coll. Hr. Grade S., Nottingham Davis, P. e.a. Dagmar H., Hatfield Dewey, E., e.al. Beaconfield Coll., Pl'm th Fox, C.H., a.o.l. Worthing High S. Francis, W.J., a Penwerris Gram. S., Falmouth Horman, G.D. d. Hastings Gram. S. Lintell, A.G. d. New Coll., Worthing McGeech, P. St. Joseph's Coll., Dumfries Scales, L. Ruthin Gram. S. White, J. Catholic Coll. Inst., Manchester Wild, A. al. People's Coll. Hr. Grade S., Nottingham

Barlee, R.J. g.a. Oswestry Gram. S. Bomford, C.A. Private tuition

Crocker, P.R. e.d. Bible Christian Coll., Shebbear Cunnah, E.E. Private tuition French, H.J. a. Coll. S., Laphord Hughes, J.G. al. Oswestry Gram. S. Marsh, A. W. eu. Dixie Gram. S., Market Bosworth Maryoseph, S. le. Ramsgate School. Mason, W. E. d. South Hornsey S., N. Sewell, E. D. Victoria Coll., Buckingham Palace Rd.

Baker, M.G. Private tuition Collier, H.C. g. Wirksworth Gram. S. Cowie, W. a. d. Queen's Pk. C., Harrow Rd. Cullen, D.F. e.d. Polytechnic Inter-S. W. Faulkner, W.M. eu. Tollington Park Coll. Francis, H.E. Newcastle Modern S. Harris, S.E. e.eu. Wright's S., Faversham Jones, E.L.L. Richmond Hill S., Surrey Jones, L. a.al. Llandudno Coll. Saword, A.E. Tollington Park Coll. Shoobridge, H.J. A.e.a.f. Ashford Gram. S. Swinloc, M.C. Private tuition Thurston, H.M. g.o. Wright's S., Faversham Wort, R.J. d. Broomwood Coll., Battersea Yates, A.H. al. Tollington Park Coll.

Barrett, J. l. Beaconfield Coll., Plymouth Bell, H. W. York Manor S., York Berry, W.H. e.a. Wright's S., Faversham Hodge, J.H. a. Gram. S., St. Ives, Cornwall Hunt, J.B. e.al. Elmhurst, Kingston-on-Thames Oddy, R.H. Technical Coll., Bradford Patterson, P.H. Private tuition Srigley, T.W. g. Cavendish S., Matlock Swain, L. a.d. People's Coll. Hr. Grade S., Nottingham Westhorpe, W.H. Seaford College White, G.E. d. People's Coll. Hr. Grade S., Nottingham Wren, H. h. Stafford Coll., Forest Hill

Barrett, A.H. High Pavement S., Nottingham Bonnor, F.H. a.d. Clyde H., Hereford Cadman, A.L. g.a.al. Montrose Coll., Brixton Hill Callaghan, L. Catholic Coll. Inst., M'chester Challen, F.H. al. Tollington Park Coll. Coghan, E. People's Coll. Hr. Grade S., Nottingham Colyer, P. g. Wright's S., Faversham Coombe, W.H. C. e.al.eu. St. James's S., Keyham, Devonport De Meza, J. a. Tollington Park Coll. Eddison, J.S. Cavendish S., Matlock Frommholz, G.A. al. Marylebone Central Hr. Grade Tech. S. Garrett, H.V. sh. Monk Bridge S., York Hart, C.W. St. John's Coll., Brixton Lowndes, W.H. The Chilterns, Halton, Tring Mason, F.E. g. Wirksworth Gram. S. Pardington, A.E. s. Chandos Gram. S., Winchcombe Saunders, H.A. High S., St. Luke's Rd., Torquay Shaw, W.H. a. High Pavement S., Nottingham Wright, H.W. Hornsey Gram. S.

Cash, F.G. Bethany H., Goudhurst Guttridge, B.C. a. Tollington Park Coll. Hayes, R.R. Beverley S., Barnes Kendall, J.G. Market Harboro' Gram. S. Maynard, H.C. e.g.a. Ashford Gram. S. Nicholson, G. Grove H., Highgate Presland, C.W. e.al. Tollington Park Coll. Stokes, F.G. al. Kingsholme S., Weston-s.-Mare Vernon, R. d. People's Coll. Hr. Grade S., Nottingham

Clark, R.D. e.o. Osborne High S., W. Hartlepool. Croucher, E.H. Borden Gram. S., Sittingbourne Edwards, J.T. a.al. Lady Hawkins' Gram. S., Kingston Finn-Kelcey, H.F. g.f. Ashford Gram. S. Flatt, A.W. Camden Rd. Coll. S., N. Harman, H.A. g.o. St. John's Choir S., St. Leonards Hoggarth, W. d. People's Coll. Hr. Grade S., Nottingham Lacey, E. University S., Rochester Muckleston, H.P. a. Tollington Park Coll. Pitman, E. W. Lewes Gram. S. Tull, G.E. Trafalgar H., Lee-on-the-Solent

Blackall, L.C.F. St. Aloysius Coll., Hornsey Lane, N. Emmett, E. e.al. d. Deal College Ewusi, K. s.e.al. African Inst., Colwyn Bay Gambell, P.C. a. Seaford College Guichard, H.W. f. Tollington Park Coll. Hill, J.E. a.d. People's Coll. Hr.-Grade S., Nottingham James, J. Pencader Gram. S., Carmarthen Morris, C.H. Taunton S., Taunton Parrott, W.S. s.l. The Chilterns, Halton, Tring. Poole, T.W. High Pavement S., Nottingham Bayliss, A.D.E. al.f. Tollington Park C. Bottomley, G.F. Dagmar H., Hatfield

Blackall, L.C.F. St. Aloysius Coll., Hornsey Lane, N. Emmett, E. e.al. d. Deal College Ewusi, K. s.e.al. African Inst., Colwyn Bay Gambell, P.C. a. Seaford College Guichard, H.W. f. Tollington Park Coll. Hill, J.E. a.d. People's Coll. Hr.-Grade S., Nottingham James, J. Pencader Gram. S., Carmarthen Morris, C.H. Taunton S., Taunton Parrott, W.S. s.l. The Chilterns, Halton, Tring. Poole, T.W. High Pavement S., Nottingham Bayliss, A.D.E. al.f. Tollington Park C. Bottomley, G.F. Dagmar H., Hatfield

Blackall, L.C.F. St. Aloysius Coll., Hornsey Lane, N. Emmett, E. e.al. d. Deal College Ewusi, K. s.e.al. African Inst., Colwyn Bay Gambell, P.C. a. Seaford College Guichard, H.W. f. Tollington Park Coll. Hill, J.E. a.d. People's Coll. Hr.-Grade S., Nottingham James, J. Pencader Gram. S., Carmarthen Morris, C.H. Taunton S., Taunton Parrott, W.S. s.l. The Chilterns, Halton, Tring. Poole, T.W. High Pavement S., Nottingham Bayliss, A.D.E. al.f. Tollington Park C. Bottomley, G.F. Dagmar H., Hatfield

Blackall, L.C.F. St. Aloysius Coll., Hornsey Lane, N. Emmett, E. e.al. d. Deal College Ewusi, K. s.e.al. African Inst., Colwyn Bay Gambell, P.C. a. Seaford College Guichard, H.W. f. Tollington Park Coll. Hill, J.E. a.d. People's Coll. Hr.-Grade S., Nottingham James, J. Pencader Gram. S., Carmarthen Morris, C.H. Taunton S., Taunton Parrott, W.S. s.l. The Chilterns, Halton, Tring. Poole, T.W. High Pavement S., Nottingham Bayliss, A.D.E. al.f. Tollington Park C. Bottomley, G.F. Dagmar H., Hatfield

**BOYS, 3RD CLASS, 1ST DIV.—Continued.**  
 Brautfoot, G. a. f. Argyle H., Sunderland  
 Cook, G. a. f. Grove H., Highgate  
 Copp, H. a. Hoe Gram. S., Plymouth  
 Evans, H. Ryde H., Ripley, Woking  
 Farrell, F. St. Joseph's Coll., Dumfries  
 Hills, A. H. Osborne High S., W. Hartlep'l  
 Loosen, G. A. a. d. Taplow Gram. S.  
 Moir, E. H. St. Catharine's S., Broxbourne  
 Pettifer, T. P. Private tuition  
 Rothwell, S. Ryde H., Ripley, Woking  
 Smith, P. de S. Wellington Terr. S., Taunton  
 Spencer, C. Wirksworth Gram. S.  
 Thorne, A. E. Taunton S., Taunton  
 Turner, H. R. Duncan H., Gt. Yarmouth  
 Walsley, U. B. Mid. Class S., Whitby

\*Boden, H. D. Willow H., Walsall  
 Couch, H. E. Cornwall Coll., Liskeard  
 Dexter, W. C. a. d. People's Coll. Hr. Grade S., Nottingham  
 Durkin, F. a. Osborne High S., W. Hartlep'l  
 Gray, F. H. a. u. Dixie Gram. S., Market Bosworth  
 Johnson, J. N. Bethany H., Goudhurst  
 Muir, J. M. St. Joseph's Coll., Dumfries  
 North, R. a. Tollington Park Coll.  
 Pryer, C. H. Clyde H., Hereford  
 Quinton, F. C. a. Tollington Park Coll.  
 Sheehan, D. Catholic Coll. Inst., Manchester  
 Smith, W. C. People's Coll. Hr. Grade S., Nottingham  
 Sonnetthal, H. M. Peterborough Lodge S., Finchley Rd.  
 Weeks, J. R. Holt H., Cheshunt

Adcock, L. F. Dagmar H., Hatfield  
 Browne, B. H. H. g. Oswestry Gram. S.  
 Davies, B. J. Polytechnic Inter. S., W.  
 \*Doward, H. Southport Comm. Coll.  
 \*Eglin, A. N. Private tuition  
 Feris, J. Catholic Coll. Inst., Manchester  
 \*Gareze, A. L. Christian Bros.' Coll., Gibraltar  
 Gibbons, R. Coll. S., Laphord  
 Gill, F. G. a. u. Eye Gram. S.  
 Holgate, J. E. a. d. University S., Southport  
 \*Holloway, L. C. Grove H., Highgate  
 Langridge, S. Lewes Gram. S.  
 \*Lear, H. G. Portland Gram. S., Plymouth  
 Martin, A. d. Taunton's Trade S., Southampton  
 Simpson, C. F. a. u. The School, Eaton Socon  
 Swidbank, G. a. a. Tollington Park Coll.  
 Walthall, J. R. a. u. Gram. S., Belper  
 Woodrow, C. Beaconfield Coll., Plymouth  
 Woods, E. R. a. Tollington Park Coll.

\*Armour, H. Ryde H., Ripley, Woking  
 Brown, C. H. Seaford College  
 Dodsworth, P. C. a. a. f. Newcastle Modern S.  
 Hallam, F. V. d. Tollington Park Coll.  
 \*Humphry, A. S. Iselden S. Boscombe  
 Jones, A. J. f. The Jersey Modern S.  
 Law, E. I. Private tuition  
 Lawson, A. e. h. Tollington Park Coll.  
 Lewes, N. a. University S., Southport  
 Rash, J. C. g. a. Eye Gram. S.  
 \*Rawcliffe, H. Hutton Gram. S.  
 \*Wallis, N. L. St. Catharine's, Littlehampton  
 Ward, C. People's Coll. Hr. Grade S., Nottingham  
 Wood, W. H. d. People's Coll. Hr. Grade S., Nottingham

\*Abbey, A. J. St. Catharine's S., Broxbourne  
 Beardsley, F. a. d. Gram. S., Bentham  
 \*Carr, J. Beaconfield Coll., Plymouth  
 Castle, S. C. a. d. Marylebone Central Hr. Grade Tech. S.  
 Coghlan, O. d. People's Coll. Hr. Grade S., Nottingham  
 \*Elford, A. E. Camelford Gram. S.  
 \*Gareze, G. Christian Bros. Coll., Gibraltar  
 \*Good, R. G. Cathcart Coll., Cathcart Hill, N.  
 Hughes-Hallett, L. C. f. Ashford Gram. S.  
 Kellest, J. H. g. a. Alvechurch Gram. S.  
 Marshall, J. A. a. Argyle H., Sunderland  
 McLoughlin, P. Catholic Coll. Inst., Manchester  
 Pearson, F. H. g. New Brighton High S.  
 \*Percy, H. J. Portland Gram. S., Plymouth  
 Pierce, I. J. a. Wright's S., Faversham  
 Rose, W. g. a. Eye Gram. S.  
 Steer, P. R. a. Hoe Gram. S., Plymouth  
 Thorne, C. a. Queen's Park C., Harrow Rd.  
 \*Towler, K. F. Bath College  
 Wakfield, P. a. a. l. Cumberland H., Milton, Gravesend  
 Whitehead, T. C. a. High Pavement S., Nottingham  
 Wood, H. a. St. John's Coll., Brixton  
 \*Young, D. M. Lewisham Park S., S.E.

\*Bundy, B. O. Middle S., Torrington  
 Hilson, F. W. People's Coll. Hr. Grade S., Nottingham  
 Hoad, F. I. e. Ryde Gram. S.  
 Hopkins, C. W. R. a. Malden C., New Malden  
 Lloyd, P. H. l. Oswestry Gram. S.  
 \*Mace, W. O. s. Hove Park S., Sussex  
 Nathan, L. f. Rushmore High S., Manchester  
 Patching, H. R. Wright's S., Faversham  
 Roberts, R. F. l. Oswestry Gram. S.  
 Rooke, I. a. G. The School, Eaton Socon  
 \*Bunceman, J. G. Barton S., Wisbech

Samuel, R. J. Osborne High S., W. Hartlep'l  
 \*Watson, G. A. Bethany H., Goudhurst  
 Wilks, W. E. Tollington Park Coll.  
 Arnold, R. a. Ryde H., Ripley, Woking  
 \*Bunsted, W. F. Horsmonden S., Kent  
 Dyer, W. L. a. Taplow Gram. S.  
 \*Fyle, F. Horsmonden S., Kent  
 Fryer, S. P. Kingsholme S., Weston-s.-Mare  
 Guiton, J. E. The Jersey Modern S.  
 \*Leonard, S. Ryde H., Ripley, Woking  
 Mathias, R. L. Kingsholme S., Weston-s.-Mare  
 Oliver, H. C. g. Taunton's Trade S., Southampton  
 Price, F. South Hornsey S., N.  
 Shacklock, H. d. Montrose C., Brixton Hill  
 Sheehan-Dare, J. L. Dagmar H., Hatfield  
 Stevens, M. C. g. Taunton's Trade S., Southampton  
 Warburton, K. W. a. d. Clyde H., Hereford  
 Sheehan-Dare, J. L. Barnstable Gram. S.  
 Wilkinson, A. E. a. Wright's S., Faversham  
 \*Willis, J. Mid. Class S., Whitby

\*Barton C. Southport Comm. Coll.  
 \*Bull, H. M. Oswestry Gram. S.  
 Bush, G. C. High Pavement S., Nottingham  
 Davenport, R. T. Private tuition  
 Dickinson, H. A. f. High Pavement S., Nottingham  
 \*Ditchfield, J. Preston Class. & Comm. S.  
 Graham, J. A. a. Private tuition  
 \*Howat, C. D. Hutton Gram. S.  
 \*Hylton, D. Y. Bath College  
 Loosen, A. F. Taplow Gram. S.  
 Martin, J. St. John's Coll., Brixton  
 Miller, W. N. s. e. Bible Christian Coll., Shebbear  
 Moore, B. J. W. M. d. Private tuition  
 Newman, P. People's Coll. Hr. Grade S., Nottingham  
 Orgel, C. a. Froebel H., Devonport  
 Prevel, J. f. St. Aloysius Coll., Hornsey Lane, N.  
 Sheffield, W. H. d. Cork Gram. S.  
 Simson, H. Ramsgate School  
 Soudy, L. H. e. a. Taplow Gram. S.  
 Trigg, A. E. a. Taunton's Trade S., Southampton  
 Weinberg, G. J. e. u. f. St. Aloysius Coll., Hornsey Lane, N.

Benest, P. G. f. The Jersey Modern S.  
 Crosthwaite, E. F. a. Taplow Gram. S.  
 Dalla Volta, V. West Cliff S., Ramsgate  
 Davies, W. St. Joseph's Coll., Dumfries  
 Deighton, W. V. a. Montrose Coll., Brixton Hill  
 Dennis, W. H. J. a. Bible Christian Coll., Shebbear  
 Edwards, D. Tollington Park Coll.  
 Gould, J. a. d. Southport Comm. Coll.  
 \*Harrington, G. H. Tollington Park Coll.  
 Harrop, D. Catholic Coll. Inst., Manchester  
 Hawke, R. g. a. Hoe Gram. S., Plymouth  
 Hadden, W. Skerry's Coll., Chancery Lane, W. C.  
 Job, L. K. a. Tollington Park Coll.  
 Jones, A. Ruthin Gram. S.  
 Jones, C. G. A. Tollington Park Coll.  
 Jones, J. d. Pencader Gr. S., Carmarthen  
 \*Laing, O. Ryde H., Ripley, Woking  
 Morasso, A. Christian Bros. Coll., Gibraltar  
 Morris, W. I. Horsmonden S., Kent  
 \*Tucker, G. H. Kingsholme S., Weston-s.-Mare  
 Walton, H. Tollington Park Coll.

\*Abbott, H. D. L. Thanet Coll., Margate  
 Ankers, N. a. York Manor S., York  
 Cornish, C. P. Bible Christian C., Shebbear  
 Cripps, W. G. Lewes Gram. S.  
 \*Edwards, A. Wright's S., Faversham  
 Gapes, S. A. St. John's Coll., Brixton  
 Harnor, P. W. a. St. John's Coll., Brixton  
 Huggett, S. G. e. The Mod. S., E. Grinstead  
 Naylor, W. Catholic Coll. Inst., Manchester  
 Ovey, H. Polytechnic Intermediate S., W.  
 Parry, A. Taunton's Trade S., Southampton  
 Roberts, M. G. e. Bible Christian Coll., Shebbear  
 \*Saunders, J. T. St. Catharine's S., Broxbourne  
 Tallack, R. a. Deal College  
 Turner, C. W. T. a. Wright's S., Faversham  
 \*Yorke, G. Camden Rd. Coll. S., N.

Ales, D. University S., Southport  
 \*Beard, H. S. g. Selhurst Park Coll., S.E.  
 Breary, H. J. St. John's Coll., Brixton  
 Dasher, W. Taunton's Trade S., Southampton  
 Dawkins, W. a. d. Dixie Gram. S., Market Bosworth  
 Greenwood, R. A. Monk Bridge S., York  
 Houghton, S. Deal College  
 Kennedy, A. B. Taplow Gram. S.  
 \*Royce, H. M. W. Gram. S., Eccles  
 Salter, A. W. Montrose Coll., Brixton Hill  
 Sandford, H. Cumberland H., Milton, Gravesend  
 Shilton, C. P. a. e. u. Dixie Gram. S., Market Bosworth  
 \*Wallington, T. H. St. Joseph's Coll., Dumfries

Bradwell, S. University S., Southport  
 \*Brannan, J. W. Rock Park S., Barnstable  
 Conway, A. f. St. Aloysius Coll., Hornsey Lane, N.  
 Dawkins, W. H. a. Borden Gram. S., Sittingbourne  
 \*Foy, E. N. St. Joseph's Coll., Dumfries  
 \*Fraser, A. Taunton S., Taunton  
 Goodall, E. G. a. Manor H., Havant  
 Haynes, J. P. d. Christian Bros.' Coll., Gibraltar  
 \*Jones, G. H. Gram. & Coll. S., Carnarvon  
 \*Macnab, P. Ryde H., Ripley, Woking  
 Morris, A. G. a. Clyde H., Hereford  
 Peters, E. J. D. a. E. Cornwall C., Liskeard  
 Pigott, C. I. The Chilterns, Halton, Tring  
 Robey, R. R. Camden Rd. Coll. S., N.  
 Sears, S. E. f. Westbourne Rd. S., Sheffield  
 Smith, W. H. Oswestry Gram. S.  
 \*Sworder, N. Cambridge H., Margate  
 Warden, A. L. a. f. Taunton's Trade S., Southampton  
 Willis, S. J. Horsmonden S., Kent

Third Class.—2nd Division.

Bensted, W. P. Wright's S., Faversham  
 Beswarick, T. O. d. Bible Christian Coll., Shebbear  
 Botheras, A. E. J. s. Stafford C., Forest Hill  
 Braden, W. a. d. Borden Gram. S., Sittingbourne  
 Butt, A. Baylis H., Slough  
 Clark, A. B. The Crescent S., Sheffield  
 Clayton, H. J. f. Hastings Gram. S.  
 \*Cogan, J. R. Wharfedale Coll., Boston Spa  
 Dennis, A. g. a. Hoe Gram. S., Plymouth  
 Dunton, H. W. a. d. Montpelier S., Paignton  
 Edwards, L. a. Private tuition  
 Paul, E. a. Gram. S., St. Ives, Cornwall  
 \*Higham, W. E. Southport Comm. Coll.  
 Hitchcock, T. C. L. g. Ashford Gram. S.  
 Horbury, N. Southport Comm. Coll.  
 Isitt, F. H. a. Taunton S., Taunton  
 Le Brocq, W. E. a. The Jersey Modern S.  
 \*Maclean, K. Ealing Gram. S.  
 Mather, P. a. Catholic Coll. Inst., Manchester  
 \*McDowall, A. S. d. Gram. S., Streatham  
 \*Mitchell, F. A. Ventnor Coll. S.  
 Nicholson, A. N. Oswestry Gram. S.  
 Pickett, F. N. e. Bible Christian Coll., Shebbear  
 Ransom, C. f. g. Broomwood C., Battersea  
 Richardson, R. J. a. Hounslow Comm. Coll.  
 \*Robertson, W. St. Joseph's Coll., Dumfries  
 Sampson, F. P. e. Stafford C., Forest Hill  
 Stebbings, H. V. a. Deal College  
 Willmot, A. J. e. Tollington Park Coll.

Abrahams, H. V. Walthamstow Modern S.  
 \*Barr, J. S. Taunton's Trade S., Southampton  
 Beamish, W. Beaconfield Coll., Plymouth  
 \*Beaumont, W. N. Bethany H., Goudhurst  
 Burghard, R. Warwick H., Southsea  
 Cooper, W. H. People's Coll. Hr. Grade S., Nottingham  
 Daun, J. H. d. Taunton's Trade S., Southampton  
 Davies, E. F. Ruthin Gram. S.  
 Davies, M. d. Queen's Park Coll., Harrow Rd.  
 Dumont, E. C. St. Joseph's Coll., Dumfries  
 Henson, H. J. d. People's Coll. Hr. Grade S., Nottingham  
 \*Hibbert, H. C. Cavendish S., Matlock  
 \*McCormick, A. Ashford Gram. S.  
 \*O'Kelly, J. H. P. St. Joseph's C., Dumfries  
 \*Reynolds, H. E. Froebel H., Devonport  
 Rubinstein, H. Ramsgate School  
 Settles, G. W. R. a. Comm. & Civ. Serv. High S., Forest Gate  
 Smith, C. E. a. The School, Eaton Socon  
 Trevail, J. H. e. Bible Christian C., Shebbear  
 \*Walker, T. Old Elvet S., Durham  
 Webber, C. W. K. l. The Chilterns, Halton, Tring

\*Blackaby, R. S. University S., Rochester  
 Bush, F. T. Market Harborough Gram. S.  
 \*Cox, H. d. St. Philip's Gram. S., Edgbaston  
 Daniel, W. a. l. The Huish Gram. S., Taunton  
 Fearnside, G. A. Comm. Coll., York  
 \*Felton, H. E. Hanley Castle Gram. S.  
 Hayman, E. a. Landsore Coll. S., Teignmouth  
 Heslop, G. C. Argyle H., Sunderland  
 Irvine, J. D. Taunton's Trade S., Southampton  
 Jester, F. d. Alvechurch Gram. S.  
 Le Blanc, S. C. e. The Jersey Modern S.  
 Orchard, C. R. R. Wellesley C., Long Eaton  
 \*Sanders, R. Coll. S., South Molton  
 Snow, N. The Crescent S., Sheffield  
 Thornton, J. Baylis H., Slough  
 \*Thurmond, E. J. Taunton S., Taunton  
 Young, F. S. d. Seaford College

Anderson, W. J. Christian Bros.' Coll., Gibraltar  
 \*Billiard, H. A. Lady Hawkins' Gram. S., Kingston  
 Botting, E. a. Ryde H., Ripley, Woking  
 \*Day, G. W. Hastings Gram. S.  
 Deacon, G. C. Taplow Gram. S.  
 Eaves, J. S. St. Joseph's Coll., Dumfries

Grinstead, J. Ryde H., Ripley, Woking  
 \*Lawson, W. Mid. Class S., Whitby  
 \*Lund, W. H. St. Dominic's Gram. S., Havestock Hill  
 McHale, J. H. Gram. S., Eccles  
 McKenzie, T. S. a. Gram. S., Eccles  
 Nokes, L. G. a. l. Polytechnic Inter. S., W.  
 \*Smithers, H. J. Bethany H., Goudhurst  
 Taylor, H. Wellesley Coll., Long Eaton  
 Winn, D. E. Camden Rd. Coll. S., N.

Abraham, H. C. Taunton's Trade S., Southampton  
 Armitage, R. Fartown Gr. S., Huddersfield  
 Bullock, A. J. Taunton's Trade S., Southampton  
 Cameron, A. J. St. Joseph's Coll., Dumfries  
 Caporn, W. H. a. Montrose C., Brixton Hill  
 Chambers, T. S. Holt H., Cheshunt  
 \*Compe, W. Preston Class. and Comm. S.  
 Dale, R. J. a. Hastings Gram. S.  
 Ford, F. S. e. Tollington Park Coll.  
 \*Gold, N. T. Allendale Coll., Peuge  
 \*Harker, F. M. Brighton Gram. S.  
 Huggett, S. J. University S., Rochester  
 Jacques, H. High S., Sutton, Surrey  
 \*Jones, W. A. Gram. & Coll. S., Carnarvon  
 \*Kearney, L. St. Joseph's Coll., Dumfries  
 Lloyd, R. M. Ruthin Gram. S.  
 Mawdsley, R. University S., Southport  
 Newby, N. Gram. S., Bentham  
 Pawlyn, R. S. Cavendish S., Matlock  
 Perry, W. J. The Douglas S., Cheltenham  
 Plackett, T. People's Coll. Hr. Grade S., Nottingham  
 Russell, J. d. Cambridge H., Margate  
 Smith, S. T. Clyde H., Hereford  
 \*Stanbury, A. The Gram. S., Launceston  
 \*Townson, W. K. Private tuition  
 Walker, F. J. Grove H., Highgate

Benest, S. G. The Jersey Modern S.  
 Blake, H. S. Hounslow Comm. Coll.  
 Channer, J. A. Carter H., Deal  
 Chevens, P. J. Lewes Gram. S.  
 Chisholm, J. S. Argyle H., Sunderland  
 \*Denley, H. O. Hanley Castle Gram. S.  
 Fellows, W. H. G. Taunton's Trade S., Southampton  
 Hamilton, V. H. Hutton Gram. S.  
 Haworth, J. Hutton Gram. S.  
 Hayward, W. H. Taplow Gram. S.  
 Kirkham, P. People's Coll. Hr. Grade S., Nottingham  
 Lowther, J. A. Gram. S., Eccles  
 \*McLennan, A. e. Osborne High S., W. Hartlep'l  
 Mein, O. C. Oswestry Gram. S.  
 Milburn, T. M. Chandos Gram. S., Winchcombe  
 Spencer, F. W. High Pavement S., Nottingham  
 \*Spurgeon, J. A. Private tuition  
 Street, C. D. G. Tollington Park Coll.  
 Turner, W. K. d. Taunton S., Taunton  
 \*Whitby, G. B. Gram. S., Yeovil

Almond, T. H. Gram. S., Longsight, Manchester  
 Appleton, R. A. e. Gram. & Inst. S., Thirsk  
 Earley, F. H. Catholic Coll., Ince, Manchester  
 Hargrave, J. E. St. Kilda's Coll., Waterlooville, Hants  
 Harris, B. Wright's S., Faversham  
 Hart, A. a. Horsmonden S., Kent  
 \*Hoare, E. A. Camden Rd. Coll. S., N.  
 Holden, S. G. Worthing Gram. S.  
 Jones, E. H. Kingsholme S., Weston-s.-Mare  
 Loetschert, W. H. St. Aloysius Coll., Hornsey Lane, N.  
 Loveless, A. W. g. Raleigh Coll., Brixton  
 Lund, G. d. Worthing Gram. S.  
 Marshall, J. A. Gram. S., Eccles  
 Simmons, A. J. University S., Rochester  
 Smith, R. B. a. Linden H., St. John's S. E.  
 \*Sullivan, C. H. Hastings Gram. S.  
 Walker, O. H. Holt H., Cheshunt  
 Walker, S. G. Holt H., Cheshunt  
 Warren, D. S. Montrose Coll., Brixton Hill  
 Whellen, M. a. Ryde H., Ripley, Woking  
 Young, F. D. Newcastle Modern S.

Bowes-Scott, R. 6 Redesdale St., Chelsea  
 \*Farmer, B. St. Joseph's Acad., Kennington Rd. S. E.  
 Forster, J. I. Tutorial S., Penarth  
 \*Gorrings, R. E. Ealing Gram. S.  
 \*Griffiths, F. A. Private tuition  
 Hall, C. E. The Huish Gram. S., Taunton  
 Holden, A. Gram. S., Belper  
 Kilbride, T. J. St. Aloysius Coll., Hornsey Lane, N.  
 Lemon, C. Barnstable Gram. S.  
 Lowe, G. E. Fartown Gram. S., Huddersfield  
 Mason, A. W. Grove H., Highgate  
 Moore, R. E. Gram. S., Bentham  
 Morrissey, T. H. The Coll., Weston-s.-Mare  
 Reid, J. B. s. The Modern S., E. Grinstead  
 Richards, D. J. R. f. Private tuition  
 Terry, J. L. Sandwich Gram. S.  
 Tucker, A. Taunton's Trade S., Southampton  
 Wallington, Q. St. Joseph's Coll., Dumfries  
 \*Wallond, W. Deal C. College  
 \*Williams, H. M. s. Ruthin Gram. S.

**BOYS, 3RD CLASS, 2ND DIV.—Continued.**  
 Cantle, C. Holt H., Cheshunt  
 Clarke, O.R. a. Taplow Gram. S.  
 Collins, L.T. a. Kingsholme S., Weston-s.-M.  
 De Meza, E. Tollington Park Coll.  
 Edwards, H.M. Oswestry Gram. S.  
 \*Harden, R. Bethany H., Goudhurst  
 Holdsworth, H.S. a. Gosberton Hall S., Spalding  
 Hulles, H. a. Ramsgate S.  
 \*Kelly, R.D. Parkdene & Poyntington S.  
 Luekhurst, H. Sandwich Gram. S.  
 Peach, S.G. Taunton S., Taunton  
 Perry, C.A. Bible Christian Coll., Shebbear  
 Prescott, H. J. Taunton's Trade S., Southampton  
 Thomas, J. a. Pencader Gr. S., Carmarthen  
 Wolstenholme, H. University S., Southport

Agerup, H. Montrose Coll., Brixton Hill  
 Broadbridge, M. St. Aloysius Coll., Hornsey Lane, N.  
 Cann, H.B. Portland Gram. S., Plymouth  
 Collier, H. a. Rusholme High S., Manchester  
 \*Creighton, F.A.E. Cornwall Coll., Liskeard  
 Crowley, S.W. Park S., Wood Green  
 \*De Frame, A.C. Private tuition  
 Gilling, E. Gram. & High S., Thirsk  
 \*Grant, L. Highfield, Wandsworth Common  
 \*Greig, L.L.E. Malden Coll., New Malden  
 Grey, B. Taplow Gram. S.  
 \*Hatzfeld, L.E. a. Bethany H., Goudhurst  
 Hawken, W.T. Camelford Gram. S.  
 S. Hobbs, H. Ashford Gram. S.  
 Hoggett, F.R. Westbourne Rd. S., Sheffield  
 \*King, A. St. Joseph's Coll., Dumfries  
 McGrady, S.H. The Modern S., E. Grinstead  
 Pickard, H.R. Bible Christian C., Shebbear  
 Pinhey, R.K. Horsmonden S., Kent  
 Rowney, F.H. Taplow Gram. S.  
 Salisbury, G.B. Kingsholme S., Weston-s.-Mare  
 Stallabrass, T.F. a. Ealing Gram. S.  
 Stevens, J. Bible Christian Coll., Shebbear  
 Walters, T. a. St. Joseph's Acad., Kennington Rd. S.E.,

Adamson, J. Argyle H., Sunderland  
 Bullen, F. Barnstaple Gram. S.  
 Burchell, A. Wreight's S., Faversham  
 Cross, P.H. Mutley Gram. S., Plymouth  
 Evans, H.T. Private tuition  
 Ferrary, N. Christian Bros. C., Gibraltar  
 Hagon, C. a. St. Mary's Hall, Cardiff  
 Harcombe, J.D. Taunton S., Taunton  
 \*Hazard, R. Montrose Coll., Brixton Hill  
 Marsh, W.S. Stafford Coll., Forest Hill  
 Tombs, W.D.R. a. Holnwood H., South Hill Park, N.  
 Wells, A.J. Richmond Hill S., Surrey  
 Williamson, G.M. Tollington Park Coll.  
 Xavier, J. Victoria Coll., Jersey

Bennett, H.D. a. a. Gram. S., Streatham  
 Burley, S.H. Fartown Gram. S., Huddersfield  
 Davies, H. Pencader Gram. S., Carmarthen  
 Dobbins, R.J. St. Joseph's Coll., Dumfries  
 Green, C.W. g. a. Eye Gram. S.  
 Henton, H.E. Dixie Gram. S., Market Bosworth  
 \*Lane, J.D. Allhallows Gram. S., Houniton  
 Langley, S.H. Hillmartin Coll., Camden Rd., N.W.  
 Larbaletier, C.M. The Jersey Modern S.  
 Loup, G.L. Borden Gram. S., Sittingbourne  
 Marsh, S.T. Park S., Wood Green  
 Murray, J. St. Joseph's Coll., Dumfries  
 \*O'Keefe, J. St. Joseph's Coll., Dumfries  
 Patterson, I.A. Newcastle Modern S.  
 Pledger, O. g. a. N. London High S., N.W.  
 Scroey, W. d. Taunton's Trade S., Southampton  
 \*Stone, E.E. Private tuition  
 Turner, R.D.B. Oswestry Gram. S.  
 Watson, S.E. Osborne High S., W. Hartlepool  
 Worsley, G. Hutton Gram. S.

\*Brown, F. Ashford Gram. S.  
 Bullock, A.E. Wreight's S., Faversham  
 Carr, J. University S., Southport  
 Croxford, P.H. Taplow Gram. S.  
 \*Garwood, C.R. Selhurst Park Coll., S.E.  
 G. Williams, F.O. The Coll., Weston-s.-Mare  
 Harrison, S.C. Tollington Park Coll.  
 Hiett, J. Taunton's Trade S., Southampton  
 Hudson, H.L. New Coll., Worthing  
 \*Keats, B.A. Royal Naval S., Eltham  
 Morrissey, L. Baylis H., Slough  
 Neep, H.W. Dixie Gram. S., Market Bosworth  
 Northwood, T.G. Llandudno College  
 Posso, L. Christian Bros. Coll., Gibraltar  
 Rawlinson, T.W. New Brighton High S.  
 Higby, P.J. St. Aloysius Coll., Hornsey Lane, N.  
 Sharpe, G. Deal College  
 Small, F.B. Waterloo with Seaforth Inst., Liverpool  
 Walker, G. eu. Llandudno College  
 Winter, J.M. University S., Southport

\*Amine, A. Montrose Coll., Brixton Hill  
 Blake, L.G. Duncan H., Gt. Yarmouth  
 Brunnt, T. d. Southport Comm. Coll.  
 Clennett, C.R. Gram. & High S., Thirsk  
 Golden, A.W. Rye Gram. S.  
 Hart, H.C. Hanley Castle Gram. S.  
 Haslock, P. Ryde H., Ripley, Woking  
 Hitchcock, H.H. Ashford Gram. S.  
 Hurst, H.H. Waterloo with Seaforth Inst., Liverpool  
 Igladesen, C.H. f. Ashford Gram. S.  
 Inger, R. Elm Bank S., Nottingham  
 McRitchie, W. McP. Montpellier S., Paignton  
 Meikleham, D.L. Hillmartin Coll., Camden Rd., N.W.  
 Meredith, T.F. Lady Hawkins' Gram. S., Kingston  
 \*Pigott, T.W. Borden Gr. S., Sittingbourne  
 Qun, C. Baylis H., Slough  
 Robinson, G.D. Gram. S., Eccles  
 Rogers, H.B. Seaford College  
 Spendill, C.K. Wreight's S., Faversham  
 Weatherseed, H.V. Hastings Gram. S.  
 Woodcock, C.R. e. Wyndham H., Aldeburgh

\*Ball, A.A.H. Private tuition  
 Bennett, F.C. a. Camden Rd. Coll. S., N.  
 \*Chadwick, C.R. Stretford Comm. S., Manchester  
 Cross, L.H. Taunton S., Taunton  
 Friend, S.R. Sandwich Gram. S.  
 Hook, L.C. Wellington Terr. S., Taunton  
 Lee, F.J. Tollington Park Coll.  
 Passy, R.D. Lady Hawkins' Gram. S., Kingston  
 Patten, A.W. Comm. Coll., York  
 Richards, F.W. Camelford Gram. S.  
 Rogerson, A. Waterloo with Seaforth Inst., Liverpool  
 \*Rowe, C.A.P. High S., Camborne  
 Saunders, N.V. West Cliff S., Ramsgate  
 \*Webb, S.G. Bethany H., Goudhurst

\*Baker, S.K. Holt H., Cheshunt  
 Baunister, H.J. St. Philip's Gram. S., Edgbaston  
 Berry, R.S.B.S. Oswestry Gram. S.  
 Bridge, P.C. Gram. S., Streatham  
 Brunton, L.A. 58 Leyland Rd., Lee, S.E.  
 \*Duplock, T.L. Lancaster Coll., W. Norwood  
 Edgar, J. Deal College  
 Farr, E.G. Clyde H., Hereford  
 French, F.W. Taunton's Trade S., Southampton  
 \*Greengrass, H.W. Holme Wood Coll., Up. Tulse Hill  
 \*Hill, H.J. Hastings Gram. S.  
 Howe, H. York Manor S., York  
 Jarvis, H.E. Taunton's Trade S., Southampton  
 Phillips, R.L. a. Hastings Gram. S.  
 Pither, C. Bible Christian Coll., Shebbear  
 Mallett, T.C. f. Carlton H., Grouville Jersey  
 Muller, J.L.B. g. e. Private tuition  
 Sheppard, S.M.P. Bath College  
 Smith, H.P. Elm Bank S., Nottingham  
 \*Soper, P.F. Taunton's Trade S., Southampton  
 Squire, L.C.T. Camelford Gram. S.  
 Winchester, F.A. St. Aloysius Coll., Hornsey Lane, N.

Andrews, J. Cavendish S., Matlock  
 Ayling, G. Malden Coll., New Malden  
 Beardshaw, H.D. Taplow Gram. S.  
 Carlyle, E.J. University S., Southport  
 Chandler, R. Deal College  
 Dunton, A.R. a. Montpellier S., Paignton  
 George, H.H. Park S., Wood Green  
 Lambert, P.G. Taplow Gram. S.  
 Le Pays, R. Taplow Gram. S.  
 Maurice, R.G. f. Plaisance Terrace S., St. Luke's, Jersey  
 May, S.C. The College, Highbury New Park, N.  
 Montague, R.H. Ealing Gram. S.  
 \*Roberts, H.P. Chandos Gram. S., Winchcombe  
 Watkins, A. Bible Christian C., Shebbear  
 \*Waugh, S.R. Private tuition

Backhouse, A.G. Gram. S., Eccles  
 Baldwin, H.C.C. Prep. S., South St., Greenwich  
 Bascombe, E.L. New Coll., Worthing  
 \*Betbeder, L.G. Selhurst Park Coll., S.E.  
 Bonner, A.S. Taunton's Trade S., Southampton  
 Brock, V.H. Hounslow Comm. Coll.  
 Budgen, P.J. Borden Gr. S., Sittingbourne  
 Chinneck, F.A. a. West Brighton High S.  
 Donnellan, J.T. St. Philip's Gram. S., Edgbaston  
 Eckerley, A.E. Stretford Comm. S., Manchester  
 Ginger, W. Gram. S., Longsight, Manchester  
 Hart, C.O. Ashford Gram. S.  
 \*Hartley, R. The Academy, Wakefield  
 Hawthorth, S. University S., Southport  
 Igladesen, G.H. Ashford Gram. S.  
 Martyr, H. Kew Coll., Surrey  
 Parker, R.S. St. Philip's Gram. S., Edgbaston

Perkins, H. Holnwood H., South Hill Park, N.  
 Raper, E.C. Crompton S., Southend  
 Rickie, R.B. a. Gram. S., Belper  
 Ruck, C.F. L. The Douglas S., Cheltenham  
 Skinner, J.D. Tankerton Coll., Whitstable  
 Wall, A.B. The Douglas S., Cheltenham  
 Westington, R.H. Mutley Gram. S., Plymouth  
 Wilks, A.E. Clyde H., Hereford  
 Williamson, E. e. 46 Avenham Lane, Preston

Bridson, H. Hutton Gram. S.  
 Brooks, S.W. Gram. S., Bentham  
 Cave, A.M. Cork Gram. S.  
 Chandler, F.S. Park S., Wood Green  
 Cheal, A.G. Bethany H., Goudhurst  
 Dean, C.G. Taunton S., Taunton  
 Ellis, E. Taunton S., Taunton  
 Evans, A.E. Taunton S., Taunton  
 Kew, W.T. Ealing Gram. S.  
 Marshall, C.E. Gram. S., Eccles  
 \*Morris, H. Gram. S., Eccles  
 Overy, H. Rye Gram. S.  
 \*Allen, P. Rye Gram. S.  
 Baird, M. Lancaster Coll., W. Norwood  
 Cattle, C.H. Hornsey Gram. S.  
 \*Comerford, A.A. Cusack Inst., Moorfields  
 Gilbert, J.K. a. Kingsholme S., Weston-s.-Mare  
 \*Heenan, M.C. Wimbledon Coll.  
 Higgs, G.N. West Cliff S., Ramsgate  
 Mitchell, E.J. d. Woodstock Gram. S.  
 Peck, W.H. Eye Gram. S.  
 Perry, A.E. Coll. S., Fairford, Glos.  
 Port, R.W. Sandwich Gram. S.  
 Seller, R. Comm. Coll., York  
 Theaker, V. Gram. S., Streatham

Third Class.—3rd Division.

Boorman, W.J. Bethany H., Goudhurst  
 Bray, F.H.A. Montrose Coll., Brixton Hill  
 Bruce, A.R. Gram. S., Longsight, Manchester  
 Clarkson, L.H. d. Gram. S., Streatham  
 Crowhurst, C. Seaford College  
 Dalnan, S.S. Holt H., Cheshunt  
 Davies, G. Middleton Coll., New Brighton  
 Dawson, E.A. St. John's Coll., Grimsburgh  
 Evans, F.J. Clyde H., Hereford  
 Harmon, L.C. Taunton's Trade S., S'hampton  
 Humphries, E.L. Bethany H., Goudhurst  
 Loisy, E. J. Beaconfield Coll., Plymouth  
 Lorch, J.A. St. Thomas' Abbey, Erdington  
 \*Mackenzie, G.A. Private tuition  
 Marchant, S.H.S. Prep. S., South St., Greenwich  
 Norton, R.W. Private tuition  
 Organ, F.C. Froebel H., Devonport  
 Ramsay, H.C. Nelson H., Clapham Comm.  
 Rees, T. Old College, Carmarthen  
 Renouf, L.P. W.L. St. Thomas' Abbey, Erdington  
 Roberts, J.F. Lady Hawkins' Gram. S., Kingston  
 Sollitt, T.M. York Manor S., York  
 Webb, L.J. Hastings Gram. S.  
 Williams, H.P. The Coll., Weston-s.-Mare  
 \*Woodger, P.N. Duncan H., Gt. Yarmouth

Beck, C. Cavendish S., Matlock  
 Crosby, A.H. 58 Leyland Rd., Lee, S.E.  
 Crunby, B.C. The Gram. S., Launceston  
 Cuffe, L.C.M.G. f. Private tuition  
 Duck, W.C. Taplow Gram. S.  
 Gray, H.W. a. Gram. S., Bentham  
 Hawkes, C.H. Linden H., St. John's, S.E.  
 Hutchison, T.H. Rusholme High S., Manchester  
 Jolliffe, S. St. Austell S.  
 Lackenby, W.F. Comm. Coll., York  
 Nailer, W.E. Hounslow Comm. Coll.  
 Parkes, C.G.S. Comm. & Civ. Serv. High S., Forest Gate  
 Reid, W.E. Carter H., Deal  
 Rheinlander, E.A. Malden C., New Malden  
 Waddington, H. Modern S., Doncaster  
 Watson, J.S. Gosberton Hall S., Spalding  
 Whelan, H.O. Hounslow Comm. Coll.  
 Williams, T. a. Gram. S., Bentham  
 \*Wood, R. Castlebar Court, Ealing  
 Yeo, O.E. d. The Huish Gram. S., Taunton

Beckett, A. Bath College  
 Boniface, M. High S., Sutton, Surrey  
 Cusack, E. St. Joseph's Coll., Dumfries  
 Frank, R.F. Horsmonden S., Kent  
 Galliano, A. Christian Bros. Coll., Gibraltar  
 Gollan, D.W. Bethany H., Goudhurst  
 Goodburn, H. Hutton Gram. S.  
 Hallum, S.S. Taunton's Trade S., S'hampton  
 Hitchcock, F.J. Gram. S., Belper  
 \*Keevil, A.F.M. Kingsholme S., Weston-s.-Mare  
 Knott, F.A. Holme Wood C., Up. Tulse Hill  
 Latham, C. Belle Vue H., Greenwich  
 Lillywhite, R. Ryde H., Ripley, Woking  
 Lyall, H.L.V. Comm. Coll., York  
 Maskell, P.F. Malden Coll., New Malden  
 Stately, H.A. Horsmonden S., Kent  
 Waghorne, H. The Douglas S., Cheltenham  
 Wood, E. Hastings Gram. S.  
 \*Wood-Clarke, C.J. D. Malden Coll., New Malden

Allberry, W.H. Stafford Coll., Forest Hill  
 Butterworth, F. Southport Comm. Coll.  
 Chalmers, C. Lancaster Coll., W. Norwood  
 Evans, B. Pencader Gram. S., Carmarthen  
 Foster, H.I. Model S. Training Coll., York  
 McCall, G. Taunton's Trade S., S'hampton  
 Muller, H.V. Hastings Gram. S.  
 Sleep, A.W. Froebel H., Devonport  
 Taylor, C.H. The Coll., Weston-s.-Mare  
 Travis, F. University S., Southport  
 Wadman, R. Rye Gram. S.  
 Wilkins, F.W. d. New Brighton High S.

Craig, A. University S., Southport  
 Drury, W.H. Modern S., Doncaster  
 du Rocher, F.E. St. Philip's Gram. S., Edgbaston  
 Forman, A.M. Richmond Hill S., Surrey  
 Gooch, J.W. Hillmartin Coll., Camden Rd., N.W.  
 Harris, F.R.G. Kingsholme S., Weston-s.-Mare  
 Kidner, R.W. Taunton S., Taunton  
 Metcalfe, H.G. Gram. S., Longsight, Manchester  
 \*Naf, O. Waltham Coll., Waltham Cross  
 Newson, G.F. St. Philip's Gram. S., Edgbaston  
 \*Simpson, C. Beverley S., Barnes  
 Smith, F. Rusholme High S., Manchester  
 Sullivan, A.N. Hastings Gram. S.  
 Tronche, H.T. Holt H., Cheshunt  
 Warren, H. Hanley Castle Gram. S.  
 Wooldridge, L. Froebel H., Devonport

Baker, F.A. The Huish Gram. S., Taunton  
 Balskille, J.D. Hornsey Gram. S.  
 Billington, H. St. John's Coll., Brixton  
 \*Boitho, W.C.G. Private tuition  
 Brewer, F.J. St. Aloysius Coll., Hornsey Lane, N.  
 Butler, S.J. Sandwich Gram. S.  
 Cameron, D.G.H. Elm Park, Shotley Bdge. N'castle-on-T.  
 Chillingworth, D.H. Cork Gram. S.  
 Howlett, A. West Cliff S., Ramsgate  
 McBrean, H.O. St. Joseph's C., Dumfries  
 Trill, M.H. Tutorial S., Penarth  
 Toyeman, F.M. Gram. S., Streatham  
 Voce, T.G. a. Private tuition  
 Wells, A.V. Gosberton Hall S., Spalding

Bacon, E.H. Mutley Gram. S., Plymouth  
 Bassham, S.E. Bethany H., Goudhurst  
 Chaney, W.H. Elmhurst, Kingston-on-T.  
 Clemens, W.H. Taunton's Trade S., S'hampton  
 Cochrane, C.V. St. John's Coll., Brixton  
 Dempster, T. Waterloo with Seaforth Inst., Liverpool  
 Green, J.L. St. Catharine's S., Broxbourne  
 \*Hewerdine, G.A. Private tuition  
 Hyde, F. Lytham Coll., Lancs.  
 Kelsall, W.A. Gram. S., Longsight, Manchester  
 Martin, L.G. St. Aloysius Coll., Hornsey Lane, N.  
 Roberts, H.F. Bible Christian C., Shebbear  
 Slade, L.W. The Huish Gram. S., Taunton  
 Stevens, V.G. Seaford College  
 \*Taunton, W.J.P. Malden Coll., New Malden  
 Willis, R. Bethany H., Goudhurst  
 Wooster, E.C. Private tuition

Cook, W. Gram. & High S., Thirsk  
 Duckett, V.R. Cambridge H., Margate  
 Grand, B. Wreight's S., Faversham  
 Margolouth, J.F. 58 Leyland Rd., Lee, S.E.  
 \*Palmer, W.H. Modern S., Doncaster  
 \*Roe, A.W. Hastings Gram. S.  
 Stivey, C.M. Froebel H., Devonport  
 Thwaites, A.R.S. Montrose Coll., Brixton Hill  
 Underwood, T. Ryde H., Ripley, Woking  
 Whittle, A.W.G. Mutley Gram. S., Plymouth

Board, A.P. Dixie Gram. S., Market Bosworth  
 Chandler, H.F. Grove H., Highgate  
 Curetton, T. Meredith H., Lichfield  
 Davies, R.T. Park S., Wood Green  
 Harrison, H.W. Penwerris Gram. S., Falmouth  
 Lawrence, J. The Douglas S., Cheltenham  
 Lester, L.W. Hastings Gram. S.  
 Livesey, M. Taplow Gram. S.  
 Long, O.G. Kingsholme S., Weston-s.-Mare  
 \*Morris, R.B. Ealing Gram. S.  
 Rigby, J.F. Ruthin Gram. S.  
 \*Snow, H.E. Crompton S., Southend  
 White, J.E. St. John's C., Sutton, Surrey  
 Wills, C.H. Bradley High S., Newton Abbot  
 \*Barrasford, G. St. Joseph's C., Dumfries  
 \*Beckett, Hope, P. Private tuition  
 Bonnard, L.H. Richmond Hill S., Surrey  
 Bridges, W. Kingsholme S., Weston-s.-Mare  
 Burrell, I.P. St. Aloysius Coll., Hornsey Lane, N.  
 Cutts, A. Model S. Training Coll., York  
 Gibb, A. St. Joseph's Coll., Dumfries  
 Hogan, P. St. Aloysius C., Hornsey Lane, N.  
 Hogg, E.C. The Modern S., E. Grinstead

**BOYS, 3RD CLASS, 3RD DIV.—continued.**  
 James A. Hoe Gram. S., Plymouth  
 Jane, R.E. Willow H., Walsall  
 Klitz, C.M. Taunton's Trade S., Shebbear  
 Martin, E. Bethany H., Goudhurst  
 Nuttall, T. University S., Southport  
 Shaw, G.B. Hasland H., Penarth  
 Silvester, A.H. The Huish Gr. S., Taunton  
 Thomson, E. Taplow Gram. S.  
 Willis, J.E. Willow H., Walsall  
 Wright, F.E. Warwick H., Southsea

Benjamin, C.H. e. Ealing Gram S.  
 Clayton, F. St. Catharine's S., Broxbourne  
 Dodgson, F. Hutton Gram. S.  
 Hammond, E.W. Camden Rd. Coll. S., N.  
 Holzappel, H.T. Duncan H., Gt. Yarmouth  
 Kelly, J.B. St. Aloysius C., Hornsey Lane, N.  
 Pike, C.G. Eye Gram. S.  
 Setford, B.E. Park S., Wood Green  
 White, H.E.G. Grove H., Highgate

Clarke, P.A. Wyndham H., Aldeburgh  
 Dowdeswell, F.J.B. Taplow Gram. S.  
 Emdon, R.R. Froebel H., Devonport  
 Grant, R. Comm. & Civil Serv. High S., Forest Gate  
 Hanson, L.E. Gram. S., Bentham  
 Hart, J.B. Hornsey Gram. S.  
 Henri, A.W. New Brighton High S.  
 Hill, B. University S., Southport  
 Husbands, J.A. Malden Coll. New Malden  
 Kirk, G. Monk Bridge S., York  
 Mason, C.J. Comm. Coll., York  
 Mustapha, S. West Cliff S., Ramsgate

Parr, G.J. Tudor H., Muswell Hill, N.  
 Seldon, N.A. Bible Christian Coll., Shebbear  
 Vine, L.C. a. Hillmartin Coll., Camden Road, N.W.  
 Walker, B. Llandudno College

\*Amos, R.B. Stretford Comm. S., M'chester  
 Baker, H.A. The Jersey Modern S.  
 Birtwistle, F. University S., Southport  
 Brown, C. Southport Comm. Coll.  
 Glenister, G.E. Hastings Gram. S.  
 Henley, G.E. Kingsholme S., Weston-s.-Mare  
 Joaquim, B.J.P. St. John's Coll., Sutton, Surrey  
 LeRossignol, J. Bible Christian Coll., Shebbear  
 Mason, E.A. Taunton's Trade S., Shebbear  
 Mason, P.G. Hounslow Comm. Coll.  
 Mulliner, F. Southport Modern S.  
 Phillips, H.S. Ramsgate S.  
 Rooke, T.A. Gram. and High S., Thirsk  
 Woodward, G. Hanley Castle Gram. S.  
 Wooster, G.H. Private tuition

Bromfield, D.A. St. Aloysius Coll., Hornsey Lane, N.  
 Graham, W.T. New Brighton High S.  
 Kneen, A. Lytham Coll., Lancs.  
 Marchington, W.B. Hutton Gram. S.  
 Plackett, H.W. Comm. Coll., York  
 Ray, R.R. St. Austell S.  
 Ward, F. The Academy, Wakefield

Cardell, C.P. Sunny Hill S., Ilfracombe  
 Davies, E.F. Lady Hawkins' Gram. S., Kington  
 Powis, E.R. The Huish Gram. S., Taunton  
 Smith, W.O. Oswestry Gram. S.  
 Wroth, J.B. a. Kingsholme S., Weston-s.-Mare  
 Wyard, L. Hasland H., Penarth

Coys, C.C. Lansdowne Coll. S., Teignmouth  
 Hancock, J.A. Stretford Comm. S., M'chester  
 Harries, T.L. Pencader Gr. S., Carmarthen  
 Lipinski, H. Ramsgate School  
 Morgan, L.W. Taunton's Trade S., Shebbear  
 Musgrave, H. Taunton S., Taunton  
 Pithers, S.J. Hillmartin Coll., Camden Rd., N.W.  
 Turner, M.B. Duncan H., Gt. Yarmouth

Cave, G.C. Hastings Gram. S.  
 Chandler, H.F. Camden Rd. Coll. S., N.  
 Cordingley, L. Wharfedale C., Boston Spa.  
 Farr, J.S. Gosberton Hall S., Spalding  
 Flisher, G.E. Rye Gram. S.  
 Francis, M. Deal College  
 Harman, A.B. St. John's Choir S., St. Leonards  
 Lale, H.P. Taunton S., Taunton  
 Lilly, A.N.I. 2 Delgany Villas, Crown Hill, Devon  
 Mott, W.R. St. John's Choir S., St. Leonards

Patrick, G.H. Market Harborough Gram. S.  
 Perkins, S.V. The Modern S., E. Grinstead  
 Simmons, G.H. Kingsholme S., Weston-s.-Mare  
 Wright, S.G. Southport Modern S.

Buckmaster, F.L. Anglesea H., St. Mary Cray  
 Chattaway, T. Richmond H., Handsworth  
 Evans, D.A. Froebel H. Devonport  
 Guilding, N.H. Hanley Castle Gram. S.  
 Huggins, C.O. Manor H., Havant  
 Mansbridge S., Ryde H., Ripley, Woking  
 Noirit, V. St. Philip's Gram. S., Edgbaston  
 O'Gorman, C. Private tuition  
 Paton, A. Portland Gram. S., Plymouth  
 Stanley, E.G. St. Kilda's Coll., Waterlooville, Hants.  
 Watson, W.H. Bethany H., Goudhurst

Bennett, D. Private tuition  
 Bourn, J. Hutton Gram. S.  
 Davison, H.W. Argyle H., Sunderland  
 Farrow, J.W. Stretford Comm. S., M'chester  
 Fern, W.S. The Huish Gram. S., Taunton  
 Isitt, H.S.G. Taunton S., Taunton  
 Morgan, R. The Braushill S., Torquay  
 Pearne, W.H. Cork Gram. S.

Cooper, T.A. Ashford Gram. S.  
 Grisewood, P. Kensey, Launceston  
 Jarrard, E.E. Taunton's Trade S., Southampton  
 Messent, H. Montrose Coll., Brixton Hill

GENERAL CLASS LIST — GIRLS.

(For list of abbreviations, see page 33A.)

First Class.—Honours Division.

Marks, A.F. s.e.h.a.u.eu.tr.f.l.d. Private tuition  
 Fry, B. s.h.g.a.u.f.d.sh. Red Maids' S., Bristol  
 Pearce, A. s.e.h.g.a.u.eu.f.d. Red Maids' S., Bristol  
 Annand, A.T. e.g.f.d. Red Maids' S., Bristol  
 Whyham, E.M. s.e.f.g.m.u. Royal Naval S., Twickenham  
 Brown, S. Rutherford C., Newcastle-o.-T.  
 Ruddle, A.A. Bible Christian C., Shebbear  
 Gill, M. h.s.d. Queen's Pk C., Harrow Rd.  
 Hogan, M. f.d.m.u. St. Mary's Convent, Newtownbarry  
 Clayton, G. d. St. Bernard's S., Southsea  
 Steyaert, M. f. St. Ethelburga's Convent S., Deal  
 Luddington, S. d. d. Rutherford Coll., Newcastle-o.-T.  
 Iddeson, K. f. Private tuition  
 Guyatt, H. R. Portsea Coll. S.

First Class.—Pass Division.

Lovell, E.M. f. High S. for Girls, Wells, Somerset  
 McLeod, L. sh. Lynton H., Portsmouth  
 Ismirides, A. f. English S., Pera, Constantinople  
 Saunders, V. M. Stroud Green High S., Oakfield Rd., N.  
 Kingsford, M. B. f. d. Up. St. Leonards Ladies' Coll.  
 Anderson, M. sd. Brynderwyn Ladies' S., Coleraine  
 Spurgeon, E. L. M. Lyndale Coll., Worthing  
 Appleton, L. M. Wincham Hall Coll., Northwich  
 Harris, E. bk. St. Bernard's S., Southsea  
 Hartigan, J. St. Mary's Convent, Bruff  
 Hodgson, G. G. Oxford Coll., Clacton-on-Sea  
 Travis, H. G. M. bk. d. Eversley H., Willesden  
 Hardstaff, G. M. f. Kirkstow, W. Bromwich  
 Norris, M. A. f. Holt H., Fakenham  
 Ryalls, R. S. E. f. Up. St. Leonards Ladies' C.  
 Thomson, E. G. f. Durham H., Crouch Hill  
 Payton, R. E. d. The Hollies, Soho Park, B'ham  
 Batty, J. A. S. Verulam, Potter's Bar  
 Whittington, E. f. g. e. Ruthin Gram. S.  
 Butler, G. f. d. Durham H., Crouch Hill

Earnshaw, E. M. d. Girls' High S., Cheadle  
 Feist, A. F. Private tuition  
 Lloy, M. M. f. Conv. S., The Avenue, Southampton  
 Whitehead, F. A. University S., Rochester  
 McRobert, A. Brynderyn Ladies' S., Coleraine  
 Carter, K. M. Up. St. Leonards Ladies' Coll.  
 Kinnersley, J. M. f. Clarendon Coll., Clifton  
 Picqué, L. f. Manor H., Surbiton  
 Wallis, E. J. f. Girtton H., Yeovil  
 Adams, B. mu. Girtton H., Yeovil  
 Eedes, M. The College, Goudhurst  
 Langdale, D. M. e. Durham H., Crouch Hill  
 Goddard, E. C. f. Up. St. Leonards Ladies' Coll.  
 Jefferiss, F. E. The Hollies, Soho Park, B'ham  
 Fegan, E. St. Mary's Convent, Newtownbarry  
 Stones, F. Holly Bank S., Cheetham Hill, M'chester  
 Adam, M. University S., Rochester  
 Bromley, C. J. Abney Park C., Stamford Hill  
 Coulton, L. L. Eton H., Cheltenham  
 Ginn, R. E. Abney Park C., Stamford Hill  
 Fagan, G. St. Mary's Convent, Newtownbarry  
 Baker, M. Millburn H., Honor Oak Pk., S.E.  
 Ginaty, A. St. Ethelburga's Convent S., Deal  
 Laendler, V. f. English S., Pera, Constantinople  
 Harvey, H. B. High S. for Girls, Wells, Som.  
 Keeling, A. Chatsworth C., Stamford Hill  
 Lloyd, N. J. The Hollies, Soho Park, B'ham  
 Robinson, M. A. Eldon C., Thornton Heath  
 Young, C. High S. for Girls, Wells, Som.

Second Class.—1st Division.

Zingel, N. B. s. e. n. g. e. Stroud Green High S., Oakfield Rd., N.  
 Norris, B. M. a. e. u. Stroud Green High S., Oakfield Rd., N.  
 Wench, I. L. h. f. Stroud Green High S., Oakfield Rd., N.  
 White, R. a. l. g. e. d. Central Foundation S. for Girls, E.  
 Stott, A. V. H. d. Private tuition  
 Jenner, E. V. H. d. Colonnade Gardens S., Eastbourne  
 Oakes, A. K. s. e. u. Stroud Green High S., Oakfield Rd., N.  
 Lock, M. B. e. f. g. e. Grosvenor Coll., Bath

Whitelaw, A. M. s. Hyde H., Tollington Pk.  
 Todd, E. s. Gordonville Ladies' S., Coleraine  
 Poulter, M. s. f. d. mu. Upper Mount S., Southsea  
 Price, E. F. N. s. f. Cork High S.  
 Wilson, M. I. s. Stroud Green High S., Oakfield Rd., N.  
 Beere, L. d. Central Foundation S. for Girls, E.  
 Rosset, J. s. j. g. e. d. "Y Garn" Bromley, Kent  
 King, V. M. Skinners' Co's. S., Stamford Hill  
 Hornby, L. M. s. Lyndale Coll., Worthing  
 Lynch, J. St. Mary's Convent, Bruff  
 Waring, F. J. A. s. e. f. g. e. Victoria C., Belfast  
 (Philp, S. E. O. a. Finsbury Park High S., N.  
 Reynolds, B. M. Coleridge Coll. S., Finsbury Park  
 Coleclough, M. C. e. d. Convent S., The Avenue, Southampton  
 Clement, D. M. s. Hyde H., Tollington Park  
 Dyer, A. E. a. b. k. Kilmar Coll., Liskeard  
 Girard, M. J. f. Convent S., Eden Grove, Holloway  
 Jarrett, K. Rye Coll. S., Sussex

Protin, G. f. St. Ethelburga's Convent S., Deal  
 West, D. s. e. g. d. Up. St. Leonards Ladies' C.  
 White, E. M. Skinner's Co's. School, Stamford Hill  
 Hayworth, D. s. Skinners' Company's S., Stamford Hill  
 Hone, D. University S., Rochester  
 Kirk, F. C. d. Cent. Found. S. for Girls, E.  
 Levi, G. E. g. e. Skinner's Company's S., Stamford Hill  
 Culverwell, H. f. Clarendon C., Clifton  
 Martin, P. Private tuition  
 Newton, D. C. Cent. Found. S. for Girls, E.  
 Palmer, L. L. Rye Coll. S., Sussex  
 Barry, P. a. St. Mary's Convent, Bruff  
 Coudell, M. A. f. St. Mary's Convent, Newtownbarry  
 Kench, D. E. Breakspear Coll., Brockley  
 Ryan, N. St. Mary's Convent, Bruff  
 Flint, I. C. bk. Cent. Found. S. for Girls, E.  
 Stanley, E. M. mu. Moseley Ladies' Coll.  
 Artbury, F. E. s. Huntington H., Ely  
 Cox, H. E. s. d. Cent. Found. S. for Girls, E.  
 Taratt, F. R. a. Stroud Green High S., Oakfield Rd., N.

Adels, F. s. f. d. Convent S., The Avenue, Southampton  
 Marling, E. d. Greystone S., Yeovil  
 McCandless, A. C. Gordonville Ladies' S., Coleraine  
 (Amon, J. A. b. Rye Coll. S., Sussex  
 Broxholm, V. H. Abney Park Coll., Stamford Hill  
 Carver, J. A. Private tuition  
 Colley-Green, H. M. The Coll., Goudhurst  
 Devereux, J. St. Mary's Convent, Newtownbarry  
 MacDonnell, M. K. St. Mary's Convent, Bruff  
 Wildish, L. d. University S., Rochester  
 Bennett, E. Wincham Hall C., Northwich  
 McCormack, E. s. St. Mary's Convent, Bruff  
 O'Connor, F. Lynton H., Portsmouth  
 Trickett, I. M. Skinners' Company's S., Stamford Hill  
 Whitaker, K. M. E. g. e. Glendair S., Ilkley  
 Hucker, E. d. English S., Pera, Constantinople  
 Loseby, D. Dixie Gr. S., Market Bosworth  
 Ridout, C. E. e. Durham H., Crouch Hill  
 Steele, E. M. Milton H., Atherstone  
 Bulah, B. al. Central Foundation S. for Girls, E.  
 Constable, G. Heathleigh S., Horsamonden  
 Cattle, F. L. Stroud Green High S., Oakfield Rd., N.  
 Leahy, M. s. St. Mary's Convent, Bruff  
 Moore, S. A. s. Cork High S.  
 Pope, M. C. d. Ravenscourt H., Ravenscourt Park, W.  
 Postans, M. H. s. Sullivan Coll., Southampton  
 Whyman, A. E. s. Private tuition  
 Smith, F. M. E. The College, Goudhurst  
 Hooper, D. A. d. Clydesdale, East Finchley  
 Freeman, E. f. Ravenscourt H., Ravenscourt Park, W.  
 Hornby, K. Wincham Hall C., Northwich  
 Liversedge, B. E. f. Royal Naval S., Twickenham  
 Wolverson, M. E. Ely H., Wolverhampton  
 MacGill, E. d. English S., Pera, Constantinople  
 Swanson, E. A. d. Brookvale Coll. S., Belfast  
 Dickinson, E. W. Skinners' Company's S., Stamford Hill  
 Francis, A. Heathleigh S., Horsamonden

Second Class.—2nd Division.

Brook, B. d. Hanover H., Ryde
Hedge, C. M. Buckland H., Axminster
Leach, M. P. Private tuition
Likon, B. Brynderwyn Ladies' S., Coleraine
Minter, H. M. F. J. St. Leonard's Ladies' Coll.
Wagstaffe, F. J. Park Rd. S., Bingley
Watts, E. M. Skippers' Company's S., Stamford Hill
Whittingham, A. A. Old Palace S., Croydon
Cassidy, E. Coston Park S., Levenshulme
Madge, V. E. Royal Naval S., Twickenham
Major, M. S. E. The Hollies, Soho Park, B'ham
Potts, A. E. Skippers' Company's S., Stamford Hill
Hutcheson, E. M. e. Victoria Coll., Belfast
Oxley, N. G. Breakspare Coll., Brockley
Henry, V. M. F. Benhilton Coll., Sutton
Nicholson, D. G. Skippers' Company's S., Stamford Hill
Silvester, E. C. d. Skippers' Company's S., Stamford Hill
Tate, D. E. High S. for Girls, Wells, Som.
Watson, E. A. The College, Goudhurst
Arney, G. G. High S. for Girls, Wells, Som.
Fielding, H. G. J. Moss H., Whitefield, Manchester
Ockelford, H. L. s. f. West Green Coll. S., Tottenham
Dormer, M. J. St. Mary's Conv., Newtownbarry
O'Neill, E. B. Victoria Coll., Belfast
Thomson, F. M. Skippers' Company's S., Stamford Hill
Etherington, G. W. B. Beechcroft Coll., Richmond Hill
Nourian, A. f. English S., Pera, Constantinople
Thompson, G. F. M. Victoria Coll., Belfast
Woolatt, M. R. Private tuition
Jenkins, M. G. Fishguard Gram. S.
Thomson, H. Wincham Hall, Northwich
Wood, D. E. Clarendon Coll., Clifton
Gorringe, E. M. s. South Croydon Coll.
Gunnell, E. f. Ravenscourt H., Ravenscourt Park, W.
Hughes, E. Brynderwyn Ladies' S., Coleraine
Moody, H. S. d. W. Green Coll. S., Tottenham
Woodward, V. E. s. 15 Vyvyan Terr., Clifton
Jewers, H. M. Castlebar High S., Ealing
Baldwin, K. I. d. Woodhouse Hall, Leeds
Holt, E. Private tuition
Jacobsen, M. H. f. High S., Dartmouth
McCready, V. M. Victoria Coll., Belfast
Sleigh, M. E. Up. St. Leonard's Ladies' Coll.
Woolatt, E. M. V. s. Private tuition
Bennett, J. St. Mary's Conv., Newtownbarry
Evans, J. M. d. High S., Dover St., M'chester
Hearle, L. s. The Hall, Montpellier, Cheltenham
Jennings, M. Skippers' Company's S., Stamford Hill
Armitage, A. E. M. Private tuition
Spencer, J. M. s. Abney Park C., Stamford Hill
Spofforth, N. W. 15 Vyvyan Terrace, Clifton
Stewart, M. A. T. s. Victoria Coll., Belfast
Vining, G. College H., Queen's Rd., Peckham
Wood, H. K. Harborne Ladies' Coll., B'ham
Burt, E. C. A. d. Upper Mount S., Southsea
Hogan, D. St. Mary's Conv., Newtownbarry
Wright, L. B. W. 15 Vyvyan Terr., Clifton
Batty, E. A. S. Verulam, Potter's Bar
Golden, M. Ashley High S., Long Sutton
Lambert, L. Convent S., Holt Hill, Birkenhead
Matthews, S. St. Stephen's C., Hounslow
Bugs, C. M. Heathleigh S., Horsmonden
Leavey, L. Millburn H., Honor Oak Park, S.E.
Cheyne, I. Salem H., Sunderland
Doubleday, E. M. Skippers' Company's S., Stamford Hill
Kavanagh, M. St. Mary's Conv., Newtownbarry
McDonald, M. A. Roy. Nav. S., Twickenham
Scordo, K. f. English School, Pera, Constantinople
Smith, F. A. The Hollies, Soho Pk., B'ham
Tatam, G. d. Fern Bank, Wands. Com. S. W.
Wrixon, C. E. Stanmore Coll., Balham
Copley, L. C. d. Central Found. S., for Girls, E.
Bradley, M. Wincham Hall Coll., Northwich
Casley, L. L. Haldon View S., Exeter
Conway, N. St. Mary's Conv., Bruff
Hawkins, L. M. Durham H., Crouch Hill
Reader, L. M. Heathleigh S., Horsmonden
Rose, E. M. E. s. The Hall, Montpellier, Cheltenham
Taylor, G. Ravenscourt H., Ravenscourt Park, W.
Todd, E. d. Onslow Hall, Kensington

Collins, D. S. Brook Green Coll. W.
Ford, W. G. P. St. Kilda's Coll. S., Bristol
O'Shaughnessy, J. St. Mary's Conv., Bruff
Rees, M. M. Surrey H., Anerley
Gardiner, A. E. F. d. The Vicarage S., Clapham Comm., S. W.
Jones, H. M. C. L. Ashlands Coll., Oswestry
Shaw, M. G. M. Private tuition
Morgan, G. Durham H., Crouch Hill
Townsend, E. L. d. The Hall, Montpellier, Cheltenham
Warren, M. M. A. Ashley High S., Long Sutton
Codd, A. St. Mary's Convent, Newtownbarry
Hughes, S. G. Gordonville Ladies' S., Coleraine
Penfold, A. Heathleigh S., Horsmonden
Sowden, M. G. Kilmar Coll., Liskeard
Funnell, B. L. Llanreath S., Boscombe
Golding, M. St. Mary's Convent, Newtownbarry
Hanson, R. Southport Comm. Coll.
Loseby, E. M. f. Dixie Gram. S., Market Bosworth
Murphy, K. N. Skippers' Company's S., Stamford Hill
Roberts, C. E. Hainault H., Ilford
Seed, E. Sunny Lea, St. Anne's-on-Sea
Robson, M. E. Hackney High School
Trim, A. A. Denmark Coll., Wimbledon
Woodman, M. M. d. High S., Northwood, Rickmansworth
Chambers, B. A. d. High S. for Girls, Wells, Som.
Kerr, M. R. Millburn H., Honor Oak Pk., S. E.
Marsden, E. Cavendish S., Matlock
Neville, E. N. Castlebar High S., Ealing
Starkey, A. do. Friedenheim, Seaton
Vincent, J. Girton H., Yeovil
Williams, D. The Hollies, Soho Pk., B'ham

Second Class.—3rd Division.

Taylor, I. M. C. 20 York Villas, Brighton
Townsend, H. M. The Hall, Montpellier, Cheltenham
Jenkins, M. L. Fishguard Gram. S.
Standen, F. The College, Goudhurst
Maberly, E. The Hollies, Soho Pk., B'ham.
Nethercot, R. M. Private tuition
Bosward, J. D. d. Rye Coll. S., Sussex
Cross, E. F. Ashlands Coll., Oswestry
Deschamps, G. L. Glenholme S., Basingstoke
French, H. M. Lynsted Coll. S., Sittingbourne
McComb, M. S. Victoria Coll., Belfast
Taylor, G. The College, Goudhurst
Cuppige, E. Cork High S.
Standing, D. d. High S., Dover St., M'chester
Gillingham, M. C. Private tuition
Hawley, L. M. Skippers' Co.'s S., Stamford Hill
McAfee, F. L. Private tuition
Richardson, A. K. Denmark Coll., Wimbledon
Grant, E. Brunswick H., Gravesend
Ham-Smith, F. C. Surrey H., Anerley
Nasbet, E. s. Saleu H., Sunderland
Strother, I. S. f. Private tuition
Twist, M. Private tuition
Nicolle, E. M. f. Six Roads S., St. Lawrence, Jersey
Crabtree, G. High S., Dover St., Manchester
Quinn, M. J. St. Mary's Convent, Newtownbarry
Rogers, C. Royal Naval S., Twickenham
Crippen, A. F. Lynsted Coll. S., Sittingbourne
Hobson, H. s. St. Mary's Convent, York
Johns, A. Queen's Park Coll., Harrow Rd.
Piggott, M. M. M. Hillside S., Clifton
Thomson, M. Ravenscourt H., Ravenscourt Park, W.
Wilson, A. f. Glenholme S., Basingstoke
Wilson, E. Victoria Coll., Belfast
Bearne, G. M. Skippers' Co.'s S., Stamford Hill
Pollott, W. d. South Croydon College
Mold, M. F. High S., Northwood, Rickmansworth
Sadler, I. W. High S., Clark's Coll., Brixton
Speakman, D. P. Betty Ladies' C., Crewe
Jones, M. W. Rye Coll. S., Sussex
Bowyer, M. A. Woolston Ladies' Coll., Southampton
Green, M. L. Old Palace S., Croydon
Phillips, N. G. Ashlands Coll., Oswestry
Shaw, B. High S., Dover St., Manchester

Gibbs, H. E. S. Holt H., Fakenham
Green, M. E. Llanreath S., Boscombe
Horsey, E. M. Mayfield S., Broxbourne
Rutherford, H. M. Abney Park Coll., Stamford Hill
Squire, R. E. Royal Naval S., Twickenham
Did-Jell, G. M. Holmwood H., South Hill Pk., N. W.
Griffiths, A. A. Westbourne High S., Bournemouth
Howe, F. E. The Hollies, Soho Pk., B'ham
Macdonald, V. Queen's Park Coll., Harrow Road
Hallifax, E. Hillside S., Clifton
Owen, F. M. Ashlands Coll., Oswestry
Chalmers, E. A. Brondesbury High S.
Derriman, F. E. J. Avonbank H., Bath
Palk, C. E. Girton H., Yeovil
Sagar, A. E. Brondesbury High S.
Webber, B. Weeks, M. M. d. Skippers' Co.'s S., Stamford Hill
West, F. R. Castlebar High S., Ealing
Ellison, W. Stagdene S., Bournemouth
Hartigan, J. St. Mary's Conv., Bruff
Lacamp, L. St. Mary's Conv., York
Robinson, A. D. Victoria Coll., Belfast
Selfe, G. M. Denmark Coll., Wimbledon
Barr, K. A. Skippers' Co.'s S., Stamford Hill
Sharpe, H. L. 32 Blenheim Gardens, Willesden
Beech, M. The Hollies, Edgbaston
Bowack, W. A. Carden High S., Peckham
French, L. L. The College, Goudhurst
Froggatt, E. C. Girton, London Rd., Croydon
Goulden, D. Vigne H., Margate
Lodge, E. Fartown Gram. S., Huddersfield
Brook, P. E. Houndiscombe Place S., Plymouth
Grant, W. R. Brunswick H., Gravesend
Southam, E. Private tuition
Adie, E. W. Abney Park C., Stamford Hill
Nutter, B. Ravenscourt H., Ravenscourt Pk., W.
Spencer, L. M. The Vicarage S., Clapham Comm., S. W.

Third Class.—1st Division.

David, J. e. h. a. f. St. Ethelburga's Conv. S., Deal
Smith, I. M. s. Skippers' Co.'s S., Stamford Hill
Cook, E. M. s. Coll. H., Queen's Rd., Peckham
Upton, A. F. Sunny Lea, St. Annes-on-Sea
Morant, A. s. g. e. Kensington High S., Redcliffe Sq., S. W.
Smith, E. M. Hyde H., Tollington Park
Gilling, M. N. Skippers' Co.'s S., Stamford Hill
Frowm, L. s. Beechcroft Coll., Richmond Hill
Zelinski, S. Central Foundation S., for Girls
David, S. St. Ethelburga's Conv. S., Deal
Rowland, C. A. Thornfield Ladies' Coll., Bowdon
Tannahill, E. a. d. Brynderwyn Ladies' S., Coleraine
Benson, M. f. Upper Mount, Southsea
Woodhams, E. d. High S. for Girls, Wells, Som.
Knowles, D. Breakspare Coll., Brockley
Marchant, W. M. h. g. a. d. Stroud Green High S., Oakfield Rd., N.
Barter, W. M. Skippers' Co.'s S., Stamford Hill
Cane, L. Queen's Coll., Haverstock Hill
Wynne, G. E. d. Skippers' Co.'s S., Stamford Hill
Davies, G. S. Millburn H., Honor Oak, S. E.
Alford, E. V. d. Montreux H., Brondesbury
Lambert, M. E. e. h. o. l. e. u. f. Heathleigh S., Horsmonden
Moore, N. d. Queen's Pk. Coll., Harrow Rd.
Fath, B. A. F. f. The Bonhams, St. Leonard's
Sturt, E. W. s. e. g. Hyde H., Tollington Pk.
Collins, C. E. Skippers' Co.'s S., Stamford Hill
Johnson, M. S. d. Woolton Ladies' Coll., Southampton
Newton, C. h. o. Skippers' Co.'s S., Stamford Hill
Potts, K. Line Tree H., York
Gibbs, E. V. s. Felix Inst., Lavender Hill, S. W.
Brown, M. e. a. Skippers' Co.'s S., Stamford Hill
Pulsford, G. F. Breakspare Coll., Brockley
Smith, E. M. f. Skippers' Co.'s S., Stamford Hill
White, E. B. a. l. f. High Pavement S., Nottingham
Wilson, A. M. g. e. d. Private tuition

Pappi, M. e. f. English S., Pera, Constantinople
Andreae, M. M. e. a. d. e. u. St. Mary's Conv., Bruff
Bushby, C. A. Rye Coll. S., Sussex
Murdun, A. E. e. l. Mundella S., Nottingham
Pearson, L. s. Beaufoth, Stratford-o.-A.
Wood, C. E. d. Central Foundation S. for Girls, E.
Avery, H. M. s. Skippers' Co.'s S., Stamford Hill
Barry, M. e. a. d. St. Mary's Conv., Bruff
Dowling, R. E. a. Harley H., Hereford
Gollan, M. I. The College, Goudhurst
Purves, L. s. e. g. a. f. The Avenue, Berwick-on-Tweed
Bunning, M. W. Lulworth H., Caerleon
Duncan, E. F. Gordonville Ladies' S., Coleraine
Wefers, L. Brynderwyn Ladies' S., Coleraine
Wilson, W. L. s. g. e. d. Private tuition
Barnes, J. M. High S. for Girls, Wells, Som.
Burnett, E. M. e. Skippers' Co.'s S., Stamford Hill
Dickinson, E. G. Grove H., Highgate
Oldham, L. G. M. s. h. Skippers' Co.'s S., Stamford Hill
Stewart, H. M. e. a. d. Gordonville Ladies' S., Coleraine
Wyatt, W. G. g. a. u. l. f. Stroud Green High S., Oakfield Rd., N.
Anderson, E. S. s. e. a. Victoria Coll., Belfast
Evans, M. A. s. o. f. Stroud Green High S., Oakfield Rd., N.
Harper, M. E. f. Victoria Coll., Belfast
Walter, G. E. s. a. f. Stroud Green High S., Oakfield Rd., N.
Bell, A. M. Millburn H., Honor Oak, S. E.
Christides, M. f. d. English S., Pera, Constantinople
Cooke, M. W. a. l. f. Stroud Green High S., Oakfield Rd., N.
Dery, C. St. Ethelburga's Convent S., Deal
Kemphorne, E. s. Beechcroft C., Richmond
Lewis, M. W. Queen's Coll., Twickenham
Brown, M. a. l. g. e. Stroud Green High S., Oakfield Rd., N.
Dworzak, E. M. e. a. d. e. u. Stroud Green High S., Oakfield Rd., N.
Lowry, E. B. d. Skippers' Co.'s S., Stamford Hill
Nunn, A. C. Westcliff Coll., Southend
Shelly, K. St. Mary's Conv., Newtownbarry
Walsh, B. s. a. f. St. Mary's Conv., Bruff
Woolley, A. K. e. g. Skippers' Co.'s S., Stamford Hill
Aston, A. L. e. f. Froebel H., Worthing
Black, N. a. f. Stroud Green High S., Oakfield Rd., N.
Bound, F. M. a. Stroud Green High S., Oakfield Rd., N.
Bridges, G. a. Arrow H., Kington
Hussey, D. H. Skippers' Co.'s S., Stamford Hill
Miller, G. High S. for Girls, Wells, Som.
Borland H. W. f. g. e. Stroud Green High S., Oakfield Rd., N.
Holden, E. M. e. Up. St. Leonard's Ladies' Coll.
Shelly, M. e. a. f. St. Mary's Conv., Newtownbarry
Southall, E. M. s. f. g. e. Alwyne C., Canonbury
Stevenson, G. S. f. Stroud Green High S., Oakfield Rd., N.
Turner, I. H. e. g. f. Private tuition
Wilks, R. M. a. Stroud Green High S., Oakfield Rd., N.
Wright, F. E. a. High Pavement S., Nottingham
Gogarty, L. St. Ethelburga's Convent S., Deal
Hornby, D. e. a. g. e. The Hollies, Soho Park, B'ham
Read, E. K. g. f. Skippers' Co.'s S., Stamford Hill
Comrie, K. M. N. Kirkstone, W. Bromwich
Drover, B. S. J. Sullivan C., S'hampton
Gleeson, H. g. a. a. l. St. Mary's Conv., Bruff
Gruchy, C. f. St. James' Coll. S., Jersey
Mason, A. H. a. f. High Pavement S., Nottingham
Nicholson, R. a. Portsea Coll. S.
Pearce, E. Stroud Green High S., Oakfield Rd., N.
Stoneman, J. W. G. D. The Hollies, Yattoo
Walsh, E. e. a. d. St. Mary's Conv., Bruff
Cullerne, G. M. Skippers' Co.'s S., Stamford Hill
Nettleship, M. Skippers' Co.'s S., Stamford Hill
Paxton, J. H. s. e. h. g. a. The Avenue, Berwick-on-Tweed
Pritchard, R. I. M. Stroud Green High S., Oakfield Rd., N.
Turner, M. E. g. e. Private tuition



GIRLS, 3RD CLASS, 1ST DIV.—Continued.

Day, M. a. d. Stroud Green High S., Oakfield Rd., N. Dennis, G. M. e. Addingdon H., Thornton Heath Hayward, M. B. B. f. Brankome Coll., New Milton, Hants Johnson, F. E. A. e. f. Lansdown Ladies' Coll., Bath Lodge, E. e. Fartown Gram. S., Huddersfield

Billings, L. E. a. Stroud Green High S., Oakfield Rd., N. \*Boorman, E. d. Stantway, Bedford Hill, Balham \*Delves, A. M. Rye Coll. S., Sussex \*Lang, G. L. Gartlet, Watford Seymour, F. M. g. a. Milton H., Atherstone \*Sinclair, M. M. Holmwood, W. Meon, Hants

Avery, M. L. e. Thorne Rd. S., S. Lambeth Brown, W. E. s. Skippers' Co.'s S., Stamford Hill Bryant, E. e. a. Linwood S., Altrincham Macdonald, J. a. Stroud Green High S., Oakfield Rd., N. Murphy, H. e. a. e. u. St. Mary's Conv., Bruff Ricks, K. M. High Pavement S., Nottingham \*Whiteley, K. F. St. Kilda's Coll. S., Bristol

Cortes-Smith, M. sp. Danehurst, Putney Harwood, S. A. The College, Goudhurst Houston, C. E. M. e. f. Gordonville Ladies' S., Coleraine Howard, E. L. s. e. Stroud Green High S., Oakfield Rd., N. Noyce, M. I. Up. St. Leonards Ladies' Coll. Rands, I. L. e. Addingdon H., Thornton Heath Scott, A. J. Brigstock Rd., Thornton Heath Smyth, J. M. a. u. l. Stroud Green High S., Oakfield Rd., N. Spensley, M. f. High Pavement S., Nottingham

\*Anderson, K. M. Carleton Queen's Coll., Tufnell Park, N. Crease, E. Aintree High S., Liverpool \*Dash, G. M. Abney Park Coll., Stamford Hill Harrison, A. B. a. Mundella S., Nottingham Kenn, Y. e. English S., Pera, Constantinople Lambrides, H. e. a. f. English S., Pera, Constantinople Micklam, F. M. The Southend S., Winchester Robinson, W. E. Holloway Coll., N. Rogers, A. M. H. f. Beechcroft Coll., Richmond Hill Wilson, F. M. s. e. f. g. e. Private tuition

Carter, D. F. Up. St. Leonards Ladies' Coll. Greig, J. Queen's Park Coll., Harrow Rd. \*Holmes, R. M. Prestwich High S. \*Johnson, E. S. Henley H., Ware Maclean, H. C. Beechcroft Coll., Richmond Hill Risdon, E. E. D. s. h. g. f. High S. for Girls, Wells, Som. Stebbing, L. S. e. g. f. Private tuition Theophilus, B. f. Fairhaven, Batheaston, Bath Tyler, E. F. s. e. Skippers' Co.'s S., Stamford Hill Wright, K. a. Southend S., Winchester Yates, C. B. A. e. Abney Park Coll., Stamford Hill

Barrington, G. E. e. f. Up. St. Leonards Ladies' Coll. Byatt, G. Skippers' Co.'s S., Stamford Hill Clements, M. G. a. Hyde H., Tollington Pk. \*Leonard, D. Stantway, Bedford Hill, Balham \*Moore, E. M. 20 York Villas, Brighton Nash, M. H. Upland Coll., Stroud Nield, E. M. Millburn H., Honor Oak, S. E. Ollard, G. A. M. Up. St. Leonards Ladies' C. Phillips, W. S. e. Private tuition \*Spencer, B. H. Private tuition Stewart, R. M. e. f. Gordonville Ladies' S., Coleraine Whyman, M. Private tuition

Beck, E. M. g. Addingdon H., Thornton Heath Bolt, M. E. f. d. Hillside, Clifton \*Fox, L. M. G. Girton H., Yeovil Goddard, M. I. e. Fulham Park Coll., S. W. \*Jeffrey, M. E. Victoria Coll., Belfast Read, J. F. f. Eden Coll., Eden Bridge Royle, D. M. s. e. a. Temple Coll., Forest Gate, E. Wood, D. e. a. f. The Close, Dyke Rd. Brighton \*Worrall, C. M. Moss H., Whitefield, Manchester

Brame, M. E. g. Harborne Ladies' C., B'ham \*Bunce, M. E. S. Durham H., Crouch Hill \*Coudery, D. W. Rye Coll. S., Sussex Dunbabin, E. M. Mundella S., Nottingham \*Fromow, M. S. Oxford Coll., Gunnersbury Hillman, A. e. Stamford Hill and Clapton High S.

Hurlstone-Piper, D. f. Highfield, Wallington Magill, E. G. a. l. Victoria Coll., Belfast O'Shaughnessy, L. e. a. St. Mary's Conv., Bruff Penrose, J. B. Skippers' Co.'s S., Stamford Hill Wright, I. M. High Pavement S., Nottingham

\*Apostolidi, M. e. f. English S., Pera, Constantinople Bilbe, N. C. e. Froebel H., Worthing Butler, M. Ebley H., East Putney Croome, G. M. High Pavement, S. Nottingham Goodhew, G. M. e. d. Lynsted Coll. S., Sittingbourne \*Harris, E. St. Ethelburga's Convent S., Deal Haward, D. M. u. l. Glencoil, Deal \*Hooton, M. Aintree High S., Liverpool Hosking, E. M. d. 32 Blenheim Gardens, Willesden Leverington, M. s. Bracklinn H., S. Norw'd Mayhew, G. E. Skippers' Co.'s S., Stamford Hill Shreeve, O. E. Huntingdon H., Ely Stonebridge, V. E. Huntingdon H., Ely

\*Andrews, H. D. Westbourne High S., Bournemouth Chinn, E. Ebley H., East Putney Evans, V. M. 15 Vyvyan Terrace, Clifton Fluck, E. F. Skippers' Co.'s S., Stamford Hill Gable, H. M. Abney Pk. Coll., Stamford Hill Godon, M. f. Westcombe, Dyke Rd., Brighton Groombridge, G. s. e. f. Lansdowne Coll., Nottingham W. Gyles, G. Bracklinn H., S. Norwood Harrison, L. A. M. s. h. Anfield Coll., L'pool. Lob de Laversay, S. a. Westcombe, Dyke Rd., Brighton Manly, R. a. Girls' Gram. S., Levenshulme Mason, D. e. Lyndale Coll., Worthing

\*Anyan, A. G. e. Girls' S., South Shore, Blackpool Baggs, B. B. The Vicarage S., Clapham Common, S. W. Courouvacaly, B. e. u. d. English S., Pera, Constantinople Freegard, M. G. s. e. Hyde H., Tollington Pk. Harvey, E. A. 15 Vyvyan Terrace, Clifton \*Hatwood, C. Fairholme, Rylid King, A. The Close, Dyke Rd., Brighton Kitto, C. E. s. Stroud Green, High S., Oakfield Rd., N. \*Lee, E. High S., Walton-on-Thames May, L. H. Manor H., Havant Parkinson, D. a. f. Elvaston, W. Norwood Parson, F. M. Lyndale Coll., Worthing \*Smith, B. Fartown Gram. S., Huddersfield Stokes, G. E. s. Durham H., Crouch Hill

\*Ball, L. Private tuition \*Bridg, C. Prestwich High S. Fletcher, D. F. High Pavement S., Nottingham Franks, G. Aintree High S., L'pool Gifford, G. M. Abney Park Coll., Stamford Hill Goodwin, B. G. d. Skippers' Co.'s S., Stamford Hill Hamlett, C. E. d. 11 Queen's Avenue, Muswell Hill \*Jones, M. E. Ashlands Coll., Oswestry O'Donnell, A. St. Mary's Conv., Bruff Fatten, E. M. Claremont H., Catford, S. E. Quaid, N. a. St. Mary's Conv. Bruff Shaw, M. a. Carlton H., Redhill Tucker, E. M. C. High S., Wyde Green, Birmingham Wynne, F. f. d. St. Ursula's S., Westbury-on-Trym

Beck, M. E. Elmhurst S., Burgess Hill Bruford, L. St. Kilda's Coll. S., Bristol Freeman, F. 31 Brigstock Rd., Thornton Heath Hincks, E. D. M. s. High S. for Girls, Wells, Som. Johnson, L. a. Queen's Park C., Harrow Rd. \*Lloyd, A. A. Bromley Girls' & Prep. S., Kent Papwork, L. S. a. Batley, Ladies' Coll., Crewe \*Peacey, L. C. Private tuition Pudephatt, O. E. e. h. a. The College, Goudhurst Shepherd, D. F. a. Harley H., Hereford Temple, J. D. e. Modern High S., Penge

\*Berry, I. West Green Coll. S., Tottenham Browning, E. G. e. Priory H., York Codd, M. E. d. St. Mary's Conv., Newtownbarry Griffin, M. L. Up. St. Leonards Ladies' Coll. Hodges, E. C. L. s. e. Old Bank H. Coll. S., Castle Cary \*Jarvis, E. L. Bromley Girls' & Prep. S., Kent Lunnon, K. M. g. Fellenberg S., Maidstone Mower, A. E. Southend S., Winchester

\*Ottway, L. B. Higher Grade S., Monnow Rd., S. E. Russell, M. A. a. Skippers' Co.'s S., Stamford Hill \*Sims, B. M. Private tuition Walesby, E. K. e. Skippers' Co.'s S., Stamford Hill Weekes, G. f. 31 Brigstock Rd., Thornton Heath

Ashton, M. E. e. Mundella S., Nottingham Brown-Constable, A. A. Glencoil, Deal Bunce, G. E. Durham H., Crouch Hill Cook, M. a. d. Lonsdale S., E. Finchley Engleman, F. M. a. Skippers' Co.'s S., Stamford Hill Glazebrook, C. Beechcroft Coll., Richmond Hill Griffin, G. Up. St. Leonards Ladies' C. Heppell, R. D. Skippers' Co.'s S., Stamford Hill Hodgson, E. a. Holmwood C., Southend Kenyon, H. g. Lulworth Lodge, Birkdale \*Leader, M. W. Lansdown Ladies' Coll., Bath Malpass, F. M. g. Beaufort H., Stratford-on-Avon Mawby, G. A. e. Mundella S., Nottingham McCreath, J. s. h. Sandgate, Berwick-on-Tweed Mills, M. K. Fartown Gr. S., Huddersfield Priestley, D. a. Linwood S., Altrincham Quaid, J. a. St. Mary's Conv., Bruff \*Robinson, L. N. Private tuition Slater, J. E. High Pavement S., Nottingham Walsley, G. The Grange, Marple

Bolger, K. St. Mary's Conv., Newtownbarry \*Harwood, K. D. Gartlet, Watford \*Pirrie, M. Brook Green Coll., W. Ralph, D. L. Glencoil, Deal Sproule, N. M. e. f. Victoria Coll., Belfast Vipan, L. E. e. Huntingdon H., Ely Woods, H. M. Skippers' Co.'s S., Stamford Hill Yeatman, E. Victoria Pk High S., Bristol

Colt, M. e. Upper Mount, Southsea Cregan, A. St. Mary's Conv., Bruff Crowhurst, M. E. The Coll., Goudhurst Gaynor, M. A. f. St. Mary's Conv., Newtownbarry Harris, D. H. a. Ballina H. High S., Brixton Jones, L. R. Stretton H., Fleetwood Miller, M. Clonville H., Brooke Rd., N. Nash, K. e. Skippers' Co.'s S., Stamford Hill Sangar, A. V. s. e. f. Hillside, Clifton Selve, M. E. Denmark Coll., Wimbledon Summers, N. G. g. f. Royal Bay H., Gorey Jersey Tinley, A. K. e. Belle Vue H., Hurstpierpoint Wilson, J. K. a. Wincham Hall Coll., Northwich Wilson, M. M. e. Private tuition

Browne, M. N. a. Woolston Ladies' Coll., Southampton Carter, M. e. a. Sandgate, Berwick-on-Tweed Connolly, M. a. St. Mary's Conv., Bruff Gable, M. P. Abney Pk. Coll., Stamford Hill Hall, F. J. I. Brondesbury High S. Jackson, G. M. Holmwood H., South Hill Park, N. W. Leader, F. e. f. Lansdowne Ladies' C., Bath Richards, M. A. e. High Pavement S., Nottingham Rowland, K. Girton, London Rd., Croydon Scholefield, M. A. e. Temple Square S., Aylesbury Smallman, L. g. Ashleigh Villas, East Boldon Sulimanje, V. f. Scotch Miss S., Hasskein, Constantinople Webb, E. M. Llandudno Coll. Wilkinson, M. f. 31 Brigstock Rd., Thornton Heath

Third Class.—2nd Division.

Anning, E. M. g. Ravenscourt H., Ravenscourt Park, W. Daniell, M. a. f. Norfolk H., Hagley Rd., B'ham Densham, M. e. a. Coll. S., Lapford \*Ewan, G. L. Clarendon H., Gosport Frankland, E. C. g. Mowbray Ter. S., Thirsk Gatehouse, B. e. Old Bank H. Coll. S., Castle Cary Goodrick, F. M. s. e. g. a. Mowbray Place S., Sowerby \*Graves, S. J. Clifton H., Leyton Hanson, E. C. a. Private tuition Kelly, K. St. Mary's Conv., Newtownbarry Kirkland, F. L. e. d. Skippers' Co.'s S., Stamford Hill Kitchen, G. M. Fartown Gram. S., Huddersfield McAuliffe, J. St. Mary's Conv., Bruff Meldrum, E. e. Linwood S., Altrincham

Parry-Jones, N. V. 48 Park Avenue, Oswestry Schofield, C. Ferndale S., Poole Willson, L. A. Westbourne S., Westbourne Park, W. \*Beek, E. R. Victoria Coll., Belfast Brett, R. L. Holt H., Fakenham Cook, B. C. Skinner's Co.'s S., Stamford Hill Edgar, A. Clonville H., Brooke Rd., N. Garlick, F. C. Girls' S., SouthShore. Blackp'l Gresty, F. e. Derwent H., Whalley Range Gribble, S. D. 15 Vyvyan Terrace, Clifton Harris, F. S. E. e. Norfolk H., Hagley Rd., Birmingham Kirk, E. C. Up. St. Leonards Ladies' Coll. \*Parslow, M. Stamford Hill & Clapton High S. Price, E. W. Skinner's Co.'s S., Stamford Hill Reb, M. St. Ethelburga's Convent S., Deal Richardson, M. A. Burnham H. E. Bridg'd Russell, V. V. Private tuition Williams, G. Upland Coll., Stroud Wilson, R. M. Sunnyside S., Fleetwood

\*Admans, W. The High S., Herne Bay Booth, F. H. High Pavements, Nottingham Bull, B. J. f. Rilston S., Oswestry Darom, S. f. g. e. Scotch Miss S., Hasskein, Constantinople \*Embleton, R. Holmwood H., South Hill Park, N. W. \*Etherington, E. Higher Grade S., Monnow Rd., S. E. Evans, I. G. Harley H., Hereford Galpin, D. M. The Girls' High S., Clitheroe \*Young, M. Mill Hill Park High S., W.

Alexander, A. H. G. f. Royal Naval S., Twickenham Flint, H. e. Carlton H., Redhill Ingram, W. s. High S., Popular Avenue, Edgbaston Mitchell, G. E. The Crescent C., York Parson, M. F. Lyndale Coll., Worthing Sherwood, G. M. Private tuition Weston, H. a. Harley H., Hereford

Birtwell, E. Girls' S., South Shore, Blackpool Burton, A. M. High Pavement S., Nottingham \*Churchouse, D. L. Hainault H., Ilford Ellison, M. V. e. Temple Sq. S., Aylesbury Grindley, F. J. a. St. Winifred's, Southampton Heywood, M. Private tuition Hutchinson, E. High Pavement S., Nottingham McKay, T. e. h. St. Ursula's S., Westbury-on-Trym Schrader, C. E. s. Hamilton Coll., Slidcup Smallman, F. M. f. Victoria Coll., Belfast VonderMeden, D. C. e. Lyndale C., Worthing Whitfield, D. L. e. g. Clarendon Coll., Clifton

Davies, W. E. Ballina House High S., Brixton Duplock, M. C. Cavendish S., Redhill Fuller, G. Temple Square S., Aylesbury Guppy, A. Clonville H., Brooke Rd., N. \*Hinwood, F. M. Freemantle High S., Southampton Meakin, A. M. Betley Ladies' Coll., Crewe \*Moller, L. Southville H., Aldeburgh \*O'Donnell, C. Adv. Elem. Girls' S., Merthyr Tydfil Priestley, N. A. Ebley H., East Putney Scott, F. D. Loretto H., Hornsey Lane, N. Sears, M. de La B. e. f. 65 Oakhurst Grove, East Dulwich Stafford, M. A. Beechcroft Coll., Richmond Hill Wilkinson, G. The High S., Herne Bay Wood, D. e. Dunedin, Station Rd., Harrow

Adlington, A. G. Thorne Rd. S., South Lambeth Barker, A. E. Mowbray Place S., Sowerby Cameron, R. T. e. g. Highfield C., Blackpool Carter, J. D. a. Sandgate, Berwick-on-Tweed Casley, M. G. Haldon View, Exeter Gould, M. B. Skippers' Co.'s S., Stamford Hill Hishon, R. a. St. Mary's Conv., Bruff Lang, C. D. f. Royal Naval S., Twickenham Larkin, M. S. The College, Goudhurst Mayer, M. A. f. Betley Ladies' Coll., Crewe Purcell, K. St. Mary's Conv., Bruff Stent, M. Froebel H., Worthing Williams, L. M. e. Harley H., Hereford \*Young, E. D. Queen's Coll., Haverstock Hill

Addis, M. K. Skippers' Co.'s S., Stamford Hill Andrews-Bligh, V. M. g. Carlton H., Grouville, Jersey Bell, H. G. Princess Gardens S., Belfast Berry, E. Fartown Gr. S., Huddersfield Clements, M. J. Victoria Coll., Belfast Colebrooke, A. M. Rye Coll. S., Sussex Constable, M. a. l. Heathleigh S., Horsmonden Coombes, L. Higher Grade S., Monnow Rd., S. E. \*Greenwood, W. Ashmount S., Sheffield

**GIRLS, 3RD CLASS, 2ND DIV.—Continued.**  
 Hall, S. E. High S., Poplar Avenue, Edgbaston  
 Payne, E. C. Girtton, London Rd., Croydon  
 Rutter, L. G. a. Henley H., Ware  
 Seed, F. Stretton H., Fleetwood  
 Snow, D. M. Private tuition  
 Stansfield, M. Ryde H., Ripley, Woking  
 Syms, D. Edenfield H., Withington, Manchester

Acres, V. a. Private tuition  
 Cates, A. M. Denmark Coll., Wimbledon  
 Clare, F. A. c. g. Private tuition  
 Goddard, D. M. Mundella S., Nottingham  
 Hoof, D. E. Holmwood Coll., Southend  
 Horwood, L. Temple Square S. Aylesbury  
 Launcefield, E. Waveney H., Peckham  
 McVittie, E. Victoria Coll., Belfast  
 Renfry, L. A. Royal Naval S., Twickenham  
 Richards, C. A. Tutorial S., Penarth  
 Stallibrass, C. E. Abney Park Coll., Stamford Hill  
 Unett, C. M. z. Betley Ladies' Coll., Crewe  
 Wicks, E. A. E. High S. for Girls, Wells, Som.

Berg, E. Clapton Coll., N. E.  
 Chatham, E. Dunedin, Station Rd., Harrow  
 Clennett, J. f. Mowbray Place S., Sowerby  
 Cox, F. Manor H., Havant  
 Gammon, E. Private tuition  
 Hare, F. J. Lansdown Ladies Coll., Bath  
 Howe, E. Woodford High S., Essex  
 Lucas, D. Ferndale S., Poole  
 Marsh, E. M. The Vicarage S., Clapham Comm., S. W.  
 Minton-Senhouse, C. M. Ravenscourt H., Ravenscourt Park, W.  
 Trot, M. S. Buckland H., Axminster  
 Walker, W. M. Sudbury and Wembley High S.  
 Walter, E. c. Froebel H., Worthing  
 White, D. 137 Highbury New Park, N.

Adin, C. C. Saxtonholme High S., Whalley Range  
 Davey, W. M. Kilmar Coll., Liskeard  
 Davis, H. E. 20 York Villas, Brighton  
 De la Hoyde, M. C. f. The Convent, Highgate Rd., N. W.  
 Eagle, R. Queen's Park Coll., Harrow Rd.  
 Erlebach, D. M. 137 Highbury New Pk., N.  
 Ford, M. Hyde H., Tollington Park  
 Haynes, B. M. Haldon View, Exeter  
 Heblitch, E. T. Durham H., Crouch Hill  
 LeGresley, F. J. Chestnut Farm, St. Mary's, Jersey  
 Lindsey, M. Cavendish S., Redhill  
 Spurgeon, M. S. Manor H., Havant  
 Watson, M. The High S., Herne Bay  
 Williams, E. E. Skinners' Co.'s S., Stamford Hill

Bizon, C. E. f. Conv. S., The Avenue, Southampton  
 Brierley, D. A. a. Moss H., Whitefield, Manchester  
 Goodwill, L. z. St. Michael's, Malton, Yorks.  
 Graham, M. C. E. g. Ravenscourt H., Ravenscourt Pk., W.  
 McGrath, A. St. Mary's Conv., Newtownbarry  
 5839 Private tuition  
 Scott, M. Denmark Coll., Wimbledon  
 Shipp, B. M. Glenfern H., Burnham, Som.  
 Smith, G. M. F. Private tuition  
 Wilson, E. D. Gowan Villas, Jesmond, N'castle-on-T.

Allen, G. E. g. Lynton H., Portsmouth  
 Boyce, M. O. Kynerton, Ullet Rd., L'pool  
 Buckler, D. L. Westford, Streatham  
 Cox, A. M. E. f. Royal Naval S., Twickenham  
 Freeman, M. F. K. Hamilton Coll., Sidcup  
 Gard, S. Girtton H., Yeovil  
 Hexter, H. Clanville H., Brooke Rd., N.

Kenny, G. M. Conv. S., The Avenue, Southampton  
 Lloyd, G. M. Skinners' Co.'s S., Stamford Hill  
 Maass, E. f. St. Hilda's, Gosforth-on-T.  
 O'Reilly, M. St. Ethelburga's Conv. S., Deal  
 Stanford, D. F. Beechcroft Coll., Richmond Hill  
 Taylor, L. C. M. E. a. Hyde H., Tollington Park  
 Tuck, B. W. Lynton H., Portsmouth  
 Turner, A. D. Harley H., Hereford

Armour, F. Ryde H., Ripley, Woking  
 Brooks, F. E. Prestwich High S.  
 Cowdy, D. M. Hamilton Coll., Sidcup  
 Davison, S. I. Skinners' Co.'s S., Stamford Hill  
 Haines, E. M. Strathmore Coll., Sydenham Park  
 Harris, F. C. Harley H., Hereford  
 Hudson, A. Stretton H., Fleetwood  
 Knight, E. Anfield Coll., L'pool.  
 Mitchell, A. Ryde H., Ripley, Woking  
 O'Neill, A. a. St. Mary's Convent, Newtownbarry  
 Peacey, E. I. Private tuition  
 Petford, E. A. M. Gothic Hall S., Highgate Rd., N. W.  
 Plunkett, K. M. z. St. Mary's S., 2 Queen Sq., Brighton  
 Powell, E. E. Lulworth H., Caerleon  
 Stamp, E. F. High S., Waltham Cross  
 Stewart, J. St. Ethelburga's Conv. S., Deal  
 Sykes, A. Fartown Gram. S., Huddersfield  
 White, F. E. Private tuition  
 Yeates, H. Park Lane S., Wellington Pk., Belfast.

Atkinson, B. Westbourne High S., Bournemouth  
 Besant, E. S. Abney Pk. Coll., Stamford Hill  
 Cook, L. B. Private tuition  
 Herapath, E. R. 15 Vyvyan Terrace, Clifton  
 Ingram, M. E. C. z. The Hollies, Soho Park, Birmingham  
 Knowles, N. Abney Park C., Stamford Hill  
 Muir, J. M. Girtton, London Rd., Croydon  
 Pearce, L. The College, Goudhurst  
 Savage, E. M. G. St. Faith's, Seaford  
 Segar, H. E. Broudesbury High S.  
 Symes, F. G. Edenfield H., Withington, Manchester  
 Unett, E. E. a. Betley Ladies' Coll., Crewe

Bartleman, M. Sibson Rd. S., Sale  
 Brown, J. Aintree High S., Liverpool  
 Harkness, J. M. The Hollies, Soho Park, Birmingham  
 Henderson, A. a. Sandgate, Berwick-on-T.  
 Holman, A. M. Summerland H., Topsham  
 Jones, K. L. B. Anglo-French Coll., Up. Norwood  
 Kennedy, E. A. Beaufort H., Stratford-on-Avon  
 Large, M. The College, Goudhurst  
 Long, E. A. The Hollies, Soho Park, B'ham  
 Mulvaney, K. E. C. Convent S., Eden Grove, Holloway  
 Rose, M. 31 Brigstock Rd., Thornton Heath  
 Studholme, B. H. Edenfield S., Withington, Manchester

Barker, C. M. Mowbray Place S., Sowerby  
 Bowditch, D. V. Oakwood H., Brighton  
 Burgess, P. M. Private tuition  
 Coles, G. M. South-Western Coll., Finborough Rd.  
 Davies, L. O. f. Oakwood H., Brighton  
 Ely, L. A. Cedar H., Ramsgate  
 FitzHenry, M. Church Home S., Clyde Rd., Dublin  
 Messiter, F. E. f. Private tuition  
 Phillips, R. Oriell H., Harpenden, St. Albans  
 Shipman, S. E. Rutland County S., Uppingham  
 Smedley, E. E. The Hill S., Sandiacre

Smith, D. The High S., Herne Bay  
 Stoner, L. London Coll. Gr. S., Holloway Rd., N.

Armstrong, E. M. Girls' S., South Shore, Blackpool  
 Barkley, E. M. Princess Gardens S., Belfast  
 Childs, A. B. Girtton H., Yeovil  
 Dickson, N. Princess Gardens S., Belfast  
 Greenhill, E. D. Mowbray Place S., Sowerby  
 Hall, F. A. Burnham H., E. Bridgford  
 Heath, E. J. Hamilton Coll., Sidcup  
 Hunter, F. 2 Clarendon Place, Brighton  
 Jones, M. M. Gwynfa Coll., Penmaenmawr  
 O'Reilly, E. St. Ethelburga's Conv. S., Deal  
 Onvrie, M. St. Ethelburga's Conv. S., Deal  
 Powles, G. M. Stantway, Bedford Hill, Balham  
 Speller, E. M. Coll. S., Brunswick Place, Southampton  
 Thomas, I. S. Rilston S., Oswestry  
 Woolley, E. P. Skinners' Co.'s S., Stamford Hill

Betts, K. L. A. f. Ravenscourt H., Ravenscourt Park, W.  
 Bugg, A. High S., Waltham Cross  
 Chiuichen, M. Queen's Pk. Coll., Harrow Rd.  
 Freeman, M. E. Milton H., Atherstone  
 Isgar, G. H. High S. for Girls, Wells, Som.  
 Lark, A. Pemberton Coll., Up. Holloway  
 Loomes, E. S. Carleton Queen's Coll., Tufnell Park, N.  
 Munroe, E. Fartown Gram. S., Huddersfield  
 Stewart, A. Ladies' Coll. S., Bangor, Co. Down  
 Stoner, C. E. Abney Park Coll., Stamford Hill  
 Worswick, C. Saxtonholme High S., Whalley Range

Crees, H. K. Selwood S., Frome  
 Fisher, N. Temple Square S., Aylesbury  
 Lambert, O. Woodford High S., Essex  
 Trenwith, E. L. Cork High S.  
 Williams, M. E. Stretton H., Fleetwood

**Third Class.—3rd Division.**  
 Chubb, F. E. High S., Waltham Cross  
 Harker, N. Aintree High S., L'pool  
 Mainwaring, M. Harley H., Hereford  
 Trachtenburg, R. L. Ravenscourt H., Ravenscourt Park, W.  
 Ward, H. St. Mary's Convent, Bruff  
 Welsh, A. M. a. Blackdown S., Wellington, Som.

Brown, G. Woodford High S., Essex  
 Christy, M. A. Brookvale Coll. S., Belfast  
 Elkington, A. M. Anby H., Downs Park Rd., N. E.  
 Freeman, R. Girl's S., South Shore, Bl'ckpl'  
 Glover, E. E. V. Private tuition  
 Hartley, S. Blairgowrie S., Kirkby Lonsdale  
 Hoskin, E. Highwood H., Liskeard  
 Lloyd, A. The Hollies, Soho Park, B'ham  
 Mockler, M. St. Mary's Convent, Newtownbarry  
 Monkhouse, L. Granville H., S'hampton.  
 Neale, A. E. g. The Hall, Montpellier, Cheltenham  
 Spark, E. G. f. Gwynfa Coll., Penmaenmawr  
 Thompson, E. G. z. Ravenscourt H., Ravenscourt Pk., W.  
 Ward, E. A. Rutland County S., Uppingham

Cleave, A. Garfield H., Paignton  
 de la Perelle, H. J. Vauxhall S., St. Helier's, Jersey  
 Hanpson, E. M. Southport Comm. Coll.

Isaacs, I. V. Queen's Coll., Twickenham  
 Wardell, H. L. a. St. Michael's, Malton, Yorks

Coombes, G. D. Harringay S., Hornsey  
 Ellis, H. Clarendon Coll., Clifton  
 McClellan, K. Fartown Gr. S., Huddersfield  
 Newman, C. The Close, Dyke Rd., Brighton  
 Pittaway, N. E. High S., Langley Green, B'ham

Dixon, E. M. 20 York Villas, Brighton  
 Fowler, M. L. Girtton H., Yeovil  
 Graham, I. E. 1 Craley Gdns., Muswell Hill Rd., N.  
 Neale, D. Duncedin, Station Rd., Harrow

Higgs, M. E. 11 Queen's Av. Muswell Hill  
 Holt, E. M. Granville H., Southampton  
 Johns, D. St. Monica's, Southampton  
 Jones, E. Woodford High S., Essex  
 Jordan, G. A. Hillside, Clifton  
 Lightfoot, E. Aintree High S., Liverpool  
 Pierce, E. M. Cavendish S., Redhill  
 Willcox, C. M. Cavendish S., Redhill

Bedford, A. M. Winford H., Heron Hill, Belvedere  
 Caldwell, C. M. Princess Gardens S., Belfast  
 Mash, A. C. St. Hilda's, Gosforth-o.-T.  
 Harlow, E. M. Addiscombe H., Margate  
 Moss, J. J. 34 King St., Gt. Yarmouth  
 Osborn, V. A. Cairnbrook Coll. S., Woodford  
 Wainwright, M. H. Woodcross H., Sedgley  
 Ward, E. K. Milton H., Atherstone

Bedford, M. I. Wynford H., Heron Hill, Belvedere  
 Parker, L. E. Sudbury and Wembley High S.  
 Scott, B. L. Belle Mont H., Ossett  
 Turner, L. Crane H., Cranbrook  
 Wilson, S. Cumberland H., Bouverie Rd., N.  
 Heath, L. M. E. High S., Waltham Cross  
 Kelly, M. C. 32 Blenheim Gdns., Willeloden  
 Kenny, B. M. Conv. S., The Avenue, Southampton  
 Reid, E. M. Waveney H., Peckham

Cox, M. L. St. Monica's, Southampton  
 Tweedie, E. M. Cavendish H., Sefton Pk., Liverpool

Blandford, L. Ferndale S., Poole  
 Chappell, M. E. Crofton H., Cheetham, Manchester  
 Ginn, D. A. Abney Park C., Stamford Hill  
 Parkinson, M. E. Sunnyside S., Fleetwood  
 Sawyer, C. M. Derwent H., Whalley Range

Bishop, H. M. Carleton Queen's C., Tufnell Park, N.  
 Blundell, A. Lulworth Lodge, Birkdale  
 Coates, E. M. South Hornsey S., N.  
 Eastwood, P. L. Oak Hill S., Huddersfield  
 Clifford, R. A. Brondesbury High S.  
 Fausset, E. M. Stretton H., Fleetwood  
 Imperiali, E. C. Convent S., Eden Grove, Holloway

Arnold, A. L. Oakwood H., Brighton  
 Gaskell, B. A. The Poplars, Southport  
 Wheeler, E. Queen's Park Coll., Harrow Rd.

Griffiths, H. G. Anglo-French C., Up. Norw'd  
 Hammond, N. Woodford High S., Essex  
 Hughes, M. S. Oakwood H., Brighton  
 Swaby, V. The College, Goudhurst

Heaton, J. 46 Avenham Lane, Preston  
 Holder, A. f. Conv. S., Eden Grove, Holloway  
 King, H. The Poplars, Southport  
 Mace, A. Thanet H., Hounslow  
 Steeple, A. z. Park S., Middleton, Lanca.  
 Tueker, H. G. Durham H., Crouch Hill  
 Gander, A. 2 Clarendon Place, Brighton

NAMES OF CANDIDATES IN THE ABOVE LISTS WHO HAVE PASSED THE ORAL EXAMINATIONS IN FRENCH AND GERMAN.

f = French. g = German.

BOYS.

Adamson, R.B. f.g. Tollington Park Coll.	de Minvielle, C.D.E. f. St. Aloysius Coll., Hornsey Lane, N.	Le Morvan, R. f. St. Joseph's Acad., Kennington Rd., S.E.	Smith, A.W. f.g. Tollington Park Coll.
Allman, T. f.g. Beechen Cliff, Peckham Rye	Dorey, G. f.g. The Jersey Modern S. Bath College	Lewis, C.G.G. f. Bath College	Storley, G. f. Hutton Gram. S.
Allward, F.L. f.g. Tollington Park Coll.	Duveen, J.E. f. Bath College	Lord, C.R. f. Gram. S., Eccles	Theobald, H.W. f. St. Aloysius Coll., Hornsey Lane, N.
Austin, J.S. f. Private tuition	Eskell, P.R. f. Bath College	Marly, G. f. Hutton Gram. S.	Towler, R.A.G. f. Bath College
Barker, W. f. Hutton Gram. S.	Footo, T.D. f. Tonbridge S. Bath College	Matthews, A. f.g. Tollington Park Coll.	Waltou, W. f. Hutton Gram. S.
Bequet, G.P. f. St. James' Coll. S., Jersey	Gill, R. f. Bath College	Moss, R.D. g. Tollington Park Coll.	Weigwood, J.I. f.g. Private tuition
Briggs, A. f.g. Tollington Park Coll.	Gray, M.I.W. f.g. Private tuition	Page, A.A. f. Private tuition	Weller, C. f. Private tuition
Brinkman, H.G. f.g. St. Aloysius Coll., Hornsey Lane, N.	Hurst, A.W. f. Dixie Gram. S., Mkt. Bosworth	Quin Harkin, A.T. g. St. Aloysius Coll., Hornsey Lane, N.	Whitfield, A.A. g. St. Aloysius Coll., Hornsey Lane, N.
Burr, F.M. f. Tollington Park Coll.	Isherwood, F.T.V. f. University S., Southport	Riddle, F. f.g. Broomwood Coll., Batterssea	Wildsmith, S.P. f.g. St. Aloysius Coll., Hornsey Lane, N.
Chalmers, H.J. f.g. Tollington Park Coll.	Joly, H. f.g. St. Joseph's Acad., Kennington Rd., S.E.	Rothera, L. f. Dixie Gr. S., Market Bosworth	Widdow, W.D. f. Hutton Gram. S.
Choyce, J.C. f. Dixie Gram. S., Market Bosworth	Keniall, A.W. f. Hutton Gram. S.	Samuel, B.B. f. Maida Vale S., W. Gram. S., Eccles	Wivell, W.D. f. Hutton Gram. S.
Cotton, R. f. Gram. S., Eccles	King, H.H. f.g. Tollington Park Coll.	Sellon, B.H. f. Gram. S., Eccles	Wright, H.G.H. f. Tollington Park Coll.
Craddock, F.J. f. Bath College	Kitto, P.T. f.g. Tollington Park Coll.	Sherrin, H.G. f. Private tuition	Yates, J.W. f. Dixie Gram. S., Market Bosworth
Day, E.W. f.g. Tollington Park Coll.	Kordik, A.C. f.g. St. Aloysius College, Hornsey Lane, N.	Shovelton, W. f. Gram. S., Eccles	

GIRLS.

Annand, A.T. f. Red Maids' S., Bristol	Fry, B. f. Red Maids' S., Bristol	Iddeson, K. f. Private tuition	Protin, G. f. St. Ethelburga's Conv. S., Deal
Butler, G. f. Durham H., Crouch Hill	Girard, M.J. f. Convent S., Eden Grove, Holloway	Ouvrie, M. f. St. Ethelburga's Conv. S., Deal	Reb, M. f. St. Ethelburga's Conv. S., Deal
David, J. f. St. Ethelburga's Conv. S., Deal	Gruchy, C. f. St. James' Coll. S., Jersey	Pearce, A. f. Red Maids' S., Bristol	Steyaert, M. f. St. Ethelburga's Conv. S., Deal
David, S. f. St. Ethelburga's Conv. S., Deal	Henry, V.M. f. Benhilton Coll., Sutton	Picquet, L. f. Manor H., Surbiton	Thomson, E.G. f. Durham H., Crouch Hill
Dery, C. f. St. Ethelburga's Conv. S., Deal			

JUNIOR FORMS EXAMINATION.—PASS LIST, MIDSUMMER, 1900.

BOYS.

Adams, B.F. Gosberton Hall S., Spalding	Beddoes, F.T. St. Philip's Gram. S., Edgbast'n	Bushell, J.H. Oswestry Gram. S.	Coombes, W.C.J. Borden Gram. S., Sittingbourne
Adcock, F.H. Dagmar H., Hatfield	Beacroft, V.R. Taplow Gram. S.	Butler, H.J. Seaford Coll.	Cornfoot, D. Wreight's S., Faversham
Addison, P.F. Horsmonden S.	Beesley, A.C. Wirksworth Gram. S.	Butts, A.H.C. University S., Rochester	Corrigan, H. Catholic Coll. Inst., Manchester
Aggett, J. Stafford Coll., Forest Hill	Belancy, A.S. Hastings Gram. S.	Buxton, J. Queen's Walk Inter. S., Nottingham	Cosgrove, J. Catholic Coll. Inst., Manchester
Alcock, G. Middleton Coll., New Brighton	Bell, A.C. Taunton's Trade S., Southampton	Cabelo, C. Christian Bros.' Coll., Gibraltar	Cottrell, G.F. Cambridge H., Margate
Aldecocca, G. Catholic Inst., Hope St., L'pool	Benister, R.C.H. Worthing High S.	Calder, H.F. Cork Gram. S.	Cowlshaw, J. Queen's Walk Inter. S., Nottingham
Alexander, A.C. University S., Rochester	Bennett, L.H. Hill Croft, Amhurst Park, N.	Campbell, G.C. Raleigh Coll., Brixton	Cox, W.A. Taplow Gram. S.
Alcock, H.A. Richmond Hill S.	Berry, G.H. Queen's Walk Inter. S., Nottingham	Campbell, W.L. Clarendon H., Sunderland	Cracknell, R.R. Eye Gram. S.
Allen, J.E. Wirksworth Gram. S.	Bertault, E. Cambridge H., Margate	Canilla, E. Christian Bros.' Coll., Gibraltar	Craddock, W.N. Grove H., Highgate
Anderson, W.A. Sandwich Gram. S.	Botteridge, T. Taunton's Trade S., S'thampt'n	Carcaud, W.G. St. John's Coll. S. Jersey	Crase, F. Taunton S., Taunton
Andrew, F. Osborne High S., W. Hartlepool	Bisby, A.J. Margate College	Cardin, M.H. Cavendish S., Matlock	Cremmer, H. Wreight's S., Faversham
Ankers, T. Hanley Castle Gram. S.	Birkin, S.T. Bethany H., Goudhurst	Carr, H. Ryde H., Ripley, Woking	Crocker, G.K. Catford Coll. S., Lewisham
Anness, W.P. Eye Gram. S.	Black, J.H. Catholic Coll. Inst., Manchester	Carroll, C. Kensey, Launceston	Crocker, W.R. Catford Coll. S., Lewisham
Anson, V. Mutley Gram. S., Plymouth	Blair, J.D. Cork Gram. S.	Carson, N. St. Aloysius Coll., Hornsey Lane, N.	Cropley, P. Ryde H., Ripley, Woking
Appleton, J. Deal College	Blissett, A.E. Margate College	Carter, A.C. Seaford Coll.	Cross, R.A. Bethany H., Goudhurst
Archer, P.H. Hornsey Gram. S.	Blyth, J.M. Wreight's S., Faversham	Castle, W.L. Margate Coll.	Cuthbert, H. Hastings Gram. S.
Arnold, A.J. St. Austell S.	Bosher, B. Queen's Park Prep. S., Harrow Rd.	Catley, E.M. Comm. Coll., York	Dagger, W. St. John's Coll., Grimstargh
Arnold, E.E. The Huish Gram. S., Taunton	Botting, A. Ryde H., Ripley, Woking	Chalker, F. Bible Christian Coll., Shebbear	Dale, J.J. St. Philip's Gram. S., Edgbaston
Attenborough, S. Margate College	Boughiey, J. New Brighton High S.	Champa, W. Wreight's S., Faversham	Dale, R.P. Cork Gram. S.
Attwood, W.G. Margate College	Boustred, F.A.P. Grove H., Highgate	Chate, H.S. Taplow Gram. S.	Dalton, A.T. Cork Gram. S.
Austin, G.R. Oswestry Gram. S.	Boyd, D.S. Osborne High S., W. Hartlepool	Chesley, L.C. The Huish Gram. S., Taunton	Dalton, B.N. Oswestry Gram. S.
Austin, W. Bible Christian Coll., Shebbear	Bowes, G.K. Walden H., Herne Bay	Cheel, P.E. Margate Coll.	Dalziel, P. Osborne High S., W. Hartlepool
Ayling, B. Mt. Radford S., Exeter	Bowes, T.D. Gram. & High S., Thirsk	Clarke, A.R. Queen's Walk Inter. S., Nottingham	Daniels, B. Hastings Gram. S.
Ayling, W. Malden Coll., New Malden	Bowmer, J.J. Wirksworth Gram. S.	Clarkson, E.A. Hutton Gram. S., Preston	Daniels, F.K. Tankerton Coll., Whitstable
Ayres, H.F. Thanet Coll., Margate	Bowyer, A. Malden Coll., New Malden	Clayton, W.F. Gosberton Hall S., Spalding	Davies, D. New Brighton High S.
Bacarese, A. Christian Bros.' Coll., Gibraltar	Bradly, L.H.M. Margate Coll.	Clemson, A.L. St. Philip's Gram. S., Edgbaston	Davies, H. Tutorial S., Penarth
Baddeley, R.W. Walden H., Herne Bay	Bray, H.W. Worthing High S.	Clibborn, H.C. Oswestry Gram. S.	Davies, J.E. Gram. and Coll. S., Carnarvon
Bain, H.R. Kingsholme S., Weston-s.-Mare	Brennan, F. Catholic Coll. Inst., Manchester	Cliff, R.C. Rutland County S., Uppingham	Davies, R.C. Oswestry Gram. S.
Baird, C. Lancaster Coll., W. Norwood	Bridgland, C. Stafford Coll., Forest Hill	Clutson, S.V. Arlington Villa, Brighton	Davies, T.H. Oswestry Gram. S.
Baker, T.H. Camelford Gram. S.	Briggs, C. The Acad., Wakefield	Coates, H. Hutton Gram. S., Preston	Daw, A.G. Hill Croft, Amhurst Park, N.
Balchin, A.B. Hastings Gram. S.	Brodie, H. St. Catharine's S., Broxbourne	Coates, S. Oswestry Gram. S.	Denman, D. Trafalgar H., Lee-on-the-Solent
Ball, F.C. The Huish Gram. S., Taunton	Brooker, C.C. Margate Coll.	Cochrane, L.V. St. John's Coll., Brixton	Detrick, J.L. Private tuition
Ball, R.G. The Huish Gram. S., Taunton	Brook-Smith, G.A. Eye Gram. S.	Collier, N.G. Queen's Walk Inter. S., Nottingham	Detru, L.G. Raleigh Coll., Brixton
Bancroft, S.A. Jura, Adcliffe Rd., Birkenh'd	Brown, A. Hutton Gram. S., Preston	Collins, F. Catholic Inst., Hope St., L'pool	Dew, M.T. St. Catharine's S., Broxbourne
Banks, J.F. Waterloo with Seaford Inst., L'pl	Brown, D.P.M. Gram. S., Streatham	Collins, F.W. Dagmar H., Hatfield	Dillon, S. Gram. and Coll. S., Carnarvon
Barling, C.H. Rye Gram. S.	Brown, H. Beaconfield Coll., Plymouth	Collins, H.J. Taunton S., Taunton	Dinwiddie, D.M. Bethany H., Goudhurst
Barlow, J.R. St. Philip's Gram. S., Edgbast'n	Buckley, C.S. Catholic Coll. Inst., Manchester	Collins, W. Wreight's S., Faversham	Dodd, T.H. The Huish Gram. S., Taunton
Bartlett, S.E. Private tuition	Bungey, A.C. Taunton's Trade S., Southampton	Conchell, R.A. Taunton's Trade S., S'thampton	Dresser, E.E. Commercial Coll., York
Bartrum, S.G. Walden H., Herne Bay	Burd, H.W. Cork Gram. S.	Connell, J. Catholic Coll. Inst., Manchester	Drewett, D.S. Margate College
Bestard, A.E. Camelford Gram. S.	Burdett, B. Malden Coll., New Malden	Conner, W.G. Cork Gram. S.	Drummond, H.C. Mutley Gram. S., Plymouth
Bate, W.J. Chandos Gram. S., Winchcombe	Burkmar, E. Deal Coll.	Cooke, L. Taplow Gram. S.	Duke, F.G.P. Mutley Gram. S., Plymouth
Bates, J. Rye Gram. S.	Burns, J.J. Catholic Coll. Inst., Manchester		Duke, G.E. Mutley Gram. S., Plymouth
Beale, A.F. Langford H., Brighton	Bushby, H.G. Rye Gram. S.		Eales, C. Margate College
Beamish, G. Beaconfield Coll., Plymouth			
Beamish, T. Beaconfield Coll., Plymouth			
Beard, J.W.P. Richmond Hill, S.			

BOYS, JUNIOR FORMS—Continued.

Ede, G.G. St. Austell S.  
 Eden, J.A. Taunton's Trade S., Southampton  
 Eden, P.J. Taplow Gram. S.  
 Edmunds, H.T. University S., Rochester  
 Edwards, G.H. Wright's S., Faversham  
 Edwards, L.V.  
 St. James' S., Keyham, Devonport  
 Elliott, A.H. Broomwood Coll., Battersea  
 Eltringham, G.A.  
 Elm Park, Shotley Bridge, Newcastle-o.-T.  
 Etherington, C.G.A. Thanet Coll., Margate  
 Evans, E.J. Gram. and Coll. S., Carnarvon  
 Evans, H.A. Bible Christian C., Shebbear  
 Evans, H. Queen's Walk Inter. S., Nottingham  
 Faherty, L.B.P. St. Philip's Gr. S., Edgbaston  
 Faherty, S.T. St. Philip's Gr. S., Edgbaston  
 Farrell, E.J. St. Philip's Gr. S., Edgbaston  
 Fawcett-Barry, J. Beaconfield C., Plymouth  
 Felstead, S.A.  
 Queen's Walk Inter. S., Nottingham  
 Fennell, E. Cath. Inst., Hope St., Liverpool  
 Ferrey, E.M. Margate Coll.  
 Filmer, F.S. Wright's S., Faversham  
 Finch, W. Catholic Coll. Inst., Manchester  
 Finigan, W. Cath. Inst., Hope St., Liverpool  
 Finn, J. Catholic Coll. Inst., Manchester  
 Fletcher, F.  
 Queen's Walk Inter. S., Nottingham  
 Fletcher, J.W.  
 Elm Park, Shotley Bridge, Newcastle-o.-T.  
 Fleury, A. St. Aloysius C., Hornsey Lane, N.  
 Freeman, P. Kensey, Launceston  
 Freeman, S. Kensey, Launceston  
 French, S. Margate Coll.  
 Fridge, S.W. Taunton's Trade S., Southampton  
 Gaitskell, E.R. Crompton S., Southend  
 Gareze, A. Christian Bros. Coll., Gibraltar  
 George, A. Wright's S., Faversham  
 George, H. Wright's S., Faversham  
 Gerahy, C.C. St. Catharine's S., Broxbourne  
 Geretti, E.C. St. John's Coll., Brixton  
 Gibbins, E.M. Cork Gram. S.  
 Gibbons, J.G. High S., Birchfield Rd., Bham  
 Gibbs, J. Hanley Castle Gram. S.  
 Gillard, H.W. The Huish Gram. S., Taunton  
 Gillham, G.D. Bethany H., Goudhurst  
 Gillings, C.E. Taplow Gram. S.  
 Gillings, H.F. Taplow Gram. S.  
 Glassey, J.R. Gram. S., Belper  
 Glazebrook, H.P. Richmond Hill S.  
 Goster, E.G. Taunton's Trade S., Southampton  
 Gooyce, H.C. Taplow Gram. S.  
 Gordon, C.S. Jura, Adelaide Rd., Birkenhead  
 Gray-Jones, A.F. New Brighton High S.  
 Greasley, A.E. Stafford Coll., Forest Hill  
 Greatorex, H.H. Gosberton Hall S., Spalding  
 Greaves, A.C.  
 Queen's Walk Inter. S., Nottingham  
 Green, F. Hillmartin Coll., Camden Rd., N.W.  
 Greenland, J.P.  
 Kingsholme S., Weston-s.-Mare  
 Gresswell, H. Richmond Hill S.  
 Griddle, H. Mutley Gram. S., Plymouth  
 Griffith, O.S. St. Philip's Gram. S., Edgbaston  
 Griffiths, H.G. Walden H., Herne Bay  
 Grover, G.S. Loran H., Oswestry  
 Groves, S. Thanet Coll., Margate  
 Gudgson, E.R.  
 Convent S., The Avenue, Southampton  
 Guest, T.J. Horsmonden S.  
 Hagger, R. Middleton Coll., New Brighton  
 Hall, H.N. Dagmar H., Hatfield  
 Hall, P. Oswestry Gram. S.  
 Hand, R.H.J. Ryde H., Ripley, Woking  
 Hamford, C.A. Mutley Gram. S., Plymouth  
 Hannah, L.S. Bible Christian Coll., Shebbear  
 Harwick, G.W.G. Horsmonden S.  
 Harmsworth, G.A. Raleigh Coll., Brixton  
 Harrington, G.J.  
 Convent S., The Avenue, Southampton  
 Harris, C.K. Wright's S., Faversham  
 Harris, F.A. Taplow Gram. S.  
 Harrison, E.T.G. Margate College  
 Harrison, J. Margate College  
 Harrison, R.G. Cork Gram. S.  
 Harrison, W.R. Margate College  
 Hart, A.R. Hanley Castle Gram. S.  
 Hart, E.F. Cavendish S., Matlock  
 Harvey, P. Bible Christian Coll., Shebbear  
 Hatch, F. Bethany H., Goudhurst  
 Hauser, J. Wright's S., Faversham  
 Hawes, N.F. Park S., Wood Green  
 Haynes, F.H. Blackpool Gram. S.  
 Hayward, S.J. The Huish Gram. S., Taunton  
 Head, A.F. Wright's S., Faversham  
 Head, H. Wright's S., Faversham  
 Healy, R.T.G. Hastings Gram. S.  
 Head, T.N. The Huish Gram. S., Taunton  
 Head, W.H. The Huish Gram. S., Taunton  
 Heath, C.  
 Queen's Walk Inter. S., Nottingham  
 Hennequy, J.  
 St. Aloysius Coll., Hornsey Lane, N.  
 Herford, H. St. Aloysius C., Hornsey Lane, N.  
 Herford, J. St. Aloysius C., Hornsey Lane, N.  
 Herratt, G.H.  
 Queen's Walk Inter. S., Nottingham  
 Heywood, S.C. Bible Christian C., Shebbear  
 Hickley, H.J. Taunton's Trade S., Southampton  
 Higgs, W.S. Margate College  
 Hignett, F.L. St. Catharine's S., Broxbourne  
 Hill, J.F.H. New Brighton High S.  
 Hill, R. Deal College

Hinds, A.F. Lancaster Coll., W. Norwood  
 Hingston, F.B. Cork Gram. S.  
 Hodgkins, W.I. Holt H., Cheshunt  
 Hoepstein, C.S. Lancaster Coll., W. Norwood  
 Hogan, C. Catholic Coll. Inst., Manchester  
 Hogben, A. Wright's S., Faversham  
 Hogg, B. Deal College  
 Holder, T.S. Penwerris Gram. S., Falmouth  
 Holgate, S.D. Monk Bridge S., York  
 Holloway, B.E. Wright's S., Faversham  
 Holman, W.G. High S., Camborne  
 Home, P.T. Hanley Castle Gram. S.  
 Hope, J.W.  
 Queen's Walk Inter. S., Nottingham  
 Hopkin, H.L. Hastings Gram. S.  
 Hopkins, F.G. Worthing High S.  
 Hornby, W.W. Richmond Hill S.  
 Horne, C.H. Cork Gram. S.  
 Houghton, R. Taunton's Trade S., Southampton  
 Howson, H.C.O. Broomwood Coll., Battersea  
 Huckle, W.M.  
 Queen's Walk Inter. S., Nottingham  
 Hughes, C. Cork Gram. S.  
 Humphreys, H.  
 Waterloo with Seaforth Inst., Liverpool  
 Humphreys, R.W. Gram. & Coll. S., Carnarvon  
 Hunt, C.P. Eye Gram. S.  
 Hunter, W.H. Comm. Coll., York  
 Illston, G.J. Margate College  
 Ingle, P.T. Cork Gram. S.  
 Jacobson, G. Catholic Coll. Inst., Manchester  
 James, H.W. Alvechurch Gram. S.  
 James, S.G. Sandwich Gram. S.  
 Jarvis, H.J.  
 Queen's Walk Inter. S., Nottingham  
 Jeffery, E. Wright's S., Faversham  
 Jeffreys, O.A. Tudor H., Muswell Hill, N.  
 Jemmett, R.F. Worthing High S.  
 Jewitt, E. Comm. Coll., York  
 Johns, M.E. The Huish Gram. S., Taunton  
 Johnson, A.M. Eye Gram. S.  
 Johnson, W.H. Gosberton Hall S., Spalding  
 Jones, A.S. Wright's S., Faversham  
 Jones, C.M. Wirksworth Gram. S.  
 Jones, C.S. Oswestry Gram. S.  
 Jones, I.G. Sandwich Gram. S.  
 Jones, J.F. Seaford College  
 Jones, T.E. Margate College  
 Jones, W.E. Margate College  
 Joynt, N.L. Cork Gram. S.  
 Laekie, J.M. St. Aloysius Coll., Hornsey Lane, N.  
 Laferme, M.L. Grove H., Highgate  
 Lambert, S. Taplow Gram. S.  
 Lamb Hawkes, M.W.E. Cork Gram. S.  
 Lane, A. Deal College  
 Langford, H.H. Lancaster Coll., W. Norwood  
 Lardner, G. Taplow Gram. S.  
 Larkworthy, N.J. Bible Christian Coll., Shebbear  
 Lashmore, A.J.S. Oswestry Gram. S.  
 Le Maistre, S.G.  
 Pen-y-Craig, St. Helier's, Jersey  
 Lewis, C.B. Taunton S., Taunton  
 Lewis, J. Lady Hawkins' Gram. S., Kingston  
 Lewis, J.S. Oswestry Gram. S.  
 L'Hollier, J.L. St. Philip's Gr. S., Edgbaston  
 Lincoln, H.W. Trafalgar H., Lee-on-the-Solent  
 Lindley, E. The Academy, Wakefield  
 Line, J.K. Etchingham Park S., Finchley  
 Linsley, T.T. University S., Rochester  
 Lisle, R.G. Taunton's Trade S., Southampton  
 Llewellyn, B.G. Kingsholme S., Weston-s.-M.  
 Lloyd, A. Deal Coll.  
 Long, A. St. Philip's Gram. S., Edgbaston  
 Long, R.C. Kingsholme S., Weston-s.-Mare  
 Long, T.E. The Academy, Wakefield  
 Longson, F.D. Taplow Gram. S.  
 Lowden, C.E. Taplow Gram. S.  
 Lowe, C. Beaconfield Coll., Plymouth  
 Lynskey, G. Catholic Inst., Hope St., L'pool  
 Lyon Clark, H.M.  
 Convent S., Pulteney Rd., Bath  
 Kay, H. Queen's Walk Inter. S., Nottingham  
 Kaye, G.J. St. Philip's Gram. S., Edgbaston  
 Keeble, A.P. Bible Christian Coll., Shebbear  
 Keevil, J.F. Kingsholme S., Weston-s.-Mare  
 Kelsall, E.H.  
 Queen's Walk Inter. S., Nottingham  
 Kendall, G.N. High S., Camborne  
 Kendall, S.V. Seaford Coll.  
 Kennedy, T.H.  
 Waterloo with Seaforth Inst., Liverpool  
 Kent, G. St. Austell S.  
 Kerfoot, E.M. Hutton Gram. S., Preston  
 Kerfoot, W.A. Hutton Gram. S., Preston  
 Kilbride, J. St. Aloysius C., Hornsey Lane, N.  
 Kilkenny, C. St. Aloysius C., Hornsey Lane, N.  
 Kingsford, S.J. Taplow Gram. S.  
 Kinnell, M. Seaford Coll.  
 Knight, J.B. Loran H., Oswestry  
 Knighton, T.S. Cambridge H., Margate  
 Koekkoek, P.R. Seaford Coll.  
 Macgregor, J.L. Lonsbury C., Up. Clapton  
 Macintosh, D. Grove H., Highgate  
 Mack, E. Wellesley H., Gt. Yarmouth  
 Macpherson, A.K. Private tuition  
 Maide, B.W. Bible Christian Coll., Shebbear  
 Maher, W.H. Cath. Coll. Inst., Manchester  
 Makins, F.K. Private tuition  
 Mallen, E. Catholic Coll. Inst., Manchester  
 Mann, T. Penwerris Gram. S., Falmouth  
 Mansell, A.E. Chandos Gram. S., Winchester  
 Mares, W.J. Frankfort S., Forest Hill, S.E.  
 Marks, A.E. Taplow Gram. S.

Marsh, G. Hutton Gram. S., Preston  
 Martyn, W.H. St. Austell S.  
 Maskell, L.W. Malden Coll., New Malden  
 Maskell, S.H. Malden Coll., New Malden  
 Mason, H. Alvechurch Gram. S.  
 Mason, W.R. Gosberton Hall S., Spalding  
 Masteron, T. Cath. Coll. Inst., Manchester  
 Matthews, G. Mount Radford S., Exeter  
 Matthews, H. Cambridge H., Margate  
 Matthews, S.G.  
 Queen's Walk Inter. S., Nottingham  
 Mayer, A. Thanet Coll., Margate  
 Maynard, W. Rye Gram. S.  
 McCallum, D. Gram. S., Streatham  
 McCormack, J. Cath. Coll. Inst., Manchester  
 McCormick, S.J. Dagmar H., Hatfield  
 McIndoe, M.J. Taunton S., Taunton  
 McLennan, R.L.  
 Osborne High S., W. Hartlepool  
 Medhurst, S. Horsmonden S.  
 Meek, J.W. Gram. S., Benthams  
 Mejer, P. St. Aloysius Coll., Hornsey Lane, N.  
 Mercer, B. Raleigh Coll., Brixton  
 Meredith, J.A.  
 Lady Hawkins' Gram. S., Kingston  
 Merrick, H.E.C. Richmond Hill S.  
 Metzner, F.E. Richmond Hill S.  
 Meyrick, J.F. Bible Christian Coll., Shebbear  
 Miller, E.S. Oswestry Gram. S.  
 Miller, D.B. Tudor H., Muswell Hill, N.  
 Miller, F. St. Aloysius Coll., Hornsey Lane, N.  
 Milne, A. Margate College  
 Milne, L. Tutorial S., Penarth  
 Milton, F.F. University S., Rochester  
 Milton, H.W. The Huish Gram. S., Taunton  
 Minter, P. Wright's S., Faversham  
 Minter, W. Wright's S., Faversham  
 Minter, W. Taunton's Trade S., Southampton  
 Miskin, G.S. Wright's S., Faversham  
 Moore, G. Wright's S., Faversham  
 Morgan, E.L. Catford Coll. S., Lewisham  
 Morrison, G.J.F.  
 Kingsholme S., Weston-s.-Mare  
 Moss, F.J.G. The Huish Gram. S., Taunton  
 Mullholland, F.  
 Catholic Inst., Hope St., Liverpool  
 Murray, W.H. Cork Gram. S.  
 Nesling, E.B. Eye Gram. S.  
 Newsham, W. Gram. S., Benthams  
 Nicholls-Jones, T.C. Oswestry Gram. S.  
 Nichols, G.H. Taplow Gram. S.  
 Nichols, J.E. Hanley Castle Gram. S.  
 Nixon, M.C.H. Broomwood Coll., Battersea  
 Noakes, A. Rye Gram. S.  
 Noakes, W.J. Rye Gram. S.  
 Nolan, H. St. Aloysius C., Hornsey Lane, N.  
 Northwood, W. Gram. S., Benthams  
 O'Brien, L. St. Philip's Gram. S., Edgbaston  
 O'Keefe, A.H. Cork Gram. S.  
 Oliver, C.  
 St. Aloysius Coll., Hornsey Lane, N.  
 Oliver, E.L. St. Philip's Gram. S., Edgbaston  
 Oliver, S.C. Lady Hawkins' Gr. S., Kingston  
 Olliver, H. Deal College  
 O'Neill, J. St. Aloysius C., Hornsey Lane, N.  
 O'nyon, R.R. Eye Gram. S.  
 Owen, F.K. 8 Birch Rd., Lr. Bebbington  
 Owens, A. St. Aloysius C., Hornsey Lane, N.  
 Owens, C. St. Aloysius C., Hornsey Lane, N.  
 Page, H.G.W. Oxford H., Herne Bay  
 Palmer, T. Cork Gram. S.  
 Panting, F. The Huish Gram. S., Taunton  
 Parkes, H.H. Brean Villa S., Weston-s.-Mare  
 Parkes, J.H.G. Brean Villa S., Weston-s.-Mare  
 Parkin, H.J. Taplow Gram. S.  
 Parrott, P.H. Richmond Hill S.  
 Parrott, R.J. Richmond Hill S.  
 Parsons, G.E. Gosberton Hall S., Spalding  
 Partington, L.W. St. John's Coll., Grimsburgh  
 Payne, J.A. Richmond Hill S.  
 Peacock, O.R. Eye Gram. S.  
 Peak, H. Hutton Gram. S., Preston  
 Pearnman, J. Ryde H., Ripley, Woking  
 Pearson, R.E. Oswestry Gram. S.  
 Pegrum, D. Holt H., Cheshunt  
 Penketh, C.H. Catholic Coll. Inst., Manchester  
 Pennington, F.E. Malden Coll., New Malden  
 Perkin, H.C. Bible Christian Coll., Shebbear  
 Perry, T. St. Aloysius Coll., Hornsey Lane, N.  
 Phillips, A.J. Loran H., Oswestry  
 Phillips, L.P. Hill Croft, Amhurst Park, N.  
 Phillipson, W.T. Gram. S., Benthams  
 Philpott, G.T. Tutorial S., Penarth  
 Playfair, D.P. Margate College  
 Playford, P.P. Wellesley H., Gt. Yarmouth  
 Pleavin, W. Middleton Coll., New Brighton  
 Poole, J. Hutton Gram. S., Preston  
 Portch, W.H. Bradley High S., Newnabbot  
 Posso, H. Christian Bros. Coll., Gibraltar  
 Potter, A. Wirksworth Gram. S.  
 Poupard, M. Richmond Hill S.  
 Powell, G.E. Hastings Gram. S.  
 Powell, W.R. Hastings Gram. S.  
 Pratt, W. Queen's Park Prep. S., Harrow Rd.  
 Prescott, G.A. Christian Bros. Coll., Gibraltar  
 Prescott, H. Christian Bros. Coll., Gibraltar  
 Pregel, F. St. Aloysius Coll., Hornsey Lane, N.  
 Price, A. Waterloo with Seaforth Inst., L'pool  
 Pruden, B. Queen's Walk Inter. S., Nottingham  
 Pullin, S.C. Malden Coll., New Malden  
 Purchase, F.R. The Huish Gram. S., Taunton  
 Radford, E. Ryde H., Ripley, Woking  
 Ramagge, A. Christian Bros. Coll., Gibraltar  
 Ramshaw, F.L. Taunton's Trade S., Southampton

Rayment, P. Dagmar H., Hatfield  
 Rayment, S. Dagmar H., Hatfield  
 Reibman, H.R. Hastings Gram. S.  
 Reinhardt, C.  
 St. Aloysius Coll., Hornsey Lane, N.  
 Relton, A.E. Hill Croft, Amhurst Park, N.  
 Relton, S. Deal College  
 Revill, H.W. Hastings Gram. S.  
 Rice, J.E. The Modern S., E. Grinstead  
 Rieck, W. Hanley Castle Gram. S.  
 Richards, D.G. Stafford Coll., Forest Hill  
 Ricketts, C.R. Park S., Wood Green  
 Riddle, L. Broomwood Coll., Battersea  
 Rimmer, J. Catholic Inst., Hope St., L'pool  
 Roberts, C.L. Arlington Villa, Brighton  
 Roberts, O.H.S. Arlington Villa, Brighton  
 Robertson, R. Deal College  
 Rogers, A.W. Grove H., Highgate  
 Rolfe, H. St. Aloysius Coll., Hornsey Lane, N.  
 Rooston, E.  
 Queen's Walk Inter. S., Nottingham  
 Root, E.J. Taplow Gram. S.  
 Roots, P.W. University S., Rochester  
 Rothemil, F.P.  
 Queen's Walk Inter. S., Nottingham  
 Roxborough, L. Deal College  
 Rundel, R.H. Bible Christian Coll., Shebbear  
 Rundel, S.P. Bible Christian Coll., Shebbear  
 Russ, W. Bible Christian Coll., Shebbear  
 Russo, J. Christian Bros. Coll., Gibraltar  
 Ruys, V.W. West Cliff S., Rungate  
 Saunders, C.W. Taunton's Trade S., Southampton  
 Saunders, F.W.  
 Kingsholme S., Weston-s.-Mare  
 Scarborough, A.J.  
 St. Philip's Gram. S., Edgbaston  
 Scott, A. Wright's S., Faversham  
 Seabrook, E.J.M. Margate Coll.  
 Setford, A.H. Park S., Wood Green  
 Sewell, A.C.H. Lancaster Coll., W. Norwood  
 Shaftoe, L. Monk Bridge S., York  
 Shafuc, F. Deal Coll.  
 Shaw, H.M. Clifton H., Aintree  
 Shaw, R.W. Dagmar H., Hatfield  
 Sheehan, J. Deal Coll.  
 Sheehan, F. St. Aloysius C., Hornsey Lane, N.  
 Sheehan-Dare, C.A. Dagmar H., Hatfield  
 Sherriff, E.J. Taplow Gram. S.  
 Sherriff, G.E. Dagmar H., Hatfield  
 Short, S.C. Bible Christian Coll., Shebbear  
 Shurington, P. Beaconfield Coll., Plymouth  
 Shry, A.L. Richmond Hill S.  
 Silk, W. Deal Coll.  
 Simonds, F.L. de W. Mutley Gr. S., Plymouth  
 Simpson, S. Broomwood Coll., Battersea  
 Simpson, W.T. Lyndon Villa S., Leeds  
 Sinclair, W.  
 Elm Park, Shotley Bridge, Newcastle-o.-T.  
 Singer, C.W. Tutorial S., Penarth  
 Sittford, R.R. The Modern S., E. Grinstead  
 Skipper, F.H. Margate Coll.  
 Slocock, A.H. Richmond Hill S.  
 Smart, R.G. Hanley Castle Gram. S.  
 Smedley, C.E. Gram. S., Belper  
 Smedley, W.H. Gram. S., Belper  
 Smith, A.G. Oswestry Gram. S.  
 Smith, H.G. Elm Bank S., Nottingham  
 Smith, H.H. Worthing High S.  
 Smith, P.H. St. Philip's Gram. S., Edgbaston  
 Smith, W.D. Grove H., Highgate  
 Snow, F.W. Park S., Wood Green  
 Snow, F.B. University S., Rochester  
 Southwood, R.J. The Huish Gram. S., Taunton  
 Spence, A.M.  
 Elm Park, Shotley Bridge, Newcastle-o.-T.  
 Spiller, J. Thanet Coll., Margate  
 Sprague, A. Mt. Radford S., Exeter  
 Sproston, A. Gosberton Hall S., Spalding  
 Standfield, G. Margate College  
 Steel, A. McK. Taunton S., Taunton  
 Stephens, A.C. Hastings Gram. S.  
 Stephenson, R. Osborne High S., W. Hartlepool  
 Stewart, C. Ryde H., Ripley, Woking  
 Stickland, G. St. John's Coll., Brixton  
 Stielman, M.M. Gram. S., Belper  
 Stone, G.W. The Huish Gram. S., Taunton  
 Storm, J.M. Chandos Gram. S., Winchester  
 Stratton, E. Baylis H., Slough  
 Sullivan, R. Malden Coll., New Malden  
 Talbot, F. Kensey, Launceston  
 Tanton, T.E.H. Malden Coll., New Malden  
 Taylor, C. Wellesley Coll., Long Eaton  
 Taylor, F. Wellesley Coll., Long Eaton  
 Taylor, J.A. Gram. S., Benthams  
 Taylor, T.R. Gram. S., Benthams  
 Taylor, T.R. Taunton S., Taunton  
 Taylor, W. University S., Rochester  
 Thomas, J.W. Lyndon Villa S., Leeds  
 Thomas, W.R. Malden Coll., New Malden  
 Thompson, J.A.L. Gwynfa, Penmaenmawr  
 Thong-Chua. The Oaks, Deal  
 Thorpe, E.S. Margate College  
 Thornton, W. Baylis H., Slough  
 Thurston, W. Margate College  
 Tomblings, D.G. Sandwich Gram. S.  
 Tomblings, E.H.G. Sandwich Gram. S.  
 Toomer, F.C. Taunton's Trade S., Southampton  
 Townsend, G.E. Margate College  
 Trenga, C. New Brighton High S.  
 Trenchard, A.H. The Huish Gram. S., Taunton  
 Trew, F. Grove H., Highgate  
 Troad, C. Christian Bros. Coll., Gibraltar  
 Tuck-Brown, M. Wright's S., Faversham  
 Turner, C.R. Eye Gram. S.

BOYS, JUNIOR FORMS—Continued.

Turner, S.W. Taunton's Trades, S'hampton
Tyack, J.S.B. High S., Camborne
Tyrrell, W.H. Lancaster Coll., W. Norwood
Underwood, W. Ryde H., Ripley, Woking
Underwood, W.A. High S., Camborne
Upton, A.R. 12 Seaford Rd., Hove
Usher, F. Monk Bridge S., York
Valgimigli, L. Catholic Coll. S., M'chester
Voy, A. Queen's Park Prep. S., Harrow Rd.
Vickery, W.J. The Huish Gram. S., Taunton
Vickridge, A.L. Stafford Coll., Forest Hill
Vining, L.E. Gram. S., Belper
Wade, A.W. Holmwood H., South Hill Pk., N.W.
Wakeford, W.A.B. Taunton's Trade S., Southampton

Waldron, A. Queen's Walk Inter. S., Nottingham
Walsh, J. Catholic Inst., Hope St., L'pool
Walsh, S. New Brighton High S.
Walter, E.G. Crompton S., Richmond
Walton, G.W. St. Catherine's Coll., Richm and
Ward, E.J. Convent S., Pultney Rd., Bath
Ward, H. Queen's Walk Inter. S., Nottingham
Waters, E.C. Taunton's Trade S., S'hampton
Watson, W.C. Osborne High S., W. Hartley
Watt, H.J. Stafford C., Forest Hill
Weaving, T.J.J. Wirksworth Gram. S.
Weekes, A. Ryde H., Ripley, Woking
Welch, W. Hastings Gram. S.
Wells, B.W. Private tuition
West, C. Frankfort S., Forest Hill, S.E.
Whibley, B. Bethany H., Goudhurst
White, E.W. The Acad., Wakefield

White, G.C. Church Hill H., Queenstown
White, H.V. The Huish Gram. S., Taunton
White, L.C. The Huish Gram. S., Taunton
Whitehead, B. University S., Rochester
Whittle, F. 120 Bold St., Liverpool
Whitworth, H.P. Private tuition
Wilcock, R. Gram. S., Bentham
Wileman, G.W.B. Cambridge H., Margate
Wilkinson, C. Deal College
Wilkinson, R. Margate College
Wilkinson, R.W. Thanet Coll., Margate
Williams, D.L. Elm Park, Shotley Bridge, Newcastle-on-T.
Williams, E.G. Bradley High S., Newton Abbot
Williams, J. Osborne High S., W. Hartley
Willis, R. Dixie Gram. S., Market Bosworth
Willmott, A.S. Hanley Castle Gram. S.

Wilson, J.C.B. Cork Gram. S.
Wilson, O.R.L. Private tuition
Wilson, R.F. Cork Gram. S.
Wintersgill, W.G. Monk Bridge S., York
Wolfe, S.A. Cork Gram. S.
Woods, I.A. Eye Gram. S.
Woodward, W. Queen's Walk Inter. S., Nottingham
Woodward, W.G.W. Hanley Castle Gram. S.
Woodbridge, L. Thanet Coll., Margate
Worsley, R. Catholic Inst., Hope St., L'pool
Wright, A.G. Queen's Walk Inter. S., Nottingham
Wright, G.C. Eye Gram. S.
Wright, W.A.B. Taplow Gram. S.
Yeoman, E.W. Taunton's Trades, S'hampton
Young, E.W. Taunton's Trades, Southampton
Yuill, J.L. Stafford Coll., Forest Hill

GIRLS.

Allen, F.M. Huntingdon H., Ely
Allen, W. Southolme High S., Whalley Range
Amidon, F.F. Private tuition
Andrews, G.A. Glanmor, Gorleston-on-Sea
Anness, J. Westbourne S., Westbourne Pk., W.
Antram, K. St. Stephen's Coll., Hounslow
Armstrong, J. Sandgate, Berwick-on-Tweed
Arthur, M.L.E.M. St. James' Coll. S., Jersey
Bailey, A.A.F. St. Monica's, S'hampton
Bailey, M. St. Bernard's, Southsea
Ball, G.E. Friedenheim, Ealing
Banks, I.M. Huntingdon H., Ely
Barber, S.G. Moravian Ladies' S., Fairfield
Barette, F.A. Six Roads S., St. Lawrence, Jersey
Barlow, A. Stand Lodge High S., Radcliffe
Barnes, A. Anglesea Villa Coll., Walton, L'pool
Barnes, H. Moss H., Whitefield, M'chester
Barrett, M. Selwood S., Frome
Barthe, A. Conv. S., Pultney Rd., Bath
Barthe, E. Conv. S., Pultney Rd., Bath
Bartlett, N. Coventry Hall, Streatham
Baxter, C.G. Church Home S., Clyde Rd., Dublin
Baxter, H. Church Home S., Clyde Rd., Dublin
Beausang, M. St. Mary's Conv., Bruff
Benner, G. Stroud Green High S., Oakfield Rd., N.
Bennett, E. Selwood S., Frome
Bennett, G.M. Stroud Green High S., Oakfield Rd., N.
Bettes, H.M. Stroud Green High S., Oakfield Rd., N.
Bevan, G. Frankfort S., Forest Hill
Bibbings, D. Duke Street S., Bath
Blackhurst, M. Sunnyside S., Fleetwood
Blyth, K.M. Holt H., Fakenham
Boggs, O. Carlton H., Eccles
Bonnaud, Y. Conv. S., Pultney Rd., Bath
Bonny, A.M. Private tuition
Bonny, O.G. Private tuition
Boucher, E. St. Helen's Coll., Streatham
Bourke, K. St. Mary's Conv., Bruff
Boyland, G.R. Fullarton S., Chorlton-on-Medlock
Brigham, K.J. Fullarton S., Chorlton-on-Medlock
Broad, I. Helena High S., Burgess Hill
Brooks, M.E. Prestwich High S.
Brothers, F. Prestwich High S.
Brown, D.H. Denmark Coll., Wimbledon
Brown, R. Church Home S., Clyde Rd., Dublin
Brown, W.F. Stroud Green High S., Oakfield Rd., N.
Browne, M. Church Home S., Clyde Rd., Dublin
Bruce, A.B. Oxford Coll., Gunnedersbury
Bruce, E.G. Oxford Coll., Gunnedersbury
Bushby, G. Bromley Girls' & Prep. S., Kent
Byrne, F. 114 Lordship Rd., Stoke Newington, N.
Byrne, M.M. Kilmar Coll., Liskeard
Carroll, K.M. Church Home S., Clyde Rd., Dublin
Carsley, E.E. Ashlands Coll., Oswestry
Casley, E.R. Haldon View, Exeter
Cawley, A.E. Valletort Rd. S., Stoke, Devonport
Chambers, L. Sherwood S., Woolwich Comm.
Chaplin, A. Oakwood H., Brighton
Clarke, B.M. Stratford Abby Coll., Stroud
Clarke, E.A. St. Helen's Coll., Streatham
Clemens, L. Moravian S., Fulneck
Cleminson, A.I.I. The Bryant S., Wainfleet
Cochrane, E.K. Raleigh Memorial S., Stoke Newington
Coles, A.K. The Southend S., Winchester
Collins, M. Ursuline Coll. & High S., Cork
Conroy, M.E. St. Mary's Conv., Newtownabbey
Conroy, H.M. Faversham Coll. S.
Couchman, G. Cranley H., Muswell Hill
Cowgill, E.C. Carlton H., Eccles
Coxen, A. New Brighton High S.
Danagher, A. St. Mary's Conv., Bruff
Dance, W.L. Addington H., Thornton Heath
Daniel, W. St. Bernard's, Southsea

Dash, L. Abney Park Coll., Stamford Hill, N.
Deacon, E.K. Solwood S., Frome
Dempsey, A.L. Church Home S., Clyde Rd., Dublin
Dempsey, A.L. St. Mary's Conv., Bruff
Denman, D.G.S. Jeckelow Grange S., Northallerton
Devereux, A.B. St. Mary's Conv., Newtownabbey
Dickson, E. Stamford Hill & Clapton High S.
Dinwiddie, A.D. The Coll., Goudhurst
Dobson, G.E. Mowbray Pl. S., Sowerby, Thirsk
Doubleday, H.J. The Coll., Goudhurst
Dowdell, E.M. Abney Pk. C., Stamford Hill, N.
Downie, M.C. Granville H., Southampton
Duncan, F.E. Muncaster H., Eastbourne
Duncan, H. Monnow Rd. Hr. Gr. Board S., S.E.
Dunn, A. St. Mary's Conv., Bruff
Eberhardt, M.F. Stroud Green High S., Oakfield Rd., N.
Edmunds, E.A. Conv. S., The Avenue, Southampton
Ellis, L.H. St. Helen's Coll., Streatham
Elphick, A.B. St. Helen's Coll., Streatham
Emery, E.M. Gleebe Place S., Chisold Pk., N.
Emery, K. Brunswick H., Kingston Hill
Evans, A.E. Woodland H., Thirsk
Evans, M.A. Claremont H., Catford, S.E.
Ewart, J. Manor H., Surbiton
Fagan, M.M. St. Mary's Conv., Newtownabbey
Fargus, E.R.T. Home Glen, Strawberry Hill, Twickenham
Farwell, M.G.B. Branksome Coll., New Milton, Hants
Ferguson, M. New Brighton High S.
Filmer, C.E. St. Mary's Priory, Stamford Hill, N.
Fisher, M. Woodland H., Thirsk
FitzHenry, K. Church Home S., Clyde Rd., Dublin
FitzMahony, E. Ursuline Coll. & High S., Cork
Flood, A.M. Stour H., Sandwich
Forrest, E.V. Up. St. Leonard's Ladies' Coll.
Foster, E.A. Stratford Abby Coll., Stroud
Fowler, M.K. Grosvenor Coll., Liverpool
Fromow, E.R. Oxford Coll., Gunnedersbury
Galbraith, A. Branksome Coll., New Milton, Hants
Galbraith, E. Branksome Coll., New Milton, Hants
Ganderton, A.N. Court H, Ateh Lench, Evesham
Garfit, D.M. Fullarton S., Chorlton-on-Medlock
Garrett, M.J. Kensington H., York
Gayton, D.M. Conv. S., The Avenue, Southampton
Gibson, A.M. Bromley Girls' & Prep. S., Kent
Ginn, M.G. Abney Park Coll., Stamford Hill, N.
Golding, G.D. Private tuition
Goodman, M. Ryde H., Ripley, Woking
Gorton, E.A. Woodcross H., Sedgley
Gould, B. Ursuline Coll. & High S., Cork
Grandison, E.S. Granville H., Southampton
Gray, A.C. Clifton Lodge S., Lee, S.E.
Gray, E.B.S. Eden Coll., Eden Bridge
Gray, L.J. Clifton Lodge S., Lee, S.E.
Green, F.A. Stroud Green High S., Oakfield Rd., N.
Green, M.L. Westford, Streatham
Greenfield, L.M. Glanmor, Gorleston-on-Sea
Gregg, B.M.S. Cork High S.
Griffin, W.E. Selwood S., Frome
Grist, M. St. Helen's Coll., Streatham
Gubbins, M.J. St. Mary's Conv., Bruff
Gulliver, G. Wincham Hall Coll., Northwich
Guy, L.B. South Western Coll., Finborough Rd., S.W.
Hahn, H. Abney Park Coll., Stamford Hill, N.
Hailes, E.M. Holmwood H., South Hill Park, N.W.
Hall, E. Y. Garn, Bromley, Kent
Hamilton, N. New Brighton High S.
Hammond, M.O. 1 Laurie Square, Romford
Hancock, E.J. Moravian Ladies' S., Fairfield
Hardie, P. Kensington H., York

Hare, J. Kensington H., York
Harpur, M. Princess Gardens S., Belfast
Harrington, E.C. Cumberland H., Bouverie Rd., N.
Harris, B. Grosvenor Coll., Liverpool
Harris, B. Grosvenor Coll., Liverpool
Harrison, E.M. Gork High S.
Harrison, K.A. Cranley H., Muswell Hill
Harrison, L.M. Kensington H., York
Hart, J. Moravian S., Fulneck
Hartley, E.M. High S., Wyde Green, B'ham
Harvey, G.E. Holt H., Fakenham
Hasso, D. Moravian S., Fulneck
Haswell, M. New Brighton High S.
Hayes, L. Monnow Rd. Hr. Grade Board S., S.E.
Hayward, N.W. Branksome Coll., New Milton, Hants
Henderson, M.E.F. Elmgrove H., Cotham Grove, Bristol
Herford, R. Stand Lodge High S., Radcliffe
Heygate, B.M. Huntingdon H., Ely
Hill, M. Sibson Rd. S., York
Hodgson, C.A. Kensington H., York
Hodgson, M. Jeckelow Grange S., Northallerton
Hoffmann, E.M. Abney Park Coll., Stamford Hill, N.
Holloway, E.M. Old Bank H., Castle Cary
Horne, N. New Brighton High S.
Horner, M.E. Woodland H., Thirsk
Horrocks, D. Hightfield Coll., Blackpool
Horsfield, F. Stand Lodge High S., Radcliffe
Howard, E. St. Mary's Conv., Bruff
Howard, E.V. High S., Wyde Green, B'ham
Hudson, M.V. Princess Gardens S., Belfast
Huggitt, N. Monnow Rd. Hr. Grade Board S., S.E.
Huxley, A. New Brighton High S.
Ingram, E.A. High S., Wyde Green, B'ham
Isherwood, R. Southolme High S., Whalley Range
Jackson, A. Huntingdon H., Ely
James, D.A. The Hollies, Soho Pk., B'ham
James, E.D.N. Upland Coll., Stroud
James, W.E. The Hollies, Soho Park, B'ham
Jennett, D.A. Private tuition
Jones, E. Ebley H., East Putney
Jorlan, E.I. Prep. S., South St., Greenwich
Jowett, M.W. Girls' Coll. S., Church St., Morley
Kelly, M.H.M. Princess Gardens S., Belfast
Kelsey, M. Lynsted Coll. S., Sittingbourne
Kerfoot, F.E. East View, Morris Green, Bolton
Ketley, W.M. Old Bank H., Castle Cary
Kidd, A.M. Elmgrove H., Cotham Grove, Bristol
Kidd, J. Stroud Green High S., Oakfield Rd., N.
King, C.G. Holt H., Fakenham
Kinsman, G.H. Carlton H., Eccles
Kohn, E.V. Abney Park Coll., Stamford Hill, N.
Kynaston, A. Old Bank H., Castle Cary
Labat, C.M. Fairhaven, Batheaston, Bath
Launcraft, E. Ryde H., Ripley, Woking
Lang, E. Moravian S., Fulneck
Laver, D.M. Old Bank H., Castle Cary
Lea, J.H.A. Westbourne S., Westbourne Park, W.
Ledger, E.W. Up. St. Leonard's Ladies' Coll.
Lee, E. Stroud Green High S., Oakfield Rd., N.
Lee, L.M. Ashlands Coll., Oswestry
Le Gros, A. Kilmar Coll., Liskeard
Lever, B. Old Bank H., Castle Cary
Lewis, C.S. The Coll., Goudhurst
Lewty, E. Linwood S., Altrincham
Lewty, A.R. The Newlands, Bootle
Livesey, E. Stand Lodge High S., Radcliffe
Livick, A.G. Holt H., Fakenham
Llewellyn, A. Upland Coll., Stroud
Lounton, A. Sandgate, Berwick-on-Tweed
Love, O.H. Mayfield, Broxbourne
Lunn, M. The Southend S., Winchester
Lunt, E. Plas Madoc, Ruabon
Lyall, L. Sandgate, Berwick-on-Tweed
Lynch, L. St. Mary's Conv., Bruff
Macfarlane, B.M. Westford, Streatham

Mackellar, F.M. Wincham Hall Coll., Northwich
Madden, L. Wincham Hall Coll., Northwich
Maddison, H. Swaffield Road S., Earlsfield, S.W.
Makin, M.S. Private tuition
Malcolmson, G.E. Muncaster H., Eastbourne
Mallouca, A. Moravian Ladies' S., Fairfield
Malone, C. Church Home S., Clyde Rd., Dublin
Marchant, D. Stroud Green High S., Oakfield Rd., N.
Mason, W. Stamford Hill & Clapton High S.
Massey, L.B. Branksome Coll., New Milton, Hants.
Masters, R.O. Abney Park Coll., Stamford Hill, N.
Mathew, H.M. Royal Naval S., Twickenham
Mawhood, R.M.L. Ashmount S., Sheffold
McCall, M. Kensington H., York
McCarragher, C. Freeman High S., Southampton
McMinn, S. Church Home S., Clyde Rd., Dublin
Meaker, M.B. Old Bank H., Castle Cary
Meach, G.E. Helena High S., Burgess Hill
Meeze, E.M. Byfield S., Painswick
Menhinick, L. The Coll., Goudhurst
Menhinick, M.E. The Coll., Goudhurst
Milch, S. Private tuition
Milne, M. Girls' S., South Shore, Blackpool
Mitchell, M. Ryde H., Ripley, Woking
Moody, H.M. Stroud Green High S., Oakfield Rd., N.
Morley, R. Cumberland H., Bouverie Rd., N.
Morris, C.E. The Hollies, Soho Pk., B'ham
Morris, G.A. Haslemere S., Clapham Park
Morris, S. Plas Madoc, Rnthon
Morton, M.S. The Newlands, Bootle
Mulcahy, M. St. Mary's Conv., Bruff
Mumford, E.M. 1 Laurie Square, Romford
Murphy, C. Ursuline Coll. & High S., Cork
Myers, R.L. Stroud Green High S., Oakfield Rd., N.
Nightingale, V.V. Claremont H., Catford, S.E.
Norris, A. Swaffield Road S., Earlsfield, S.W.
Northcote, D. Royal Naval S., Twickenham
Oakes, L. New Brighton High S.
Olden, L.H. Sullivan Coll., Southampton
O'Shaughnessy, N. St. Mary's Conv., Bruff
Oswald, B.A.L. St. Mary's Conv., Bruff
Palmer, E.N. Lavender Hill High S., S.W.
Parmer, C.D. Coll. S., Brunswick Place, Southampton
Parry-Jones, E.D. 48 Park Avenue, Oswestry
Parry, R.B. Hampton Gram. S., Glasbury-on-Wye
Patton, A.L. Tuffnell Park Terrace S., N.
Pearce, I.M. Burligh H., Addlestone
Peatfield, M.E. The Ferns, Hassocks, Sussex
Peck, M.G. Huntingdon H., Ely
Peckham, V.R. Stroud Green High S., Oakfield Rd., N.
Penny, K. The Coll., Goudhurst
Peto, M.S. Up. St. Leonard's Ladies' Coll.
Phillips, F.J.M. Raleigh Memorial S., Stoke Newington
Phillips, E. Private tuition
Phillips, L.F.E. University S. Rochester
Phipps, E.A. Byfield S., Painswick
Pickup, E.M.A. Girls' S., South Shore, Blackpool
Pierce, M.A. Claremont H., Catford, S.E.
Pinley, D.J. Westford, Streatham
Powell, G.F.M. Stratford Abby Coll., Stroud
Pratt, G. St. Stephen's Coll., Hounslow
Raggdale, H.E. Moss H., Whitefield, M'chester
Ranshaw, E.H. Haslemere S., Clapham Park
Rayner, B.D. Addington H., Thornton Heath
Reader, E.V. Heathleigh S., Oswestry
Reay, M.E.E. Glanmor, Gorleston-on-Sea
Reboring, F.L. Vauxhall S., St. Helier's, Jersey
Reid, J.F. Ebor, Dorking
Reid, M.C. Fullarton S., Chorlton-on-Medlock



<b>GIRLS, JUNIOR FORMS—Continued.</b>		Shepley, H. Moravian Ladies' S., Fairfield	Thompson, F. E. V. Gwynfa Coll., Penmaenmawr	Whiteley, W. Belle Mont H., Ossett
Richards, D. R. 25 Westwick Gdns., W. Kensington Park	Richards, M. L. Westford, Streatham	Shiels, E. L. St. George's Girls' S., Kensington	Thorn, D. High S., Walton-on-Thames	Whittingham, P. Plas Madoc, Ruabon
Richards, P. C. Private tuition	Richardson, E. E. Mowbray Place S., Sowerby, Thirsk	Shinner, A. R. Abney Park Coll., Stamford Hill, N.	Thorne, A. Old Bank H., Castle Cary	Wicks, P. R. The Ferns, Hassocks, Sussex
Richardson, J. J. Oxford Coll., Gunnersbury	Richardson, K. J. Oxford Coll., Gunnersbury	Simpson, E. A. Belle Mont H., Ossett	Thornhill, M. St. Mary's Conv., Bruff	Wilkinson, S. I. Cranley H., Muswell Hill
Rigler, C. M. Royal Naval S., Twickenham	Rigler, C. M. Royal Naval S., Twickenham	Smelch, E. M. Carlton H., Eccles	Thrupp, D. The Ferns, Hassocks, Sussex	Willett, J. Ashlands Coll., Oswestry
Rocke, G. Church Home S., Clyde Rd., Dublin	Rocke, G. Church Home S., Clyde Rd., Dublin	Skeoch, M. E. R. Sunnyside S., Fleetwood	Tippet, A. M. St. George's Girls' S., Kensington	Willett, M. Ashlands Coll., Oswestry
Roberts, E. M. St. Stephen's Coll., Hounslow	Roberts, E. M. St. Stephen's Coll., Hounslow	Sleigh, J. G. Up. St. Leonard's Ladies' Coll.	Tippet, W. L. de C. Woodford S., Southsea	Williamson, D. Stamford Hill and Clapton High S.
Roberts, M. Ashlands Coll., Oswestry	Roberts, M. Ashlands Coll., Oswestry	Smith, A. Dukinfield High S., Cheshire	Tonkin, T. M. University S., Rochester	Wilson, F. E. Woodland H., Thirsk
Robertson, D. J. Addington H., Thornton Heath	Robertson, D. J. Addington H., Thornton Heath	Smith, M. Girls' Gram. S., Levenshulme	Townend, G. Belle Mont H., Ossett	Wilson, G. Woodland H., Thirsk
Robinson, F. M. Cumberland H., Bouverie Rd., N.	Robinson, F. M. Cumberland H., Bouverie Rd., N.	Smith, W. M. Oakwood H., Brighton	Treadwell, D. C. Eden Coll., Eden Bridge	Wiltshire, L. F. Private tuition
Rolfe, E. F. Stratford Abbey Coll., Stroud	Rolfe, E. F. Stratford Abbey Coll., Stroud	Spencer, E. M. 1 Laurie Square, Romford	Turner, D. J. St. Stephen's Coll., Hounslow	Winter, E. E. A. St. Stephen's Coll., Hounslow
Root, G. Y. Garn, Bromley, Kent	Root, G. Y. Garn, Bromley, Kent	Spens, D. M. Clifton Lodge S., Lee, S. E.	Turner, E. L. Abney Park C., Stamford Hill, N.	Wood, F. E. The Hollies, Soho Pk., B'ham
Rowley, M. P. Private tuition	Rowley, M. P. Private tuition	Somers, A. R. Southolme High S., Whalley Range	Uff, E. M. Oxford Coll., Gunnersbury	Woodroffe, A. St. George's Girls' S., Kensington
Roy, M. B. Helena High S., Burgess Hill	Roy, M. B. Helena High S., Burgess Hill	Spencer, E. M. 1 Laurie Square, Romford	Varley, E. M. M. Abney Park C., Stamford Hill, N.	Woodroffe, A. St. George's Girls' S., Kensington
Ryan, K. St. Mary's Conv., Bruff	Ryan, K. St. Mary's Conv., Bruff	Spriggs, E. M. Coventry Hall, Streatham	Vaughton, D. The Hollies, Soho Pk., B'ham	Woodroffe, A. St. George's Girls' S., Kensington
Ryan, N. St. Mary's Conv., Bruff	Ryan, N. St. Mary's Conv., Bruff	Squire, M. Girls' S., Mechanics Inst., Pusey	Wadsworth, M. North Kensington Coll. S., W.	Woods, K. D. Denmark Coll., Wimbledon
Sadler, B. Southolme High S., Whalley Range	Sadler, B. Southolme High S., Whalley Range	Stacey, G. C. Ellesdon H., Bexley Heath	Waking, P. E. Westford, Streatham	Wren, E. R. Stroud Green High S., Oakfield Rd., N.
Salisbury, E. New Brighton High S.	Salisbury, E. New Brighton High S.	Stamp, B. C. Frankfort S., Forest Hill	Walker, C. Moss H., Whitefield, M'chester	Wright, M. B. B. Abney Park Coll., Stamford Hill, N.
Salter, E. D. The Laurels, Kegworth	Salter, E. D. The Laurels, Kegworth	Staubury, H. C. Stratford Abbey Coll., Stroud	Walsh, N. St. Mary's Conv., Bruff	Wright, W. G. Elmgrove H., Cotnam Grove, Bristol
Sandford, D. G. Claremont H., Catford, S. E.	Sandford, D. G. Claremont H., Catford, S. E.	Stebbing, G. M. Glencol, Deal	Watt, M. Private tuition	Wylie, E. Burleigh H., Addlestone
Sawle, M. T. Kynerton, Ullest Rd., L'pool	Sawle, M. T. Kynerton, Ullest Rd., L'pool	Stone, H. M. Branksome Coll., New Milton, Hants	Watts, B. St. Ethelburga's Conv. S., Deal	Yarnall, G. Ashlands Coll., Oswestry
Scott, E. Alwyne Coll., Caunbury	Scott, E. Alwyne Coll., Caunbury	Stower, L. A. Fulham Park Coll., S. W.	Webb, H. M. The Coll., Goudhurst	Yendell, E. F. South Western C., Finborough Rd., S. W.
Scroggie, H. M. Lavender Hill High S., S. W.	Scroggie, H. M. Lavender Hill High S., S. W.	Stringer, E. E. Cork High S.	Welcome, M. Lulworth Lodge, Birkdale	Yeoman, M. Coventry Hall, Streatham
Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sullivan, M. St. Ethelburga's Conv. S., Deal	Wellacott, B. A. S. Private tuition	Yonke, S. Frankfort S., Forest Hill
Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sumner, M. P. Cork High S.	Wellacott, L. M. B. Private tuition	Young, C. J. Lavender Hill High S., S. W.
Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sevell, B. Swaffield Road S., Earlsfield, S. W.	Sutton, F. G. Westford, Streatham	Wells, M. E. Private tuition	Young, G. L. Cavendish S., Redhill
Sewell, B. Coll. S., Brunswick Place, Southampton	Sewell, B. Coll. S., Brunswick Place, Southampton	Swaffield, S. E. Cork High S.	Wheeler, K. E. Westbourne S., Westbourne Pk., W.	Young, M. K. Mill Hill Park High S., W.
Sewell, D. E. 1 Laurie Square, Romford	Sewell, D. E. 1 Laurie Square, Romford	Taylor, S. E. The Hill S., Sandiacre	White, A. Coleridge Coll. S., Finsbury Park	
Shepherd, A. Mill Hill Park High S., W.	Shepherd, A. Mill Hill Park High S., W.	Thomas, A. M. Fullarton S., Chorlton-on-Medlock	White, E. Old Bank H., Castle Cary	
Shepherd, J. F. Kenilworth, Lr. Weston, Bath	Shepherd, J. F. Kenilworth, Lr. Weston, Bath		White, E. Old Bank H., Castle Cary	

CASEY'S EUCLID.

THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises. By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c. Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin. Second Edition. Small 8vo, price 6s.

A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID." Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

A TREATISE ON THE

ANALYTICAL GEOMETRY OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS. Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

A TREATISE ON

ELEMENTARY TRIGONOMETRY. With numerous Examples and Questions for Examination. Third Edition. Small 8vo, 148 pp., price 3s.

KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY. With numerous Examples and Questions. Second Edition. Price 3s.

A TREATISE ON

PLANE TRIGONOMETRY. Containing an account of Hyperbolic Functions, with numerous Examples. Crown 8vo. Second Edition.

Crown 8vo, price 6s.

A TREATISE ON

SPHERICAL TRIGONOMETRY, AND ITS APPLICATION TO GEODESY AND ASTRONOMY. With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN. LONDON: LONGMANS & CO.

EDUCATIONAL WORKS

BY

Dr. WILLIAM DAVIS.

- 1.—The First Book of English History for Schools and Families.** In Question and Answer. *Seventeenth Edition.* Cloth, 1s. "It would be impossible to summarize in shorter space the leading facts of English History."—*Bookseller.*
- 2.—The Complete Grade Parsing and Analysis.** A Book of Exercises for Home and School Use. *Thirtieth Edition.* Cloth, 9d. \*Recently enlarged by Chapters on Syntax and English Verification. \*The above work is specially adapted to meet the wants of the higher classes in Elementary Schools, of Pupil Teachers, and of those preparing for the Oxford, Cambridge, and other Public Examinations.
- 3.—Key to the Complete Grade Parsing and Analysis.** Containing the full working of all the Exercises. *Fifth Edition.* Cloth, 3s.
- 4.—The Book of Poetry for Schools and Families.** Containing a large number of choice Extracts from our Poets, from Shakspeare downwards, together with brief Notes of the life and principal works of each writer, and copious Explanations of Difficult Words and Allusions. *Thirty-third Edition.* 208 pp., cloth, 1s. "This is a choice little volume."—*Educational News.*
- 5.—The Complete English Spelling and Dictation Book.** *Seventy-first Edition.* Strong cloth, 1s. 6d. "We have no doubt the book, wherever used, will give satisfaction."—*Educational News.*
- 6.—The Complete Book of Arithmetical Examples.** *One Hundred and Thirty-second Thousand.* Strong cloth, 1s. 4d. \*This work has recently been enlarged by several pages of Explanations (together with Specimen Solutions) in Proportion, Profit and Loss, Stocks and Discount. \*A remarkably cheap, well graduated, and practical collection of Arithmetical Examples for Home and School use."—*Educational Times.* \*BOOK OF ANSWERS, 2s.
- 7.—Arithmetical Examples for Home and School Use, Part I.** Containing thousands of new questions, from Simple Addition to Practice, Bills of Parcels, Fractions, Proportion, &c. *Five Hundred and Fifth Thousand.* Strong cloth, 8d. BOOK OF ANSWERS, 1s. \*Recently enlarged by several pages of Explanations (and Model Solutions) in Proportion, and also by a large number of Exercises in Mental Arithmetic.

Dr. Davis will have much pleasure in sending, post free, a specimen copy of any one of the above works to School Principals on application to him, St. Germans, Cheltenham.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., LTD.;

EDUCATIONAL WORKS BY A. K. ISBISTER, M.A., LL.B.

Sixth Edition. 12mo, price 3s. 6d.

**THE COLLEGE EUCLID:** Comprising the First Six and portions of the Eleventh and Twelfth Books read at the Universities. Chiefly from the Text of Dr. SIMSON. With a new arrangement of the Figures and Demonstrations; the Enunciations of the Propositions separately for Self-Examination, apart from the Text; Notes and Questions on each Book; and a Series of Geometrical Problems for Solution, from the most recent University Examination Papers.

New Edition. 12mo, price 9d.

**THE COLLEGE AND SCHOOL EXAMINER IN EUCLID,** containing the Enunciations of all the Propositions in the College and School Editions, Questions on the Definitions, Arithmetical and Algebraical Demonstrations of the Propositions in Books II. and V., and a large collection of Geometrical Problems for Solution. Designed for Class and Self-Examination, and adapted to all Editions of Euclid.

# CHARLES GRIFFIN & CO.'S PUBLICATIONS.

## SCIENTIFIC.

- THE FLOWERING PLANT:** First Principles of Botany. By Prof. J. R. AINSWORTH DAVIS, M.A., F.Z.S., University College, Aberystwyth. Very fully Illustrated. Third Edition, Revised and Enlarged. With an additional chapter on FERNS and MOSSES. 3s. 6d.  
 "It would be hard to find a text-book which would better guide the student to an accurate knowledge of modern discoveries in botany."—*Journal of Botany*.
- THE MAKING OF A DAISY; "WHEAT OUT OF LILIES":** and other Studies in Plant Life and Evolution. A Popular Introduction to Botany. By ELEANOR HUGHES-GIBB. With Illustrations. Crown 8vo, gilt, 2s. 6d., post free.  
 "A bright little introduction to the study of flowers."—*Journal of Botany*.
- HOW PLANTS LIVE AND WORK.** A Simple Introduction to Real Life in the Plant World, based on Lessons originally given to Country Children. By ELEANOR HUGHES-GIBB. With Illustrations. Crown 8vo, cloth, 2s. 6d., post free.  
 "Well calculated to make the study of botany attractive."—*Scotsman*.
- OPEN-AIR STUDIES IN BOTANY:** Sketches of British Wild Flowers in their Homes. By R. LLOYD PRAEGER, B.A., M.R.I.A. Illustrated by Drawings from Nature, and Photographs. Handsome cloth, 7s. 6d.; gilt, 8s. 6d., post free.  
 "A fresh and stimulating book."—*Times*.
- OPEN-AIR STUDIES IN GEOLOGY:** An Introduction to Geology Out of Doors. By GRENVILLE A. J. COLE, M.R.I.A., F.G.S. With 12 Full-page Plates after Photographs, and Illustrations. Handsome cloth, 8s. 6d., post free.  
 "A charming book . . . beautifully illustrated."—*Athenaeum*.
- PRACTICAL GEOLOGY, AIDS IN.** By Prof. GRENVILLE COLE, F.G.S., Royal College of Science for Ireland. With numerous Illustrations. Third Edition, Revised. Crown 8vo, 10s. 6d.  
 "Prof. Cole treats of the examination of minerals and rocks in a way that has never been attempted before."—*Athenaeum*.
- SOUND.** Forming an instalment of an important work entitled *A Text-book of Physics*. By J. H. POYNTING, Sc.D., F.R.S., and J. J. THOMSON, M.A., F.R.S., Hon. Sc.D. Dublin, Hon. D.L. Princeton. With Illustrations. Handsome cloth, Second Edition, 8s. 6d.  
 "Will serve as an introduction to the most abstruse treatises."—*Scotsman*.
- METALLURGY (An Elementary Text-book).** By Prof. HUMBOLDT SEXTON, F.I.C., Professor of Metallurgy in Glasgow and West of Scotland Technical College. With numerous Illustrations. Second Edition, Revised. 6s.  
 "Possesses the great advantage of giving a course of practical work."—*Mining Journal*.

## CLASSICAL AND LITERARY.

- GREEK ANTIQUITIES, A MANUAL OF.** For Students and General Readers. By PERCY GARDNER, M.A., D.Litt., Professor of Classical Archaeology and Art, Oxford University; and F. B. JEVONS, M.A., Litt.D., Principal of Bishop Hatfield's Hall, Durham University. Second Edition. Handsome cloth, 16s.  
 "Fresh, thoughtful, and cleverly arranged."—*Academy*.
- ROMAN ANTIQUITIES, A MANUAL OF.** By WILLIAM RAMSAY, M.A., late Professor of Humanity, Glasgow University. Revised and Edited by RODOLFO LANCIANI, D.C.L. Oxon., LL.D., &c., Professor of Classical Topography in the University of Rome. Sixteenth Edition. 10s. 6d.  
 "It is the best and handiest guide yet produced."—*Athenaeum*.
- ROMAN ANTIQUITIES (Elementary).** By Prof. RAMSAY. With numerous Illustrations. Ninth Edition. 4s.
- A HISTORY OF GREEK LITERATURE.** From the Earliest Period to the Death of Demosthenes. By FRANK B. JEVONS, M.A., D.Litt., Principal of Bishop Hatfield's Hall, in the University of Durham. Second Edition. Cloth, 8s. 6d.  
 "The best history of Greek literature hitherto published."—*Spectator*.
- A HISTORY OF ROMAN LITERATURE.** By the Rev. C. T. CRUTTWELL, M.A., Hon. Canon of Peterborough Cathedral. From the Earliest Period to the Times of the Antonines. Sixth Edition. 8s. 6d.  
 "Full of good scholarship and good criticism."—*Athenaeum*.
- SPECIMENS OF ROMAN LITERATURE FROM THE EARLIEST PERIOD TO THE TIMES OF THE ANTONINES.** Third Edition. Edited by C. T. CRUTTWELL, M.A., and PRAKE BANTON, M.A.  
 Part I.—ROMAN THOUGHT: Religion, Philosophy and Science, Art and Letters. 6s.  
 Part II.—ROMAN STYLE: Descriptive, Rhetorical, and Humorous Passages. 5s. Or, in one Vol., with Synopsis and Indices, complete, 10s. 6d.  
 "A work not only useful, but necessary."—*Saturday Review*.
- A HISTORY OF ENGLISH LITERATURE AND OF THE ENGLISH LANGUAGE.** From the Norman Conquest. With numerous Excerpts and Specimens. By GEORGE LITTLE CRAIK, LL.D., late Professor of History and English Literature, Queen's College, Belfast. New Edition. In Two Vols., royal 8vo, cloth, 25s.  
 "A more than usually agreeable book."—*Times*.
- A MANUAL OF ENGLISH LITERATURE.** For the use of Colleges, Schools, and those preparing for Competitive Examinations. With an Appendix on Recent Literature, by Sir H. CRAIK, K.C.B., M.A., LL.D. From the larger work by Dr. CRAIK. Eleventh Edition. Crown 8vo, cloth, 7s. 6d.  
 "Needs no recommendation."—*The Spectator*.

LONDON: CHARLES GRIFFIN & CO., LTD., EXETER STREET, STRAND.

# PROFESSOR MEIKLEJOHN'S SERIES.

Crown 8vo, 410 pp. Price 2s. 6d.

## A SCHOOL GEOGRAPHY.

WITH SPECIAL REFERENCE TO COMMERCE AND HISTORY.

*With Maps and Diagrams.*

BY

J. M. D. MEIKLEJOHN, M.A., Professor of the Theory, History, and Practice of Education in the University of St. Andrews, AND  
 M. J. C. MEIKLEJOHN, B.A., sometime Adam de Brome Exhibitioner of Oriol College, Oxford; F.R.G.S.

"After examining this new production with both interest and care, the verdict is, perforce, 'admirable.'"—*The Teachers' Monthly*.

"In this, the latest work issued from 11 Paternoster Square, our expectations have been fully realized."—*The School Teacher*.

"It furnishes a useful step between the 'Short Geography' and the 'New Geography.' It is not an abridgment of the latter, but an entirely distinct work, written on the Comparative Method, and replete with useful and interesting information."—*The Practical Teacher*.

"This is a well-planned book, with many good features, and the promise of the title-page is sedulously fulfilled."—*The Educational Times*.

"The whole plan of the book has been carefully thought out, and as the result we have a good School Geography."—*The School Guardian*.

**A New Spelling Book.** With Side Lights from History. Eighth Edition. Crown 8vo, 152 pp. 1s.

"We agree with the main principle here followed—that spelling should be learnt through the eye rather than through the ear."—*The School Guardian*.

**The Spelling List.** For Civil Service and other Examinations. With a Key to Correct Spelling. Fourth Edition. Crown 8vo, 146 pp. 1s.

"Your 'Spelling List' is a very decided advance in the right direction, ably conceived and brilliantly written. We shall certainly strongly recommend it to our pupils."—*The Rev. H. P. Gurney, M.A. (Messrs. Wren & Gurney), Powis Square, London.*

**A New Poetry Book** for the Use of Schools and Families. Fourth Edition. 156 pp. 1s.

"This neatly bound little collection, which is one of Professor Meiklejohn's series of school manuals, may be confidently recommended to teachers in search of new selections for recitation."—*The Schoolmaster*.

**Fifty New Lessons in English.** Being a Historical Method of Parsing. By Professor J. M. D. MEIKLEJOHN, M.A. Crown 8vo, 102 pp. 1s. 6d.

"A very interesting little book of exercises in simple English philology."—*The Journal of Education*.

**The New Freehand Drawing Cards.** By FRANK G. JACKSON, of the Birmingham Municipal School of Art; Author of "Lessons in Decorative Art" and "Theory and Practice of Design." Standards III., IV., and V., 2s. each.  
 Standards VI. and VII., 2s. 6d. each.

"Nothing so good has yet been offered to teachers of drawing as this excellent series of cards."—*The Schoolmaster*.

LONDON: A. M. HOLDEN, 11 PATERNOSTER SQUARE.

# PROFESSOR MEIKLEJOHN'S SERIES.

## ARITHMETIC AND ALGEBRA.

**A New Arithmetic.** By G. A. CHRISTIAN, B.A. (Lond.) and G. COLLAR, B.A., B.Sc. (Lond.). Fourth Edition. Crown 8vo, 562 pp. 4s. 6d.

"We consider it so satisfactory that we have at once placed it on our list of books."—*Rev. G. H. S. Walpole, D.D., Principal, Bede College, Durham.*

**A Short Arithmetic.** By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. 1s. With Answers, 1s. 6d.

"A book of well graduated examples, and just as much theory as will explain the methods of their solution."—*The Educational Times.*

**A School Algebra for Junior Forms.** By F. OSCAR LANE, B.Sc. Lond., Assistant-Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. 1s. 6d. With Answers, 266 pp. 2s. 0d.

"A very trustworthy book for beginners, extending to indices, surds, and progressions."—*The University Correspondent.*

## COMPOSITION.

**The Art of Writing English.** A Manual for Students. With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A. Second Edition. Crown 8vo, 340 pp. 2s. 6d.

"The Art of Writing English" teems with good advice."—*The Literary World.*  
"Whatever Prof. Meiklejohn writes is sure to be vigorous and racy, and, on the subject of English composition, he is peculiarly well qualified to speak."—*The Journal of Education.*

**One Hundred Short Essays in Outline.** By Professor MEIKLEJOHN. Second Edition. 110 pp. 1s. 0d.

"This is undoubtedly one of the most useful books for pupil teachers, Scholarship and Certificate students, ever produced."—*The Practical Teacher.*

**General Intelligence Papers; with Exercises in English Composition.** By GERALD BLUNT, M.A. Crown 8vo, 130 pp. 2s. 0d.

"This little book is likely to be very useful. It avoids the faults of so many books of the same class; the questions are not too difficult."—*Rev. Joseph Wood, D.D., Headmaster of Harrow School.*

## ENGLISH LANGUAGE.

**The English Language: its Grammar, History, and Literature.** By J. M. D. MEIKLEJOHN, M.A. Nineteenth Edition. Enlarged, with Exercises and additional Analyses. Crown 8vo, 470 pp. 4s. 6d.

"I gave it to a girl candidate for an English scholarship; she got first place, and valued the help she got from the book."—*W. Johnson, Esq., B.A., Elmfield College, York.*

**A New Grammar of the English Tongue.** With Chapter on Composition, Versification, Paraphrasing, and Punctuation. With Exercises and Examination Questions. Eighteenth Edition. Crown 8vo, 280 pp. 2s. 6d.

**A Short History of the English Language.** Crown 8vo, 76 pp. 1s. 0d.

**An Outline of the History of English Literature.** Crown 8vo, 110 pp. 1s. 6d.

**A Short Grammar of the English Tongue, with Three Hundred and Thirty Exercises.** Eleventh Edition. 1s. 0d.

This little book is written in the clearest and simplest style for beginners. It contains:—

- |                                 |   |
|---------------------------------|---|
| i. The Simplest Definitions.    | iv. Graduated Methods of Parsing.       |
| ii. Slowly graduated Exercises. | v. Bad Grammar Corrected, with Reasons. |
| iii. Clearly printed Tables.    | vi. Analysis, with Plain Diagrams.      |

## GEOGRAPHY.

**A New Geography on the Comparative Method.** With Maps and Diagrams and an Outline of Commercial Geography. By J. M. D. MEIKLEJOHN, M.A. Twenty-fourth Edition. 135th Thousand. Crown 8vo, 630 pp. 4s. 6d.

"A most useful manual for examiners, and full of stimulating matter for students of geography. Its picturesqueness of description and vividness of style make it almost as interesting and enjoyable reading as a book of travels."—*The Journal of Education.*

**A School Geography.** With special reference to Commerce and History. With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A. Crown 8vo, 410 pp. 2s. 6d.

"This is a well-planned book, with many good features, and the promise of the title-page is sedulously fulfilled."—*The Educational Times.*

**A Short Geography, with the Commercial Highways of the World.** Sixteenth Edition. Crown 8vo, 196 pp. 1s. 0d.

"Terse, practical, informative, and statistic. This shilling Geography is exactly what a School Geography needs to be."—*The Teachers' Aid.*  
"Clearness and conciseness exemplified."—*The Private Schoolmaster.*

**The Comparative Atlas.** By J. G. BARTHOLOMEW, F.R.G.S., and Edited by Professor MEIKLEJOHN. Containing 64 Plates and a General Index. 2s. 6d.

"No atlas that we know at anything like the price gives so much so well."—*The Teachers' Monthly.*

**Europe: its Physical and Political Geography, with Chapters on Latitude and Longitude, Day and Night, and the Seasons.** With a Double-Page Map in Colour. By M. J. C. MEIKLEJOHN, B.A., F.R.G.S. 96 pp. 6d.

**Africa: its Geography, Resources, and Chronicle of Discovery up to 1897.** By M. J. C. MEIKLEJOHN, B.A. Oxon. Third Edition. Crown 8vo, 76 pp. 4d.

**The British Colonies and Dependencies: their Resources and Commerce.** With Chapters on the Interchange of Productions and Climatic Conditions. By M. J. C. MEIKLEJOHN, B.A. Third Edition. Crown 8vo, 96 pp. 6d.

**The United States: their Geography, Resources, Commerce, and History.** By M. J. C. MEIKLEJOHN, B.A. 92 pp. 6d.

**Australasia: its Geography, Resources, Commerce, and Chronicle of Discovery.** By M. J. C. MEIKLEJOHN, B.A. Crown 8vo, 86 pp. 6d.

## HISTORY.

**A New History of England and Great Britain.** With Maps and Tables. By J. M. D. MEIKLEJOHN, M.A. Fourteenth Edition. Crown 8vo, 688 pp. 4s. 6d.

"I am very pleased with the concise statements and orderly marshalling of facts: such an improvement on our ordinary Histories."—*R. A. Little, Esq., M.A., The College, Buxton.*

**A New History of England and Great Britain.** With Maps and Tables. PART I.—From B.C. 55 to A.D. 1509. Ninth Edition. Crown 8vo, 320 pp. 2s. 6d.

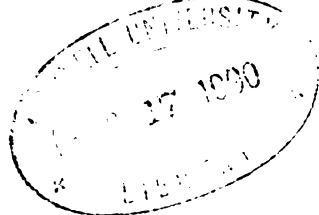
**A New History of England and Great Britain.** Part II.—From 1509 to 1890. Tenth Edition. Crown 8vo, 380 pp. 2s. 6d.

**Outlines of the History of England and Great Britain to A.D. 1890.** Fifth Edition. Crown 8vo, 84 pp. 6d.

**A Short History of England and Great Britain.** B.C. 55 to A.D. 1890. Twelfth Edition. Crown 8vo 1s. 0d.

"In the 'Short History' there is plenty of anecdote, ballad, and stray gems of literature; and we find, though not with its usual emphasis, the Professor's expertness in the use and disposition of type."—*Education.*

LONDON: A. M. HOLDEN, 11 PATERNOSTER SQUARE, E.C.



# THE EDUCATIONAL TIMES,

AND  
**Journal of the College of Preceptors.**

Vol. LIII.] New Series, No. 473. SEPTEMBER 1, 1900. { Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 1st of January, 1901.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.
2. **CERTIFICATE EXAMINATIONS.**—The Christmas Examination for Certificates will commence on the 4th of December, 1900.
3. **JUNIOR FORMS EXAMINATIONS.**—The Christmas Examination will commence on the 4th of December, 1900.
4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 4th of September, 1900.
5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5. The Doreck Scholarship of £20 will be awarded on the results of the Christmas Examination.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

## PRELIMINARY EXAMINATION OF

**MEDICAL STUDENTS.**—The COLLEGE of PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 4th, 5th, and 6th of September, 1900.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS.— EXTRACT FROM THE BY-LAWS.

*Section II., clause 5.*—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, DECEMBER, 1900.

Notice is hereby given that at the above Examination the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book vi., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., *the First Book of Samuel*.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

The Council of the College of Preceptors will shortly proceed to the appointment of additional EXAMINERS in PHYSICS and PHYSIOLOGY. Candidates must be Graduates, and should have had experience in teaching. Applications (twenty copies), stating age, experience, &c., should be addressed to the DEAN of the College not later than the 1st of October. If testimonials are sent, they should be not more than three in number, and twenty copies of each should be forwarded.

C. R. HODGSON, B.A., *Secretary.*

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS

#### ON THE SCIENCE AND ART OF EDUCATION. THE PRACTICE OF EDUCATION.

To be delivered by H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester, late Principal of the "Borough Road" Training College, Isleworth.

The Second Course of Lectures (Twenty-sixth Annual Series), will begin on Saturday, October 6, at 5 p.m.

*For Syllabus, see p. 388.*

The Fee for the Course is Half-a-guinea.

The Lectures will be delivered on Saturday Afternoons at 5 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., *Secretary.*

### UNIVERSITY DIPLOMA FOR WOMEN.

## THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## LL.A. ST ANDREWS UNIVER-

SITY.—Oral Classes for London students in all subjects of this examination are held at the Day Training College, White Street, Finsbury Street, and Ropermaker Street, Finsbury Pavement, E.C., and are conducted by Mr. S. Blows, M.A. Honours Cantab., B.A. Honours, B.Sc., and Teacher's Diploma, London.

Correspondence Tuition in all subjects for country students.

All applications to be addressed to Prof. CUSACK.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

### FOR MUSICAL EDUCATION, AND EXAMINATIONS IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KERN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in December, when certificates will be granted to all successful candidates. Last day for entry, November 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship also take place in December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Piano-forte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, *Secretary.*

## CORRESPONDENCE TUITION.

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—P. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunwick Road, Sutton, Surrey. Schools visited and Examinations conducted.

## LONDON UNIVERSITY EXAMINATIONS.

AT <b>Matric.</b> 1900,	<b>320</b>	Univ.
AT <b>Inter. Arts</b> 1900,	<b>93</b>	Corr.  Coll.
AT <b>Inter. Sc.</b> 1900,	<b>129</b>	Students
AT <b>Prelim. Sci.</b> JULY 1900,	<b>74</b>	Passed.

Prospectus, and full particulars of Classes, may be had, post free, from

**THE SECRETARY,**  
(Univ. Corr. Coll. London Office)  
32 Red Lion Square, Holborn, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

Next Session begins October 2nd, 1900. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (held in September), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

## UNIVERSITY COLLEGE OF NORTH WALES.

(A Constituent College of the University of Wales.)

### DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.

(Recognized by the Cambridge Syndicate.)

Professor of Education—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAVESON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

## UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.

(One of the constituent Colleges of the Univ. of Wales.)

### TRAINING DEPARTMENT FOR SECONDARY TEACHERS, MEN AND WOMEN.

Recognized by the Cambridge Teachers' Training Syndicate.

Professor of the Theory, Practice, and History of Education—POSTER WATSON, M.A. Lond.  
Assistant-Lecturers—Miss C. P. TREMAIN, B.A. Wales; D. R. HARRIS, B.A. Cantab. and Lond.

Preparation for (a) the Degrees in Arts and Science of the University of Wales, the curriculum for which includes the Theory and History of Education as an optional subject in the third year; (b) Cambridge Teachers' Certificate, Theory and Practice; (c) London University Teachers' Diploma; (d) College of Preceptors' Diplomas.

A Scholarship of £15 for one year will be awarded to a candidate entering in October, 1900.

Composition Fee for the Session (including Lectures and Practice) £10.

Men Students reside in registered lodgings in the town, or in the Hostel for Men Students.

Women Students reside in the Hall of Residence for Women Students. Terms from 27 to 42 guineas.

For further particulars apply to

T. MORTIMER GREEN, Registrar.

THE

### FROEBEL EDUCATIONAL INSTITUTE,

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEFIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

### TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

### KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

### ROYAL HOLLOWAY COLLEGE FOR WOMEN, EGHAM, SURREY.

THE Michaelmas Term will begin on October 4th. Entrance Examination September 27th and 28th, at the College. For Prospectus, forms of entry, and further particulars apply to the SECRETARY.

## BEDFORD COLLEGE, LONDON (FOR WOMEN),

YORK PLACE, BAKER STREET, W.

Principal—Miss ETHEL HURLBATT.

The Session 1900-1901 will open on Thursday, October 4th. Students are requested to enter their names on Wednesday, October 3rd.

Lectures are given in all branches of General and Higher Education. Taken systematically, they form a connected and progressive course, but a single course of Lectures in any subject may be attended.

Courses are held in preparation for all the Examinations of the University of London in Arts and Science, for the Teachers' Diploma (London), and for the Teachers' Certificate (Cambridge); and also a Special Course of Scientific Instruction in Hygiene. Six Laboratories are open to students for Practical Work. Two Entrance Scholarships awarded yearly. A Gladstone Memorial Prize and the Early English Text Society's Prize are awarded to students each June. The Art School is open from 10 to 4.

Students can reside in the College.

Full particulars on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

### DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.

(Recognized by the Cambridge Syndicate.)

Head of the Department—Miss H. ROBERTSON, B.A.

The Third Term of the Session 1900 begins on Thursday, October 4th.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

The Council will, in December, award a Gilchrist Travelling Studentship, value £70.

Full particulars on application to Miss ROBERTSON.

## THE MARIA GREY TRAINING COLLEGE FOR WOMEN TEACHERS,

SALTSBURY ROAD, BRONDESBURY, LONDON, N.W.

Principal—Miss ALICE WOODS.

A Full Course of Professional Training is offered to ladies who desire to become Teachers in Secondary Schools or in Kindergartens.

The Course for students preparing for the Cambridge Teachers' Certificate or for the London Teachers' Diploma begins in September or January, and lasts for one or two years. The Course for Kindergarten students preparing for the Higher Certificate of the National Froebel Union begins in September, and takes two years and one term.

Ample opportunities are given for Practice in Teaching in the School and Kindergarten of 150 pupils on the premises, as well as in other Schools.

The Winkworth Hall of Residence, close to the College, accommodates 20 students.

Scholarships to the amount of £230, from public and private sources, are annually awarded.

For all particulars as to qualifications for entrance, terms, scholarships, &c., apply to Miss ALICE WOODS, at the College.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.

The WINTER SESSION will open on Monday, October 1, at 5 p.m. T. CLIFFORD ALLBUTT, Esq., M.D., F.R.C.P., F.R.S., Regius Professor of Physic in the University of Cambridge, will distribute the prizes gained during the previous year, and deliver an Address. The ANNUAL DINNER of the Past and Present Students and their friends will take place the same evening at the Trocadero at 7 o'clock. Mr. W. LANG, F.R.C.S., in the Chair.

### HOSPITAL STAFF AND LECTURERS.

Consulting Physicians—Dr. S. Coupland, Sir R. Douglas Powell, Bart., M.D.

Physicians—Dr. Cayley, Dr. J. K. Fowler, Dr. W. Pasteur.

Assistant Physicians—Dr. W. E. Wynter, Dr. A. F. Voelcker, Dr. F. J. Wethered, Dr. H. C. Thomson.

Obstetric Physician—Dr. W. Duncan.

Assistant Obstetric Physician—Dr. R. Boxall.

Consulting Physician to the Skin Department—Dr. Robert Livinge.

Physician to the Skin Department—Dr. J. J. Pringle.

Consulting Surgeons—Mr. Nunn, Mr. George Lawson, Surgeons—Mr. Henry Morris, Mr. Andrew Clark, Mr. A. Penrice Gould.

Assistant Surgeons—Mr. J. Bland-Sutton, Mr. John Murray, and Mr. T. H. Killock.

Ophthalmic Surgeon—Mr. William Lang.

Aural Surgeon—Mr. Stephen Page.

Consulting Dental Surgeon—Mr. J. S. Turner.

Dental Surgeon—Mr. W. Hern.

Assistant Dental Surgeon—Mr. W. S. Nowell.

Other Lecturers—Dr. Robinson, Dr. Young, Dr. Kellas, Dr. W. J. Mickle, Dr. Crombie, Mr. A. G. R. Foulerton.

The Hospital contains 320 beds. There are Special Departments for Cancer, Syphilis, Diseases of Women and Children, Diseases of the Eye, Skin, Throat, and Ear, and for cases requiring Electrical treatment.

There are eighteen Resident Clinical Appointments open to Students of the Hospital annually.

Two open Entrance Scholarships (value £100 and £60) will be competed for on September 25, 26, and 27, and one Entrance Scholarship (value £60) in Anatomy and Physiology (open to Oxford and Cambridge Students only) on September 25 and 26. Notice in writing to be sent to the Dean on or before September 18.

Composition Fee 135 guineas, or by three yearly instalments of 60 guineas, 50 guineas, and 35 guineas.

Special terms are made in favour of University and other Students who have already commenced their medical studies, and of University of London Students who have passed the Preliminary Scientific Examination.

The New School Buildings, which provide large and fully equipped laboratories for Physiology, Pathology, and Bacteriology, as well as a new Dissecting Room and Chemical Department, are now in regular use.

The Residential College adjoining the Hospital provides accommodation for thirty Students.

For further information apply to

W. PASTEUR, M.D., Dean.

## GUY'S HOSPITAL MEDICAL SCHOOL.

The WINTER SESSION will begin on Monday, October 1st, 1900. Five Open ENTRANCE SCHOLARSHIPS of the combined value of £410 are offered for competition in September next, and numerous Prizes, Medals, and Scholarships are awarded annually.

The COLLEGE accommodates 60 residents, and contains Reading Rooms, Dining Hall, and Gymnasium for the general use of the students. During last year more than 7500 patients have been treated in the Wards of the Hospital. The Preliminary Scientific Class for Students who matriculated at London University in July will begin on October 1st. The Clubs' Union Athletic Ground at Honor Oak Park is easily accessible from the Hospital. A handbook of information for students about to enter the profession will be forwarded on application.

For further particulars, or Prospectus of the School, apply personally or by letter to the DEAN, Guy's Hospital, London Bridge, S.E.

## ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

The WINTER SESSION will begin on Monday, October 1st, 1900.

Students can reside in the College within the Hospital walls subject to the collegiate regulations.

The Hospital contains a service of 750 beds.

Scholarships and prizes of the aggregate value of nearly £900 are awarded annually.

The Medical School contains large Lecture Rooms and well-appointed Laboratories for practical teaching, as well as Dissecting Rooms, Museum, Library, &c.

The Amalgamated Clubs Ground (ten acres) is at Winchmore Hill, within easy reach of the Hospital.

For further particulars apply personally or by letter to the WARDEN of the College, St. Bartholomew's Hospital, E.C. A handbook forwarded on application.

LADY, experienced, good teacher, desires Re-engagement. Has attended Training Lectures at College of Preceptors, and passed all subjects but two for A.C.P. Diploma. Usual subjects: Drawing (certificated South Kensington), Needlework, Kindergarten.—Brixton, 277 Brixton Road, Brixton, S.W.



**LONDON UNIVERSITY EXAMINATIONS.**



Private Tuition may be taken up during the Summer Vacation.

**Day and Evening Classes**

FOR THE

**MATRICULATION**

AND OTHER

**Examinations of London University**

Commence at University Tutorial College, Red Lion Square, Holborn, as follows:—Matriculation (January and June), Monday, September 10; Prelim. Sci., Monday, September 17; Inter. Arts, B.A., Inter. Sc., and B.Sc., Monday, October 1. Evening Classes are held in Organic Chemistry for Inter. M.B.; in Botany and Geology for B.Sc.; for Inter. Laws and LL.B.

Prospectus on application to

**THE VICE-PRINCIPAL,**

University Tutorial College,

32 Red Lion Square, Holborn, W.C.

**ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.**

Principal—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

**THE ANSTAY PHYSICAL TRAINING COLLEGE**

**OFFERS** a professional Training in Swedish Gymnastics (both educational and medical) to Ladies of good education.

The Course begins in September, and lasts two years. Age of admission, 18 to 30. The work is particularly interesting and healthful, and is remunerative, there being more openings for trained teachers than can be filled.

Apply, for illustrated prospectus, to **THE PRINCIPAL, The Leasowes, near Halesowen, Worcestershire.**

**KELLAND TRAINING COLLEGE FOR TEACHERS, LEICESTER.**

Principals—(Miss MORGAN, N.F.U. (Higher), Miss J. MORGAN, B.A. (Lond.).

Preparation for the National Froebel Union Certificates. Cambridge Teacher's Diploma. Entrance Scholarships. Grounds comprise Tennis Court, Croquet Lawn, &c. **STUDENT-TEACHER** required for September 18th. Premium 25 guineas.

**MR. JOHN JACKSON** lectures on **THE TEACHING OF WRITING, OF ARITHMETIC, and of AMBIDEXTERITY.** He also gives Courses of (or introductory) Lessons in those subjects to Boys' or Girls' Schools.—The Hollies, West Norwood, S.E.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: **Mr. J. CHARLESTON, B.A.** (Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

**Single subjects may be taken**—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—**Mr. J. CHARLESTON, B.A.,**

**BURLINGTON CLASSES,**

**27 CHANCERY LANE, LONDON.**

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

**LONDON MATRICULATION and B.A. REVISION** Classes, September 6. **INTER. ARTS and SCIENCE, B.A., and B.Sc. Classes,** October 2. Day and Evening Classes.

Classes and Tuition for all **Preliminaries, Scholarship Examinations, Oxford and Cambridge, B.U.I., &c.**

Papers Corrected for Schools.

Private tuition for all Examinations.

Prospectus and full details on application to **R. C. B. KERIN, B.A. Lond.,** First of First Class Classical Honours, Editor of "Phaedo," "Pro Plancio," &c.

**SUCCESSSES.**

1892-1900.—London Matric., 74; Inter. Arts, Sc., and Prel. Sci., 88, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, B.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**

**M.A., 2 (1898 and 1899).**

**Diploma Correspondence College.**

FOR

**A.C.P.,**

**L.C.P., AND F.C.P.**

**SUCCESSSES: 311 at A.C.P.; 20 at L.C.P.**

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**WANTED, a Post as Resident KINBERGARTEN-MISTRESS** in a School. National Froebel Certificate.—M. H., St. Mary's House, Atherton, Cheshire.

**KING'S COLLEGE, LONDON.**

**FREE SATURDAY MORNING LECTURES TO TEACHERS.**

1. A Course of about Ten Lectures on "The Teaching of Mathematics," by Prof. HUDSON.
2. A Course of about Ten Lectures, Historical and Critical, on "The Pedagogy of John Locke," by Mr. ADAMSON.

The Courses begin on October 13 at 10 a.m. and 11.30 a.m., respectively, and will be continued on alternate Saturdays at the same hour.

For prospectus, apply to the **SECRETARY, King's College, Strand.**

**KING'S COLLEGE, LONDON.—**

**FULL COURSES** for MATRICULATED STUDENTS in Arts, Science, Engineering, Medicine, and Theology at composition fees, or students may attend the separate classes.

Preparation for all Examinations of the London University.

**NEXT TERM** commences Thursday, October 4.

There are a few vacancies for Resident Students.

For prospectuses and all information apply to the **SECRETARY, King's College, London, W.C.**

**UNIVERSITY COLLEGE, LONDON.**

**ENGINEERING AND ARCHITECTURAL DEPARTMENT.**

Assisted by Technical Education Board of London County Council and by the Carpenters' Company.

**SESSION 1900-1901.**

The Courses of Instruction in Mechanical, Civil, Municipal, and Electrical Engineering and Architecture commence on October 2nd. They are arranged to cover periods of two and three years.

Particulars of the Courses, of Entrance Scholarships, of the Matriculation Examination, and of the Fees, may be obtained from the **SECRETARY.**

*Professors.*

Mechanical Engineering	T. Hudson Beare, M.I.C.E.
Electrical Engineering	J. A. Fleming, D.Sc., F.R.S.
Municipal Engineering	Osbert Chadwick, M.I.C.E., C.M.G.
Civil Engineering	L. F. Vernon Harcourt, M.I.C.E.
Architecture	T. Roger Smith, F.R.I.B.A.
Physics	H. L. Callendar, F.R.S.
Chemistry	W. Ramsay, F.R.S.
Applied Mathematics	K. Pearson, F.R.S.
Economic Geology	T. G. Bonney, F.R.S.
Mathematics	M. J. M. Hill, F.R.S.

The New Wing of the College, opened by H.R.H. the Duke of Connaught in May, 1893, contains spacious Mechanical and Electrical Engineering Laboratories, Workshops, Drawing Office, Museum and Lecture Theatres. The Laboratories are fitted with all the best appliances for practical work and for research work of the most advanced character.

**ST. THOMAS'S HOSPITAL MEDICAL SCHOOL,**

ALBERT EMBANKMENT, LONDON, S.E.

The **WINTER SESSION** of 1900-1901 will open on Tuesday, October 2, when the prizes will be distributed at 3 p.m. by Sir **WILLIAM MACCORMAC, Bart., K.C.V.O.,** in the Governors' Hall.

Three Entrance Scholarships will be offered for competition in September, viz., one of £150 and one of £60, in Chemistry and Physics, with either Physiology, Botany, or Zoology, for First Year's Students; one of £50 in Anatomy, Physiology, Chemistry (any two) for Third Year's Students from the Universities.

Scholarships and Money Prizes of the value of £300 are awarded at the Sessional Examinations, as well as several Medals.

Special Classes are held throughout the year for the Preliminary Scientific and Intermediate M.B. Examinations of the University of London.

All Hospital Appointments are open to students without charge.

Club-rooms and an Athletic Ground are provided for students.

The School Buildings and the Hospital can be seen on application to the Medical Secretary.

The fees may be paid in one sum or by instalments. Entries may be made separately to Lectures or to Hospital Practice, and special arrangements are made for students entering from the Universities and for Qualified Practitioners.

A Register of approved lodgings is kept by the Medical Secretary, who also has a list of local Medical Practitioners, Clergymen, and others who receive students into their houses.

For Prospectus and all particulars apply to **Mr. RENDLE, the Medical Secretary.**

H. G. TURNEY, M.A., M.D., Oxon., Dean.

**UNIVERSITY OF ABERDEEN.**  
**FACULTY OF MEDICINE.**  
 WINTER SESSION, 1900-1901.

The WINTER SESSION commences on Tuesday, October 16, 1900. The Preliminary Examination will commence on September 29.

The Degrees in Medicine granted by the University are—Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.). They are conferred only after examination, and only on Students of the University. A Diploma in Public Health is conferred, after Examination, on Graduates in Medicine of any University in the United Kingdom.

The total cost for the whole curriculum, including Hospital Fees and Fees for the Degrees of M.B. and Ch.B., is usually about £120. Bursaries, Scholarships, Fellowships, and Prizes, to the number of 50, and of the aggregate annual value of £1,185, are open to Competition in this Faculty.

A Prospectus of the Classes, Fees, &c., may be had free on application to the SECRETARY OF THE MEDICAL FACULTY.

The University also grants the following Degrees in Arts, Science, Divinity, and Law:—In Arts: Doctor of Letters, Doctor of Philosophy, and Master of Arts. In Science: Doctor of Science, Bachelor of Science (in Pure Science and in Agriculture). In Divinity: Doctor of Divinity (Honorary) and Bachelor of Divinity. In Law: Doctor of Laws (Honorary) and Bachelor of Law (B.L.).

Particulars may be had on application to the SECRETARY OF FACULTIES.

**UNIVERSITY OF ST. ANDREWS.**  
 UNIVERSITY HALL.

RESIDENCE FOR WOMEN STUDENTS.

Warden—MISS FRANCES H. MELVILLE, M.A., with First Class Honours in Mental Philosophy.

The Hall accommodates twenty-five Women Students. There are some vacancies for next Session.

Students are received in residence during the Preliminary and other University Examinations in September.

The Classes and Degrees of the University, and some Bursaries and Scholarships, are open to Women.

For further information apply to the WARDEN, University Hall, St. Andrews, N.B.

**CAMBRIDGE TRAINING COLLEGE**  
 FOR WOMEN TEACHERS.

The Council are about to appoint a LECTURER for January next. Stipend from £90 to £120, and residence. Special knowledge of Languages or Science required. Applications, with fifteen copies of testimonials, should be sent by October 13th, to the PRINCIPAL, Cambridge Training College, Wollaston Road, Cambridge, from whom further particulars may be obtained.

**ARMY SCHOOLMASTERS.**—There are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Board of Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

**JOINT AGENCY FOR WOMEN TEACHERS.**

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families: Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

**JOINT AGENCY FOR ASSISTANT-MASTERS.**

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. P. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.  
 Incorporated Association of Headmasters.  
 College of Preceptors,  
 Teachers' Guild.  
 Welsh County Schools' Association.  
 Private Schools' Association.  
 Association of Headmasters of Preparatory Schools.  
 Association of Headmasters of Roman Catholic Schools.  
 Assistant-Masters' Association.  
 Association of Technical Institutions.  
 &c. &c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

**GIRLS' GRAMMAR SCHOOL.**

BRISBANE, QUEENSLAND.—Required, for February, 1901, Resident MUSIC MISTRESS. Special subjects: Piano, Theory, Harmony, Class Singing. Applicants must have high qualifications and successful experience in the preparation of pupils for the Practical and Theoretical Examinations of the R.A.M. and Trinity College Junior, Senior, and Higher Divisions. Salary £150 and residence. Passage money advanced if desired. Applications, stating age, full particulars of qualifications and experience in above and any other subjects, with copies of testimonials, to be sent on or before September 20, to the AGENT-GENERAL FOR QUEENSLAND, 1 Victoria Street, S.W., from whom further information can be obtained.

"Useful for Examination Purposes."

**THE "NOTABILIA" SERIES.**

By WALTER BLANCHARD, L.C.P., F.R.G.S.,  
 Principal of the Intermediate School, Lancaster.

- (1) "NOTABILIA OF ENGLISH HISTORY." 30th Edition, with Addenda to 1900. Price 1s.
- (2) "TOPOGRAPHICAL GEOGRAPHY." 12th Edition, with Index. Price 1s.
- (3) "COMMERCIAL GEOGRAPHY." Supplement to the above. Price 1s.
- (4) "PATTERN LOGIC." "Euclid," Book I, in brief. Price 6d.

T. MURBY, 3 Ludgate Circus Buildings, London, E.C.

**OLD ESTABLISHED MIDDLE-CLASS DAY SCHOOL,** with good house and accommodation for Boarders, in rapidly increasing town twelve miles from London. Detached special School Buildings. For family reasons. A bargain to an immediate purchaser. No agents.—SCHOLASTIC, c/o Street's Agency, 30 Cornhill, London.

Tenth Edition. 12mo, price 3s. 6d.

**THE ILLUSTRATED PUBLIC**

SCHOOL SPEAKER AND READER, based on Grammatical Analysis, comprising a choice Selection of pieces for Reading and Recitation, annotated for Expression, Emphasis, and Pauses, and illustrated by Diagrams and Figures exhibiting to the eye the appropriate gestures and positions, to which is added a selection of Greek, Latin, French, and German Extracts, suitable for "Speech Days" at Public Schools. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors.

LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-**

KEEPING, by SINGLE AND DOUBLE ENTRY: with Practical Explanations and Exercises on the most useful forms for Business. By A. K. ISBISTER, M.A., LL.B., late Dean of the College of Preceptors.

LONDON: LONGMANS & Co., PATERNOSTER ROW, E.C.

**EPPS'S COCOA.**

GRATEFUL. COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in 1-lb. and 1/2-lb. packets, and 1-lb. tins, labelled JAMES EPPS & CO., Ltd., Homœopathic Chemists, London.

BREAKFAST. SUPPER.

**EPPS'S COCOA.**

Seventh Edition. With an Appendix of Easier Exercises.

Fcap. 8vo, cloth, price One Shilling.

**HINTS ON FRENCH SYNTAX.**

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

**OXFORD LOCAL SHAKESPEARE, 1901.**

DINGLEWOOD SHAKESPEARE MANUALS, BY STANLEY WOOD, M.A.

**HENRY THE FIFTH, QUESTIONS AND NOTES. 1s.**

"A little brochure of some fifty pages, which will suggest some useful thoughts to masters teaching the play."—*Journal of Education*.

**MERCHANT OF VENICE, QUESTIONS AND NOTES. 1s.**

"Cannot but prove useful to candidates for whom these plays are set."—*Scotsman*.

**CAMBRIDGE LOCAL SHAKESPEARE, 1900.**

**AS YOU LIKE IT, QUESTIONS AND NOTES. 1s.**

"They will tend rather to discourage 'gram' than otherwise. . . . We can recommend the book as a distinctly useful 'aid.'"—*Guardian*.

Each of the Manuals contains about 250 Questions, of which all the most difficult (about one-third of the whole number) are fully answered as models.

JOHN HEYWOOD, LONDON AND MANCHESTER.

# GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS FOR THE College of Preceptors Examinations, July & December, 1901.

ENGLISH.		s. d.	RELIGIOUS KNOWLEDGE.		s. d.
Shakespeare's Henry V. Edited by STANLEY WOOD, M.A., author of the Dinglewood Shakespeare Series, and the Rev. F. MARSHALL, M.A. ...	1	6	Marshall's St. Matthew. Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo. cloth ...	1	6
Containing— Introduction.—Source, Editions, Date, Scene of the Play; the Unities, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes. Text with marginal and foot notes, and paraphrase of difficult passages. Appendix.—Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.			Containing— 1. Introduction.—Author, Life and Purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazarene Vow, &c., &c. 2. Text of the Gospel, with marginal and foot notes. 3. Comments on the Revised Version. 4. Glossary, and Chapters on Our Lord's Teachings. 5. Appropriately Coloured Sketch Maps. 6. Critical Notes.		
The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A. ...	1	0	Marshall's Acts of the Apostles. Part II.: Chapters XIII.—end. Edited by the Rev. F. MARSHALL, M.A. ...	1	6
The O. and C. Spelling ...	1	0	Marsnal's Catechism. By the same Author ...	1	6
Preparation Papers in English Grammar. Per packet ...	0	8	The Prayer Book. Edited by the Rev. F. MARSHALL, M.A. ( <i>In the press.</i> ) ...	2	6
Normal Copy Books. In 12 numbers each ...	0	2	Preparation Papers on St. Matthew. Per packet ...	0	8
			Preparation Papers on Acts of the Apostles. Per packet ...	0	8
<b>HISTORY.</b>			<b>BOOK-KEEPING.</b>		
The Imperial History of England. By ROSCOE MORGAN, B.A. ...	2	6	Sarll's Practical Book-keeping. 128 pp., cloth ...	1	0
The O. and C. History of England ...	1	0	Sarll's Double-Entry Book-keeping. 226 pp., cloth ...	2	0
Outlines and Dates of English History. By A. A. GUNNIS ...	1	0	Sarll's Exercises in Double-Entry Book-keeping. 128 pp., cloth ...	1	0
This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &c.			The above with all introductory matter, full explanations, outline keys, &c.		
History Notes. By GEORGE GILL, F.R.G.S. With Maps ...	0	6	Manuscript Books published to accompany the above.		
Europe in the Eighteenth Century. By T. J. WALKER, M.A. Oxon. With Maps, &c. ...	0	9	For Practical:—Cash Book ... 5s. Ledger ... 0 7		
			Ledger (100 Accounts) ... 7s. Ledger ... 0 7		
<b>GEOGRAPHY.</b>			Key to Double-Entry Book-keeping ... 3 0		
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition Physical, Descriptive, Political, Industrial, Commercial, Social.	4	6	Key to Practical Book-keeping ... 2 0		
Also published in Sections as follows:—			<b>MATHEMATICS AND ARITHMETIC.</b>		
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d. Section I.a. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.			Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A. ...	2	6
The Imperial Geography. 464 pages, crown 8vo. cloth, with numerous Maps. For Senior Classes. New Edition <i>ready September, 1900</i> ...	2	6	Marshall's Examination Euclid. Books I.—IV. ...	1	0
The O. and C. Geography (Revised Edition). By GEORGE GILL ...	1	0	The O. and C. Algebra ...	1	6
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms, and particularly useful for the Junior Forms Examination.)	1	0	Preparation Papers in Algebra. By A. CUDWORTH, M.A. ...	0	8
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies.	2	6	The O. and C. "Practical Arithmetic." 176 pp., crown 8vo. (New Edition), cloth, enlarged. (With Answers, 1s. 6d.) ...	1	0
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps	1	0	The O. and C. "Tests in Arithmetic." (With Answers, 1s. 6d.) ...	1	0
<b>LATIN AND FRENCH.</b> s. d.			A Graded Examination Arithmetic. 160 pp., cloth ...		
The O. and C. Latin, Part I. ...	1	0	The Metric Chart (65 by 45). In Four Tints, mounted and varnished ...	10	6
The O. and C. Latin, Part II. ...	1	0	The Long Tot Book. By the Rev. CHARLES BROOKE, M.A. ...	0	3
The O. and C. Latin, Part III. ...	1	0	The Cross Tot Book. By the Rev. CHARLES BROOKE, M.A. ...	0	3
Commercial French Correspondence ...	1	0	Cambridge Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per pkt.	0	8
The O. and C. French, Part I. ...	1	0	Oxford Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per packet	0	8
The O. and C. French, Part II. ...	1	0	<b>DRAWING (Freehand, &amp;c.).</b>		
Phædrus, Books I. and II. ...	1	0	The New Government Drawing Copies. 32 Subjects, upon stout card in case	1	4
Eutropius, Books I. and II. ...	1	0	South Kensington Demonstration Sheets. For Class Teaching (in Colour). On Mahogany Guards, per set, 24 Subjects to each set ...	7	6
Cæsar, Book VI. ...	1	0	Also Mounted and Varnished on Boards, in Box, each set ...	15	0
Vergil, Æneid, Book VI. ...	1	0	No. 1. Freehand.   No. 3. Freehand.   No. 6. Freehand and Model.		
Cicero, De Senectute ...	1	0	No. 2. Freehand.   No. 5. Freehand.   No. 8. Freehand and Geom.		
Preparation Papers in French ...	0	8	No. 9. Casts and Vases, sketched ...	6	6
Preparation Papers in Latin ...	0	8	New School of Art Geometry, 192 pp., by T. W. GOOD, D.D. ...	1	0
			Exactly meeting the requirements of the College of Preceptors Examinations, Science and Art Geometry, in Two Parts, each ...	1	4

## New. GILL'S New. "CARTOGRAPHIC" WALL MAPS

Edited by GEORGE GILL, F.R.G.S.

WALL MAPS WITH NEW AND DISTINCTIVE FEATURES:

New Method of "Coast" production.    New Method of "Hill" Work.    New Treatment throughout.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Size,  
80 x 60 in.

Price 16s.

- |                     |           |          |              |
|---------------------|-----------|----------|--------------|
| *ENGLAND AND WALES. | *IRELAND. | INDIA.   | ASIA.        |
| *SCOTLAND.          | *EUROPE.  | *AFRICA. | *N. AMERICA. |
| WORLD (MERCATOR).   |           |          |              |
- \* The Set Geography for the Examinations.

## 2/6 GILL'S MILITARY DRILL. 2/6

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

FREE GUIDE TO THE  
**CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

332 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1900, 60 with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P.**, **L.C.P.**, and **F.C.P.**

BY JOHN S. RAWLE, F.S.A.,

Late Examiner to the Department of Science and Art.

**SECOND GRADE PRACTICAL GEOMETRY,**  
PLANE & SOLID, CURVES, SCALES & PATTERN DRAWING.

REVISED AND ENLARGED. NOW READY.

Containing the additional matter as required by the Department Circular of March, 1895, and forming a complete Text-Book for the Science and Art Examinations.


350th Thousand. MORE THAN 600 DIAGRAMS.

Price 1s. Bound in cloth, 2s.

Class Sheets for Practical Geometry	... ..	1s.
Practical Geometry Test Papers	... ..	4d.
Freehand Drawing Test Papers	... ..	1s.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO.

 *Headmasters should apply for*

**EYRE & SPOTTISWOODE'S**

ILLUSTRATED CATALOGUE OF

**DRAWING INSTRUMENTS,**

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

*BOXES OF WATER AND OIL COLOURS,*

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

**EXAMINATION PAPER**

AS USED BY THE

**COLLEGE OF PRECEPTORS.**

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets ... .. per Ream, 2s. 6d.  
" " 960 " " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

**HEWARD & SHELBOURNE, Wholesale and Retail Stationers,**  
63 HIGH HOLBORN, LONDON, W.C.

**JOSEPH GILLOTT'S** Gold Medals, Paris, 1878, 1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 720, 303,  
170, 166, 5, 6, 222, 293,  
291 (Mapping), 650 (Drawing);  
and (for Vertical Writing) 104A, 104B.

**STEEL PENS.**

Professor **MEIKLEJOHN'S** SERIES.

Just Published. Crown 8vo, 120 pp. 1s.

**A FIRST FRENCH BOOK.**

BY

J. DE CUSANCE.

"It is an uncommonly good French grammar, full of valuable material, and will make a thoroughly practical text-book."—*The Educational News.*

"The merit of these lessons is that the sentences illustrating the rules are sensible, short, and of the kind continually employed in daily conversation."—*The Girls' and Infants' Mistress.*

SPECIMEN PAGES ON APPLICATION.

**A New Spelling Book.** With Side Lights from History—  
Eighth Edition. Crown 8vo, 152 pp. . . . . 1s.

"We agree with the main principle here followed—that spelling should be learnt through the eye rather than through the ear."—*The School Guardian.*

**The Spelling List.** For Civil Service and other Examinations. With a Key to Correct Spelling. Fourth Edition. Crown 8vo, 146 pp. . . . . 1s.

"Your 'Spelling List' is a very decided advance in the right direction, ably conceived and brilliantly written. We shall certainly strongly recommend it to our pupils."—*The Rev. H. P. Gurney, M.A. (late of Messrs. Wren & Gurney), Powis Square, London.*

**A New Poetry Book** for the Use of Schools and Families.  
Fourth Edition. 156 pp. . . . . 1s.

"This neatly bound little collection, which is one of Professor Meiklejohn's series of school manuals, may be confidently recommended to teachers in search of new selections for recitation."—*The Schoolmaster.*

**Fifty New Lessons in English.** Being a Historical Method of Parsing. By Professor J. M. D. MEIKLEJOHN, M.A. Crown 8vo, 102 pp. . . . . 1s. 6d.

"A very interesting little book of exercises in simple English philology."—*The Journal of Education.*

"In the fifty lessons here given, Professor Meiklejohn has demonstrated fully and ably that it is possible to make the examination of the words of a simple sentence a most interesting process."—*The Practical Teacher.*

**The New Freehand Drawing Cards.** By FRANK G. JACKSON, of the Birmingham Municipal School of Art; Author of "Lessons in Decorative Art" and "Theory and Practice of Design." Sets III., IV., and V., 2s. each.  
Sets VI. and VII., 2s. 6d. each.

"Nothing so good has yet been offered to teachers of drawing as this excellent series of cards."—*The Schoolmaster.*

LONDON: A. M. HOLDEN, 11 PATERNOSTER SQUARE.

# PROFESSOR MEIKLEJOHN'S SERIES.

## ARITHMETIC AND ALGEBRA.

**A New Arithmetic.** By G. A. CHRISTIAN, B.A. (Lond.), and G. COLLAR, B.A., B.Sc. (Lond.). **Fourth Edition.** Crown 8vo, 562 pp. . . . . 4s. 6d.

"We consider it so satisfactory that we have at once placed it on our list of books."—*Rev. G. H. S. Walpole, D.D., Principal, Bede College, Durham.*

**A Short Arithmetic.** By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. . . . . 1s. With Answers, 1s. 6d.

"A book of well graduated examples, and just as much theory as will explain the methods of their solution."—*The Educational Times.*

**A School Algebra for Junior Forms.** By F. OSCAR LANE, B.Sc. Lond., Assistant Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. . . . . 1s. 6d. With Answers, 266 pp. 2s. 0d.

"A very trustworthy book for beginners, extending to indices, surds, and progressions."—*The University Correspondent.*

## COMPOSITION.

**The Art of Writing English.** A Manual for Students. With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A. **Second Edition.** Crown 8vo, 340 pp. . . . . 2s. 6d.

"The Art of Writing English' teems with good advice."—*The Literary World.*  
"Whatever Prof. Meiklejohn writes is sure to be vigorous and racy, and, on the subject of English composition, he is peculiarly well qualified to speak."—*The Journal of Education.*

**One Hundred Short Essays in Outline.** By Professor MEIKLEJOHN. **Second Edition.** 110 pp. . . . . 1s. 0d.

"This is undoubtedly one of the most useful books for pupil teachers, Scholarship and Certificate students, ever produced."—*The Practical Teacher.*

**General Intelligence Papers;** with Exercises in English Composition. By GERALD BLUNT, M.A. Crown 8vo, 130 pp. 2s. 0d.

"This little book is likely to be very useful. It avoids the faults of so many books of the same class; the questions are not too difficult."—*Rev. Joseph Wood, D.D., Headmaster of Harrow School.*

## ENGLISH LANGUAGE.

**The English Language:** its Grammar, History, and Literature. By J. M. D. MEIKLEJOHN, M.A. **Nineteenth Edition.** Enlarged, with Exercises and additional Analyses. Crown 8vo, 470 pp. . . . . 4s. 6d.

"I gave it to a girl candidate for an English scholarship; she got first place, and valued the help she got from the book."—*W. Johnson, Esq., B.A., Elmfield College, York.*

**A New Grammar of the English Tongue.** With Chapter on Composition, Versification, Paraphrasing, and Punctuation. With Exercises and Examination Questions. **Eighteenth Edition.** Crown 8vo, 280 pp. . . . . 2s. 6d.

**A Short History of the English Language.** Crown 8vo, 76 pp. . . . . 1s. 0d.

**An Outline of the History of English Literature.** Crown 8vo, 110 pp. . . . . 1s. 6d.

**A Short Grammar of the English Tongue,** with Three Hundred and Thirty Exercises. **Eleventh Edition.** . . . . 1s. 0d.

This little book is written in the clearest and simplest style for beginners. It contains:—

- |                                 |   |
|---------------------------------|---|
| i. The Simplest Definitions.    | iv. Graduated Methods of Parsing.       |
| ii. Slowly graduated Exercises. | v. Bad Grammar Corrected, with Reasons. |
| iii. Clearly printed Tables.    | vi. Analysis, with Plain Diagrams.      |

## GEOGRAPHY.

**A New Geography on the Comparative Method.** With Maps and Diagrams and an Outline of Commercial Geography. By J. M. D. MEIKLEJOHN, M.A. **Twenty-fourth Edition.** 135th Thousand. Crown 8vo, 630 pp. . . . . 4s. 6d.

"A most useful manual for examiners, and full of stimulating matter for students of geography. Its picturesqueness of description and vividness of style make it almost as interesting and enjoyable reading as a book of travels."—*The Journal of Education.*

**A School Geography.** With special reference to Commerce and History. With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A. Crown 8vo, 410 pp. . . . . 2s. 6d.

"This is a well-planned book, with many good features, and the promise of the title-page is sedulously fulfilled."—*The Educational Times.*

**A Short Geography,** with the Commercial Highways of the World. **Sixteenth Edition.** Crown 8vo, 196 pp. . . . . 1s. 0d.

"Terse, practical, informative, and statistic. This shilling Geography is exactly what a School Geography needs to be."—*The Teachers' Aid.*  
"Clearness and conciseness exemplified."—*The Private Schoolmaster.*

**The Comparative Atlas.** By J. G. BARTHOLOMEW, F.R.G.S., and Edited by Professor MEIKLEJOHN. Containing 64 Plates and a General Index . . . . . 2s. 6d.

"No atlas that we know at anything like the price gives so much so well."—*The Teachers' Monthly.*

**Europe:** its Physical and Political Geography, with Chapters on Latitude and Longitude, Day and Night, and the Seasons. With a Double-Page Map in Colour. By M. J. C. MEIKLEJOHN, B.A., F.R.G.S. 96 pp. . . . . 6d.

**Africa:** its Geography, Resources, and Chronicle of Discovery up to 1897. By M. J. C. MEIKLEJOHN, B.A. Oxon. **Third Edition.** Crown 8vo, 76 pp. . . . . 4d.

**The British Colonies and Dependencies:** their Resources and Commerce. With Chapters on the Interchange of Productions and Climatic Conditions. By M. J. C. MEIKLEJOHN, B.A. **Third Edition.** Crown 8vo, 96 pp. . . . . 6d.

**The United States:** their Geography, Resources, Commerce, and History. By M. J. C. MEIKLEJOHN, B.A. 92 pp. 6d.

**Australasia:** its Geography, Resources, Commerce, and Chronicle of Discovery. By M. J. C. MEIKLEJOHN, B.A. Crown 8vo, 86 pp. . . . . 6d.

## HISTORY.

**A New History of England and Great Britain.** With Maps and Tables. By J. M. D. MEIKLEJOHN, M.A. **Fourteenth Edition.** Crown 8vo, 688 pp. . . . . 4s. 6d.

"I am very pleased with the concise statements and orderly marshalling of facts: such an improvement on our ordinary Histories."—*R. A. Little, Esq., M.A., The College, Buxton.*

**A New History of England and Great Britain.** With Maps and Tables. PART I.—From B.C. 55 to A.D. 1509. **Ninth Edition.** Crown 8vo, 320 pp. . . . . 2s. 6d.

**A New History of England and Great Britain.** Part II.—From 1509 to 1890. **Tenth Edition.** Crown 8vo, 380 pp. . . . . 2s. 6d.

**Outlines of the History of England and Great Britain** to A.D. 1890. **Fifth Edition.** Crown 8vo, 84 pp. . . . . 6d.

**A Short History of England and Great Britain.** B.C. 55 to A.D. 1890. **Twelfth Edition.** Crown 8vo . . . . . 1s. 0d.

"In the 'Short History' there is plenty of anecdote, ballad, and stray gems of literature: and we find, though not with its usual emphasis, the Professor's expertness in the use and disposition of type."—*Education.*



# Bell's Illustrated Classics.

Edited by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School.

Full Illustrated Prospectus of this Series post free on application.

THE special object of this Series is to make the editions as interesting and helpful as possible to the intelligent learner; and, with this object, numerous Illustrations have been introduced. Though based on authentic sources, these are not mere copies of antiquities, such as are to be found in every Classical Dictionary, but pictures drawn with a view to bringing the reality of Greek and Roman life before the reader.

Photographic views of places, as well as Maps and Plans, are also freely introduced.

The volumes are equipped with Introductions, Notes, Grammatical Appendices, and, in some of the prose authors, Exercises on the Text. Vocabularies are also given, but the volumes may be had without the Vocabularies if preferred.

The volumes are printed at the Oxford University Press, post 8vo, and are issued in three forms:

1. With Notes and Vocabulary complete, 1s. 6d.
2. Without Vocabulary, 1s. 6d.
3. With Vocabulary, but without Notes, 1s.

THE FOLLOWING VOLUMES ARE NOW READY, UNLESS OTHERWISE STATED:—

- Caesar. De Bello Gallico.—Book I.** Edited by A. C. LIDDELL, M.A., Assistant-Master at the High School, Nottingham. With Exercises.
- Caesar. De Bello Gallico.—Book II.** Edited by A. C. LIDDELL, M.A. With Exercises.
- Caesar. De Bello Gallico.—Book III.** Edited by F. H. COLSON, M.A., Headmaster of Plymouth College, and G. M. GWYTHER, M.A., Assistant-Master.
- Caesar. De Bello Gallico.—Book IV.** Edited by the Rev. A. W. UPCOTT, M.A., Headmaster of St. Edmund's School, Canterbury.
- Caesar. De Bello Gallico.—Book V.** Edited by A. REYNOLDS, M.A., Assistant-Master at Merchant Taylors' School. With Exercises.
- Caesar. De Bello Gallico.—Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley. With Exercises.
- Cicero Speeches against Catiline, I. and II.** Edited by F. HERRING, M.A., Assistant-Master at Blundell's School, Tiverton. With Exercises.
- Selections from Cicero.** Edited by J. F. CHARLES, B.A., Assistant-Master at the City of London School. With Exercises.
- Cornelius Nepos. Epaminondas, Hannibal, Cato.** Edited by H. L. EARL, M.A., Assistant-Master at the Grammar School, Manchester.
- Enropius.—Books I. and II.** Edited by J. G. SPENCER, B.A., Assistant-Master at St. Paul's Preparatory School.
- Horace's Odes.—Book I.** Edited by C. G. BOTTING, B.A., Assistant-Master at St. Paul's School.
- Horace's Odes.—Book II.** Edited by C. G. BOTTING, B.A. [Preparing.]
- Horace's Odes.—Book III.** Edited by H. LATTER, M.A., Assistant-Master at Cheltenham College.
- Livy.—Book IX., cc. i.—xix.** Edited by W. C. FLAMSTEAD WALTERS, M.A., Lecturer in Classics at University College, Cardiff, formerly Composition Master at Christ's College, New Zealand.
- Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI., and edited by F. E. A. TRAYES, M.A., Assistant-Master at St. Paul's School.
- Ovid's Metamorphoses.—Book I.** Edited by G. H. WELLS, M.A., Merchant Taylors' School.
- Selection from Ovid's Metamorphoses.** Edited, with Introduction and Notes, by J. W. E. PEARCE, M.A., Morton Court Preparatory School, Sidcup; formerly Assistant-Master at University College School, London.
- Ovid's Tristia.—Book III.** Edited by H. R. WOOLRYCH, M.A., Headmaster of Blackheath School.
- Phaedrus. A Selection.** Edited by the Rev. R. H. CHAMBERS, M.A., Headmaster of Christ's College, Brecon.
- Stories of Great Men.** Edited by the Rev. F. CONWAY, M.A., Assistant-Master at Merchant Taylors' School.
- Vergil's Aeneid.—Book I.** Edited by the Rev. E. H. ESCOTT, M.A., Assistant-Master at Dulwich College.
- Vergil's Aeneid.—Book II.** Edited by L. D. WAINWRIGHT, M.A., Assistant-Master at St. Paul's School.
- Vergil's Aeneid.—Book III.** Edited by L. D. WAINWRIGHT, M.A.
- Vergil's Aeneid.—Book IV.** Edited by A. S. WARMAN, B.A., Assistant-Master at the Grammar School, Manchester.
- Vergil's Aeneid.—Book VI.** Edited by J. T. PHILLIPSON, M.A., Headmaster of Christ's College, Finchley.
- Vergil. Selection from Aeneid, Books VII.—XII.** Edited by W. G. COAST, B.A., Assistant-Master at Fettes College.
- Xenophon's Anabasis.—Book I.** Edited by E. C. MARCHANT, M.A.
- Xenophon's Anabasis.—Book II.** Edited by E. C. MARCHANT, M.A.

## BELL'S ILLUSTRATED CLASSICS.

INTERMEDIATE SERIES. With numerous Illustrations and Maps. Crown 8vo.

- Caesar's Seventh Campaign in Gaul, B.C. 52. DE BELLO GALLICO.** Lib. VII. Edited, with Notes, Excursus, and Tables of Idioms, by the Rev. W. COOKWORTHY COMPTON, M.A., Headmaster of Dover College. Fourth Edition. 2s. 6d. net.
- "Mr. Compton has made an admirable effort. His maps are excellent. . . . The general character of the notes is excellent. After the notes are appended a few pages of 'idioms,' intended to teach the boys how to turn Latin into real English. We have seen few better bits of educational work than these idioms."—*Guardian*.
- "A really admirable class book. No one ought to find Caesar dull with these illustrations."—*Spectator*.
- Sophocles' Antigone.** Edited, with Introduction and Notes, by G. H. WELLS, M.A., Assistant-Master at Merchant Taylors' School. With numerous Illustrations. 3s. 6d.
- The Athenians in Sicily.** Being portions of Thucydides, Books VI. and VII. Edited, with Introduction and Notes, by Rev. W. COOKWORTHY COMPTON, M.A., Headmaster of Dover College. With numerous Illustrations and Maps. [In the Press.]
- Livy.—Book XXI.** Edited, with Introduction and Notes, by F. E. A. TRAYES, M.A., Assistant-Master at St. Paul's School. With numerous Illustrations and Maps. [Preparing.]

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the ILLUSTRATED CLASSICS. Price One Shilling each.

- Scalae Primae.** Simple Stories and Fables for Translation, with Notes and Vocabulary. By J. G. SPENCER, B.A., St. Paul's Preparatory School. With 29 Illustrations.
- Scalae Mediae.** Extracts from *Enropius* and *Caesar*. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. With 20 Illustrations.
- Scalae Tertiae.** Graduated Extracts in Prose and Verse from *Phaedrus* and *Ovid*, *Nepos* and *Cicero*. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. [Shortly.]

SPECIMEN COPY SENT TO HEADMASTERS WITH A VIEW TO INTRODUCTION.

LONDON: GEORGE BELL & SONS, YORK STREET, COVENT GARDEN.

# MESSRS. BELL'S NEW EDUCATIONAL LIST.

Complete Educational Catalogue post free on application.

Crown 8vo, 6s.

PLATO'S REPUBLIC, BOOK I. AND BOOK II., cc. i-x.

**THE PROEM TO THE IDEAL COMMONWEALTH OF PLATO.** (An Introduction to the Language and Substance of the "Socratic" Dialogues.) With Introduction and Critical Explanatory Notes by T. G. TRICKER, Litt.D. (Camb.), Hon. Litt.D. (Dublin), Professor of Classical Philology in the University of Melbourne.

Part III. Now ready. 4to, 9s. net.

**CORPUS POETARUM LATINORUM**, a se alisque denuo recognit-  
orum et brevi lectionum varietate instructorum, edidit JOHANNES PERCIVAL  
POSTGATE, Litt.D.

*Contents.*—Grattius. Edited by J. P. POSTGATE.—Manilius. Edited by  
MALVIN BECHERT.—Phœdrus. Edited by JAMES GOW.—Ætna. Edited by  
ROBINSON ELLIS.—Persius. Edited by W. C. SUMMERS.—Lucan. Edited by W  
E. HEITLAND.—Valerius Flaccus. Edited by J. B. BURY.

Cheaper Re-issue. 2 vols. 8vo, 15s.

**TEUFFEL'S HISTORY OF ROMAN LITERATURE.** Revised and  
Enlarged by LUDWIG SCHWABE. Authorized Translation from the Fifth  
German Edition by GEORGE C. W. WARR, M.A., Ex-Fellow of Trinity College,  
Cambridge, Professor of Classical Literature in King's College, London.

Crown 8vo, 3s. 6d.

**ESSAYS AND ESSAY WRITING FOR PUBLIC EXAMINA-  
TIONS.** By A. W. READY, B.A., Army and University Tutor, formerly Scholar  
of Wadham College, Oxford.

This book is divided into three Parts. Part I. contains Rules and Directions for  
Beginners. Part II. contains Twelve complete Essays, preceded by an Analysis and  
Sketch of each, and followed by Notes and Explanations. Part III. contains Articles  
for Advanced Pupils. An Appendix contains a List of Subjects set for Woolwich  
and Sandhurst.

## BELL'S SCIENCE SERIES.

New Volumes.

Edited by PERCY GROOM, M.A., and Prof. G. M. MINCHIN, M.A., F.R.S.

**AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE  
ANATOMY OF ANIMALS.** By GILBERT C. BOURNE, M.A., F.L.S., Fellow and  
Tutor of New College, Oxford; University Lecturer in Comparative Anatomy.

Vol. I.—Animal Organization. The Protozoa and Coelenterata. Crown 8vo.  
Illustrated, 288 pages, price 4s. 6d.

"His book is simply charming, and well worthy his reputation; and, while its  
literary style should alone ensure for it a wide circulation, it cannot fail to exercise  
a leavening and humanizing influence on the youthful mind."—*Nature*.

**THE STUDENT'S DYNAMICS.** Comprising Statics and Kinetics.  
By G. M. MINCHIN, M.A., F.R.S., Professor of Applied Mathematics in the  
Royal Indian Engineering College, Cooper's Hill. Crown 8vo, 3s. 6d.

Second Edition. Pott 8vo, 1s.

**FIRST EXERCISES IN LATIN PROSE.** By E. A. WELLS, M.A.,  
Highfield School, Southampton.

"A neat little Latin book, original and withal practical. A boy well drilled in its  
methods cannot fail to get a reasonable hold on Latin idiom."—*School Guardian*.

New Edition, thoroughly Revised, with New Figures throughout.

**THE ELEMENTS OF EUCLID.** (Books I.-VI., and part of  
Book XI.) Newly translated from the Greek Text, with Supplementary Propo-  
sitions, Chapters on Modern Geometry, and numerous Exercises. By HORACE  
DIGHTON, M.A., formerly Scholar of Queens' College, Cambridge, Headmaster  
of Harrison College, Barbados. Complete. Crown 8vo, 4s. 6d. Or in Parts:—  
Book I., 1s. Books I. and II., 1s. 6d. Books I., II., and III., 2s. 6d. Books  
I.-IV., 3s. Books III. and IV., 1s. 6d. Books V., VI., XI., &c., 2s. 6d. Key  
(for Teachers only), 5s. net.

WORKS BY

## CHARLES PENDLEBURY, M.A.,

Chief Mathematical Master at St. Paul's School.

**ARITHMETIC FOR SCHOOLS.** Twelfth Edition. Complete, with  
or without Answers, 4s. 6d.; or in Two Parts, 2s. 6d. each. Key to Part II.,  
7s. 6d. net.

**EXAMPLES IN ARITHMETIC.** 8,000 Examples extracted from  
the above Arithmetic. Tenth Edition, with or without Answers, 3s.; or in  
Two Parts, 1s. 6d. and 2s.

**A SHILLING ARITHMETIC.** Second Edition. Small crown 8vo,  
192 pages. Cloth, 1s.; or, with Answers, 1s. 4d. The Answers may be had  
separately, 4d. net.

This book is intended for the lower and middle forms of secondary schools. It  
will be found adapted especially for the use of candidates for the Oxford and  
Cambridge Junior Local Examinations, the Scottish Universities' Locals, County  
Council Scholarships, and for examinations conducted by the College of Preceptors,  
the Board of Intermediate Education for Ireland, &c., &c.

**ELEMENTARY ARITHMETIC.** Fifth Edition. Crown 8vo, 1s. 6d.,  
with or without Answers.

This book is essentially one for beginners, and is intended to serve as an intro-  
duction to the "Arithmetic for Schools." The examples and problems for written  
work are very abundant, and have been carefully graduated; and the numerous  
sets of examples for use in oral teaching form a very important feature. All the  
examples are different from those in the advanced book.

**COMMERCIAL ARITHMETIC.** Second Edition. Crown 8vo, 250  
pages, 2s. 6d.

This book is based upon Mr. Pendlebury's "Arithmetic for Schools," and upon  
the scheme suggested by the Education Department for students in Evening  
Continuation Classes. It also meets the requirements of pupils on the modern  
or mercantile side of secondary schools who may be preparing for a business career.

**COMMERCIAL ARITHMETIC.** Part I. Crown 8vo, 1s.

**GRADUATED ARITHMETIC.** For Private and Junior Schools. In  
cloth. Parts I., II., and III., 3d. each; IV., V., and VI., 4d. each; VII., 6d.  
Answers to Parts I. and II., 4d.; III., IV., V., VI., and VII., 4d. each.

**LONG TOTS AND CROSS TOTS (Simple and Compound).** Con-  
taining 864 Sums for the use of Pupils in Evening Continuation Schools and  
Day Schools under the Education Department. Price, 2d.; in cloth, 3d.  
Answers, cloth, 4d.

**EXAMINATION PAPERS IN ARITHMETIC.** Fourth Edition.  
Crown 8vo, 2s. 6d. Key, 5s. net.

This volume contains, in the first place, 140 papers, each consisting of seven  
straightforward questions; and, in the second place, a collection of 357 more  
difficult problems. In the third portion of the book are copies of the arithmetic  
papers set at some of the most recent examinations.

**ELEMENTARY TRIGONOMETRY.** Second Edition, Revised.  
Crown 8vo, 4s. 6d.

**A SHORT COURSE OF ELEMENTARY PLANE TRIGONOMETRY.**  
Crown 8vo, 2s. 6d.

This Short Course of Elementary Plane Trigonometry is intended for the use of  
Junior Students and of those others who do not require so complete a knowledge of  
the subject as would be obtained from a study of the author's larger work. In its  
range this book will be found sufficient for Candidates for the Oxford and Cambridge  
Local Examinations, the College of Preceptors, the Cambridge Previous Examina-  
tion, the London Intermediate Examination in Arts, the Science and Art Examina-  
tions, College Entrance Examinations, and other examinations of the same character.

# MACMILLAN & CO.'S

**Text-Books for the Oxford and Cambridge Local Exams., the Oxford and Cambridge Schools Exams., London University, and College of Preceptors Exams.**

## LATIN.

- MACMILLAN'S ELEMENTARY LATIN-ENGLISH DICTIONARY.** By Rev. G. H. NALL, M.A. 3s. 6d.  
**ENGLISH-LATIN AND LATIN-ENGLISH DICTIONARIES.** By Prof. C. D. YONGE. Each sold separately, 3s. 6d.; or, complete, 7s. 6d.  
**MACMILLAN'S LATIN COURSE.** By A. M. COOK, M.A., and W. E. P. PANTIN, M.A. First Part, 3s. 6d. Second Part, 4s. 6d.  
**MACMILLAN'S SHORTER LATIN COURSE.** Being an Abridgement of Macmillan's Latin Course. First Part, 1s. 6d. KEY, 4s. 6d. net. Second Part, 2s. KEY, 4s. 6d. net.  
**MEISSNER'S LATIN PHRASE BOOK.** Translated by H. W. AUDEN, M.A. 4s. 6d.  
**CÆSAR.—THE GALLIC WAR.** By Rev. JOHN BOND, M.A., and Rev. A. S. WALPOLE, M.A. 4s. 6d.  
 — With Notes and Vocabulary. **Book IV.** By CLEMENT BRYANS, M.A. 1s. 6d. **Book V.** By C. COLBECK, M.A. 1s. 6d. **Book VI.** By C. COLBECK, M.A. 1s. 6d.  
**CICERO.—THE CATILINE ORATIONS.** Edited by A. S. WILKINS, Litt.D. 2s. 6d.  
**PRO ROSCIO AMERINO.** Edited by E. H. DONKIN, M.A. 2s. 6d.  
**DE SENECTUTE.** With Notes and Vocabulary. By E. S. SHUCKBURGH, M.A. 1s. 6d.  
**EUTROPIUS.—Books I. and II.** With Notes and Vocabulary. By W. WEICH, M.A., and C. G. DUFFIELD, M.A. 1s. 6d.  
**HORACE.—ODES.** Books I., III., and IV. With Notes and Vocabulary. By T. E. PAGE, M.A. 1s. 6d. each. Edited by the same. 2s. each.  
 — **THE ODES AND EPODES.** By T. E. PAGE, M.A. 5s. Epodes separately, 2s.  
**EPISTLES AND AKS POETICA.** Edited by A. S. WILKINS, Litt.D. 5s.  
**LIVY.—Book V.** With Notes and Vocabulary. By J. ALFORD, 1s. 6d.  
 — **Book XXI.** With Notes and Vocabulary. By Rev. W. W. CAPES, M.A., and J. E. MELHUSH, M.A. 1s. 6d.  
 — **Book XXII.** With Notes and Vocabulary. By Rev. W. W. CAPES, M.A., and J. E. MELHUSH, M.A. 1s. 6d.  
**PHEDRUS.—FABLES.** With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.  
 — **SELECT FABLES.** With Notes and Vocabulary. By Rev. A. S. WALPOLE, M.A. 1s. 6d.  
**SALLUST.—CATILINA.** With Notes and Vocabulary. By Rev. G. H. NALL, M.A. 1s. 6d.  
 — **CATILINA.** Edited by C. MERIVALE, D.D. 2s.  
 — **BELLUM CATULINÆ.** Edited by A. M. COOK, M.A. 2s. 6d.  
**TACITUS.—THE HISTORIES.** Edited by A. D. GODLEY, M.A. **Books I. and II.** 3s. 6d. **Books III.-V.** 3s. 6d.  
**TERENCE.—ADELPHOE.** Edited by Prof. S. G. ASHMORE. 3s. 6d.  
 — **RAUTON TIMORUMENOS.** Edited by E. S. SHUCKBURGH, M.A. 2s. 6d. With Translation. 3s. 6d.  
**VIRGIL.—ÆNEID.** With Notes and Vocabulary. **Book I.** By Rev. A. S. WALPOLE, M.A. 1s. 6d. **Book I.** By T. E. PAGE, M.A. 1s. 6d. **Book II.** By T. E. PAGE, M.A. 1s. 6d. **Book VI.** By T. E. PAGE, M.A. 1s. 6d. **Book IX.** By Rev. H. M. STEPHENSON, M.A. 1s. 6d. **Book X.** By S. G. OWEN, M.A. 1s. 6d. **Book XI.** By T. E. PAGE, M.A. 1s. 6d. **Book XII.** By T. E. PAGE, M.A. 1s. 6d.

## GREEK.

- MACMILLAN'S GREEK COURSE.** Edited by the Rev. W. G. RUTHERFORD, M.A., LL.D., Headmaster of Westminster.  
**First Greek Grammar.** By Rev. W. GUNTON RUTHERFORD, M.A., LL.D. Accidence, 2s. Syntax, 2s. Together, 3s. 6d.  
**Easy Exercises in Greek Accidence.** By H. G. UNDERHILL, M.A. 2s.  
**Second Greek Exercise Book.** By Rev. W. A. BEARD, M.A. 2s. 6d.  
**Easy Exercises on the First Greek Syntax.** By Rev. G. H. NALL, M.A. 2s. 6d.  
**MACMILLAN'S GREEK READER.** With Notes, Vocabulary, and Exercises. By F. H. COLSON, M.A. 3s.  
**AN INTRODUCTION TO GREEK PROSE COMPOSITION.** By H. PITMAN, M.A. 2s. 6d. KEY, 5s. net.  
**PASSAGES FOR GREEK TRANSLATION FOR LOWER FORMS.** By G. H. PEACOCK, M.A., and E. W. W. BELL, M.A. 1s. 6d.  
**ZSCHYLUS.—PERSÆ.** Edited by A. O. PRICKARD, M.A. 2s. 6d.—**PROMETHEUS VINCTUS.** With Notes and Vocabulary. By Rev. H. M. STEPHENSON, M.A. 1s. 6d.  
**EURIPIDES.** With Notes and Vocabulary. **ALCESTIS.** By Rev. M. A. BAYFIELD, M.A. 1s. 6d.—**MEDÆA.** By Rev. M. A. BAYFIELD, M.A. 1s. 6d.—**ECUBA.** By Rev. J. BOND, M.A., and Rev. A. S. WALPOLE, M.A. 1s. 6d.—**ANDRONACHE.** Edited by A. R. F. HYSLOP, M.A. 2s. 6d.  
**HOMER.—ILIAD.** Edited by W. LEAF, Litt.D., and Rev. M. A. BAYFIELD, M.A. **Books XIII. to XXIV.** 6s.  
 — **ILIAD.—Books I., IX., XI., XVI.-XXIV.** **THE STORY OF ACHILLES.** Edited by J. H. PRATT, M.A., and WALTER LEAF, Litt.D. 5s.  
**PLATO.—CRITO AND PHÆDO.** (Ce. lviii. to end.) Edited by Prof. C. H. KEENE, M.A. 2s. 6d.  
 — **EUTHYPHRO, APOLOGY, CRITO, AND PHÆDO.** Translated by F. J. CHURCH, 2s. 6d. net.  
**THUCYDIDES.—Book III.** Edited by E. C. MARCHANT, M.A. [In preparation].  
 — **Books VI. and VII.** Edited by Rev. Percival Frost, M.A. With Map. 3s. 6d. **Book VI.** Edited by E. C. MARCHANT, M.A. 3s. 6d.  
 — **Book VII.** Edited by E. C. MARCHANT, M.A. 3s. 6d.  
**XENOPHON.—ANABASIS.** With Notes and Vocabulary. **Book I.** By Rev. A. S. WALPOLE, M.A. 1s. 6d.—**Book I.** With Exercises by E. A. WELLS, M.A. 1s. 6d.—**Book II.** By Rev. A. S. WALPOLE, M.A. 1s. 6d.—**Book III.** By Rev. G. H. NALL, M.A. 1s. 6d.—**Book V.** By Rev. G. H. NALL, M.A. 1s. 6d.

## DIVINITY.

- ST. LUKE'S GOSPEL.** Greek Text, with Introduction and Notes. By Rev. J. BOND, M.A. 2s. 6d.  
**THE GOSPEL ACCORDING TO ST. MATTHEW.** The Greek Text, with Introduction and Notes. By Rev. A. STOMAN. 2s. 6d.  
**AN INTRODUCTION TO THE CREEDS.** By Rev. G. F. MACLEAR, D.D. 3s. 6d.  
**THE ACTS OF THE APOSTLES.** The Greek Text, with Notes. By T. E. PAGE, M.A. 3s. 6d.  
**THE ACTS OF THE APOSTLES.** Authorized Version, with Notes. By T. E. PAGE, M.A., and Rev. A. S. WALPOLE, M.A. 2s. 6d.

## SCIENCE.

- ELEMENTARY GENERAL SCIENCE.** By A. T. SIMMONS, B.Sc., and L. M. JONES, B.Sc. 3s. 6d. (Adapted to the London Matriculation Course.)

MACMILLAN & CO., LIMITED, ST.

## ENGLISH.

- ENGLISH GRAMMAR PAST AND PRESENT.** By J. C. NESFIELD, M.A. 4s. 6d. KEY, 2s. 6d. net.  
**MANUAL OF ENGLISH GRAMMAR AND COMPOSITION.** 2s. 6d. KEY, 2s. 6d. net.  
**WORD-BUILDING AND COMPOSITION.** By S. WOOD. **Book VII.** 1s.  
**A FIRST BOOK IN WRITING ENGLISH.** By E. H. LEWIS, Ph.D. 3s. 6d.  
**A FIRST MANUAL OF COMPOSITION.** By Prof. E. H. LEWIS. 3s. 6d.  
**A SHORT HISTORY OF ENGLISH LITERATURE.** By Prof. G. SAINTSBURY. 8s. 6d.  
**BURKE.—REFLECTIONS ON THE FRENCH REVOLUTION.** With Introduction and Notes by F. G. SELBY, M.A. 5s.  
**BYRON.—CHILDE HAROLD'S PILGRIMAGE.** Edited by Prof. E. E. MORRIS. **Cantos III. and IV.** 1s. 9d.  
**CHAUCER.—THE PROLOGUE.** With Introduction and Notes. By A. W. POLLARD, M.A. [In the Press].  
 — **THE KNIGHT'S TALE.** With Introduction and Notes. By A. W. POLLARD, M.A. [In the Press].  
**CHILDREN'S TREASURY OF LYRICAL POETRY.** Selected by F. T. PALGRAVE. Part I. 1s.  
**MACAULAY.—LAYS OF ANCIENT ROME.** With Introduction and Notes. By W. T. WEBB, M.A. 1s. 9d. (Contains The Prophecy of Cypri, Ivory, and the Armada.)  
**MILTON.—PARADISE LOST.** **Books III. and IV.** With Introduction and Notes. By M. MACMILLAN, B.A. 1s. 3d. each; sewed, 1s. each.  
**POEMS OF ENGLAND; A Selection of English Patriotic Poetry.** With Notes. By H. B. GEORGE, M.A., and A. SIDGWICK, M.A. 2s. 6d.  
**SCOTT.—THE LAY OF THE LAST MINSTREL.** With Introduction and Notes. By G. H. STUART, M.A., and E. H. ELLIOT, B.A. **Cantos I. to III.** 1s. 3d.; sewed, 1s.  
 — **MARMION.** With Introduction and Notes. By M. MACMILLAN, B.A. 3s.; sewed, 2s. 6d.  
**SHAKESPEARE.** With Introduction and Notes. By K. DEIGHTON. **AS YOU LIKE IT.** 1s. 9d. **HAMLET.** 2s. 6d.; sewed, 2s. **HENRY V.** 1s. 9d. **MERCHANT OF VENICE.** 2s. 9d.  
**SPENSE.—THE FAERIE QUEENE.** **Book I.** With Introduction and Notes. By H. M. PERCIVAL, M.A. 3s. Sewed, 2s. 6d.

## FRENCH AND GERMAN.

- CORNEILLE.—LE CID.** Edited by G. E. FASNACHT. 1s.  
**MÉRIMÉE.—COLOMBA.** Edited by G. E. FASNACHT. 2s.  
**MOLIÈRE.—LE MALADE IMAGINAIRE.** Edited by G. E. FASNACHT. 1s. 6d.  
**VOLTAIRE.—CHARLES XII.** Edited by G. E. FASNACHT. 3s. 6d.  
**THE STUDY OF FRENCH ACCORDING TO THE BEST AND NEWEST SYSTEMS.** By A. F. EUGÈNE and H. E. DURIAUX. 3s. 6d. Exercise Books, in Eight Books. 6d. each.  
**MACMILLAN'S PROGRESSIVE FRENCH COURSE.** By G. E. FASNACHT. **First Year.** 1s. Supplementary Exercises to First Year, 1s. **Second Year.** 2s. **Third Year.** 2s. 6d. **KEYS.** 4s. 6d. net each.  
**MACMILLAN'S PROGRESSIVE FRENCH READERS.** By the Same. **First Year.** 2s. 6d. **Second Year.** 2s. 6d.  
**MACMILLAN'S FRENCH COMPOSITION.** By the Same. **Part I.** 2s. 6d. **KEY.** 4s. 6d. net. **Part II.** 5s. **KEY.** 5s. net.  
**AN ABRIDGED FRENCH GRAMMAR FOR SCHOOLS.** By G. E. FASNACHT. 2s. 6d.  
**A COMPENDIOUS DICTIONARY OF THE FRENCH LANGUAGE.** By Prof. ALFRED EWALL and GUSTAVE MASSON. 3s. 6d.  
**GOETHE.—EGMONT.** Edited by S. PRIMER, Ph.D. 3s. 6d.  
 — **HERMANN UND DOROTHEA.** With Introduction and Notes. By J. T. HATFIELD. 3s. 6d.  
**A GERMAN PRIMER.** By OTTO STEPMANN. 3s. 6d. **KEY.** 3s. 6d. net.  
**MACMILLAN'S PROGRESSIVE GERMAN COURSE.** By G. E. FASNACHT. **First Year.** 1s. 6d. **Second Year.** 3s. 6d. **KEYS.** 4s. 6d. net each.  
**MACMILLAN'S PROGRESSIVE GERMAN READERS.** By the Same. **First Year.** 2s. 6d.  
**MACMILLAN'S GERMAN COMPOSITION.** By the Same. **Part I.** 2s. 6d. **KEY.** 4s. 6d. net.  
**A COMPENDIOUS GERMAN AND ENGLISH DICTIONARY.** By Prof. WHITELEY and A. H. EDGREN. 5s. German-English, 3s. 6d.  
**COMMERCIAL GERMAN.** By F. C. SMITH. 3s. 6d.

## HISTORY AND GEOGRAPHY.

- ELIZABETH.** By E. S. BEESLY. 2s. 6d.  
**A FIRST SKETCH OF ENGLISH HISTORY.** **Part I.** 449-1307. **Part II.** 1307-1689. **Part III.** 1689-1895. By E. J. MATHW, M.A. 2s. each. Complete, 3s. 6d.  
**A PRIMER OF ENGLISH HISTORY.** By A. B. BUCKLEY. 1s.  
**A HISTORY OF ENGLAND.** By A. B. BUCKLEY. 3s.  
**HISTORY OF ENGLAND.** By EDITH THOMPSON. 2s. 6d.  
**ANALYSIS OF ENGLISH HISTORY.** By Prof. T. F. TOUL. 1s.  
**A SHORT HISTORY OF THE ENGLISH PEOPLE.** By J. R. GREEN, LL.D. 8s. 6d. Also in FOUR PARTS, with Analysis. 3s. each. **Part I.** 607-1265. **Part II.** 1265-1540. **Part III.** 1540-1689. **Part IV.** 1660-1873.  
**A HISTORY OF ROME FOR BEGINNERS.** By E. S. SHUCKBURGH, M.A. 3s. 6d.  
**THE HISTORY OF ROME.** By T. MOMMSEN. Abridged for Schools by C. BRYANS and F. J. R. HENDY. 7s. 6d.  
**A PRIMER OF THE HISTORY OF ROME.** By Bishop CREIGHTON, D.D. 1s.  
**A PRIMER OF THE HISTORY OF GREECE.** By C. A. FYFE, M.A. 1s.  
**HISTORY OF GREECE TO THE DEATH OF ALEXANDER THE GREAT.** By J. B. BURY, M.A. 8s. 6d.  
**HISTORY OF GREECE.** By Prof. A. HOLM. Authorized Translation revised by F. CLARKE, M.A. 4 Vols. Vols. I.-III. 6s. net each. Vol. IV. 7s. 6d. net.  
**COMMERCIAL GEOGRAPHY.** By E. C. K. GONNER, M.A. 3s.  
**A SHORT GEOGRAPHY OF THE BRITISH ISLANDS.** By JOHN RICHARD GREEN, LL.D., and A. S. GREEN. With Maps. 3s. 6d.  
**GEOGRAPHY OF THE BRITISH ISLES.** By SIR A. GEIKIE. 1s.  
**THE ELEMENTARY SCHOOL ATLAS.** By J. BARTHOLOMEW. 1s.  
**CLASS-BOOK OF GEOGRAPHY.** By C. B. CLARKE. 2s. 6d.; sewed, 2s.  
**CLASS-BOOK OF GENERAL GEOGRAPHY.** By H. R. MILL. 3s. 6d.  
**GEOGRAPHY OF EUROPE.** By J. SIMS, M.A. 2s.  
**ELEMENTARY GEOGRAPHY OF THE BRITISH COLONIES.** By GEORGE M. DAWSON, LL.D., and A. SUTHERLAND, M.A. 2s.

MARTIN'S STREET, LONDON, W.C.



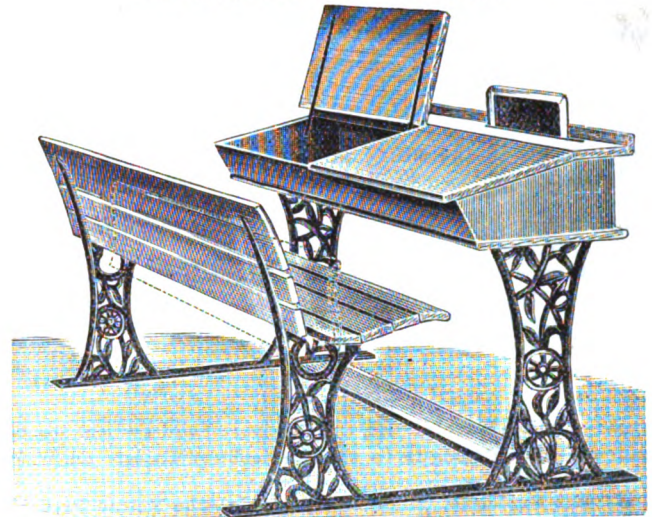
THE  
**EDUCATIONAL SUPPLY ASSOCIATION,**  
 LIMITED,  
 SUPPLY AND MANUFACTURE  
**SCHOOL FURNITURE**

At the Association's Steam Factory,  
**STEVENAGE, HERTS,**

Which is the largest School Furniture Manufactory in  
 the Kingdom.

*Every article of School Furniture supplied by the  
 Association is made entirely in England.*

No. 131. **OAK DUAL DESK.** Price 40s. each.  
*The Cheapest Oak Desk in the Market.*



With Lifting Seat, which allows the edges of the seat and desk to be in a vertical line when used for writing, and affords ample space for the scholars to stand comfortably.  
 The Woodwork, being Oak, is exceptionally durable, and the desk has a very superior appearance.

*A most Complete and Elegantly Illustrated Catalogue of School Desks and Fittings sent free on application.*

THE EDUCATIONAL SUPPLY ASSOCIATION also manufacture

**SCHOOL STATIONERY**

Of all kinds at their two London factories, viz., Holborn Viaduct and Charterhouse Square. Every process is carried out on the premises—the Stationery leaving them ready for use.

**SPECIAL EXERCISE BOOKS** can be supplied with the greatest expedition, and according to customers' requirements.

*Estimates and Samples of Stationery sent post free.*

THE EDUCATIONAL SUPPLY ASSOCIATION, Limited, 42 Holborn Viaduct, London.

**Ruddiman Johnston & Co., Ltd.,**

26 CHARTERHOUSE SQUARE, LONDON,

Publishers of

**WALL MAPS, ATLASES, DIAGRAMS, AND PRINTS.**

*The Publications of RUDDIMAN JOHNSTON & CO. have secured a world-wide reputation for accuracy, and are all up to date.*

**POLITICAL AND PHYSICAL WALL MAPS.**

With Names or without Names. Size, 53 inches by 46 inches. Price 12s. each.

*A great feature in the Series of Maps published by Ruddiman Johnston & Co. is the large number of Test Maps for Class Teaching.*

**HUMAN ANATOMY AND PHYSIOLOGY.**

Four Sheets. Size, 53 inches by 16 inches. Price 12s. each.

**CLASSICAL SCHOOL WALL MAPS.**

Italia Antiqua and Græcia Antiqua. With Modern Names in small type, underneath the Classical Names. Size, 53 inches by 46 inches. Price 12s. each.

ILLUSTRATED CATALOGUE AND PARTICULARS POST FREE ON APPLICATION TO  
**RUDDIMAN JOHNSTON & CO., Limited, 26 Charterhouse Square, London.**

# OXFORD UNIVERSITY PRESS.

BOOKS FOR LONDON UNIVERSITY, OXFORD AND CAMBRIDGE BOARD, OXFORD LOCALS, AND COLLEGE OF PRECEPTORS 1901 EXAMINATIONS.

## RELIGIOUS KNOWLEDGE.

- Oxford Helps to the Study of the Bible.** New, Enlarged, and Illustrated Edition. Pearl 16mo, 1s. net; Nonpareil 8vo, 2s. 6d.; Large Type Edition, 5s.
- Oxford Helps to the Study of the Book of Common Prayer.** W. R. W. STEPHENS. 2s.
- Greek Testament Primer.** An Easy Grammar and Reading Book. E. MILLER. Second Edition. 2s.
- Old Testament History for Schools.** T. H. STOKER. In Three Parts. With Maps. 2s. 6d. each.

## ENGLISH.

- Byron.—Childe Harold.** Ed. H. F. TOZER. Third Edition. 3s. 6d.
- Chaucer.—The Prologue to the Canterbury Tales.** Ed. W. W. SKEAT. 1s.
- **The Prologue, The Knightes Tale, The Nonne Preestes Tale.** Edd. R. MORRIS and W. W. SKEAT. 2s. 6d.
- Shakespeare.—Henry V.** Ed. W. ALDIS WRIGHT. 2s.
- **Merchant of Venice.** Edd. W. G. CLARK and W. ALDIS WRIGHT. 1s.
- **Hamlet.** By the same Editors. 2s.
- Shakespeare as a Dramatic Artist.** R. G. MOULTON. Third Edition. 7s. 6d.
- Spenser.—Faery Queene.** Book I. Edd. G. W. KITCHIN and A. L. MAYHEW. 2s. 6d.
- Milton.—Lycidas.** Ed. O. ELTON. 6d. **Comus.** By the same. 1s.
- Scott.—Lay of the Last Minstrel.** Ed. W. MINTO. 1s. 6d.
- Burke.—Reflections on the French Revolution.** Ed. E. J. PAYNE. 5s.
- Primer of Historical English Grammar.** H. SWEET. 2s.
- Concise Etymological Dictionary of the English Language.** W. W. SKEAT. 5s. 6d.
- Primer of English Etymology.** W. W. SKEAT. Second Edition. 1s. 6d.

## LATIN.

- Tales of the Roman Republic.** Part I. J. BARROW ALLEN. 1s. 6d.
- Caesar.—De Bello Gallico.** Ed. C. E. MOBERLY. Books III-V, 2s. 6d.; Books VI-VIII, 3s. 6d.
- Cicero.—Speeches against Catilina.** Ed. E. A. UPCOTT. 2s. 6d.
- **Pro Roscio.** Ed. ST. G. STOCK. 3s. 6d.
- **De Senectute.** Ed. L. HUXLEY. 2s.
- Horace.** With Commentary. Vol. I. THE ODES, CARMEN SECULARE, AND EPODES. E. C. WICKHAM. Second Edition. 6s.
- Livy.** Book XXII. Ed. M. T. TATHAM. 2s. 6d.
- Book V. Edd. A. R. CLUER and P. E. MATHESON. 2s. 6d.
- Books V-VII. By the same Editors. 5s.
- Virgil.—Aeneid.** Book I. Ed. C. S. JERRAM. 1s. 6d.
- **Aeneid.** Book IX. Ed. A. E. HAIGH. 1s. 6d.
- Elementary Latin Grammar.** J. BARROW ALLEN. 2s. 6d.
- First Latin Exercise Book.** By the same. 2s. 6d.
- Second Latin Exercise Book.** By the same. 3s. 6d.
- Anglice Reddenda: Extracts, Latin and Greek, for Unseen Translation.** C. S. JERRAM. Fourth Edition. 2s. 6d.
- Second Series. By the same. 3s.
- Third Series. By the same. 3s.
- Reddenda Minora: Easy Passages, Latin and Greek, for Unseen Translation.** By the same Editor. Sixth Edition. 1s. 6d.
- Sallust.** Ed. W. W. CAPES. 4s. 6d.
- Elementary Latin Dictionary.** CHARLTON T. LEWIS. 7s. 6d.
- Juvenal.—Satires.** Edd. C. H. PEARSON and H. A. STRONG. 9s.

## GREEK.

- Aeschylus.—Eumenides.** Ed. A. SIDGWICK. New Edition. 3s.
- **Prometheus Bound.** Ed. A. O. PRICKARD. 2s.
- Euripides.—Alcestis.** Ed. C. S. JERRAM. 2s. 6d.
- **Medea.** Ed. C. B. HEBERDEN. 2s.
- Homer.—Iliad.** Books XIII-XXIV. Ed. D. B. MONRO. 6s.
- Plato.—Crito.** Ed. ST. GEORGE STOCK. 2s.
- Sophocles.—Antigone.** Edd. L. CAMPBELL and E. ABBOTT. 2s.
- **Oedipus Coloneus.** By the same Editors. 2s.
- Xenophon.—Anabasis.** Book I. Ed. J. MARSHALL. 2s. 6d. Book II. Ed. C. S. JERRAM. 2s.
- **Vocabulary to the Anabasis.** J. MARSHALL. 1s. 6d.
- Primer of Greek Prose Composition.** J. Y. SARGENT. 3s. 6d.
- Greek-English Lexicon.** Abridged from LIDDELL and SCOTT's 4th Edition. 7s. 6d.
- Intermediate Greek-English Lexicon.** Founded upon LIDDELL and SCOTT's 4th Edition. 12s. 6d.

## GERMAN AND FRENCH.

- Goethe.—Egmont.** Ed. C. A. BUCHHEIM. Fourth Edition. 3s.
- Heine.—Die Harzreise.** By the same Editor. Third Edition. 2s. 6d.
- Rieh.—Seines Vaters Sohn and Gespensterkampf.** Ed. H. T. GERBANS. 2s.
- Short German Plays.** Ed. EMMA S. BUCHHEIM. 3s.
- Elementary German Prose Composition.** By the same. 1s. 6d.
- Les Œuvres Complètes de Molière.** 5s.

## MATHEMATICS.

- Geometry for Beginners.** G. M. MINCHIN. 1s. 6d.
- Euclid Revised.** Ed. R. C. J. NIXON. Third Edition. 6s. Sold separately:—Book I, 1s. Books I, II, 1s. 6d. Books I-IV, 3s. Books V, VI, 3s. 6d.
- The "Junior" Euclid.** Books I and II. S. W. FINN. 1s. 6d. (Books III and IV in the press.)
- Elementary Plane Trigonometry.** R. C. J. NIXON. 7s. 6d.
- Introduction to the Mathematical Theory of Electricity and Magnetism.** W. T. A. EMTAGE. Second Edition. 7s. 6d.
- Practical Work in General Physics.** W. G. WOOLLCOMBE. In Four Parts:—General Physics, Heat, Light and Sound, Magnetism and Electricity. 2s. each.
- Class-Book of Chemistry.** W. W. FISHER. Fourth Edition. 4s. 6d.

## MISCELLANEOUS.

- Elementary Architecture (Classic and Gothic).** MARTIN A. BUCKMASTER. Thirty-eight Illustrations. 4s. 6d.
- Music Primer.** J. TROUTBECK and R. F. DALE. 1s. 6d.
- Historical Geography of the British Colonies.** C. P. LUCAS. INTRODUCTION. With Eight Maps. 4s. 6d.—Vol. I. THE MEDITERRANEAN AND EASTERN COLONIES (exclusive of India). With Eleven Maps. 5s.—Vol. II. THE WEST INDIAN COLONIES. With Twelve Maps. 7s. 6d.—Vol. III. WEST AFRICA (reprinting).—Vol. IV. SOUTH AND EAST AFRICA, HISTORICAL AND GEOGRAPHICAL. With Eleven Maps. 9s. 6d. Also Part I, HISTORICAL, 6s. 6d.; Part II, GEOGRAPHICAL, 3s. 6d.
- **The History of South Africa to the Jameson Raid.** With numerous Maps. 5s.
- Geography of Africa South of the Zambesi.** W. P. GRESWELL. With Maps. 7s. 6d.
- Elementary Political Economy.** E. CANNAN. 1s.
- Elementary Politics.** T. RALEIGH. 1s.
- Remarks on the Use and Abuse of some Political Terms.** Sir G. C. LEWIS. Ed. T. RALEIGH. Paper boards, 3s. 6d.; cloth, 4s. 6d.
- Book-keeping.** Sir R. G. C. HAMILTON and J. BALL. 2s.



## CONTENTS.

	Page		Page
Anglo-French Education .....	361	Forecasts and Comments:—Fixtures .....	369
Notes .....	362	Education Gossip .....	370
Summary:		Appointments and Vacancies.....	370
The Month .....	363	Literary Gossip.....	371
Universities .....	365	A Triumph of Education .....	372
Correspondence .....	365	Reviews.....	373
An Offer from Canada; Science at Eton; Registration of Music Teachers.		Excursions in History; Canada; Rome at her Worst; Chapters from Aristotle; Mr. Shuckburgh's Cicero.	
		General Notices .....	375
		Mathematics.....	377

## The Educational Times.

### Anglo-French Education.

At the present time, when journalistic reprisals in France and Great Britain are forced upon us, it is pleasant and profitable to take note of factors that make for friendly relations between the two countries. We have already drawn attention to the good work carried on by the Franco-English Guild during the past ten years; a younger and smaller body, the Franco-Scottish Society, is ruled by the same motives, its sphere, of course, being a different one. Founded six years ago in Edinburgh, and established in Paris six months later, its object is threefold, viz.: to bring the Universities into connexion with each other by encouraging an interchange of students, to promote historical research concerning the ancient relations, to renew as far as possible the bonds of sympathy between the two countries by means of periodical meetings and other social intercourse. There are at this time 254 and 137 members on the Scottish and French rolls respectively; ladies make up just one-sixth of the former and about one-fifteenth of the latter number. Each section elects a National Council, with its own office-bearers. The Presidents chosen for the current year were Lord Kelvin and M. Casimir-Perier; and among the Vice-Presidents are the Duke of Fife, Sir Henry Campbell-Bannerman, the Principal of the University of Edinburgh, Sir Archibald Geikie, M. Gréard, Vice-Rector of the Academy and Rector of the University of Paris, M. Bréal, Professor at the Collège de France. It is interesting to see that three members of the Scottish branch are Chevaliers of the Order of the Legion of Honour, viz.: Mr. Thomas Barclay, President of the British Chamber of Commerce, Paris; Prof. Ramsay, of University College, London, and the Honorary Secretary, Mr. A. A. Gordon. In the ordinary course the anniversary meeting—postponed this year on account of the Exhibition—takes place in Scotland and France alternately. It is hoped that Grenoble may be the meeting place in 1901. Prof. Patrick Geddes holds the post of Secretary for Foreign Correspondence.

In this connexion it is specially opportune to notice the work and influence of one of the three lady members of the Consultative Committee chosen under the Board of Education Act. Miss Lydia Manley, Principal of the British and Foreign Society's Training College, Stockwell, is specially identified with the setting

up of friendly relations between French and English primary teachers in training by arranging an interchange of visits. She is also intimately and personally acquainted with the work carried on in the *écoles normales*. Some of her third-year students were among the earliest English *répétitrices* formally received in France, and a few have also been admitted to the college that provides the staff of the ordinary training colleges for primary teachers—the *école normale supérieure* at Fontenay-aux-Roses, near Paris, where the *répétitrice* system does not obtain. Miss Manley wrote one of the articles on "English Students in Foreign Training Colleges" for Mr. Sadler's "Reports." Another valuable contribution on the same subject is from the pen of Miss Williams, official representative of the French Minister of Public Instruction in this matter, and President of the Franco-English Guild. The third has been referred to above.

On the 1st of October fifty-four selected English candidates will enter French *écoles normales* in all parts of France as *répétitrices*. This position is well worth the consideration of girl and women students who wish to become practically acquainted—under excellent auspices—with the educational methods of our neighbours. It affords a favourable opportunity for studying the French interior on a large scale. The experience thus secured would form a valuable element in the equipment of intending language teachers at home. Again, the outlay cannot be considered a heavy one, seeing that a sum of 400 francs (£16) meets all ordinary expenses for board, lodging, and lectures during the scholastic year of ten months. These *écoles normales* are, it may be noted, secular State schools—where all religions are tolerated—for training elementary teachers, the work beginning at the age of sixteen. There are, roughly speaking, as many such schools as there are departments in France, and English forms part of the curriculum at fifty-four. The course of study is directed by the requirements for the *brevet supérieur*, which cover a wider range than do those for the ordinary "parchment" of our own Education Department. In them, as in all State schools, the general teaching for English is carried on by French teachers; the *répétitrices* are expected primarily to give the students "true and vivid impressions of English life and literature, and to make them familiar with English colloquially." This scheme, which has worked successfully for some seven years, is, of course, controlled by the French Minister of Public Instruction, while it is expressly approved by the Education Department. The posts

have been held by students from Girton and Newnham, from the Ladies' College, Cheltenham, from the Welsh University colleges, from training colleges under the Education Department, and by sixth-form girls entering directly from high schools. The next examination—to fill vacancies that will occur in October, 1901—will probably be held in London during Easter week.

### NOTES.

SEPTEMBER is, perhaps, the least favourable month in which to discuss the political aspects of educational problems, and we shall reserve for a later opportunity certain considerations which are suggested by the Education Bill introduced at the close of the Parliamentary Session. Meanwhile we note with satisfaction that the reorganization of the Education Department, which cannot be effected all at once, but which is essential for the administration of the vast and complicated work of the Department, is steadily advancing. We understand that the President of the Board proposes to appoint a Departmental Committee to co-ordinate the technological administration of the Board with the homogeneous work which is now being carried on by bodies other than that Board. This is strictly Departmental work; but the Committee is to be strengthened by a representation of the County Councils and the City and Guilds Institute. The appointment of Mr. Gilbert Redgrave, Senior Chief Inspector, as Assistant-Secretary for Technology, is another indication that the technological side of education is to be efficiently organized.

THE more closely the constitution of the Consultative Committee is analysed the less distinctly fitted does it seem to be for the actual work to be accomplished. Whatever may be the disposition of future Boards of Education, the present one is not likely to seek much in the way of extraneous assistance in solving problems in educational policy. The work of the Consultative Committee will, therefore, for the present, be mainly confined to the one statutory duty imposed on it by the Board of Education Act—to frame regulations for a Register of teachers. For this purpose one would suppose that the prime qualification would be experience in the working of secondary schools. We have, however, only three out of eighteen members constituting the Committee who can be said to have had any real experience in the administration of secondary schools—Mrs. Bryant, Dr. Gow, and Canon Lyttelton. We have already drawn attention to the glaring omission of a representative of the unendowed schools of England. To avoid injustice to many a deserving teacher, the widest knowledge of the infinite variety of existing secondary schools and their teachers is necessary, and we think that the Board of Education has unwisely weighted the Committee with “the views of Universities and other bodies” referred to in the fourth section of the Board of Education Act.

WHAT is a teacher? We suppose even a Sunday-school pupil would be prepared with an answer. On the threshold, however, of the Consultative Committee's deliberations in October next this question will have to be answered, and they may find the answer by no means easy. It is their duty to frame regulations for a register of teachers. This involves at the outset a deter-

mination of the meaning of the word “teacher”; and the Board of Education Act affords no assistance by an interpretation clause. It will be presumed that it is the Committee's duty to decide who shall be accounted a teacher, not, however, in the popular sense, but a “teacher” within the meaning of the Act. Now, by the Board of Education Act, the Board has jurisdiction over elementary and secondary educational institutions only, so that *prima facie* its jurisdiction over teachers would be confined to those engaged in teaching in elementary or secondary schools. University lecturers are thus apparently excluded from admission to the Register, and so are University Extension and County Council lecturers. Although the word is not defined, the word “teacher” has now become a technical term, the real significance of which it is the province of the Consultative Committee to determine. Are teachers of domestic economy, slojd, and horticulture statutory teachers? If they are, then on no principle of construction afforded by the Act can swimming masters and gymnastic instructors be excluded. The Committee will not lack debatable matter, for it has to determine questions which have, in the case of all other professions, been settled by the legislature alone. Of course, the Committee will not be bound by so strict an interpretation of the Act as that suggested above. They will be entitled and expected to take a liberal view as to the admission of teachers to the Register.

THE holiday season, with its varied joys, brings one beneficent influence to bear upon schoolmasters which they seldom appreciate in its true significance. It is the influence of the outside money-grubbing work-a-day life of the country with which the schoolmaster is rarely in contact during term time. How seldom do we hear of a secondary schoolmaster being elected upon a School Board, District Council, Board of Guardians, or other public body! Yet doctors, lawyers, and clergymen, whose professional duties are quite as engrossing as those of schoolmasters, find it possible to take a commanding part in the public life of the country. The opportunities, which fall in the way of schoolmasters during holiday time, of casting their professional sloughs are, indeed, not many, and, filled, as they are, with thoughts of mental and physical recreation, schoolmasters seldom avail themselves of them when they occur. This estrangement of the profession from public life is certainly undesirable, as it lessens its influence even in movements and measures directly affecting its own interests. We do not think a schoolmaster's real work would suffer by more frequent excursions from his shop, even in term time.

MUCH of what has been said in defence of the Court of the Merchant Taylors' Company in their determination to appoint a clerical Headmaster to succeed Dr. Baker seems to have been only half-hearted. When the alleged justification for a rule is that it “accords with a long-prevailing popular sentiment” it cannot be said to rest on a very sure foundation. Teaching is a profession the prevailing sentiment of whose members is clearly hostile to all forms of religious tests. In fact, the so-called rule which has prevailed in many of our schools has its origin in the circumstance that until the passing of the Endowed Schools Acts all masters of grammar schools were licensed by the Ordinary. It was, therefore, natural that all the most lucrative posts should be filled by clergymen, and the clerical

atmosphere has survived to influence school governors when their choice is in no way fettered by the necessity of seeking episcopal approval. In day schools there is assuredly no justification for such a serious limitation of the field of choice, and no instance can be given where difficulties have arisen owing to the appointment of a layman at the head of a public school. "Sweet reasonableness" will hardly be claimed as the monopoly of the clergy, nor, indeed, any other quality which goes to the making of a successful headmaster.

MANY of our readers will be glad to see the following appreciative notice of the late Dr. Buchheim from the last number of the *Periodical* :—

It is with much regret that we have to record the death of Dr. C. A. Buchheim, at the age of seventy-two. He was the editor of the well known "Clarendon Press German Classics." The demand for this series has been such that in it Becker's "Friedrich der Grosse" has reached a third edition; Goethe's "Egmont" a fourth, and "Iphigenie auf Tauris" a fourth, revised; Heine's "Harzreise" a third, "Prosa" (selections from his prose writings) a second; Lessing's "Minna von Barnhelm" an eighth, revised and enlarged; "Nathan der Weise" a second; and Schiller's "Historische Skizzen" a seventh, revised, "Jungfrau von Orleans" a second, "Wilhelm Tell" (large edition) a seventh, and the school edition a fourth. Other volumes in the series are Goethe's "Dichtung und Wahrheit," Halm's "Griseldis," and Schiller's "Maria Stuart." Prof. Buchheim also edited the "Modern German Reader," of which Part I. has reached a seventh and Part II. a second edition.

THE Irish Education Office has issued for circulation in the national schools of Ireland a set of rules dealing with the preservation of the teeth of children. They are similar to those recommended some time ago by a Committee of the British Dental Association, and may be described as emphasizing the necessity of extreme cleanliness and the avoidance of rough usage. Much more might be done by school authorities in the way of propagating simple and practical health maxims than is done at present. In boarding schools, where the masters stand more strictly *in loco parentis* than in day schools, some such precaution as that of having cards with simple rules of health placed in the dormitories should always be adopted. Yet how seldom it is done! Out of a thousand children's mouths examined it was found that the teeth of 86 per cent. required skilled treatment.

## SUMMARY.

### THE MONTH.

It would seem that the British Educational Section of the Paris Exhibition has obtained its full share of awards. In addition to the *grands prix* enumerated in the following official list, a large number of exhibitors have been awarded gold medals, silver medals, bronze medals, and honourable mentions:—1. Primary Education—Education Committee of the Royal Commission (Organization of English Section), Education Committee of the Royal Commission (Organization of Scottish Section), London School Board, British and Foreign School Society, National Society. 2. Secondary Education—Collective Exhibit of Preparatory and Public Schools, Girls' Public Day School Company, Collective Exhibit of Secondary Schools of Scotland, Collective Exhibit of Intermediate Schools of Wales. 3. Higher Education—University of Oxford, University of Cambridge, Victoria University, Education Committee of Royal Commission (Organization of English Section), H. Frowde (Oxford University Press). 4. Special Artistic Education—The Board of Education, South Kensington, for Collective Exhibit of Schools of Art of the United Kingdom. 5. Technical and Commercial Education

—London County Council (Central School of Arts and Crafts), City and Guilds of London Institute (Examinations Department). A *grand prix* has also been awarded to the Alliance Française, and a gold medal to the Franco-English Guild. Three *grands prix* have been awarded to the Oxford University Press, for "higher education," book-binding, and Oxford India paper.

A GRADUATES' UNION of the University of London has been formed for the purpose of dealing systematically with the various functions of the graduates under the new conditions of the University. The aims of the Union will be to support and strengthen the reconstituted University as a whole, to promote its interests, and to keep the graduates who are members of Convocation in touch with the University and informed of all important movements concerning it. The management of the Union will be in the hands of a General Committee, advised by Committees representing each of the groups of graduates as divided for electoral purposes (Arts, Laws, Science, Music, and Medicine), and by local branch committees now in course of formation. The officers are—President: P. H. Pye-Smith, M.D., F.R.S. Secretaries: H. J. Harris, B.A. (Arts); C. F. T. Blyth, LL.B., B.Sc. (Laws); F. W. Oliver, D.Sc. (Science); W. H. Sampson, B.A., B.Mus. (Music); L. E. Shaw, M.D., and W. Pasteur, M.D. (Medicine); and T. Gregory Foster, B.A. Ph.D. (General Secretary).

THE Committee of the Graduates' Association have sent a circular letter to members with respect to the October election of sixteen Convocation representatives to the Senate, in which they say:—"In order to safeguard the interests of the privately educated, or self-taught, external student, the Executive Council of the Association feel it to be essential that the sixteen representatives of Convocation should be graduates of the University whose knowledge, sympathies, and antecedents justify the belief that they may be relied on to support the system of high standard and impartial examinations, from matriculation upwards, upon which the reputation of our University has been mainly built. It is also deemed desirable that, as far as possible, all the representatives shall reside in or near London, so as to ensure their regular attendance at the meetings of the Senate and of the Council, which, at any rate at the outset, must of necessity be frequent and lengthy." Fifteen candidates are recommended for election:—In Arts: J. Fletcher Moulton, M.A., Q.C., M.P., F.R.S., Fellow of the University; T. Lambert Mears, M.A., LL.D.; T. Bateman Napier, LL.D., Fellow of the University; Sir Albert Kaye Rolitt, B.A., LL.D. (D.C.L.), M.P., Fellow of the University; J. Bourne Benson, B.A., LL.D.; John David McClure, B.A. (M.A. and LL.D. Camb.). In Laws: Joseph Walton, B.A., Q.C. In Medicine and Surgery: Sydney Ringer, M.D., F.R.S.; Arthur Quarry Silcock, M.D., B.S. In Science: Sir Philip Magnus, B.A., B.Sc., Fellow of the University; S. Russell Wells, M.D., B.Sc.; C. W. Kimmins, D.Sc.; Sophia Bryant, D.Sc.; Prof. Frank Clowes, D.Sc.; F. S. Macaulay, D.Sc. The representative in Music is not yet nominated.

THE University Extension Summer Meeting at Cambridge was opened by Mr. A. J. Balfour, M.P., by an address on "The Nineteenth Century"—the general subject of the meeting—to which we refer in another column. On Saturday afternoon, August 4, there was a public conference in the Senate House, which was presided over by the Bishop of Bristol, Dr. G. Forrest Browne, the former secretary to the University Local Examinations Syndicate. He was supported by the Vice-Chancellor, Prof. Sir R. C. Jebb, M.P., the Masters of Trinity and Downing, Dr. Roberts, &c. The last named opened the discussion on "The Co-ordination of Educational Agencies." Among other speakers were the Vice-Principal of Reading College, Miss Montgomery, of Exeter, and the Principal of Exeter College.

ON August 7 Sir Joshua Fitch presided at a conference on "The Conditions of Admission to the Register of Teachers to be formed under the provisions of the Board of Education Act." The Rev. R. D. Swallow, Chairman of the Training of Teachers Joint Committee appointed by the Headmasters, Headmistresses, College of Preceptors, Preparatory Schools Association, and other bodies, brought under notice a memorandum adopted by that Committee. Teachers at the present time divided themselves into three classes—those in the profession, those who will

Join in the next five years, and those who will join after 1905. The Committee suggested that those who are already teachers should be admitted to the register on easy terms (which the memorandum set forth), and a similar elasticity must be allowed in the case of those who shall become teachers within the next five years. For those who would seek admission on or after April 1, 1905, these should be the conditions: (1) that candidates for admission should be graduates of a British University, or should be in possession of a diploma equivalent to a pass degree; (2) that they should hold a certificate, approved by the Consultative Committee, that they had followed a course of training in the theory and practice of education subsequent to their graduation; (3) that they should give proof of two years' efficient service in a school approved for the purpose. In reference to condition (2), a considerable minority of the Committee were of opinion that, under exceptional circumstances, this course of professional training might be concurrent with the period of study for the degree. Prof. H. L. Withers, secretary of the Committee, trusted that the register would be something more than a directory. Miss Foxley hoped that those already teachers would meet with very generous treatment. Miss Hughes urged that the training of teachers should be post-graduate study. The chairman spoke of the great value of the register to parents, and urged that each University should provide a special training department, with a professor of education and master of method.

ON August 14 there was a discussion on "The Teaching of the Mother Tongue and National Literature in Schools and Universities." Prof. Sir Richard Jebb, M.P., who presided, said that our schools were rather the best schools of other countries in this respect. "Complaints were made that in the teaching of the mother tongue in our schools too much stress was laid on the teaching of English grammar and grammatical analysis, and too little on the work of developing ease and accuracy of expression. The result, no doubt, was that very often English boys and girls of sixteen and seventeen were singularly deficient in putting sentences together. That difficulty, of course, accompanied them into later life, to their great disadvantage." Our national character, he thought, had something to do with it. "The reserve and slowness of speech which characterized not a few English people were qualities which were received with great tolerance in our school system of education. Be that as it may, there could be no doubt that there were other countries which taught their mother tongue very much better than we did our own. He understood that in France, in Germany, in Holland, and in the United States, the habit of oral recapitulation was more used in teaching than it was in England, the result being that the people acquired a habit of prompt and coherent statement, as well as the power of logical narrative in writing." Papers were contributed by Prof. E. T. Smith, of the University College, Sheffield, and Mr. Russell, of University College School, the last named urging that the form master should give way to the specialist. The discussion was continued by Mr. W. E. Bryan (Cambridge), Dr. Arends and Dr. Imelman, of Germany, Mr. E. S. Shuckburgh (Cambridge), and others.

ON August 16 Miss E. P. Hughes opened a discussion on "The drawing together of different Nations in Educational Matters and the Limitations on the Interchange of (1) the Methods and (2) the Ideals of different Countries." The Master of Downing College (Dr. Hill) presided, and observed that the University Extension meeting had the one common ground which seemed to have abolished all distinctions of position and wealth, of politics, and even of nationality. Miss Hughes began by asking: "Is it possible to learn from foreign nations in educational matters, and is it desirable?" She submitted that it was extremely desirable, but that the practical problem was how to learn. They must not copy or imitate foreign countries; they must not transplant methods or ideals, but educational principles, which, of course, would be modified by the special conditions of each country. Dr. Hauch (Denmark), said they were aiming at no chimera, and difficulties must not deter them from the pursuit of their object. That very Extension meeting, with the many foreigners accepting invitations, was an evidence of what could be done; and they had to thank Cambridge for instituting the movement, which was the beginning of drawing different nations together. Each country could learn much

from the other. M. Courtois (Antwerp) said the feature of drawing different nations together was the study of languages. If the English people would pride themselves less on their insularity, and give more study to foreign languages, they would come to understand other countries better.

THE first annual report of the Central Church Council of Secondary Education for the Province of Canterbury has been published. It shows that every effort is being made to watch legislation on the subject with which it is concerned, and to safeguard the denominational principle as far as possible. The Council consists of six members of the Upper House, six of the Lower, and six members of the House of Laymen, including Lord Cranborne and Mr. J. G. Talbot, M.P. Oxford and Cambridge Universities send four representatives each, and every diocese in the province sends one; while twelve members are nominated by the Archbishop of Canterbury, among them being the Bishops of Winchester and Bristol, the Headmasters of Marlborough, Haileybury, and Dulwich, Lord Hugh Cecil, M.P., and Chancellor Dibdin. Archdeacon Sandford is the Secretary. The Council has appointed a "Law Committee," to consider legislative proposals brought forward by Government, and watch them, in the interests of religious education. Its general Committee has concerned itself with schemes for a systematic examination of secondary schools in religious knowledge, for the religious instruction of teachers on University Extension lines, and for diocesan organizations throughout the province which shall deal with secondary education in its relation to the Church and religious instruction.

THE following diplomas and certificates have been awarded in connexion with the examination held under the joint auspices of the Oxford Delegacy for the Extension of Teaching beyond the limits of the University and Reading College (affiliated) (under degrees of Convocation [2], [3], June 2, 1896), June and July, 1900:—Diploma in Agriculture:—passed final examination: Arthur Ernest Davis, Thomas Edward Gunter. Passed second examination: Arthur Percy Cox, Harold Charles Jefferys. Passed first examination: Thomas Charles Martin, Albert Fedarb Sandys. Dairy Teacher's Certificate:—passed final examination: S. Blanche, J. Forrester, Arthur Myers Smith. Certificate in Dairying:—passed final examination: Margaret Robertson McDuff. Passed theoretical examination: Marianne P. Gardner, Elizabeth Constance Hoare, Beatrice Elleray Thomson. Certificate in Horticulture:—passed final examination: Edna Mary Gunnell, Edward T. B. Reece. Passed theoretical subjects: Mabel Mary Rayner. Certificate in Aviculture:—passed in all theoretical subjects: Miss Muriel Johnson. The external examiners were Prof. Sollas, F.R.S., R. W. T. Günther, M.A., W. W. Fisher, M.A., W. J. Henman, Leonard G. Sutton, Prof. Sir G. Brown, R. Newstead, J. A. Voelcker, M.A., Ph.D., and J. Douglas.

HER MAJESTY'S COMMISSIONERS for the Exhibition of 1851 have made appointments to science research scholarships for the year 1900, on the recommendation of the authorities of the respective Universities and colleges. The scholarships are of the value of £150 a year, and are ordinarily tenable for two years (subject to a satisfactory report at the end of the first year) in any University at home or abroad, or in some other institution approved by the Commissioners. The scholars are to devote themselves exclusively to study and research in some branch of science the extension of which is important to the industries of the country. A limited number of the scholarships are renewed for a third year where it appears that the renewal is likely to result in work of scientific importance. The Commissioners have made fifteen appointments, fourteen of the scholars being men, and the fifteenth a woman. The list is as follows:—Charles Edward Fawcitt, B.Sc.; Vincent James Blyth, M.A.; James Moir, M.A., B.Sc.; William Mansergh Varley, B.Sc.; John Charles Willis Humfrey, B.Sc.; Samuel Smiles, B.Sc.; Norman Smith, B.Sc.; Lorenzo Lyddon Lloyd; Alice Laura Embleton, B.Sc.; John A. Cunningham, B.A.; William Sloan Mills, B.A.; John Patterson, B.A.; William Coombs Baker, M.A.; James Barnes, M.A.; and John Jerry E. Durack, B.A.

their Minute establishing higher elementary schools. The following letter was written on August 14 to the Bradford School Board, which had asked for the recognition of a new commercial (higher-grade) school:—

SIR,—Adverting to your letter of the 16th ultimo, I am directed by the Board of Education to state that the Higher Elementary Schools Minute was framed for the establishment and maintenance of schools of science of an elementary character, where such were needed, and that the school now proposed by the Bradford School Board seems to be of a different type, and, therefore, could not be recognized by the Board of Education under that Minute. You will remember that, in the time-table submitted with your letter on 20th June, the school was described as a "commercial school," and I may add that the hours allotted to science and mathematics fell considerably short of the time to be given to those subjects in higher elementary schools. In addition to the requirements of Article 9 of the Minute in regard to curriculum, I may also refer you to Article 7a, and, with respect to the above, remark that the Minute contemplated the establishment of higher elementary schools only "where such were needed." I may point out that, before recognizing a higher elementary school, the Board of Education must be satisfied that this article also (Article 7a) is complied with.—I have, &c., JOHN WHITE.

AFTER distributing the prizes to the successful scholars of the Hampton Grammar School, the Bishop of London said that he always thought it would be a good thing that every boy should have some definite manual work. He was not sure that digging would not be a good thing—digging hard for an hour. "Every one ought to know what hard manual labour meant, and he should be glad to see its application take a place side by side with the more highly developed curriculum of which we were so proud. Every boy would do his work better if, in the first instance, he had to face hard manual labour; and he would know what manual work meant for the rest of his life. The great lesson we all had to learn, as life went on, was to work hard. Life was much too easy for us."

FROM a report of an inquiry into the eyesight of children, which has been recently drawn up, it appears that, of 338,920 children, 259,523, or 76.6 per cent., had good sight; and 79,167, or 23.3 per cent., defective vision. The large number of 2,675 children were only able to see the enormous top letter of the test card at a distance of 20 ft.—a letter which is meant to be read at a distance of about 200 ft. The eyesight appeared to be worse in the more crowded parts of London, and best in those parts where the houses are less dense and there are more open spaces. The elder children seemed to show better sight than the younger, but it is probable that knowledge of the letters had something to do with this. The sight of the girls seemed to be inferior to that of the boys, which has been attributed to the strain of doing needlework.

THE death is reported of a well known man of science and naturalist, Dr. John Anderson, F.R.S. He graduated as M.D. (and gold medallist) of the University of Edinburgh in 1861. From 1864 to 1886 he was Superintendent of the India Museum, Calcutta, and during the greater part of the same period Professor of Comparative Anatomy in the Medical College of that city. In 1868-9 and 1874-5 he served as scientific officer in the expeditions to Western China which were organized by the Indian Government, and of which he published accounts in several forms. In 1881 he investigated the marine zoology of the Mergui Archipelago, off the coast of Tenasserim; his book on the subject appearing in 1889. Among his other publications were "English Intercourse with Siam in the Seventeenth Century," 1890; "Herpetology of Arabia," 1896; and the first part of a work on the "Zoology of Egypt," 1898.

THE following elections have taken place at Bradfield College to foundation scholarships, value ninety guineas per annum:—R. M. J. Martin, Rev. R. J. Martin's, St. Leonard's School, St. Leonards-on-Sea; D. P. McDonald, Mr. A. M. Kilby's, Lindisfarne, Blackheath; W. L. Misken, Rev. H. B. Allen's, Temple Grove, East Sheen. To a Warden's Exhibition, value fifty guineas per annum: A. G. B. Buchanan, Bradfield College. To exhibitions, value thirty guineas per annum: J. H. Morris, King's School, Peterborough; M. P. Shaw-Smith, Mr. R. Paddison's, Woodcote

House, Windlesham; E. F. Mathews, Mr. R. Paddison's, Woodcote House, Windlesham; W. H. H. Thompson (Army), Mr. E. H. Parry's, Stoke House School, Stoke Poges.

THE Council of the Cambridge Training College for Women Teachers have recently made the following awards:—A Council Scholarship of £30 to Miss W. Boyd, M.A. Glasgow with Honours in English; a Council Scholarship of £20 to Miss C. E. Browne, B.Sc. Wales, from University College, Cardiff; the Gilchrist Scholarship of £25 to Miss N. Howlin, B.A. Royal University of Ireland, with Honours in Modern Literature, from Alexandra College, Dublin; the Old Students' Guild Scholarship of £20 to Miss A. F. Marks, B.A. London, from Mason College, Birmingham.

## UNIVERSITIES.

(From our Correspondents.)

THE Matriculation List of the University of Wales Wales. for the present year shows that fifty-five candidates passed the whole examination in the First Division and twenty-nine in the Second Division. Fifty-four candidates completed the examination by passing in their one remaining subject, while nine were successful in passing in their two remaining subjects. Fifty candidates passed in four out of the five subjects, and thirty-seven in three. It is probable that the leading avenue to the University of Wales from the county schools will be by means of the Senior Certificate of the Central Welsh Board, which is now recognized by the University of Wales subject for subject. The results of the annual examination of the Central Welsh Board for 1900 have not yet been made known. They will probably be communicated to the schools about the middle of September, in time for the re-opening after the holidays.

A striking illustration of the excellent quality of the work done in some of the Welsh county schools is afforded by the success of Mr. Phillips, a boy of seventeen, from the County School, Machynlleth, Montgomeryshire, who gained First Class Honours in History at the recent Intermediate Arts Examination of London University. This year, too, Mr. Wykes, Mathematical Scholar of Balliol, and recently a pupil of the Grove Park County School, Wrexham, was placed in the First Class in Mathematical Moderations at Oxford. These and other successes show that the Welsh county-school system, while not neglecting the majority of the children in the schools, gives distinct stimulus and encouragement to the higher secondary work. The aim of the Central Welsh Board is to encourage the growth of the county schools upon truly educational lines, in the light of all that is best and most progressive in modern educational science, while retaining the most valuable traditions of the education of the past. The Chairman of the Central Board, Mr. A. C. Humphreys-Owen, M.P., has been recently appointed a member of the Consultative Committee to the Board of Education, and will be doubtless able to render the Board and the Committee very valuable assistance in organizing English secondary education.

In the recent B.D. Examination of the University of Wales, the degree was awarded, for the first time in the history of the University, to the Rev. Richard Morris, M.A. Glasgow, and the Rev. Howel Harris Hughes, B.A. London, both students of the Bala Theological College. The University of Wales B.D. is a post-graduate degree, and requires as a necessary condition for obtaining it a three years' course of training at an approved theological college.

## CORRESPONDENCE.

### AN OFFER FROM CANADA.

To the Editor of the Educational Times.

SIR,—The Canadian Government is very desirous of encouraging the study of the history, geography, and resources of Canada in the schools of the United Kingdom; and, with this object in view, has had prepared two books for use in schools—one an atlas, and the other a reader about Canada. Copies are enclosed herewith.

The books will be supplied in sufficient numbers to schools prepared to take the matter up after the summer holidays. The offer will be confined, in the first place, to schools in the rural districts, and in the smaller towns and villages—the centres of agricultural neighbourhoods. It is intended to present a bronze medal for competition in each



school. The medal will be given to the boy or girl who proves to be the most proficient in the subjects when the schools close for the Christmas holidays. An examination should be held about the time specified, and the best two papers in each school forwarded to me, when I shall decide, as soon as possible after they are received, to which of the papers the medal is to be awarded.

The adoption of the proposal cannot fail to be of advantage from an Imperial as well as from a Canadian point of view, and nothing but good results can follow a better knowledge of Canada among the rising generation. Both directly and indirectly it ought to be beneficial in a commercial sense in making the products of Canada better known than at present; and, again, the more the rising generation know about Canada and the colonies the more likely are those of them who may decide upon emigration in the future to remain within the limits of the Empire.

I shall be glad to hear from schoolmasters who view the suggestion favourably, and will furnish them with atlases and readers on learning the numbers required and the date on which they will be needed. The applications will be recorded in order of priority, and will be dealt with on the lines mentioned until the available supply of the books is exhausted.—I am, Sir, your obedient servant,

Office of the High Commissioner for Canada, STRATHCONA.  
17 Victoria Street, London, S.W.

#### SCIENCE AT ETON.

To the Editor of the Educational Times.

SIR,—In your August number you quote Prof. Armstrong's criticisms on the few certificates that have been gained from Eton in "science" during recent years. May I be allowed to draw attention to two points? First, as a rule, boys who wish to devote extra time to science are encouraged to pass the Certificate or some corresponding Examination (e.g., Responsions at Oxford), before giving up a large part of their classical work in favour of science. This will account in some measure for the paucity of boys who take up a scientific subject in the Certificate Examination; though, of course, it is to be deplored that the amount of time given to science in the ordinary curriculum is insufficient for this purpose. Secondly, it is indeed strange for one who listened last January to Prof. Armstrong's vehement denunciations of examinations of this type to find him now finding fault with a school because so few of its boys are sent up for the very examinations he holds in such scorn.

Personally, I should be the last to deny that the present state of science teaching in our public schools in general, and at Eton in particular, is capable of being vastly improved. Those to whom such teaching is entrusted are only too glad of outside criticism given by competent judges who have taken the trouble to acquaint themselves with the details of the system they are criticizing. They will gain little help from the vague accusations and inaccurate statements which recently characterized Prof. Armstrong's methods of controversy.—I am, Sir, yours faithfully,  
M. W. HILL,  
Savile Club, 107 Piccadilly, W. Assistant-Master, Eton College.  
August 10.

#### REGISTRATION OF MUSIC TEACHERS.

To the Editor of the Educational Times.

SIR,—There is a Bill in Parliament, recently read for the first time which is a distinct source of danger to many members of the scholastic and musical professions. I refer to the Teachers of Music Registration Bill. This measure, which is drafted by a small section or party of musicians, seeks, to all intents and purposes, to make registration compulsory, and Clause 9b says: "Or, at the time of the passing of this Act, he or she has been engaged for not less than two years in teaching or practising music as a profession and means of livelihood. . . ." The italics are mine. This clause, combined with what is stated in the memorandum on the front of the Bill, makes it very apparent that it is not intended to register those who teach other subjects besides music. The consequence to thousands of teachers would be disastrous if this measure succeeded, and equally so to heads of schools. It behoves all to use their influence to prevent such a scheme from becoming law.—Yours, &c.,  
TEACHER.  
August 11, 1900.

[The words quoted by our correspondent would include all who teach music professionally, whatever else they may teach in addition.—EDITOR.]

#### COLLEGE OF PRECEPTORS.—DIPLOMA EXAMINATION.

##### ERRATUM IN PASS LIST.

Insert in Experimental Physics (Associateship): Varcoe, J. T. S.

## A SELECTION FROM CASSELL'S EDUCATIONAL BOOKS.

### NEW BOOKS.

Just Published. Price 5s.

#### LANDSCAPE PAINTING IN WATER COLOURS.

By J. MACWHIRTER, R.A. With 23 Coloured Plates.

"This volume cannot be too highly recommended to the amateur sketcher. The twenty-three examples in colour—wonderfully successful as reproductions—are from the artist's own sketches, and are of Nature in her every mood—sky, sea, snow, moor, and cloud. Nothing more widely shows the progress made in art-teaching than a comparison of this masterly handbook to water-colour painting with similar ones of some twenty or thirty years back. The young artist should at once possess himself of this volume, of which the value is enhanced by some useful 'Hints to Students' by Mr. MacWhirter, as well as by a practical introduction by Mr. Edwin Bale, R.L."—*Daily News*.

**A PRACTICAL METHOD OF TEACHING GEOGRAPHY.** (ENGLAND AND WALES. Part II.) Agricultural Industries, Seaports, Sectional Maps, and Continental Connexions with the British Isles. By J. H. OVERTON. 6d.

**OUR GREAT CITY;** or, London the Heart of the Empire. By H. O. ARNOLD-FORSTER, M.A. Profusely Illustrated. 1s. 9d.

**THE TROUBADOUR.** Selections from English Verse. Edited and Annotated by PHILIP GIBBS, Author of "Founders of the Empire," &c. 1s. 6d.

#### HISTORY.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS. 256 pages, Extra crown 8vo, bound in cloth. With 4 Coloured Plates and numerous Illustrations. Price 1s. 8d. This Work has already been reprinted.

**IN DANGER'S HOUR; or, Stout Hearts and Stirring Deeds.** With Introduction by H. O. ARNOLD-FORSTER, M.A. With 4 Coloured Plates and numerous Illustrations. Price 1s. 8d.; or, bound in cloth gilt, 2s. 6d. "Forty years' experience of reading books, for boys both in large and small schools, tells me that no book will prove to be more popular than 'In Danger's Hour.'"—PRINCIPAL, High School, Thurks.

Third Edition, Revised. Price 5s.

**A HISTORY OF ENGLAND.** By H. O. ARNOLD-FORSTER, M.A. Fully Illustrated. Extra crown 8vo, 816 pp.

*The Scotsman* says:—"The picturesqueness of its manner, its fine national spirit, its insistence on those parts of the story that have most use and interest for the modern world, its numerous choice of appropriate and interesting illustrations—all these things make it a book not for the cloistered student, but for everybody who wishes, not merely to be instructed, but to be won to an interest in a study too often made repellent by the Dryasdusts. . . . Few popular histories, if any, have been better done."

#### THE BEST AND CHEAPEST DICTIONARIES.

**CASSELL'S FRENCH DICTIONARY.** (French-English and English-French.) 515th Thousand. Revised and Corrected from the Seventh and Latest Edition of the Dictionary of the French Academy. 1,150 pages. Cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S GERMAN DICTIONARY.** (German-English and English-German.) 222nd Thousand. By ELIZABETH WEIR. 1,120 pp., demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 112th Thousand. Thoroughly Revised and Corrected and in part Rewritten, by J. R. V. MARCHANT, M.A., Master of St. Paul's School, and formerly Scholar of Wadham College, Oxford; and J. F. CHARLES, B.A., Assistant-Master at the City of London School. Cheap Edition, 3s. 6d.; half-morocco, 5s.

#### CASSELL'S NEW LATIN PRIMER SERIES.

Edited by Prof. J. P. POSTGATE, M.A., Litt.D.,

Fellow and Classical Lecturer of Trinity College, Cambridge; Professor of Comparative Philology in University College, London.

**THE NEW LATIN PRIMER.** By Prof. POSTGATE, with the co-operation of C. A. VINCE, M.A. 2s. 6d.

**THE FIRST LATIN PRIMER.** By Prof. POSTGATE. 1s.

Fourth Thousand. Price 2s. 6d.

**LATIN PROSE FOR LOWER FORMS.** By M. A. BAYFIELD, M.A. Being a Series of Exercises adapted to THE NEW and First Latin Primers.

**CASSELL'S LESSONS IN FRENCH.** An Entirely New and Revised Edition. In Two Parts, cloth, 2s. each. Complete in One Vol., 3s. 6d.

#### LITERATURE.

Thirty-first Thousand. 7s. 6d.

**A FIRST SKETCH OF ENGLISH LITERATURE.** By Prof. HENRY MORLEY.

**THE STORY OF ENGLISH LITERATURE.** By ANNA BUCKLAND. Cheap Edition. Cloth boards, 3s. 6d. Adopted by the London School Board as a Reading Book at the Pupil-Teacher Centres.

Cassell's Educational Catalogue will be sent, post free, on application.

CASSELL & CO., LTD., LUDGATE HILL, LONDON, E.C.



# Blackie's Illustrated Latin Series

**General Editor—Professor R. Y. TYRRELL, Litt.D.**

Examiner to the Universities of London and Glasgow, &c.

This new Series, issued under the editorship of Professor TYRRELL, is distinguished by several important features for the first time introduced into English school books.



Palladium, from the West Pediment of the Temple of Aigina.  
Sixth century B.C.

Illustrated with full-page coloured reproductions of vase paintings, &c.: photographs of bas-reliefs, statues, and famous paintings; and numerous black and white illustrations specially drawn for this Series. Crown 8vo, cloth.

THE PUBLISHERS WILL BE PLEASED TO SEND SPECIMEN COPIES TO TEACHERS WITH A VIEW TO INTRODUCTION.

**Eutropius.—Books I. and II.** Edited by W. CECIL LAMING, M.A., Classical Master in Edinburgh Academy 1s. 6d.

**Livy.—Book V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.

**Tacitus.—Agricola.** Edited by W. C. FLAMSTEAD WALTERS, M.A., formerly of Christ's College, New Zealand. 1s. 6d.

**Virgil.—Aeneid III.** Edited by Professor SANDFORD, M.A., Queen's College, Galway. 1s. 6d.

**Horace.—The Odes. Books I., II., III., and IV.** Edited by STEPHEN GWYNN, B.A., late Scholar and Hulmean Exhibitioner of Brasenose College, Oxford. 1s. 6d. each.

**Cicero.—The First Catiline Oration.** Edited by Professor C. H. KEENE, M.A., Queen's College, Cork. 1s. 6d.

**Cicero.—The Catiline Orations. (COMPLETE.)** Edited by Professor C. H. KEENE, M.A. 2s. 6d.

**Sallust.—The Catiline Conspiracy.** Edited by the Rev. W. A. STONE, M.A., Assistant-Master in Bristol Grammar School.

**Virgil.—Georgics I.** Edited by S. E. WINBOLT, M.A., Assistant-Master in Christ's Hospital. 1s. 6d.

**Livy.—Book VI.** Edited by W. CECIL LAMING, M.A. [In September.]

## FORTHCOMING VOLUMES.

**Livy.—Book I.** Edited by Professor JOHN BROWN, Wellington University, New Zealand.

**Caesar.—The Gallic War. Books I. and V.** Edited by Professor JOHN BROWN.

**Livy.—Books XXI and XXII.** Edited by G. G. LOANE, M.A., Assistant-Master in St. Paul's School.

**Virgil.—Georgics II.** Edited by S. E. WINBOLT, M.A., Assistant-Master in Christ's Hospital.

**Virgil.—Aeneid VI.** Edited by H. B. COTTERILL, M.A., formerly Assistant-Master at Haileybury.

**Virgil.—Aeneid II.** Edited by Professor SANDFORD.

**Cicero.—Pro Lege Manilia.** Edited by W. J. WOODHOUSE, M.A., formerly Assistant-Lecturer in Classics, University College of North Wales.



Dardan Shepherds, wearing the tunic, Phrygian cap, cothurnus, and carrying the baculus.



# MESSRS. RIVINGTONS LIST

## RIVINGTONS JUNIOR CLASSICS.

### First Latin Translation Book.

By A. H. THOMAS and J. A. TURNER. 1s. 6d.

### Loculi. A Second Latin Reading-Book.

By F. D. MORICE. 2s. net.

### Initia Latina. A Latin Book for Beginners.

By E. D. MANSFIELD. 2s.

### ▲ Master's Key, 3s. 8d. net, post free to Teachers.

### Exercises in Latin Prose.

By E. D. MANSFIELD. 2s. 6d. net.

▲ Master's Key, 5s. 2d. net, post free to Teachers.

Edited, with Maps, Plans, Exercises for Re-translation, Notes, and Vocabularies.

May also be had without Vocabularies.

### Caesar.—The Gallic War.

Books I., II., III., IV., V., and VI.

1s. 6d. each.

### Selections from Cicero. In Two Parts.

1s. 6d. each.

### Selections from Eutropius. 2s.

### Easy Selections from Livy. 2s.

### Selections from Ovid. 2s.

▲ Latin Version of the Exercises, 2s. 2d. net, post free to Teachers only.

### Cornelius Nepos. (Select Lives.) 2s.

### Xenophon's Anabasis. Book I. 2s.

### The Gospels according to St. Matthew, St. Mark, and St. Luke, in Greek.

2s. each.

## A PRIMER OF LATIN GRAMMAR.

By W. MODLEN, M.A., Classical Master at St. John's College, Hurstpierpoint. With a Preface by F. B. JEVONS, M.A., Litt.D., Principal of Bishop Hatfield's Hall, Durham. Crown 8vo, 2s. 6d. Or, separately:—

### Latin Accidence. 1s. Latin Syntax. 1s. 6d.

## LATIN PROSE COMPOSITION.

For the Middle Forms of Schools. By M. A. NORTH, M.A., Assistant-Master at Clifton College, and A. E. HILLARD, M.A., Headmaster of Durham School. Crown 8vo, 3s. 6d.

▲ Latin Version, 6s. 2d. net, post free.

## RIVINGTONS LATIN UNSEENS.

Twelve books, (a) One to Six, for alternative use (of equal difficulty), each containing about sixty to seventy pieces of Prose and Verse, for the use of Fourth Forms of Schools; and (b) Seven to Twelve, for the use of Fifth Forms.

Edited by E. H. C. SMITH, M.A.

Small fcap. 8vo, 6d. each, net.

## A LATIN VERSE BOOK.

For Preparatory Schools. By A. H. THOMAS, M.A., Crescent House School, Brighton. Crown 8vo, 3s. 6d.

▲ Latin Version, 5s. 2d. net, post free, from the Publishers only to authenticated Teachers.

## GREEK PROSE COMPOSITION FOR SCHOOLS.

By M. A. NORTH, M.A., and A. E. HILLARD, M.A. Crown 8vo, 3s. 6d.

▲ Greek Version, 6s. 2d. net, post free, from the Publishers only to Teachers.

## EXERCISES IN THE SYNTAX AND IDIOMS OF ATTIC GREEK.

Containing 104 Exercises, 3 Appendices, and Vocabulary. By W. H. D. ROUSE, M.A., Assistant-Master at Rugby School, and J. M. SING, M.A., Assistant-Master at St. Edward's School, Oxford. Crown 8vo, 3s. 6d. [Just published.]

## A FIRST GREEK READING-BOOK.

Containing 100 Easy Stories, with the necessary Grammar and Vocabulary.

By ARTHUR SIDGWICK, M.A.

Crown 8vo, 2s. 6d.

## DUHAMEL AND MINNSEN'S COMPLETE COURSE OF FRENCH PROSE COMPOSITION.

1. **First Steps in Reading and Composition.** An Introduction to French Pronunciation and Reading, with Continuous Narratives for Translation into English and into French, so arranged as to teach the Commonest Parts of Speech and the Commonest Tenses of Verbs.

By J. DUHAMEL, M. ès A., Assistant-Master at Harrow School. 3s. 6d.

▲ French Version, 5s. 2d. net, post free, from the Publishers only to Teachers.

2. **A Primer of French Prose Composition.** Including an Elementary Syntax, the Irregular Verbs, 150 Easy Pieces for Translation, and a Complete Vocabulary.

By J. DUHAMEL, M. ès A., and B. MINNSEN, M. ès A., Assistant-Masters at Harrow School. 2s. 6d.

▲ Master's Key, 5s. 2d. net, post free, from the Publishers only to Teachers.

3. **A Book of French Prose Composition for Middle Forms.** Including Notes on Syntax, the Irregular Verbs, numerous Idioms and Phrases, 150 Pieces for Translation, and complete Vocabulary. By J. DUHAMEL, M. ès A., and B. MINNSEN, M. ès A. 3s. 6d.

▲ French Version, 5s. 2d. net, post free, from the Publishers only to Teachers.

4. **Advanced French Prose Composition.** With Notes on Syntax, Translation, and Idiom, followed by Exercises with Notes and Lists of Selected Words.

By J. DUHAMEL, M. ès A. 4s. 6d. net.

[Forming a Volume of the "Modern French" Series.]

▲ French Version, 6s. 2d. net, post free, from the Publishers only to Teachers.

## THE MODERN FRENCH SERIES.

### A Primer of French Grammar.

By A. A. SOMERVILLE. 2s. net.

### Primary French Exercises.

By A. A. SOMERVILLE. 1s. 6d. net.

▲ French Version, 5s. 2d. net, post free.

### A Primary French Translation Book.

By W. LYON and G. LARPENT. 2s. net.

### The Beginners' Texts. 9 vols. 6d. each net.\*

### Elementary Texts. 11 vols. 8d. each net.\*

### Intermediate French Translation Book.

By W. S. LYON. 2s. 6d. net.

### Intermediate Texts. 13 vols. 10d. each net.\*

### Advanced Passages for Unseen Translation.

By H. C. STEEL. 2s. 6d. net.

### Morceaux Détachés d'Auteurs Contemporains.

By J. W. J. VECQUERAY. 3s. net.

### Advanced French Prose Composition.

By J. DUHAMEL. 4s. 6d. net.

▲ French Version, 6s. 2d. net, post free.

### Advanced Texts. 15 vols. 2s. each net.\*

\* A detailed List of these Texts may be had on application to the Publishers.

## GERMAN PROSE COMPOSITION.

For Middle and Upper Forms of Schools.

By R. J. MORICE. Crown 8vo, 4s. 6d.

▲ German Version, 6s. 2d. net, post free, from the Publishers only to Teachers.

## RIVINGTONS SINGLE TERM LATIN READERS, WITH NOTES, EXERCISES, AND VOCABULARIES.

Suited for a full Term's work, allowing time for revision and examinations. From 8d. to 1s. 4d. each Book.

### FIRST TERM. Three Books, 8d. each.

Separate Sentences, the Simple Sentence, and very easy Constructions only.

### SECOND TERM. Three Books, 1s. each.

Continuous Stories, with easy Adverbial Clauses.

### THIRD TERM. Three Books, 1s. each.

The Accusative and Infinitive.

### FOURTH TERM. Three Books, 1s. each.

Easy Latin pieces, modelled on easy Caesar.

### FIFTH TERM. Three Books, 1s. 4d. each.

Easy Latin pieces, similar to Fourth Term, but a little harder.

### SIXTH TERM. Three Books, 9d. each.

Easy Selections from Ovid, increasing in difficulty, to be read with the Books of the Fourth and Fifth Terms.

*Exercises are given at the end of each Book, except the First and Sixth Terms.*

## RIVINGTONS SINGLE TERM GREEK READERS. With Notes and Vocabularies.

### FIRST TERM. Three Books, 9d. each.

Sentences and Short Stories constructed with a view to illustrate the easy Accidence.

### SECOND TERM. Three Books, 9d. each.

Easy Stories, with aids to find such irregular forms as occur.

### THIRD TERM. Three Books, 9d. each.

Easy Selections from Xenophon, simplified.

## RIVINGTONS MIDDLE FORM CLASSICS.

Edited, with Maps, Introduction, and Notes.

### Livy, Books I., II., and V.

By A. F. HORT, M.A., Assistant-Master at Harrow School. 2s. each, sold separately.

### Scenes from Hercules Furens of Euripides.

By A. F. HORT, M.A. 1s. 6d.

### The Retreat from Syracuse, from Thucydides.

By W. H. D. ROUSE, M.A., Assistant-Master at Rugby School. 1s. 6d.

### Pylos and Sphacteria, from Thucydides.

By W. H. D. ROUSE, M.A. 1s. 6d.

### The Siege of Plataea, from Thucydides.

By J. M. SING, M.A., Assistant-Master at St. Edward's School, Oxford. 1s. 6d.

### Brasidas in Thrace, from Thucydides.

By J. M. SING, M.A. 1s. 6d.

## THE MODERN GERMAN SERIES.

### A Primer of German Grammar. 2s. net.

### Primary German Exercises. 2s. net.

### A First German Writer. 3s. 6d.

▲ German Version, 6s. 2d. net, post free, from the Publishers only to Teachers.

### Beginners' Texts. 4 vols. 9d. each net.

### Elementary Texts. 7 vols. 1s. each net.

### Advanced Texts. 8 vols. 2s. each net.

*A detailed List of these Texts may be had on application to the Publishers.*

# COLLEGE OF PRECEPTORS' EXAMINATIONS.

SUITABLE BOOKS IN THE  
University Tutorial and Preceptors' Series.

## English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond. [*In the press.*]  
**The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. *Fifth Edition.* 3s. 6d.  
**History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, and numerous Chronological and other Tables. By C. S. FREANESIDE, M.A. Oxon. 3s. 6d.

## French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. 2s. 6d.  
**FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. ès Sc., Univ. Gall. 1s. 6d.  
**French Prose Composition.** By E. WEEKLEY, M.A. Lond. 3s. 6d.  
**FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. *Second Edition.* 1s. 6d.  
**French Prose Reader.** Edited by S. BARLET, B. ès Sc., and W. F. MASOM, M.A. With Notes and Vocabulary. *Third Edition.* 2s. 6d.

## Latin Grammar, &c.

- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. 2s. 6d. [*In the press.*]  
**Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Fourth Edition.* 3s. 6d. **Exercises and Test Questions on.** 1s. 6d.  
**Latin Composition.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fifth Edition.* 2s. 6d.  
**Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.  
**LATIN READER, THE PRECEPTORS'.** [*In preparation.*]

## Mathematics and Science.

- Algebra, The Tutorial.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Based on the *Algebra* of RADHAKRISHNAN. Part II.: Advanced Course. 6s. 6d.  
**Algebra, A Middle.** By the same Authors. 3s. 6d.  
**Arithmetic, The Tutorial.** By W. P. WORKMAN, M.A. [*In preparation.*]  
**Biology, Text-Book of.** By H. G. WELLS, B.Sc. Lond., F.Z.S., F.C.P. Part I.: Vertebrates. 2s. 6d. Part II.: Invertebrates and Plants. 2s. 6d.  
**Book-keeping, Practical Lessons in.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. 3s. 6d. Exercise Books ruled Ledger, Journal, or Cash. 3d.  
**BOOK-KEEPING, THE PRECEPTORS'.** By the same Author. [*In preparation.*]  
**Botany, First Stage.** By A. J. EWART, D.Sc., Ph.D., F.L.S. 2s.  
**Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, LL.D., M.A., F.C.S.  
 Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.  
**Chemistry, Synopsis of Non-Metallic.** With an Appendix on Calculations. By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. Interleaved. 1s. 6d.  
**Euclid, Books I-IV.** By RUPERT DRAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.  
**Hydrostatics, An Elementary Text-Book of.** By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 2s.  
**Hygiene, First Stage.** By R. A. LYSTER, B.Sc. 2s.  
**Magnetism and Electricity, Text-Book of.** By R. W. STEWART, D.Sc. *Fourth Edition.* 3s. 6d.  
**MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.  
**Mensuration of the Simpler Figures.** By WM. BRIGGS, LL.D., M.A., F.C.S., and T. W. EDMONDSON, M.A. *Second Edition.* 2s. 6d.  
**Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. 2s.  
**Trigonometry, The Tutorial.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 3s. 6d.  
**TRIGONOMETRY, THE PRECEPTORS'.** By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS, London University (including the Special Subjects for 1901 and 1902), Science and Art Department, and other Examinations, free on application.

London: UNIVERSITY TUTORIAL PRESS (University Correspondence College Press).  
 W. B. CLIVE: 13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	2 10 0	.....	"	3 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.  
 Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 5d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

September 1, 1900.

THE Lectures for Teachers, by Prof. Withers, on Fixtures. "The Practice of Education," being the second course of the twenty-sixth annual series, will be delivered at the College of Preceptors on Saturday afternoons, at 5 o'clock, beginning on October 6. We print the syllabus this month.

\* \* \*

THE Professional Preliminary Examination of the College will be held on the 4th, 5th, and 6th of this month.

\* \* \*

AN examination for one geographical scholarship, of the value of £60, will be held at Oxford on October 9. Candidates, who must have taken Honours in one of the final schools of the University, should send in their names to Mr. H. J. Mackinder, Christ Church, not later than October 3. The scholar elected will be required to attend the full course of instruction at the School of Geography during the academic year 1900-1901, and to enter for the University Diploma in Geography in June, 1901.

\* \* \*

DURING the coming session evening science courses will be held in connexion with the Technical Education Board at University College, King's College, and Bedford College. At University College Prof. J. A. Fleming, F.R.S., will give a course of ten lectures, followed by laboratory practice, in advanced electrical measurements. A course of lectures on the electric motor and its application to electric traction will be given by Prof. C. A. Carus-Wilson, each lecture to be followed by an experimental demonstration or by a class for the practical working of numerical examples in connexion with the subject. A course will be given by Prof. E. Wilson at King's College on direct and alternating currents. In mechanical engineering, Prof. T. Hudson Beare will give a course of ten lectures, at University College, on the theory of steam engines and boilers, with laboratory work on the testing of steam engines and boilers. Prof. Beare will also give a course of five lectures on the theory of gas and oil engines, combined with laboratory work.

\* \* \*

THE following Saturday morning courses for teachers have been arranged by the London Technical Education Board:—A course of about ten lectures on the teaching of mathematics will be given by Prof. Hudson at King's College. The object of these lectures is to help those who are practically engaged in teaching and wish to become acquainted with modern methods and improvements in order to render their teaching more effective. A course on physics will be given under the direction of Prof. W. Grylls Adams and Mr. S. A. F. White. The course will consist of practical work in the Wheatstone Laboratory, the object of the instruction being to enable students to obtain an intimate knowledge of the methods employed in physical measurements and familiarity with the use of apparatus. A course of twenty lectures on physiology will be delivered by Prof. Halliburton. The object of the course is to acquaint teachers with the modern methods of teaching physiology by objective methods. A course of ten lectures on the teaching of physical geography, each lecture followed by a class for practical work, will be given by Miss Catherine A. Raisin, D.Sc., at Bedford College.

Education Gossip. WE are informed by the Privy Council, through the *London Gazette*, that "whereas the Faculty of Laws in the University of London have failed to exercise the power of appointing one member of the Senate by reason of there being no persons entitled to be members of the said Faculty"—a very good reason for their (?) failure—"Her Majesty is pleased, by and with the advice of Her Privy Council, to appoint the Right Hon. Horace Baron Davey, to be a member of the Senate of the said University."

\* \* \*

THE *Gazette* also announces that, whereas by the Statutes made by the University of London Commissioners it is provided that four members of the Senate of the University shall be appointed by Her Majesty in Council, the Queen is pleased to appoint Sir John Wolfe Wolfe-Barry, K.C.B., F.R.S., Sir Henry Enfield Roscoe, F.R.S., Mrs. Eleanor Mildred Sidgwick, and the Hon. W. Pember Reeves, Agent-General for New Zealand, to be members of the Senate.

\* \* \*

LORD STRATHCONA, the High Commissioner for Canada, asks us to state, in reference to his letter in another column, that the proposal is not confined to elementary schools, but may be taken advantage of by both evening continuation schools and secondary schools; and that he will be glad to receive applications for the atlases and readers from those who are connected with such institutions.

\* \* \*

At the invitation of the Committee of the Paris International Assembly, the Rev. J. O. Bevan, who attended the Assembly as a representative of the College of Preceptors, delivered two lectures at the Bureau in the Palace of Education within the Exhibition: the first, on August 14, dealing with child-study; and the second, two days afterwards, with school hygiene. The addresses were well received.

\* \* \*

WITH regard to our note last month on the restriction of age in candidates for a headmastership, several correspondents point out that the greater public schools show a very considerable majority of appointments above the age of forty. For instance, the last four appointments at Rugby are:—Hayman, 1869, *at* forty-six; Jex-Blake, 1874, *at* forty-two; Percival, 1887, *at* fifty-one; James, 1895, *at* forty-nine.

\* \* \*

A FELLOWSHIP, for which the funds have been collected by the Association of Newnham College, has been offered to and accepted by Miss Jane E. Harrison. She is engaged on a work on the mythology and ritual of primitive Greece. The Geoffrey Fellowship, vacant by the resignation of Miss Elsbeth Philipps, has been awarded to Miss G. L. Ellis.

\* \* \*

THE Headmasters of Bradfield, Cheltenham, and Clifton have established classes to prepare boys for the Navy, and have agreed on a common standard for entrance at the age of thirteen and a half.

\* \* \*

BRISTOL UNIVERSITY COLLEGE has been enlarged by the erection of a library, an examination hall, and several new classrooms, at a cost of about £6,000.

\* \* \*

THE MARQUIS OF BUTE has given £20,000 to St. Andrews University for the endowment of a Chair of Anatomy.

\* \* \*

WE have once more the oft-repeated and still necessary warning to governesses in search of foreign engagements. The lady superintendent of the Victoria Home for British Governesses in Vienna tells of two English governesses who were recently turned out of their places in Russia at a moment's notice, in a penniless condition, with only their tickets to London.

\* \* \*

THE Oxford Local Examinations Syndicate appears to have

recognized that to fix a low minimum of marks for a Senior or Junior pass is a mistaken policy. At the last examination the percentage of passes amongst the Senior candidates fell from 67.6 to 51.7. The percentage of the Juniors, however, increased from 66.8 to 67.30. "Natural Science" was offered by 716 "Preliminary" candidates, and 50 per cent. of them passed.

\* \* \*

At the recent congress in London of the Associated Chambers of Commerce of the Empire a resolution was passed to the effect that the Government should be asked to give specific grants in aid of commercial education, as they do for technical education. A resolution of this kind will be moved by Sir Albert Rollit at the forthcoming autumnal meeting of the Chambers of Commerce of the United Kingdom shortly to be held in Paris.

\* \* \*

THE eighth of a series of International Art Exhibitions will be held at Munich in 1901, and will be promoted by the Munich Artists' Club and the Plastic Art Union of Munich. It will be conducted for the most part on the same principles as the last exhibition (the seventh), which was held in 1897. Special efforts will be made to secure success in view of the eightieth birthday of the Prince Regent of Bavaria. The co-operation of British artists is cordially invited. The exhibition of 1897 comprised painting, sculpture, etching and engraving, and design, both as illustrated by drawings and as carried out in materials. Further information can be obtained upon application to the Secretary of the Artists' Club (Künstler Genossenschaft), Munich.

\* \* \*

Appointments and Vacancies. It is fitting that a college in a teaching University should be represented by a Principal. University College, London, has hitherto had a President and a Vice-President, but no head of the teaching staff. The Council announce that they have appointed Mr. G. Carey Foster, B.A., F.R.S., Principal of the College. Mr. Carey Foster is a Fellow of the College, and has held the offices of Professor of Experimental Physics and of Quain Professor of Physics; he is also a Fellow of the University of London, in which University he acted as examiner previous to his election to the Senate.

\* \* \*

OWING to this appointment and to the retirement of Mr. J. M. Horsburgh, the Secretary of the College, there will be a reorganization of the administrative and executive department of the College. Pending the completion of this reorganization, the Council have invited Dr. Gregory Foster, Fellow of the College and Professor of English Language and Literature at Bedford College, to hold the office of Secretary.

\* \* \*

THE QUEEN has been pleased to appoint Dr. Thomas McCall Anderson, M.D., Professor of Clinical Medicine in the University of Glasgow, to be Professor of Practice of Medicine in the said University, in place of Prof. Sir William Tennant Gairdner, M.D., who has retired.

\* \* \*

MR. ALEXANDER MACPHAIL, M.B., C.M., Senior Demonstrator of Anatomy in Glasgow University, has been appointed Professor of Anatomy in St. Mungo's College, Glasgow.

\* \* \*

PROF. J. G. MCGREGOR, of Dalhousie University, Halifax (N.S.), has been appointed Professor of Physics in the University of Liverpool, in succession to Prof. Lodge.

\* \* \*

APPLICATIONS for examinerships for the College of Preceptors in Physics and Physiology should be addressed to the Dean of the College not later than October 1.

\* \* \*

THERE is a vacancy for the Principalship of Heriot Watt College, Edinburgh. September 1 is the latest day for applications.



MR. ERNEST L. WATKIN, late scholar of St. John's, Cambridge, has been appointed Lecturer in Mathematics at Bristol University College, in succession to Mr. J. F. Hudson.

\* \* \*

MR. THOMAS SMITH MURRAY, D.Sc., senior assistant in the Chemical Department of the University of Aberdeen, has been appointed Headmaster of the Science Department in the High School of Dundee, in succession to Mr. Frank W. Young, who has been appointed one of Her Majesty's Inspectors of Science and Art Schools.

\* \* \*

MR. G. L. BRETHERTON, B.A., one of the senior assistant-masters at the Wyggeston School, Leicester, has been appointed to the Headmastership of Hipperholme Grammar School, Yorks.

\* \* \*

THE REV. T. ALLISON, M.A., has been appointed Vice-Principal of St. John's Hall, Highbury. Mr. Allison was for some time Deputy Professor of Economic History at Harvard.

\* \* \*

DR. WALLACE STEWART has resigned the post of Principal of the Hartley College, Southampton.

\* \* \*

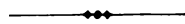
THE REV. W. E. SHERWOOD, M.A., retires from the Headmastership of Magdalen College School, Oxford, which he has held since the year 1886.

\* \* \*

DR. T. S. MURRAY, D.Sc. Aberdeen, has been appointed Headmaster of Dundee High School.

\* \* \*

THE Council of Mason University College has appointed Mr. Frank Roscoe to the post of Master of Method in the Day Training Department, which in October will be transferred to the Birmingham University. Mr. Roscoe succeeds Mr. C. O. Tunstall, B.A.



Literary Gossip. THE Oxford University Press has a splendid collection of books at the Paris Exhibition, many of them being sumptuously bound. One of these, valued at £150, is "A Century of Oxford Almanacks," including rare old line engravings, some of great value. The prices of the forty-seven volumes specially distinguished reach a total of upwards of £1,100. Several volumes were sold almost as soon as they were shown, chiefly to representatives of various science and art museums. The single volumes with the most costly binding are the "Ancient MS. of the Yasna," edited by Prof. L. H. Mills, and Dr. Fortnum's historical treatise on "Maiolica."

\* \* \*

ACCORDING to Mr. Frowde's *Periodical*, the Yasna MS. is bound in crushed levant morocco, dark green in colour, with a design of tulips and a panel of sunflowers, and a diamond of solid stops inlaid with red and blue. The "Maiolica" is bound with a flexible back. "The edges have been gaufered with a pattern of outline tools of roses and vine, the pattern starting at the centre of the fore-edge and ending at the head-bands. The book is covered with bright blue levant morocco, with design of tulips and vine. On the side the vine forms a border, the leaves being inlaid with a soft reseda green, which colour also occurs in the centre panel of the doublures. The decoration of the doublures is an elaboration of the dentille. The four corners have a pattern of tulips, which continue to the centre of the sides and overlay into the centre panel of green leather. The flyleaf is of green *moiré* silk."

\* \* \*

PROF. DIETZ, of Berlin University, has a high opinion of the future position of the English language, which seems to him to be destined to assume sway throughout the world:—

Apart from the immense political influence which the United States and the United Kingdom with her colonies exercise upon the world, as well as the supremacy which the English-speaking population alone

exercises by its numerical preponderance, the English language, even by its structure, seems destined to be the language of the universe. It has, in the first instance, freed itself early from all superfluous ballast of declensions and conjugations, and, being founded on roots, is a most suitable language of command for a governing race.

\* \* \*

THE annual report of the Cambridge University Library for the year 1899 has been published. Mr. H. G. Aldis has been appointed Secretary, and Mr. E. G. Browne, Fellow of Pembroke, Curator in Oriental Literature. The number of titles printed for the general catalogue during 1899 was 7,860. The number of new books catalogued in 1899 was 5,280. The number of persons not members of the University to whom tickets of admission to the library for purposes of study have been granted during the year is 82. The number of books borrowed from the library during the year was 28,650, as compared with 24,727 in 1898. Of this number 496 were borrowed under the rule which requires the librarian's order. The number of manuscripts, &c., borrowed on bond by grace of the Senate was five. The number of manuscripts and other reserved books entered as having been consulted in the library was 924.

\* \* \*

THE examiners for the Hare Prize at Cambridge announce that it will be offered in 1901 for the best English dissertation on the following subject:—"A Study of the Imperial Administration under Trajan." Candidates must be actual members of the University and graduates of not more than ten years' standing from their admission to their first degree at the time when the exercises are sent in. The exercises must be sent in to the Vice-Chancellor before the division of the Easter term, 1901.

\* \* \*

THE International Congress of Publishers, which met at Paris in 1896, at Brussels in 1897, and at London in 1899, has arranged to hold its next gathering, in 1901, at Leipzig. This venerable seat of the oldest European book-market is still the metropolis of the modern German, Austrian, and Swiss book trades. Publishers from all parts of Europe and America will discuss the question of copyright in its international aspects. Albert Brockhaus, the head of the ancient firm, has been chosen President of the Congress. The foreign honorary presidents for the 1901 Congress are Mr. Murray, of London; M. Fouret-Hachette, of Paris; and M. Bruylant, of Brussels.

\* \* \*

A NEWLY revised edition of the "Imitation of Christ" will be published shortly, possessing the following new features:—The translation is absolutely faithful to the original Latin of Thomas à Kempis: "No word or phrase has been altered in the interests of any school or party." The traditional arrangement into verses, which rests on no authority whatsoever, and dates only from the seventeenth century, has been abandoned in favour of an arrangement according to the original paragraphs. All direct quotations from Holy Scripture are printed in italics; marginal references are given not only for these, but for all allusions to or indirect quotations from the Bible. The Clarendon Press will publish this volume.

\* \* \*

MR. JOHN MURRAY has decided to publish a new monthly periodical, the *Monthly Review*, under the editorship of Mr. Henry Newbolt. It will be illustrated, and will include a regular "editorial" department. This department is to be "under the direct and effective control of the Editor," and its articles will be unsigned. The first (October) number is to appear on September 19.

\* \* \*

THE late Sir William Stokes was Hon. President of the International Medical Congress at Paris, 1900. He was distinguished in the world of letters, as well as in medicine. He contributed largely to the medical and surgical papers on clinical and operative surgery; and in 1898 he published in Mr. Fisher Unwin's "Masters of Medicine Series" an exceedingly able biography of his father William Stokes, and his work in the cause of medicine.

### A TRIUMPH OF EDUCATION.

ON the last page of the "Helen Keller Souvenir," a handsome volume published by the Volta Bureau, Washington, "to commemorate the Harvard Final Examination for admission to Radcliffe College," is a *facsimile* of a certificate of admission dated July 4, 1899, wherein we read that Helen Keller passed the examination "with credit in advanced Latin." The subjects taken also comprised advanced Greek, geometry, and algebra. This would be counted no mean achievement for an ordinary young girl of considerable talent. In the case of one who has been totally deaf, and blind as well, from infancy, it is nothing less than wonderful.

How this transformation was accomplished, by what untiring labour and patience, may best be learnt in the interesting account of her clever and devoted teacher, Miss Annie Sullivan. She, as the girl says in her own description of her education, was eyes and ears for her, "more like a part of myself than a teacher." "Helen," says Miss Sullivan, "is not an extraordinary genius," but "simply a very bright and lovely child, unmarred by self-consciousness or any taint of evil." She tells us how, in the early days of her charge, she waited long, eager, and impatient, "before that beleaguered citadel, anxious for some sign from the soul within." One day Helen was taken to the pump-house to feel the water as it flowed, and, as she felt it, the word "water" was spelled into her hand, and so suddenly it dawned upon her what language meant. As she herself charmingly puts it: "That word, meaning water, startled my soul, and it awoke. . . . Until that day my mind had been like a darkened chamber, waiting for words to enter, and light the lamp, which is thought." From that day we read that she went forward steadily in daily mental growth, never falling back a step, to the delight of herself and the surprise of all who watched her. It was all pure joy to her. "She impresses me every day," says her teacher, "as being the happiest child in the world; and so it is a special privilege to be with her."

And here we may note a few facts in Miss Sullivan's demonstrably successful method of teaching the deaf. The sign-language had no part in Helen's training, nor oral instruction. She was not taught to speak till she had mastered the English language in her mind. Up to then Miss Sullivan employed only the manual alphabet, spelling into the child's hands just such words and sentences as she would have spoken to her had she been able to hear—not picked language, but ordinary idiomatic English. "I invariably used language," she tells us, "as a medium for the communication of *thought*; thus the learning of language was coincident with the acquisition of knowledge." One great obstacle to the progress of ordinary children was removed from Helen's path—there was nothing external to distract a wandering attention. This absolute concentration was doubtless an ally in her struggle. The child "acquired language in an objective way, by practice and habit rather than by study of rules and definitions." Books were the second great factor in Helen's education. As soon as she had learned the raised letters—for we must remember she was in worse plight than the merely deaf child—books were her constant companions. Long before she could read them she would amuse herself over them for hours each day and scream with delight whenever she found a word she knew. The number of books to which she had access was necessarily limited. "I am confident," says Miss Sullivan, "that the ease and fluency with which she uses language are in large part due to the fact that embossed books were placed in her hands as soon as she had learned the letters."

The great principle of Miss Sullivan's method seems to have been one well known in teaching an ordinary child. The words and sentences were presented first before they were understood, as a model for imitation. Ordinary children, as Dr. Graham Bell says in one of the introductory essays of the "Souvenir," learn by frequent hearing, the deaf by frequent seeing, and those doubly afflicted by constant touching.

Three years after beginning to learn the manual alphabet Helen had her first lesson in oral speech. "How do the blind girls know what to say with their mouths?" she would ask. "Do deaf children ever learn to speak?" And when told they could see their teacher's mouth, she said she was sure she could feel it. No difficulties daunted her. In a few lessons she learned nearly all the English sounds; in less than a month she was able to pronounce many words quite distinctly. Of course the complete attainment of this object, to speak like other girls, must take many years of patient labour. But for that she was always prepared. It was in 1896 that she entered the Cambridge School for Girls, to be prepared for college, accompanied always by Miss Sullivan as her interpreter. She was now to be taught in classes

of "normal" pupils by ordinary teachers. She had made good progress in English and French, and had done some Latin. It was proposed that she should pass the entrance examinations to Harvard College in English history, advanced French, and advanced German. She was also to study arithmetic. Helen would enter the examination at a great disadvantage, as the others could read and re-read their papers, and all that they had written as they went on. There was difficulty, too, in getting the books which she required made quickly enough, that is, getting them put into "Braille," a raised type used by the blind. But obstacles to a nature like hers were but fresh incentives. The German teacher, touched and interested, learned to read to her with her hand, and others followed suit, we are told. Helen made such progress in Latin that, after studying it for half the time allowed to ordinary pupils, she was pronounced by the teacher fit to take it with her other subjects. Indeed, it is clear that the girl's mental powers were far in advance of the average, and, when once the initial difficulty of being able to enter for an examination at all was surmounted, her teachers had reason to believe her "able to accomplish any mental feat that is possible to woman."

The examination approached. Helen sat at her typewriter with Dr. Gilman, the head of the school, as interpreter at her side, in place of Miss Sullivan. He read the whole paper through, and then re-read it sentence by sentence. She repeated the words as his hands made the signs, to make doubly sure she had fully understood him. In the event she was successful in every subject, and took Honours in English and German. Indeed, she won the highest marks of all in English. And she had only been working "on college preparatory lines" for one year. "No one," says Dr. Gilman, "had prepared for these examinations in so short a time before." And all this was due to concentration of mind and purpose, to the long and careful instructions of her teachers, and especially to the devotion of Miss Sullivan. "When a required book was not in raised print," says Helen, "her fingers spelled it all out on my hand with infinite patience." Even so the result seems little short of miraculous. Helen's career at the Cambridge School was unexpectedly cut short. The classes were too large for her to have the special instruction she needed at the start. "Miss Sullivan was obliged to read everything to me, as well as interpret for the teachers, and, for the first time in eleven years, it seemed as if her dear hand would not be equal to the task." But it was finally due merely to some difference of opinion as to whether she was being tried beyond her strength that Helen was withdrawn. She was then placed under the direction of Mr. Merton Keith.

From the beginning of 1898 down to the summer of 1899 she and Miss Sullivan boarded with friends in Massachusetts, living an outdoor life, boating, bathing, and bicycle-riding, and Mr. Keith came to give her lessons, chiefly in mathematics (by no means Helen's favourite study), and also in Greek and Latin. It had been arranged by Dr. Gilman that she was to take the three years' course of study for the Radcliffe College final examinations. Would she be able to do the entrance examination in 1899? "Every one," says Mr. Keith, "including the persistent, energetic, indomitable Miss Sullivan, seemed utterly discouraged over the algebra and geometry." Mr. Keith, despite Helen's distaste for mathematical studies, and the fact that Mr. Gilman had fears of a breakdown, seems to have encouraged the idea of her achieving the task. He considered that Helen "needed the drill in accuracy and in logic" afforded thereby. History, literature, and languages were as child's play to her unwearying brain in comparison. "Her joy in life and her power of service to the world will find their chief sources there." In them he believed she could attain anything, for the bent of her mind was essentially poetic and imaginative. Helen was not adverse to mathematical study—far from it. A task, however formidable, meant but the opening of new delights to her. Her ambition, her eager thirst for knowledge, made her determined to succeed against all obstacles. To onlookers it might seem cruel to put pressure on this child. But she welcomed the burden, and her teachers seem not to have overrated her power or miscalculated her nervous force. After all, the winning of educational laurels was almost, if not all, her means of joy in life. The private teaching suited best her peculiar needs. She now found her progress quicker than in class-work at school. Greek was an absorbing pleasure to her. "I admire Greek very much indeed," she says in one of her letters. "It is easier to read than Latin, I think, and much more spontaneous and beautiful. I wish algebra and geometry were only half as easy for me as languages and literature."

When one reads an account of Helen's rapid advance, not only in the things she loved, but in the distasteful and thorny paths of

mathematical knowledge, one is lost in admiration for this undaunted soul. Mr. Keith says: "I set out to discover how far I could rely on her eager attention, tenacity of mental grasp, and memory to save her the time and weariness of paper-work." And the discoveries were rich in promise of success. "We sometimes did theorems wholly in the mind." Much of the algebra, too, was carried on by purely mental process. And the upshot? "She has acquired new qualities of mind, or, at least, developed or strengthened latent ones. She has seen new beauty and heard new harmony," is the final verdict.

It would be interesting to go more fully into this account of Helen's studies. But it must suffice to note that she read much of Xenophon and Thucydides, on which she passed examinations without dictionary or grammar. She read Homer, too, which, from the start, was "Paradise to her." The study of the "Iliad" and "Odyssey" opened up a whole fresh dream-world to her vivid imagination. Mr. Keith remarks that she took to Greek even more easily than to Latin. We must not forget that some of the books she was unable to get in "Braille," and they were read under difficulties. She also read something of Cicero, whom she could ultimately translate into idiomatic English, and of Virgil, in which more than any other book she was primarily her own teacher. "It seems easy and natural for her to see the meaning and appreciate the inner feeling of the great Roman poet." She translated him in "highly poetic" language. "I believe," says her tutor, enthusiastically, "Miss Keller is capable of giving the world, at some future time, in rhythmical prose, a new version of Virgil, which would possess high and peculiar merit." To sum up, in thirteen months she was fit to pass the Radcliffe examinations in elementary algebra and plane geometry, Latin, and Greek. The examination in languages, we learn, includes mostly translations at sight, and questions on the grammar and subject-matter of the pieces set for translation. Half the geometry paper is "sight-work" and half book-work. When the time came for her final test, Mr. Eugene Vining, of the Perkins Institute, who had had no educational or personal relations with her, was engaged to reproduce the papers in "Braille." It was arranged that he should send her a few days previously some sample papers transcribed by him in "Braille." The plan was found to work well in the languages, but in mathematics it was different. The method of writing the various signs and symbols varies somewhat. Poor Helen had a fresh and unforeseen difficulty to meet. Two days before the examination she found that her examiner used a different notation from the one she was accustomed to, and she had to sit down to master this. Even so, the poor girl was sadly hampered in both mathematical papers. "But I do not blame any one," she says, with her never failing patience. "They did not realize how difficult they were making the examinations for me."

Once again, in spite of all, she overcame the obstacles, and finished her examination perfectly bright and fresh, showing no trace, we are told, of nervousness or fatigue. And the outcome was the aforementioned certificate.

Helen Keller's two great gifts we gather to be memory and power of inference. Her powers have been strengthened in latter years, and she has acquired more patience in the collecting and comparing of facts and in logical thought. But, above all, she has been sustained by the moral qualities of her soul, ambition, courage, confidence, patience, and faith. She has refused defeat and defied difficulties. Her "persistent will" has been the main-spring of her accomplishment. For her brave fight against overwhelming odds, for her conquest of a destiny that seemed dark indeed, we can but do her honour. And so we leave her on the borders at least of a land very fair in promise. In the annals of education this book reads like a fairy-tale. D. M. G. S.

## REVIEWS.

### EXCURSIONS IN HISTORY.

- (1) *A Short History of the British Empire for the Use of Junior Forms.* By G. E. Green, M.A. (Dent & Co.) (2) *The Making of the British Colonies.* (Manchester: Heywood.) (3) *A Preparatory Historical Reader.* (McDougall.) (4) *The Nineteenth Century: an Inaugural Address delivered in the Senate House, Cambridge.* By the Rt. Hon. A. J. Balfour, M.P. (Cambridge University Press.)

The miscellaneous quartet of books whose titles are here set forth have little in common, except the fact that they deal with British history in summary fashion, and for youthful and un-

critical readers—though Mr. Balfour's lecture was originally given to an audience which included a sprinkling of University dons amongst a crowd of Extension students. The first three volumes are written expressly for use in schools, and of these Mr. Green's "Short History" has a special claim on our attention, being a careful attempt by a competent writer to produce a new story of the national growth on somewhat novel and attractive lines. His book has much to recommend it. To begin with, it is well planned, being divided into three parts of twenty chapters each; it is not overlaid with constitutional facts or philosophic deductions, but, at the same time, it aims at including "the main stages in the development of every side of national life." The space gained by abstention in regard to constitutional detail has been given to industrial and literary records, which occupy eight of the sixty chapters; and, perhaps, this is a little in excess of what is necessary, or even advisable, for the junior forms. Still, there may be many teachers who will be glad to have these commercial chapters as an alternative to the more detailed consideration of charters, laws, and the institutions of government. An intelligent boy will be able to assimilate them, and they will furnish his mind with useful ideas. We can scarcely feel the same confidence in regard to the literary chapters, which are too much in the nature of catalogues to be taken to kindly by a young reader. A very good feature of this volume is its sixty-seven illustrations and sixteen maps, distributed over 236 pages of type. The pictures are no perfunctory collection of blocks and indifferent cuts; nearly all are from contemporary manuscripts, tapestries, tombs, ornaments, or early printed books, and the origin of each is carefully assigned. This adds considerably to the historical value of the book. On the whole, it is one which we are disposed to recommend for use, not as a first history, but for boys and girls of twelve or thirteen. Mr. Green is occasionally rather loose in expression. It is hardly precise to say that "a hundred years before Lydgate there was a book published in English which might almost be called a story-book. It is Sir John Maundeville's 'Travels,' for [!] they contain many tales which are as entertaining as they are incredible." Also, he is a little too didactic, as in page 129, line 2, and line 8 from the bottom.

(2) "The Making of the British Colonies" is described as "a short account for schools and general reading, a series of sketches for young and old." The net that is to catch so many fish, big and little, is made accordingly—big meshes in one part and little meshes in other parts. Dates are omitted from the text, for, "where the date comes in at the door, the interest for readers of the younger generation too often flies out at the window." "A few landmarks only, such as 1588," should be "kept constantly in view." There are no maps. "Such little maps as can be inserted in a volume of this size"—a fair octavo—"must perforce be trumpery." "Finally, be it said"—we quote a whimsical preface—"where long, or foreign, or classical words have been used, it has been done to afford teachers more scope."

(3) "McDougall's Preparatory Historical Reader" extends from Cæsar to Victoria. It is simply written for young children, interspersed with poetry, and freely illustrated—by no means a bad book for its purpose.

(4) Mr. Balfour began his lecture at Cambridge by apologizing for tackling the nineteenth century in a single speech, and for seeming to teach when he could only profess to generalize. "The Nineteenth Century" was the general subject of the Cambridge Summer Meeting, and Mr. Balfour simply came to open the courses of lectures. That he did so in an interesting manner may be taken for granted. He took samples of the century, and freely declared his preference for some samples over the others.

The middle third of the nineteenth century does not, I acknowledge, appeal to me. It is probably due to the natural ingratitude which we are apt to feel towards our immediate predecessors. But I justify it to myself by saying that it reminds me too much of Landseer's pictures and the revival of Gothic; that I feel no sentiment of allegiance towards any of the intellectual dynasties which then held sway; that neither the thin lucidity of Mill nor the windy prophesings of Carlyle, neither Comte nor yet Newman, were ever able to arouse in me the enthusiasm of a disciple; that I turn, with pleasure, from the Corn Law squabbles to the great War, from Thackeray and Dickens to Scott and Miss Austen, even from Tennyson and Browning to Keats, Coleridge, Wordsworth, and Shelley.

From mere preferences of this kind, Mr. Balfour passes on to philosophic speculations, and ends with a prediction, manifestly intended to console us; though there may be some whom it will rather tend to depress.

If the goal to which, consciously or unconsciously, the modern

physicist is pressing be ever reached, the mechanical view of things will receive an extension and a completeness never before dreamed of. There would then, in truth, be only one natural science—namely, physics; and only one kind of explanation—namely, the dynamic. . . . Would this conception, in its turn, foster a new and refined materialism? For my own part, I conjecture that it would not. I believe that the very completeness and internal consistency of such a view of the physical world would establish its inadequacy. The very fact that within it there seemed no room for Spirit would convince mankind that Spirit must be invoked to explain it. I know not how the theoretic reconciliation will be effected, for I mistrust the current philosophical theories upon the subject; but that, in some way or other, future generations will, each in its own way, find a practical *modus vivendi* between the natural and the spiritual, I do not doubt at all.

We have said that Mr. Balfour's lecture was interesting. It did not aim at being profound; though it manifestly touched some very profound problems. A philosophic politician has an immense advantage in being able to manipulate the infinite with a light and airy touch, which would be manifest desecration as applied to a proposition of Euclid.

#### CANADA.

(1) *Canada: a Descriptive Text-Book.* By E. R. Peacock, M.A. (Toronto: Warwick Brothers & Rutter.) (2) *Canadian Atlas for use in Schools.* (Issued by the direction of the Minister of the Interior, Ottawa, Canada.)

If a watchword were wanting to the British nation, to remind it in the future of the loyal enthusiasm of the Colonies during the war in South Africa, it is found in the words "Sursum corda!" used by Burke at the close of his great speech on conciliation with America. He said, truly, that the Colonies would only become dangerous when the nation failed to elevate its mind to the greatness of the trust to which it was called. The dense ignorance of the average Englishman of Burke's day as to the condition and resources of the Colonies has only been partially removed. How can it be dispelled? It seems, indeed, as if nothing short of war can induce us, as a nation, to take even a spasmodic interest in geography. In spite of all our efforts, the subject still languishes in our schools. It has never been alive at the Universities; and no exception is made in favour of the geography of our Colonies. Fortunately, at last, the importance of a real knowledge of the Colonies is admitted on all sides; but even Froude, Dilke, and Seeley have failed to move the Universities to give geography the measure of recognition without which it must remain both unfashionable and insipid.

The great trust of which Burke spoke must remain incomprehensible, unless we are taught in a living way the natural and social features of the Colonies, and what manner of men our kin are fashioning themselves into by the result of their industry. This is clearly the province of geography teachers and writers of text-books. Hitherto, with few exceptions, the geographies used in our schools have repelled learners by their dry-as-dust style and bald statement of facts, devoid of local colouring. As a contrast to such books, we wish to draw pointed attention to Mr. Peacock's "Canada," for two reasons. It will be a revelation to schoolmasters of the way in which a geography should be written; and every master and pupil will be fascinated by its human and practical interest. The book has admittedly been written for a purpose, and may have to overcome some prejudice on that account. As Dr. Grant, Principal of Queen's University, Kingston, states, in an introduction: "There is place now for a text-book in British schools on the Dominion of Canada"; and the Canadian Government, through Lord Strathcona, High Commissioner for Canada in England, has taken steps to encourage the study of Canada in our schools. The High Commissioner's letter, explaining how this can be done, will be found elsewhere in this number.

We sincerely hope that a considerable number of schools will seize the opportunity of becoming acquainted with a refreshing and at the same time thorough book. Written, as it is, in a simple direct style, without any flavour of false jingoism, and full of real and practical information, it cannot fail to foster a noble conception of the destinies of our race. Even if in some cases the exigencies of examinations make it impossible to arrange for a modification of the school syllabus for the coming term, the book might well be set as extra work out of school-hours. We are bold to think the boys would be grateful, for Mr. Peacock has shown a wonderful insight into the requirements and tastes of his prospective readers. They will enjoy the vivid picture of Canadian life, and long for the things that are left unsaid and only cunningly suggested; they will enjoy, perhaps unconsciously,

the fact that the language is not obviously brought down to a child's level; and above all they will enjoy the complete absence of notes. There is a charm about such words as "tomahawks," "papooses," "scalps," and "squaws" that notes would quite destroy. If the book is intended to attract English settlers, nothing could be better calculated to effect this end than the descriptions of the various industries of the country. It is continually pointed out by the author that in all of them—fishing, lumbering, ranching, mining—hard work, self-denial, and even heroism are frequently demanded of the young colonial; but the very freshness and freedom of the open-air life, and the independence of mind and love of sport that go along with the hardships, are equally presented to the reader. We could perhaps wish that some of the summaries of facts at the close of the chapters were a little less congested; there is room here for a teacher's discretion. In conclusion, we may say that the manner in which history is woven in with the geography throughout shows how well the latter subject may be made interesting in a legitimate way.

We cannot, however, commend the accompanying Atlas. Not only are the maps overcrowded, but the letterpress is a mass of information which we trust will be used strictly for reference only. The illustrations in both books are plentiful and well chosen.

#### ROME at HER WORST.

*History of the City of Rome in the Middle Ages.* By Ferdinand Gregorovius. Translated by Annie Hamilton. Vol. VII., Part II. (1497-1503). (Bell & Sons.)

The seventh volume of Mrs. Hamilton's translation of the voluminous history of Gregorovius brings us to the closing phase of the middle ages, to the dawn of the Renaissance, and to the most terrible and ghastly epoch in the annals of the Papacy. Gregorovius notices, but does not quite endorse, the claim that the spiritual history of Rome must be held distinct from the personal history of the Popes, and that the continuity of spiritual authority could not be destroyed by the unworthiness of some of the fallible men in whom it was vested. The distinction, of course, is reasonable and necessary; and, without such discrimination, it would surely have been impossible that the Roman Church should have retained her supremacy after the opprobrium and contempt incurred by Popes and Cardinals at the end of the fifteenth and the beginning of the sixteenth century.

The Jubilee of 1500 brought many thousands of pilgrims to Rome, which they found no longer a sacred city, but a sink of every kind of iniquity. They saw Lucrezia Borgia, a daughter of the Pope Alexander VI., riding on horseback from the Vatican to St. Peter's, a magnificently clad pilgrim, attended by a hundred other women, also on horseback and magnificently clad. They saw gigantic bonfires burning in the city, and were told that they celebrated a victory of the Pope's bastard son Caesar, a renegade Cardinal, who had recently killed his brother under circumstances too horrible and atrocious even to hint at. The whole story of the Borgias, who prostituted a corrupt Church and ruined a demoralized nation, is a sickening and disgusting record:

At no period of Rome's deepest darkness, such as had been denounced by satirists or saints, from Pier Damiani to Clemange, had her corruption equalled that of the time of the Borgias, when the light of Humanism only made the shadows of the Vatican appear the darker. Here, under the ruins of the ancient Church, and also of the ancient communal freedom of Rome, sat father and son in their sumptuous chambers, absolute rulers, surrounded by complaisant servants, deeming themselves justified, like Tiberius in former days, in despising their time, the corrupt people, and the Senate which obeyed them. . . . Thirst for power and pleasure were the motives of an age in which the doctrines of Epicurus had vanquished Christianity. Almost every prominent man of this period seems abandoned to sensuality, and Alexander VI. found Rome a sink of immorality. . . . The Borgias represented the renaissance of crime such as had been witnessed in the days of Tiberius and other emperors. They possessed the most audacious courage in this respect, but crime itself in their hands became a work of art.

One third of the present volume is devoted to the papacy of Alexander VI., and the remainder to the Renaissance in Italian literature and art. The discovery of ancient authors, the enrichment of the Vatican Library, the arrival of the Byzantine fugitives, the work of the Medici and the Colonna, of Poggio, Chrysoloras, Argyropoulos, and Reuchlin, amongst philologists, collectors, and archaeologists, the growth of poetry and the drama, the achievements of painters, sculptors, and architects, the production of bronzes, busts, medals, and gems, the collection of antiquities, the recovery of the Apollo Belvedere and of innumerable

able statues and inscriptions—these things Gregorovius tells us with much detail, and we read them with a zest all the greater for the sombreness of the preceding narrative. This description of the learning and zeal of Rome in the Renaissance, this demonstration of an art and a literature extending over seventeen centuries, seems to emphasize a true and venerable saying: "Corruptio optimi pessima."

#### CHAPTERS FROM ARISTOTLE.

*Chapters from Aristotle's Ethics.* By J. H. Muirhead, M.A. (Murray.)

Neither the learned commentaries of Sir Alexander Grant and Prof. Stewart nor several translations of unequal excellence can be said to furnish the "general reader" with ready access to the "Ethics" of Aristotle. Even if the very name does not warn off the non-classical scholar, the simple translation itself needs to be translated into modern terms and forms of thought; and, while there have been such advances in psychology and general philosophy since Sir Alexander Grant's time that a fresh interpretation of the Aristotelian ideas has been rendered necessary, it is only scholars that can profitably tackle Prof. Stewart's most able work. Prof. Muirhead's object, accordingly, has been "to bring some of the leading conceptions of the 'Ethics' into connexion with modern ideas for the sake of the general reader." In this connexion we cannot but recall Mr. St. George Stock's "Lectures in the Lyceum" (with the alternative title of "Aristotle's Ethics for English Readers"), which came before us some three years ago—really a more elaborate and not less popular treatment than Prof. Muirhead's, though not on lines exclusive of the latter. We do not observe that the Professor makes any reference to Mr. Stock's excellent book.

Still there is room enough for Prof. Muirhead's "Chapters." These retain marks of "their origin in a course of lectures to teachers." Nor are they any the worse for that; on the contrary, they are all the better, in simplicity, ease, and flexibility. The distinctive note of them, however, is the very full reference to modern philosophy, so that Aristotle is reinterpreted in the terms of the latest philosophical developments, and compared or contrasted with modern views. The process is very interesting as well as useful; and all the more so in that the author not only has a firm grip of the philosophies, but is able to join literary grace and skill with lucidity of expression and fertility of illustration. If he brings the Stagirite face to face with Hobbes, J. S. Mill, T. H. Green, Herbert Spencer, or even Dr. Ward or Dr. Stout, he is also ready to cast upon his doctrine rays of literary light from Stevenson, William Morris, and Stephen Crane. To his readers, as to his original hearers, he makes Aristotle live and move and have his being as if he were a professor in the newest University of to-day lecturing to a class of Extension students. We hope the volume will find a very wide, popular circulation, in spite of its rather deterrent title. Whether Aristotle is the best introduction to ethics opens up a question that need not be discussed now; even if not the best, it is sufficiently good. The volume, we should add, will be found serviceable as a collateral help to University students; also the "selected passages" from Aristotle's text (in translation) form an all but indispensable appendix.

#### MR. SHUCKBURGH'S CICERO.

*The Letters of Cicero.* Translated by E. S. Shuckburgh. Vol. III. (Bell.)

Mr. Shuckburgh has published a third volume of his translation, the first instalment of which was noticed in our columns some months ago. To our general estimate of the considerable merits, and some defects, of the translation we have nothing to add; but there are one or two features in the present volume which call for notice. The Letters included in it cover the important period from January, 48, to February, 44—that is, from the time when Cicero joined Pompey's camp in Epirus to just before the murder of Caesar—a period marked, moreover, by great literary activity on the part of the orator. The translator has prefixed a brief and interesting introduction, dealing with the position and feelings of Cicero under the new régime, and giving a well balanced estimate of the point of view which led him, after reluctant acquiescence in Caesar's rule, to exult over what he justly calls "the stupid crime of the Ides of March." Certainly, though modern historians have pronounced against Cicero's views of the whole situation as short-sighted, no one better deserves the full benefit of the motto "Tout comprendre, c'est tout pardonner." Besides the introduction, this volume contains an appendix, giving a chronological list of the events of Roman history during the life of Cicero, with references to the Letters of each year.

## GENERAL NOTICES.

### CLASSICS.

*Sophocles, Antigone*, edited by G. H. Wells (Bell & Sons), belongs to an intermediate series of illustrated classics which Messrs. Bell are issuing. Of the style in which this volume is printed, bound, and illustrated, it is impossible to speak too highly. The introduction, profusely illustrated, is divided into short sections, each of which is devoted to a separate branch of the subject—the Greek theatre, Greek drama, tragedy, and other more special matters connected with the play. Mr. Wells writes in a manner that is likely to attract intelligent pupils. He makes reference to many authors, and, in a short space, provides the learner with plenty of information and plenty to think about. For the candidate in honours examinations he has erected a convenient little storehouse, in which are to be found, neatly arranged, all the facts and all the references to authorities that he can require in the time of need. The notes are short and practical. There are no critical notes proper; but the corrections received or favoured are duly commented upon in the general notes. There is at the end a handy collection of grammatical points and idioms; but there are no remarks on metre beyond bare statements, which will not be of much use to beginners—altogether a highly meritorious edition at a moderate price, which should certainly make its way in schools.

*The Æneid of Virgil, Book III.*, edited by P. Sandford (Blackie), contains a rather heavy introduction, a scholarly commentary, appendices on translations and metre, a grammatical index, and a vocabulary. Among the illustrations only the view of Mount Etna is of much account. Two of the others—Ulysses and Scylla, and Andromache giving up Astyanax—have only an indirect connexion with the text. The notes are very richly supplied with quotations, and these quotations are likely enough to interest advanced students; but we cannot think they are well placed in a volume that includes a vocabulary. For beginners, indeed, the notes are, in our judgment, quite unsuitable; but they would prove stimulating to an intelligent and well taught sixth form. The same remarks apply to the two appendices. We should be sorry to be condemned to use this edition in a class that requires a vocabulary; but it is a meritorious production, notwithstanding.

Of "Murray's Handy Classical Maps," we have lately received *Palestine, &c.*, and *Germania, &c.* (John Murray). The former includes maps of the countries mentioned in the Old and New Testaments and of Jerusalem. The latter contains the countries that made up what we may call the permanent north-western provinces of the Roman Empire, from the German Ocean to the Black Sea. These maps are excellent, both as regards scale and system of colouring, and we hope that they will be ultimately collected in an atlas. We should certainly recommend the two before us to divinity and history students.

*Xenophon's Anabasis, Book I.* (Bell & Sons), is edited by Mr. E. C. Marchant for the publishers' "Illustrated Classical Series." It contains a map, three plans, and twenty-seven illustrations; it has also a simple vocabulary; but the text may also be had without vocabulary. The editor warns us that "there is absolutely no trace of erudition between these covers"; but there are the short notes and syntax rules of an accomplished teacher, together with an admirable introduction. This is indisputably the best elementary edition for schools of the first book of Xenophon.

### SCIENCE.

*Elementary Lessons in Electricity and Magnetism.* By Silvanus P. Thompson. (Macmillan.)

This well known book needs no commendation. It is not often that the author of a standard scientific work remains in the forefront of his science twenty years after the writing of the first edition. Such is the case here, and we can, therefore, recommend Prof. Thompson's handbook, which is neither out of date nor tinkered, as new editions of twenty-year-old books too often are. The copy before us appears to be a reprint, without alterations, of the 1895 edition, which was, in large measure, a new book.

*Blackie's Science Handbook: Standard IV.* By H. Rowland Wakefield. (Blackie.)

Instructions for performing a number of simple experiments on the properties of bodies, physical and chemical, are given, with a sketch of the reasoning to be based on the results. We note that chemical experiments on chalk are included, but the very necessary warning as to the nature of modern blackboard chalk is not given. For teachers and scholars outside the districts where chalk-quarries are found it might be better to speak of "whiting" than of "chalk."

*Elementary Physics and Chemistry.* (McDougall's Educational Co.)

The beginning of this book we do not like. In the first chapter we have explained to us more than twenty different "properties of matter," mostly with long names, and only ten experiments to illustrate the lot. This is not the way to train children to thorough work, or to give them real knowledge as distinct from knowledge of words.



Afterwards, however, the method improves, and, if the teacher will take care to modify the opening portion, he will find it a serviceable book as an introduction to a school of science course.

*The Elements of Inorganic Chemistry.* By W. A. Shenstone, F.R.S. (Edward Arnold.)

Finding that there is a general want of co-ordination between introductory and advanced text-books of chemistry, Mr. Shenstone has tried to combine in one volume the material of both preliminary and subsequent courses in such a way as to leave the precise delimitation of the former to the teacher's discretion. So far as can be judged from a perusal of the book, he has succeeded in his object, and has, therefore, supplied a work the want of which must have been felt by a large number of teachers. It is intended to be supplemented by an excerpt edition containing the laboratory work only, to save damage to the present volume. The whole range of an ordinary advanced work is taken, including even some of the rare metals (though the now commercially important thorium is, strangely enough, passed over). The book is well written and clearly printed. As a small detail, we note that in the enumeration of the uses of iron-slag its use for railway ballast is not mentioned; though this now absorbs an enormous amount.

*Elementary Practical Chemistry for Schools of Science.* By Thomas Cartwright, B.A., B.Sc. (Nelson.)

A good introduction to the science of a thoroughly practical character. The instructions for preparing apparatus, &c., are particularly good.

*Elementary Inorganic Chemistry: Metals.* By S. R. Trotman, M.A., F.I.C. (Rivingtons.)

A rather dreary collection of facts about the metals. The extreme brevity of statement may sometimes lead to misunderstanding; e.g., on page 15 it is implied that an amorphous substance is one that is not capable of assuming a crystalline form.

*Elementary Chemistry (Second Year's Course).* By T. A. Cheetham, F.C.S. (Blackie.)

Though it contains only a hundred and fifty pages, this book includes two parts: the first devoted to the laboratory, the second to the classroom. The two are arranged in a parallel manner, and include the study of equivalents and of the properties of the commoner elements and their compounds. There is a sense of compression everywhere in the book, which may be regarded as advantageous or the reverse, according to circumstances.

*Elementary Practical Chemistry and Qualitative Analysis.* By Frank Clowes, D.Sc., and J. Bernard Coleman, A.R.C.Sc. Third Edition. (Churchill.)

This systematic handbook to the work of the chemical laboratory has, by attaining a third edition, acquired the right to be considered a standard work. It is pre-eminently a practical book, and the student who carefully follows the instructions it contains, from the first handling of apparatus up to the full qualitative analysis of an elaborate mixture, will only have himself to blame if he is not an expert manipulator.

*Elements of Mineralogy.* By Frank Rutley, F.G.S. Twelfth Edition, Revised and Corrected. (Murby.)

This perennial work has once again renewed its youth and will continue its career of usefulness. Considerable additions and improvements have been made, chiefly in the crystallographic section. Including the index there are now two hundred and forty pages of small print—a good quantity for the price.

#### MODERN LANGUAGES.

*Buch der Lieder.* Von H. Heine. (Dent.)

This is a dainty new edition of Heine's poems—the "Junge Leiden," the "Lyrisches Intermezzo," the "Heimkehr," "Aus der Harzreise," and "Die Nordsee." Type, paper, and binding are all that could be desired, and there is a characteristic portrait of the poet for frontispiece.

*German Prepositions at a Glance.* By C. Kaiser and A. Thouaille. (Sampson Low.)

This little book is by two teachers of the Gouin School of Languages at Liverpool. It contains pictures of a *Schützenfest*, a ship, a wounded soldier, and a railway-bridge; each detail of the picture being labelled with its appropriate preposition and its case. Thus, one boat is lying *neben dem Schiff*, and another is rowing *an das Schiff*; a tramcar is running *oberhalb des Viadukts*, and *Kraft des Motors*. The text consists of a good many short descriptive sentences for conversational practice, which a teacher might utilize and add to.

*Winke für junge Kaufleute.* (Stuttgart: Metzler.)

This handy guide to commercial office-work, put forth by a German commercial association by the aid of local teachers, embraces all that a mercantile apprentice may be expected to know by the end of his probation, when he should pass one of the examinations instituted in the year 1884. The contents embrace Historical Development of Trade; Organization of Trade; Buying and Selling, Travellers, Agents; Forwarding, Customs, Insurance; Ordering of Goods, Calculations, Payments; Weights and Measures, Moneys; Bills of Exchange; Banking; Correspondence, Bookkeeping; Questions in the order of the

text. In this country, unhappily, the system of apprenticeship in commercial work has died out, a raw schoolboy of fifteen receiving a "salary" (e.g., £100 spread over five years), which foreign youths only dream of until they become competent clerks. In the meantime, these are not left dependent entirely on their own "wits." The British custom hampers the development of commercial education amongst us. A book like the present may, however, well find a place in a school of commerce. It will be especially useful to students who take up the study of commercial German—for which it serves as a reading-book—and wish to gain some idea of the complexion of business done by German houses. It deserves the attention of teachers of business practice, and may be recommended to intending examinees of the London Chamber of Commerce, for either grade of its examinations, as a useful auxiliary to such English works as those by Whitfield, Hooper, and Graham, &c.

*Traité de Prononciation française.* By Albert Liet. (Paris: Boyveau & Chevillet.)

Any attempt to smooth the difficulties experienced by students of French in the pronunciation of that language will always be welcome, especially when the result is so satisfactory as in the work of M. Liet, which represents lessons given by him whilst specially engaged by the School Board for London to instruct its certificated teachers. Occasionally a doubt may be felt whether the author is altogether right, as when he divides *élasticité* into "é-la-sti-ci-té" instead of "é-las-ti-ci-té" (page 13). Again, one misses a note of qualification, as under "Liaison" (pages 15-16), where he gives *aimer à lire, deux et deux font quatre*, where the fusion is not compulsory, or in *voire avis est court et bon*, where the *liaison* of *court* and *et* should be avoided in ordinary conversation, and the second case, in *Prenez un peu de tabac en poudre*, not to be recommended. The "Lectures Simples" at the end are excellently marked for correct pronunciation of each word, and the English student can hardly fail to benefit by use of the book.

"Small Language Manuals."—III., *Lezioni Italiane.* By A. Scanferlato. (Leipzig: Teubner.)

This is the Italian volume of a series of manuals the aim of which is, besides giving rules of grammar, with conversations as exercises, to supply reading lessons conveying useful information as to the country concerned, which illustrate both the several grammatical rules and a vocabulary arranged systematically. Useful maps and plates are appended. The present part would serve as a good second book; but, as German is the medium employed, can, of course, be used only by those who have already acquired some knowledge of that language. To such the book may be recommended.

#### MISCELLANEOUS.

*Tales from Tennyson.* By the Rev. G. C. Allen, M.A. (Constable.)

We must say that Mr. Allen has performed his task—the reduction of Tennyson's "Idyls of the King" into prose—well enough; but we gravely doubt whether the task was worth performing. Boys to whom the Arthurian legend is likely to "say something" have already the "Idyls" and the old "Chronicle" of Malory within reach; and one sees not the necessity for this new setting, nor the likelihood of its attracting those who have turned away from Tennyson and the "Morte d'Arthur." It is a mistake to think that young people are repelled by the poetic form; on the contrary, they love the ringing march of great heroic lines, of such lines as:—

"So all day long the noise of battle roll'd  
Among the mountains by the winter sea."

It is a mistake, too, to imagine that children will turn away from such a style as Malory's—from the ancient form of speech and the strange words—since children revel in the strange and mysterious, and find a curious poetry and religion of their own in phrases which, logically, they cannot understand. Of course, there are the "less poetic boys"; but to these all fine literature, new or old, prose or verse, is odious.

*The School and Society.* By John Dewey, Professor of Pedagogy in the University of Chicago. (P. S. King.)

In no sphere of thought, perhaps, is the contrast between the old times and the new sharper than in the whole treatment of the method of education. We know the old way—Johnson described it to Boswell: The master suddenly asked a boy the Latin for "candlestick." The boy did not know; and the boy was there and then beaten savagely. Here, surely, we have the true "elementary" education. And how vast the difference—"immane quantum discrepat!"—between these simple methods and the other way, as expounded by Prof. Dewey! Education is no longer the acquiring information somehow or other—usually through the medium of the stick—it is a discipline of all the faculties; or, as the author expresses himself: "What we want is to have the child come to school with a whole mind and a whole body, and leave school with a fuller mind and an even healthier body." It is the purpose of these lectures to show how this entirely satisfactory result may be obtained.

"Monographs on Artists."—V., *Dürer.* By H. Knackfuss. Translated by Campbell Dodgson. (Grevé & Co.)  
We have spoken before of this admirable series of monographs, so

well written and admirably translated, in which Raphael, Holbein, Rembrandt, and Van Dyck have already appeared, and Rubens, Michelangelo, and Leonardo da Vinci are to follow. The Dürer volume has 134 illustrations from the artist's pictures, woodcuts, engravings, and drawings; and this handsome large octavo, with its artistic binding of chocolate and white, with gilt lettering and page tops and its protecting case, is sold at a remarkably low price. This is decidedly one of the most artistic books of the year, and its cost brings it within the reach of the poorest art student. Dürer is an education in himself. After nearly four hundred years many of his pictures stand out with the truth, dignity, and feeling of the best craftsmanship of our own day.

"Cambridge Series for Schools and Training Colleges."—*Geometrical Drawing: Part II., Solid or Descriptive Geometry.* By W. H. Blythe, M.A. (Cambridge University Press.)

This is a sequel, with continuous chapters and pages, to the little book on plane geometrical drawing noticed here a few months ago. It will be of special use to Army candidates, and the two parts together make a serviceable and simple text-book of geometrical drawing, with numerous examples and explanatory notes.

*Commercial Correspondence and Office Routines (Second Year).* By G. R. Walker. (Chambers.)

A good commercial handbook, suggested by the Evening Continuation Code. It is such a book as every junior clerk who hopes for a shift upwards would do well to master.

(1) *Text-Book for the Three Creeds.* (2) *Text-Book for the Church Catechism.* By the Rev. Septimus Buss. (Rivingtons.)

These are companion volumes to the "Text-Book for Holy Communion," by the same author, noticed in August, and the previous "Text-Book on the Morning and Evening Prayer." They are written in the same clear, expository style, and the completed series will be a valuable historical companion to the Prayer Book.

*Tennyson: The Lotus Eaters, Ulysses, Ode on the Death of the Duke of Wellington, Maud, The Coming of Arthur, The Passing of Arthur.* With Introductions and Notes by F. J. Rowe, M.A., and W. T. Webb, M.A. (Macmillan.)

It is useless to protest against the annotation of the most beautiful poems. Such books as this may make Tennyson known and loved by many who would not otherwise know him. And, if a great poet must pass into the guise of a little school-book, the transformation could not be better done than it is by Messrs. Rowe and Webb. The paraphrase of "Maud" is a skilful piece of work.

*Over the Alps on a Bicycle.* By Elizabeth Robins Pennell.

Illustrated by Joseph Pennell. (Fisher Unwin.)

This book reminds us of a characteristic saying of Dr. Johnson, when Boswell expressed his astonishment that a certain dancing pig should dance so well. "Sir, the wonder is not that it should dance so well, but that it should dance at all." We can understand Mrs. Pennell's satisfaction in having established a record; although the title of her book must not be taken literally, as the journey entailed a good deal of pushing when she was certainly not on the bicycle. The text and Mr. Pennell's sketches have, we think, appeared some time ago in the pages of a magazine. The sketches are interesting, as examples of rapid and effective work, and illustrate Mr. Pennell's well known sense of artistic selection, although he is sometimes unkindly used by the process block. Mrs. Pennell's advice as to roads will be found useful to any one ambitious enough to do a fair day's work in pushing for the delights of a good deal of hazardous "coasting."

*King Alfred Readers: Introductory Book.* (Edward Arnold.)

This is a capital little book for children just able to read—simple words, good print, very pretty pictures. The words are old and new, the pictures black and white or coloured.

*Preliminary and Intermediate Arithmetic for Civil Service and other Public Examinations.* By W. Stewart Thomson, M.A. (Simpkin & Co.)

Seventy-four worked examples and a large number of miscellaneous examples and problems. A very serviceable little volume.

*Metric Weights and Measures, with an Appendix on Decimal Coinage.* By J. Lingham Lees, B.A. Lond. (Relfe Bros.)

A plain and systematic explanation of the decimal system, with many easy examples.

*Language Lessons for Junior Classes, Books I.—III.* (Edward Arnold.) Very simple drilling for the simplest sort of children.

*Synthetical Maps.* By W. B. Taylor. (A. & C. Black.)

Judging from the "Germany" sent us as a specimen, this should be a very useful and instructive series. There are three maps of Germany on an extended and folded sheet; the first with named and numbered towns, rivers, and mountains; the second with the numbers but not the names, products and industries being indicated in small capitals; the third a mere outline for testing, with the numbers (1-30) of the towns. On the backs of the maps are notes on historical development.

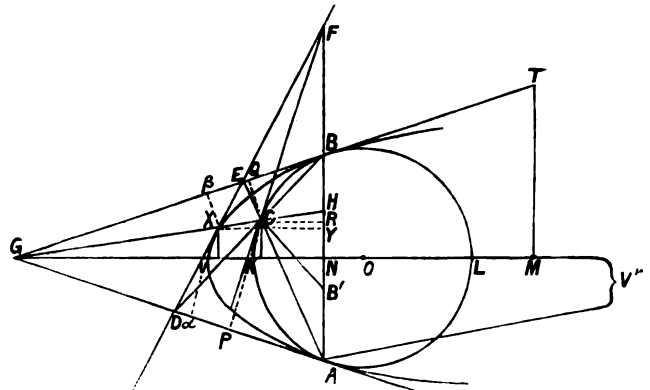
From Messrs. Jarrold & Sons we have a *School Punishment Book*, designed to meet the requirements of the Education Department's "revised instructions."

MATHEMATICS.

12561. (C. E. HILLYER, M.A.)—(1) A, B are two fixed points on a circle whose centre is O, and C is any third point on the circumference; BC meets the tangent at A in D, CA the tangent at B in E, and AB the tangent at C in F. Prove that DEF is a straight line which envelops a conic of eccentricity  $\epsilon$ , where  $\epsilon^2 = 3OA^2/AB^2$ . (2) Generalize the above and Quest. 12462 (solved in Vol. LXII., p. 89) by reciprocation.

Solution by the PROPOSER.

Draw CB' equally inclined with CB to AB; then  $\angle FBC = CB'A$ ,  $\angle FCB = CAB'$ ; therefore the triangles FBC, CB'A are similar; therefore  $FC/FB = CA/B'C = CA/BC$ , and similarly  $DA/DC = AB/CA$ ,  $EB/EA = BC/AB$ ; therefore  $DA \cdot EB \cdot FC = DC \cdot EA \cdot FB$ .



But, since  $DB \cdot DC = DA^2$ , we have  $DB/DC = DA^2/DC^2$ , and similarly  $EC/EA = EB^2/EA^2$  and  $FA/FB = FC^2/FB^2$ ; therefore

$$DB \cdot EC \cdot FA = DC \cdot EA \cdot FB.$$

Therefore DEF is a straight line.

Let the tangents at A and B meet in G, and draw GC meeting DE in X and AB in H. Draw from X  $X\alpha, X\beta, X\gamma$ , and from C  $CP, CQ, CR$  perpendicular respectively to GA, GB, BA; then G, X, C, H form a harmonic range; therefore  $XG/CG = \frac{1}{2}(XH/CH)$ ; therefore  $X\alpha/CP = X\beta/CQ = \frac{1}{2}(X\gamma/CR)$ , and therefore  $X\alpha \cdot X\beta/CP \cdot CQ = \frac{1}{2}(X\gamma^2/CR^2)$ ; but, since C is on the circumference of the circle,  $CP \cdot CQ = CR^2$ ; therefore  $X\alpha \cdot X\beta = \frac{1}{2}X\gamma^2$ ; therefore the locus of X is a conic touching GA, GB at A and B; also, since F, B, H, A form a harmonic range, GH is the polar of F with respect to the conic; therefore DEF touches the conic at X.

[The rest in Volume.]

14394. (Professor THOMAS SAVAGE.)—Discuss,  $n$  being integral and positive,  $(1+1/x)^n < 2$ , but  $(1+1/x)^{n+1} > 2$ .

Solution by H. MACCOLL, B.A.

This question, as I understand it, will afford an instructive example of the application of symbolic logic to ordinary algebra. We are required to find the real limits of  $x$ . Let A denote the statement  $(1+1/x)^n < 2$ , and B the statement  $(1+1/x)^{n+1} > 2$ . My result is

$$n^e (AB = x_{\beta,1}) + n^o (AB = x_{\beta,1} + x_{\beta,2}),$$

which asserts (see *Definitions and Table of Limits*) that either  $n$  is even and AB equivalent to the statement that  $x$  lies between the superior limit  $x_2$  and the inferior limit  $x_1$ , or else  $n$  is odd and AB equivalent to the statement that  $x$  lies either between  $x_2$  and  $x_1$  or between zero and the negative inferior limit  $x_1$ .

*Definitions.*—The symbol  $n^e$  asserts that  $n$  is even;  $n^o$  that  $n$  is odd;  $a^+$  that  $a$  is positive;  $a^-$  that  $a$  is negative;  $x_m^+$  that  $x_m$  is a superior limit to  $x$ ;  $x_m^-$  that  $x_m$  is an inferior limit to  $x$ ;  $x_m^+, n^+, r^+$  that  $x_m$  and  $n$  are superior, and  $x_r$  and  $x_r^-$  inferior, limits to  $x$ .

Table of Limits.

$x_0 = 0$	$y_0 = 0$
$x_1 = 1/y_1$	$y_1 = 2^{1/n} - 1$
$x_2 = 1/y_2$	$y_2 = -(2^{1/n} + 1)$
$x_3 = 1/y_3$	$y_3 = 2^{1/(n+1)} - 1$
$x_4 = 1/y_4$	$y_4 = -(2^{1/(n+1)} + 1)$

It will be convenient to put  $y$  for  $1/x$ , and first find the limits of  $y$  as follows:—

$$n^e A = n^e \{ (1+y)^n - 2 \}^o = n^e \{ (1+y) - 2^{1/n} \}^o \{ (1+y) + 2^{1/n} \}^o \\ = n^e \{ y - (2^{1/n} - 1) \}^o \{ y + (2^{1/n} + 1) \}^o = n^e y_{1,2}$$

$$n^o B = n^o \{ (1+y)^{n+1} - 2 \}^o = n^o \{ (1+y) - 2^{1/(n+1)} \}^o \\ = n^o \{ y - (2^{1/(n+1)} - 1) \}^o \{ y + 2^{1/(n+1)} \}^o = n^o y_{3,4}$$

∴  $n^{\circ}AB = n^{\circ}y_{1,2,3} = n^{\circ}y_{1,3}$ , for  $y_3$  implies  $y_2$ .  
 $n^{\circ}A = n^{\circ}\{(1+y)^n - 2\}^f = n^{\circ}\{(1+y) - 2^{1/n}\}^f$   
 $= n^{\circ}\{y - (2^{1/n} - 1)\}^f = n^{\circ}y_1$ ;  
 $n^{\circ}B = n^{\circ}\{(1+y)^{n+1} - 2\}^u = n^{\circ}\{(1+y) - 2^{1/(n+1)}\}^u$   
 $+ n^{\circ}\{(1+y) + 2^{1/(n+1)}\}^v$   
 $= n^{\circ}\{y - (2^{1/(n+1)} - 1)\}^u + n^{\circ}\{y + (2^{1/(n+1)} + 1)\}^v = n^{\circ}(y_3 + y_4)$ ;  
 ∴  $n^{\circ}AB = n^{\circ}y_1(y_3 + y_4) = n^{\circ}(y_{1,3} + y_{1,4}) = n^{\circ}(y_{1,3} + y_4)$ ,  
 for  $y_4$  implies  $y_1$ . Thus the statement for the limits of  $y$  is  
 $n^{\circ}(AB = y_{1,3}) + n^{\circ}(AB = y_{1,3} + y_4)$ .

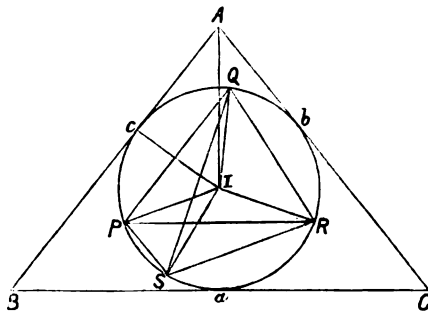
From this statement, the limits of  $x$  are readily found; for, since  $y = 1/x$ , and  $y_1$  and  $y_3$  are positive and  $y_4$  negative, it is clear that  $y_{1,3} = x_{v,1}$ , and that  $y_4 = x_{v,4}$ .

The above contains every step—more than would be needed in actual practice—of the symbolic process for finding the limits. The whole reasoning presupposes but an elementary knowledge of common algebra.

**14479.** (SALUTATION.)—I is the incentre of the triangle ABC, of which A is the greatest angle. P is a point on the incircle, and through P lines are drawn parallel to the three sides of the triangle, and meeting the incircle again in Q, R, S, respectively. QR, RS being joined, prove that the quadrilateral PQRS is a maximum when AIP is a right angle, and find its mean area.

Solution by J. H. TAYLOR, M.A.; Rev. T. ROACH, M.A.; and G. W. PRESTON, B.A.

The greatest quadrilateral must have the centre I within it. a, b, c are points of contact. Take a point P between cI and BI, and draw PQ, PR, PS parallel to AB, BC, CA, respectively. Let



$cIP = \theta = cIQ$ ;  
 therefore  $QIP = 2\theta$ ;  
 $SIP = 2(A - \theta)$ .  
 $\Delta QIP = \frac{1}{2}r^2 \sin 2\theta$ ;  
 $\Delta SIP = \frac{1}{2}r^2 \sin 2(A - \theta)$ ;  $\Delta SIR = \frac{1}{2}r^2 \sin 2C$ ;  $\Delta QIR = \frac{1}{2}r^2 \sin 2B$ .  
 The convex quadrilateral PQRS is the sum of these four triangles and, since  $\theta$  is the only variable, is a maximum when  $\sin 2\theta + \sin 2(A - \theta)$  is a maximum, i.e., when  $\sin A \cos(2\theta - A)$  is a maximum. These factors increase together until  $2\theta - A = 0$ , i.e., till  $\theta = \frac{1}{2}A$ . But  
 $\angle CIA = 90^\circ - \frac{1}{2}A$ .

Therefore, when the quadrilateral PQRS is a maximum,  
 $\angle PIA = 90^\circ$ .  
 [The second part of the Question remains still unsolved.]

**10358.** (R. W. D. CHRISTIE.)—If  $\omega_2$  and  $\omega_3$  are irrational cube roots of unity, prove that, if  $n + 2$  is a prime number,

$$\omega_2^n + \omega_3^n + \frac{n+1}{2!}(\omega_2^{n-2} + \omega_3^{n-2}) + \frac{n \cdot n + 1}{3!}(\omega_2^{n-4} + \omega_3^{n-4}) + \frac{n-1}{4!} \cdot \frac{n \cdot n + 1}{5!}(\omega_2^{n-6} + \omega_3^{n-6}) + \dots = 0.$$

Solution by H. J. WOODALL, A.R.C.S.

The series  
 $= \{(\omega_2 + 1/\omega_2)^{n+2} + (\omega_3 + 1/\omega_3)^{n+2} - \omega_2^{n+2} - \omega_3^{n+2} - \omega_2^{-(n+2)} - \omega_3^{-(n+2)}\} / (n+2)$   
 $= \{ \{(\omega_2^2 + 1)^{n+2} - \omega_2^{2(n+2)} - 1\} / \omega_2^{n+2} + \{(\omega_3^2 + 1)^{n+2} - \omega_3^{2(n+2)} - 1\} / \omega_3^{n+2} \} / (n+2)$   
 But,  $\omega_2, \omega_3$  being irrational cube roots of unity, we have  
 $(\omega_2^2 + 1)^{n+2} = (-\omega_2)^{n+2} = -\omega_2^{n+2}$  and  $(\omega_3^2 + 1)^{n+2} = -\omega_3^{n+2}$   
 ( $n$  being odd). The proposed series becomes  
 $= - \{ \{ \omega_2^{2(n+2)} + \omega_2^{n+2} + 1 \} / \omega_2^{n+2} + \{ \omega_3^{2(n+2)} + \omega_3^{n+2} + 1 \} / \omega_3^{n+2} \} / (n+2)$   
 $= - \{ \frac{\omega_2^{3(n+2)} - 1}{\omega_2^{n+2}(\omega_2^2 - 1)} + \frac{\omega_3^{3(n+2)} - 1}{\omega_3^{n+2}(\omega_3^2 - 1)} \} / (n+2) = 0,$

because the numerators are each zero, the denominators being always  $\neq 0$ .  
 [The PROPOSER observes:—The general term is

$$\frac{n+1}{n-m+2! \cdot m!} (\omega_2^{n-2m+2} + \omega_3^{n-2m+2}).$$

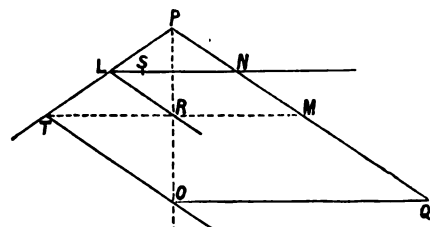
Now  $(\omega_2^n + \omega_3^n) = 2$  if  $n = 3k$ , and  $= -1$  if  $n = 3k \pm 1$  (v. TODHUNTER'S *Algebra*, p. 213).

And by a well known theorem (v. CARR'S *Synopsis*, 284, p. 94 *Algebra*),  $S = 0$  if  $n$  be of the form  $6m \pm 1$ . The result necessarily follows.]

**14504.** (R. KNOWLES.)—The circle of curvature is drawn at a point P of a parabola; PQ is the common chord; an ordinate from P to the diameter through the focus meets the parabola in R, and a diameter through Q in O. If T be the pole of PQ with respect to the parabola, prove that TO, PQ, and the tangent at R are parallel.

Solution by Professor A. DROZ-FARNY; and J. H. TAYLOR, M.A.

Soit PL la tangente en P à la parabole. S, le sommet de cette dernière, est le point milieu de la soustangente. D'après le théorème suivant lequel les couples de côtés opposés d'un quadrilatère ayant pour sommet les points d'intersection d'un cercle avec une conique sont également inclinés sur les axes de la conique, on obtiendra la direction de la corde PQ en construisant la symétrique de PL par rapport à l'ordonnée. Le centre de gravité des quatre points d'intersection d'un cercle avec une parabole coïncidant avec l'axe de cette dernière, comme trois des points d'intersection du cercle de courbure coïncidant avec P et un avec Q, on obtiendra Q en prolongeant PN d'une longueur  $NQ = 3PN$ . Soit M le point milieu de PQ; comme  $PN = NM$ , le diamètre passant par M contiendra R et coupera PL au pôle T de PQ. Comme  $TR = RM$ ,  $TL = LP$  et  $PR = RO$ , il est évident que les droites PQ, LR et TO sont parallèles.



Remarques.—LR est la tangente en R car elle est symétrique de PL par rapport à l'axe: TQ est la tangente en Q; on verrait que TQ divise RO dans le rapport de 1 : 2.

**14425.** (Professor U. C. GHOSH.)—Prove that

$$\int_0^\pi x \phi(\sin x) dx = \frac{1}{2} \pi \int_0^\pi \phi(\sin x) dx,$$

and hence evaluate  $\int_0^\pi \frac{x \sin x (1 - \sin^n x)}{1 - \sin x} dx$ .

Solution by H. W. CURJEL, M.A.; and CONSTANCE I. MARKS, B.A.

$$\int_0^\pi x \phi(\sin x) dx = \int_0^{\pi/2} [x \phi(\sin x) + (\pi - x) \phi(\sin(\pi - x))] dx$$

$$= \pi \int_0^{\pi/2} \phi(\sin x) dx = \frac{1}{2} \pi \int_0^\pi \phi(\sin x) dx.$$

Hence

$$\int_0^\pi \frac{x \sin x (1 - \sin^n x)}{1 - \sin x} dx$$

$$= \pi \int_0^{\pi/2} \frac{\sin x (1 - \sin^n x)}{1 - \sin x} dx = \pi \int_0^{\pi/2} (\sin x + \sin^2 x + \dots + \sin^n x) dx$$

$$= \pi \left\{ 1 + \frac{2}{3} + \frac{2}{5} + \dots + \frac{1}{2} \pi \left( \frac{1}{2} + \frac{1}{4} + \frac{1}{6} + \dots \right) \right\}$$

$$= \pi \left( -1 + \frac{1}{2} + \frac{1}{4} + \dots + \frac{2m+1 \pm 1}{2m \pm 1} \right) + \frac{\pi^2}{2} \left( -1 + \frac{1}{2} + \frac{1}{4} + \dots + \frac{2m+1}{2m} \right),$$

where

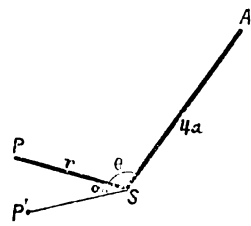
$$n = 2m + \frac{1}{2} \pm \frac{1}{2}.$$

**14372.** (R. C. ARCHIBALD, M.A.)—Parabolas with a common focus pass through a fixed point. Show (1) that the locus of their vertices is a cardioid whose cusp is at the common focus and whose vertex is the fixed point; (2) that the locus of the points of intersection with the parabolas, of the lines through the focus making a constant angle with their axes, is a cardioid.

Solution by the PROPOSER.

(1) S is the common focus, A the fixed point, P the vertex of any parabola passing through A and with focus at S.

If  $SA = 4a$ ,  $\angle PSA = \theta$ ,  $SP = r$ , we have at once from the equation of the parabola, as the locus of P,  $r = 2a(1 + \cos \theta)$ , which defines a cardioid. Geometrically, it is well known that the circle on the radius vector of a parabola as diameter is always tangent to the tangent at the vertex of the parabola. Hence, the locus of P is the pedal of the circle on SA as diameter with respect to the point S of its circumference: a well known cardioid definition.



(2) If P' be a point of intersection and  $\alpha$  the constant angle made by  $SP'$  with  $SP$ , we easily find the locus of P' to be the cardioid defined by the equation  $r = \frac{4a \{1 + \cos(\theta + \alpha)\}}{1 + \cos \alpha}$ .

**14461.** (Rev. W. ALLEN WHITWORTH, M.A.)—If a straight line be divided at random into three parts  $x, y, z$ , show that the expectation of the volume  $(y+z)(z+x)(x+y)$  is 14 times the expectation of the volume  $xyz$ .

I. Solution by H. W. CURJEL, M.A.

If the straight line is taken of unit length  $z = 1 - x - y$ , and if the integrals are taken over all positive values for which  $x + y < 1$ ,

$$\frac{\text{expectation of } \pi(y+z)}{\text{expectation of } xyz} = \frac{\iint (y+z)(z+x)(x+y) dy dx}{\iint xyz dy dx} = \frac{6 \iint x^2 z dy dx + 2}{\iint xyz dy dx}$$

$$= \frac{6 \iint \{x^2(1-x) - yx^2\} dy dx}{\iint \{yx(1-x) - xy^2\} dy dx} + 2 = \frac{6 \int_0^1 \frac{x^2 - 2x^3 + x^4}{2} dx}{\int_0^1 \frac{x - 3x^2 + 3x^3 - x^4}{6} dx} + 2 = 14.$$

II. Solution by R. CHARTRES.

Let the length be one unit, and the parts  $x, y, z$ , then  $1^3 = (x+y+z)^3$ , which has ten terms each being of the same mean value,  $\frac{1}{10}$ ; therefore mean value of  $xyz = \frac{1}{30}$ ; and mean value of  $(x+y)(y+z)(z+x)$ , or

$$\Sigma (x^2y) + 2xyz = \frac{1}{3} + \frac{2}{30} = \frac{4}{15};$$

therefore mean value of the latter = 14 times that of the other.

[See the PROPOSER'S Expectation of Parts.]

**14432.** (R. TUCKER, M.A.)—PSQ is a focal chord of a parabola, and PQR is the maximum triangle in the segment cut off by PQ. Prove that the equation to the circle PQR is

$$8(x^2 + y^2) - 2(7p^2 + 20)ax + p(3p^2 - 4)ay + 6p^2a^2 = 0,$$

where  $p = m - 1/m$  (P is  $am^2, 2am$ ).

The locus of the centre is a cubic, and, if O is the fourth point of section, the locus of the mid-point of OR is a parabola, and the envelope of the chord OR is another parabola.

Solution by the PROPOSER; CONSTANCE I. MARKS, B.A.; and F. H. PEACHELL, B.A.

The triangle is a maximum when R is the vertex of the diameter corresponding to the chord PQ. The coordinates of P, Q, R are  $(am^2, 2am), (a/m^2, -2a/m), (\frac{1}{4}ap^2, ap)$ , where  $p \equiv m - 1/m$ .

By substitution it is readily verified that the circle through PQR is

$$8(x^2 + y^2) - 2(7p^2 + 20)ax + p(3p^2 - 4)ay + 6p^2a^2 = 0.$$

The coordinates of the centre are  $h, k$  where  $8h = (7p^2 + 20)a$ ,  $16k = -p(3p^2 - 4)a$ ;

therefore the locus is

$$343ak^2 = (2h - 5a)(11a - 3h)^2.$$

The fourth point (O) of section is found from  $0 = 2am - 2a/m + ap + y$ ; therefore  $y = -3ap$ , and hence  $x$ .

The midpoint of OR is given by  $y = -ap$ ,  $x = \frac{5}{2}ap^2$ ; therefore its locus is the parabola  $y^2 = \frac{5}{2}ax$ .

The equation to OR is  $2py + 4x = 3ap^2$ ; hence it envelops the parabola  $y^2 + 12ax = 0$ .

**14315.** (B. N. CAMA, M.A.)—If parabolas be described cutting an equiangular spiral orthogonally, and having their axes in the direction of the polar subtangent, the loci of the focus and the vertex are copolar spirals whose linear dimensions bear a constant ratio.

Solution by the PROPOSER.

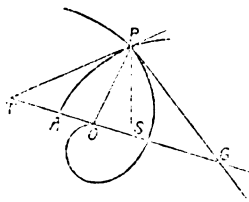
Let S be the focus and vertex of one such parabola. Then, clearly,

$$OS = \frac{1}{2}(OG - OT) = \frac{1}{2}(r \tan \alpha - r \cot \alpha) \propto r.$$

Also the vectorial angles of OS, OP differ by a right angle. Therefore S describes a spiral copolar with the given one.

Also  $OA = \frac{1}{2}OT = \frac{1}{2}r \cot \alpha \propto r$ .

Therefore locus of A is also a copolar spiral, the ratio of the linear dimensions of the two loci depending upon the angle of the original spiral, and therefore constant.



**14284.** (Professor NEUBERG.)—Soient O, I, I<sub>a</sub>, I<sub>b</sub>, I<sub>c</sub> les centres des cercles circonscrit, inscrit et exinscrits au triangle ABC; soient D, E, F les pieds des hauteurs et A<sub>1</sub>, B<sub>1</sub>, C<sub>1</sub> les pôles de BC, CA, AB par rapport au cercle O. Les quatrièmes tangentes communes aux cercles (I, I<sub>a</sub>), (I, I<sub>b</sub>), (I, I<sub>c</sub>) forment un triangle  $a\beta\gamma$  homothétique aux triangles A<sub>1</sub>B<sub>1</sub>C<sub>1</sub>, DEF. Le centre d'homothétie des triangles  $a\beta\gamma$ , A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> partage la droite OI dans le rapport R : r, et est le conjugué isogonal du point de GERGONNE de ABC : ses coordonnées normales par rapport au triangle  $a\beta\gamma$  sont  $1/a, 1/b, 1/c$ . Le centre d'homothétie des triangles  $a\beta\gamma$ , DEF a pour coordonnées normales, dans ces triangles,  $\tan \frac{1}{2}A, \tan \frac{1}{2}B, \tan \frac{1}{2}C$ .

Solution by Professor SANJANA.

On AB take

$$Ax_1 = AC,$$

on AC take

$$Ay_1 = AB;$$

then  $x_1y_1$  is the fourth tangent common to (I) and (I<sub>a</sub>). Draw the two lines similar to  $x_1y_1$ , and let the three form the triangle  $a\beta\gamma$ . As  $\angle Ax_1y_1 = C, \angle Ay_1x_1 = B, x_1y_1$  is anti-parallel to BC, and therefore parallel to B<sub>1</sub>C<sub>1</sub>. Thus the triangles A<sub>1</sub>B<sub>1</sub>C<sub>1</sub>,  $a\beta\gamma$  have corresponding sides parallel, and therefore are homothetic; so also are DEF,  $a\beta\gamma$ . As  $x_1y_1, \dots$  are tangents to the incircle, the triangle  $a\beta\gamma$  has I for incentre: and the triangle A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> has O for incentre. Hence OI is the axis of perspective for these, and the centre of perspective divides OI in the ratio of the inradii of A<sub>1</sub>B<sub>1</sub>C<sub>1</sub> and  $a\beta\gamma$ , i.e., in the ratio R : r. The distance of this centre from BC

$$= (R \cos A \cdot r + r \cdot R) / (R + r) = a(s-a) / 2(R+r);$$

thus this point is  $a(s-a) : b(s-b) : c(s-c)$ , and is therefore conjugate to  $1/a(s-a) : 1/b(s-b) : 1/c(s-c)$ , the GERGONNE point of ABC. [The rest in Volume.]

**14464.** (EDWARD V. HUNTINGTON, A.M.)—The angle between the principal axes of two given concentric ellipses is  $90^\circ$ , and  $a+b = a'+b'$ . Show that a line of length  $a-b'$  (or  $a'-b$ ) sliding between these curves envelops an astroid; and that any line rigidly connected with this sliding line envelops an involute of an astroid. (Astroid = hypocycloid of four cusps.)

Solution by R. C. ARCHIBALD, M.A.

Inside a circle of radius  $a+b$  rolls a circle of half this radius. The ends of any given diameter of the fixed circle, and in these diameters lie the axes of the ellipses traced by the points in the given diameter, distant from the circumference  $b$  and  $a'$ , or  $b'$  and  $a$ . The diameter of the rolling circle envelops an astroid with the perpendicular diameters as axes of symmetry. Whence the theorem.

QUESTIONS FOR SOLUTION.

**14651.** (Professor G. B. MATHEWS, F.R.S.)—Let  $\alpha, \beta$  be any two given complex quantities, and let  $t$  be such that  $(\alpha + t\beta)/(1+t)$  is real. Prove that, if  $t = x + 2iy$ , the locus of  $(x, y)$  is, in general, a circle. How is this to be reconciled with the fact that the line joining two imaginary points  $(\alpha, \beta), (\gamma, \delta)$  contains only one real point?

**14652.** (Professor E. LEMOINE.)—(1) Le point  $\phi$  du triangle ABC, dont les coordonnées barycentriques sont  $a^2b^2 + a^2c^2 - b^2c^2, b^2c^2 + b^2a^2 - c^2a^2, c^2a^2 + c^2b^2 - a^2b^2$ , et qui jouit, d'ailleurs, de remarquables propriétés, est à l'intersection de la droite qui joint le milieu de la distance des points de BROCARD au barycentre, et sur chacune des trois droites qui joignent le symétrique d'un sommet par rapport au milieu du côté opposé, au pied, sur le côté, de la médiane partant du sommet opposé. (2) Soient A<sub>1</sub>, B<sub>1</sub>, C<sub>1</sub> les points où A $\phi$ , B $\phi$ , C $\phi$  coupent BC, CA, AB; les parallèles à AB et à AC menées par A<sub>1</sub> coupent respectivement AC et AB en  $\mu$  et  $\nu'$ ; les parallèles à BC et à BA menées par B<sub>1</sub> coupent respectivement BA et BC en  $\nu$  et  $\lambda'$ ; les parallèles à CA et à CB menées par C<sub>1</sub> coupent respectivement BC et BA en  $\lambda$  et  $\mu'$ . Cela posé, les points  $\lambda, \mu, \nu, \lambda', \mu', \nu$  sont concycliques.

**14653.** (Professor E. J. NANSON.)—If  $a = (x^2 - y^2)/(1 - xy)$ ,  $b = (y^2 - x^2)/(1 - xy)$ , prove that  $(a^2 - b^2)/(1 - ab) = x$ ,  $(b^2 - a^2)/(1 - ab) = y$ .

**14654.** (Professor NEUBERG.)—On donne dans un même plan deux droites O $x, O_y$  et un point A. Trouver un point M qui soit pour les poids donnés  $\alpha, \beta, \gamma$  le centre de gravité du point A et des projections B, C de M sur O $x, O_y$ . (Solution géométrique.)

**14655.** (J. A. THIRD, M.A., D.Sc.)—From the vertices of a triangle ABC lines AX, BY, CZ are drawn to the opposite sides, such that the angles CAX, ABY, BCZ, taken the same way round, are together equal to  $180^\circ$ ; and AX', BY', CZ' are drawn from the vertices to the opposite sides, parallel to CZ, AX, BY respectively. Show that the circumcentres of AX'X, BYY', CZZ' are collinear.

**14656.** (Professor K. J. SANJANA, M.A.)—(1) If  $a, b, c$  be positive quantities, every two of which are together greater than the third, prove that  $\Sigma a^2 - \Sigma a^2b + 3abc$  is never negative. Hence show that in a plane triangle the inradius is never greater than half the circumradius. (2) With the ordinary notation for a plane triangle, prove that  $\Sigma a^2b - \Sigma a^3 = 8S(R+r)$ .

**14657.** (Professor LANGHORNE ORCHARD, M.A., B.Sc.)—Show that  $3\{1^5 + 2^5 + 3^5 + \dots + n^5 - (1+2+3+\dots+n)^3\} = (1+2+3+\dots+n)^3 - (1+2+3+\dots+n)^2$ ,  $n$  being a positive integer.

**14658.** (Professor UMES CHANDRA GHOSH.)—If the cosine circle of a triangle ABC cuts the sides AB, BC, and CA in Z, Z', X, X', and Y, Y', and if  $R_1, R_2, R_3$  be the radii of the circumcircles of triangles AZY', BXZ', and CX'Y, and  $T_1, T_2, T_3$  the lengths of the tangents from A, B, C to the cosine circle, and  $r$  the radius of the cosine circle, prove that

$$(1) 1/R_1 + 1/R_2 + 1/R_3 = r^2/R_1R_2R_3. \quad (2) a^2T_1^2 + b^2T_2^2 + c^2T_3^2 = 2abc.$$

**14659.** (D. BIDDLE.)— $N$  being any odd number that is prime to 3 and 7, prove that  $N^6 \equiv 1 \pmod{168}$ .

**14660.** (R. TUCKER, M.A.)—PQ is a focal chord of a parabola (focus S), and is also the major axis of an ellipse. Find the locus of the other focus and the equation to the ellipse. If this ellipse cuts the axis in K, K', then  $1/SK + 1/SK' = 1/a$ , where  $4a$  is the latus rectum of the parabola (and also of the ellipse). Show also that the envelope of the ellipse is a confocal parabola of latus rectum  $8a$ , and that of the auxiliary circle is (beside the directrix) the circle  $x^2 + y^2 - ax = 2a^2$ . If  $\lambda = \cot \phi$  ( $\phi$  angle made by chord with axis), then the point of contact is  $x/a = -2(2\lambda^2 - 1)/(4\lambda^2 + 1)$ ,  $y/a = -6\lambda/(4\lambda^2 + 1)$ .

**14661.** (R. F. DAVIS, M.A.)—Prove that (1) the trilinear coordinates of the foci of an ellipse  $\sqrt{(a)} + \sqrt{(mb)} + \sqrt{(n\gamma)} = 0$  inscribed in the triangle of reference ABC are given by the equations  $\beta/\gamma + \gamma/\beta = l - 2 \cos A$ ,  $\gamma/\alpha + \alpha/\gamma = m - 2 \cos B$ ,  $\alpha/\beta + \beta/\alpha = n - 2 \cos C$ , where

$$lmn l^2 - l^2 + \dots + 2mn \cos A + \dots + 4(l \sin B \sin C + \dots) = 0;$$

(2) these foci lie on the conics

$$a\{l\alpha - (m+n \cos A)\beta - (m \cos A + n)\gamma\} + l\beta\gamma \cos A : \dots : \dots = \sin A : \sin B : \sin C.$$

**14662.** (R. C. ARCHIBALD, M.A.)—In the  $xy$ -plane, passing through the origin S, and with its centre on the  $x$ -axis, is a circle of radius  $a$ . On this circle is rolled an equal circle whose plane is always perpendicular to the  $xy$ -plane. The point P of this rolling circle, which was at the beginning of the motion in coincidence with S, traces out a curve C. Show that (1) the curve C lies both on a sphere of radius  $a\sqrt{2}$  and on the cone  $x^2 + y^2 = z^2$ ; (2) the orthogonal projection of C on the  $xy$ -plane is the cardioid whose axial circle is the given fixed circle; (3) the projection of C on the  $yz$ -plane is the cuspidal quartic called by the French a *toupe* or *piriforme*; (4) the projection of C on the  $xz$ -plane is a parabola.

**14663.** (G. H. HARDY, B.A.)—Prove the formulæ

$$(1) \int_{-1}^{1} \frac{e^{pi u}}{(\cos u)^a} \frac{e^{i(p+a-1)(\xi-u)}}{\sin(\xi-u)} du = -2\pi i \frac{e^{pi \xi}}{(\cos \xi)^a}, \quad 0,$$

according as the imaginary part of  $\xi$  is positive or negative; and

$$(2) \int_0^{\pi} \frac{e^{pi u}}{(\sin u)^a} \frac{e^{i(p+a-1)(\xi-u)}}{\sin(\xi-u)} du = -2\pi i \frac{e^{pi \xi}}{(\sin \xi)^a}, \quad 0.$$

Here  $a < 1$ ,  $0 < p + a$ ; and  $(\cos \xi)^a$ ,  $(\sin \xi)^a$  must be chosen suitably. Give the corresponding formulæ when  $\xi$  is real.

**14664.** (R. P. PARANJPE, B.A.)—Solve the equation

$$(2x-1)(d^2y/dx^2) - (dy/dx)(12x^2-4x+1) + 4y(4x^3-x+1) = 0.$$

**14665.** (H. MACCOLL, B.A.)—Each letter denoting a statement, and  $a'$  being the denial of  $a$ , show that  $(ax = ay)(a'x = a'z)$  and  $a(x = y) + a'(x = z)$  are equivalent when  $a$  is a constant ( $x, y, z$  being unrestricted), but not necessarily when  $a$  is a variable. [Def.: A statement is a constant when it is either certain or impossible; a variable when it is neither certain nor impossible.]

**14666.** (J. J. BARNIVILLE, B.A.)—Having  $u_n + u_{n+3} = 3u_{n+1} + 3u_{n+2}$

prove that

$$\frac{1}{4} + \frac{1}{5} + \frac{1}{28} + \frac{1}{95} + \frac{1}{364} + \dots = \frac{1}{2},$$

$$\frac{1}{3} + \frac{1}{8} + \frac{1}{33} + \frac{1}{120} + \frac{1}{461} + \dots = \frac{1}{2},$$

$$1 - \frac{1}{2} + \frac{1}{10} - \frac{1}{35} + \frac{1}{133} - \dots = \frac{1}{\sqrt{3}},$$

$$1 - \frac{1}{3} + \frac{1}{12} - \frac{1}{44} + \frac{1}{165} - \dots = \sqrt{3-1},$$

$$\frac{1}{5} - \frac{1}{7} + \frac{1}{38} - \frac{1}{130} + \frac{1}{497} - \dots = \frac{1}{\sqrt{3}} - \frac{1}{2}.$$

**14667.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Factorize completely (into prime factors)  $N = 7^{25} + 1$ .

**14668.** (ROBERT W. D. CHRISTIE.)—Prove the following modular equations for any prime:—

$$r^{2m-n} + r_1^n \equiv 0 \pmod{p} = 0 \pmod{4m+1},$$

$$r^{2m-n-1} + r_1^n = 0 \pmod{p} = 0 \pmod{4m-1},$$

$r$  and  $r_1$  being associated primitive roots, and  $n$  any integer whatever.

**14669.** (V. DANIEL.)—Triangles are inscribed one to another so that the sides of one are divided, in the same sense, by the vertices of the next in a constant ratio  $k/(1-k)$ . Show that the sides of the  $n$ th inscribed triangle, in terms of  $a, b, c$  (the sides of the outermost), are given by

$$-3a_n^2 = 4\lambda^n (a^2 \cos \theta_1 \cos \theta_2 + b^2 \cos \theta_2 \cos \theta_3 + c^2 \cos \theta_3 \cos \theta_1),$$

and two similar expressions with  $a, b, c$ , changed in cyclic order, where  $\cos \theta_1, \cos \theta_2, \cos \theta_3$  are the roots of the trigonometrical cubic

$$4 \cos^3 \theta - 3 \cos \theta + \sin 3\theta = 0,$$

$$\text{and } \phi = -\frac{1}{2}\pi + \sin^{-1} \frac{1}{2}\lambda^{-1} = \frac{1}{2} \cos^{-1} (\frac{3}{2}\lambda^{-1} - \frac{1}{2}\lambda^{-1}),$$

and

$$\lambda = 1 - 3k + 3k^2.$$

**14670.** (E. W. ADAIR.)—If the bisectors of the base angles of a triangle, drawn to the opposite sides, are equal, then is the triangle isosceles. [Set, but not solved, in HALL and STEVENS' *Euclid*.]

**14671.** (R. KNOWLES.)—If  $A$ , is the coefficient of  $x^n$  in the expansion of  $(1-x)^{-n}$ , prove that the sum of the series  $1 + A_1^2x + A_2^2x^2 + A_3^2x^3 + \dots$  ad inf. is a function of the form

$$(1 + p_1^2x + p_2^2x^2 + \dots + p_n^2x^{n-2} + x^{n-1})/(1-x)^{2n-1},$$

in which  $p_r$  is the coefficient of  $x^r$  in the expansion of  $(1+x)^{n-1}$ , e.g., if  $n = 5$ , the sum of the series

$$1 + 5^2x + 15^2x^2 + 35^2x^3 + \dots = (1 + 16x + 36x^2 + 16x^3 + x^4)/(1-x)^9.$$

**14672.** (SALVATION.)—Within the square ABCD the semicircle AIB is described; from A a straight line is drawn, cutting the semicircle in P; through P another line is drawn, perpendicular to AB, cutting CD in M; and finally MN is drawn perpendicular to AP produced. Find the locus of N.

**14673.** (REV. J. ROACH, M.A.)—A countryman, unversed in numbers, picks a bulrush, which he breaks into three pieces, and gives the longest to his eldest nephew Dick, the second to Sam, the next in age, and the third to Bob, the youngest. At the same time he promises each a ball of toffy as high as the length of his bulrush. Find the value of the expectation of each nephew, given that the whole bulrush was 24 inches long and that toffy costs  $1\frac{1}{4}$ d. a cubic inch, and taking the value of  $\pi$  as  $3\frac{1}{2}$ .

**14674.** (H. J. WOODALL, A.R.C.S.)—Solve  $x^{33} \equiv 1 \pmod{1933}$ .

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6692.** (Professor E. B. ELLIOTT, M.A.)—If  $\omega = 0$ , the tangential equation of a point in space-tangential coordinates be so prepared by a factor that its left-hand member  $\omega$  is the expression for the perpendicular from that point upon any plane whose coordinates are substituted in it, and if it contain two variable parameters  $a, b$ , so as to be the type point of a surface, then  $d\omega/da = 0$ ,  $d\omega/db = 0$ , taken simultaneously, are the equations of the line at infinity in the tangent plane at  $\omega = 0$ .

**6693.** (E. W. SYMONS, M.A.)—A parabola has four-point contact with a given ellipse; prove that its axis touches a polar reciprocal of the pedal of the evolute of a coaxial ellipse.

**6697.** (Professor SYLVESTER, F.R.S.)—M. Edouard Lucas has shown (*American Journal of Mathematics*, for June, 1879) that,  $n$  being the rational number,  $n^2 + n$  is the sum or difference (very probably both the one and the other) of two rational cubes. Prove that (1) the same is true of  $9(n^2 - 3n + 1)$ , with the exception of the case when  $n = -1, 2$ , or  $\frac{1}{2}$ ; and hence (2) that 17, 19, 31 are each of them the sum or difference (probably both the one and the other) of two rational cubes.

**6701.** (Professor CROFTON, F.R.S.)—Find a function X such that, whatever F be,  $F(\epsilon^D)X \equiv F(a)X$ .

**6702.** (Professor SEITZ, M.A.)—In the surface of a circle two lines are drawn at random in length and direction; find the chance that they intersect.

**6703.** (Professor MATZ, M.A.)—Show that the polar equation of the "Luminous Curve" to the circle, radius unity, when the incident rays are parallel to the axis of abscissæ, may be put in the form  $\rho = \pm \operatorname{cosec} \theta$ .

NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

NOTICE.—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.



# EDUCATIONAL WORKS FROM MR. MURRAY'S LIST.

IN PREPARATION OR JUST PUBLISHED.

## MURRAY'S HANDY CLASSICAL MAPS.

Edited by G. B. GRUNDY, M.A., Brasenose College, Oxford.

### LIST OF MAPS NOW READY.

GALLIA ... ..	One sheet, 2s., cloth; 1s. net, paper.	BRITANNIA ... ..	One sheet, 2s., cloth; 1s. net, paper.
ITALIA { Northern Italy	Two sheets in one case, 3s., cloth; 1s. 6d. net, paper.	HISPANIA ... ..	One sheet, 2s., cloth; 1s. net, paper.
{ South and Sicily }		PALESTINE, SYRIA, and part	Three Maps on one sheet, 2s., cloth; 1s. net, paper.
GERMANIA, RHAETIA, } ILLYRIA, MOESIA, &c. }	One sheet, 2s., cloth; 1s. net, paper.	{ of MESOPOTAMIA, and a Map { showing St. Paul's Voyages ... }	

### MAPS AT PRESENT IN PREPARATION.

GRAECIA { Northern Greece,	Two sheets in one case, 3s., cloth; 1s. 6d. net, paper.	THE ROMAN EMPIRE (at	Two Maps on one sheet, 2s., cloth; 1s. net, paper.
{ South, and Pelo- { ponnusus		{ different epochs) ... ..	
ASIA MINOR and MARE	Two Maps on one sheet, 2s., cloth; 1s. net, paper.	EGYPT and the EASTERN	Two Maps on one sheet, 2s., cloth; 1s. net, paper.
AEGAEUM ... ..		{ EMPIRES ... ..	

*An Index is bound with each Map.*

"This method of showing physical features is most effective, and lends the maps a value which is possessed by no other classical atlas known to us. . . . We recommend all schoolmasters and students who care for geographical matters to look at these maps."—*Athenaeum*.  
". . . . May be taken as correct and up-to-date. . . . Both attractive to the eye and informing to the mind. . . . No school should be without a series of these maps."—*Manchester Guardian*.

**THE GREEK THINKERS.** By Prof. THEODORE GOMPERZ, of Vienna University. Translated by LAURIE MAGNUS, M.A., Magdalen College, Oxford. Volume I. Demy 8vo. [In the press.]

Volume II., containing **Plato**, is now nearly completed, and is already in course of translation.

This account of Greek Philosophy is inspired by the endeavour to do justice to the chief tendencies in all departments of ancient thought. Composed throughout in a clear and popular style, the work will be found to combine in a singular degree the resources of an almost encyclopedic learning with an appreciation of the results of modern science and of the dependence of the civilisation of the present on that of past ages. The "Greek Thinkers" in this sense include the leaders of religion, of literature, and of the special sciences.

**A GREEK GRAMMAR FOR SCHOOLS.** By JOHN THOMPSON, M.A., late Scholar of Christ's College, Cambridge, Senior Classical Master, High School, Dublin. Crown 8vo. [In the press.]

One of the chief objects of this book is to bring within the reach of the younger generation of students and schoolboys some of the results of the linguistic discoveries of the present day. It is, therefore, written in accordance with the philological views of the "Grundriss der Vergleichenden Grammatik" of Profs. Brugmann and Delbrück, of P. Giles's "Manual of Comparative Philology," of G. Meyer's "Griechische Grammatik," and of other scholars. Use has also been made of the Third Edition, revised by Drs. Blass and Gerth, of Kühner's "Ausführliche Grammatik der Griechischen Sprache," and of several school Greek grammars in use in Germany.

The Grammar consists of two parts in one volume, the Accidence and the Syntax. The forms and spelling in use in Attic Greek are given according to the latest authorities, and there are special notes on Homeric peculiarities. There are also tables of Greek verbs arranged on a new plan, including (a) a list of the chief type of verbs, (b) a list of common Attic verbs regular according to the types in (a), and (c) a list of the irregular verbs with the irregular forms printed in special type. This arrangement is intended to remove many misconceptions about Greek verbs. Brief notes on syntax, &c., are given with each verb, stating the ordinary constructions and any special uses. There will also be Appendices on (1) Greek Weights, Measures, and Dates, (2) Accents, and (3) Sound Changes. Particular attention has been given to the type, so that the essential parts of Greek grammar may be made specially clear, and that the beginner may have no difficulty in distinguishing the more important sections.

*An Entirely New and Cheaper Edition.*

**GREEK TESTAMENT READER.** For Use in Schools. Comprising consecutive Extracts from the Synoptic Gospels and Passages from the Epistles of St. Paul. By THEOPHILUS D. HALL, M.A. Crown 8vo, 2s. 6d. [Published.]

"A valuable epitome of the New Testament in the original, amply supplied with exegetical notes, and with a grammatical commentary and a vocabulary which fit it admirably for the instruction of beginners in the study of Greek."—*Scotsman*.

### THE STUDENT'S GREECE.

**A HISTORY OF GREECE FROM THE EARLIEST TIMES TO THE ROMAN CONQUEST.** With Supplementary Chapters on the History of Literature and Art. A New Edition. Thoroughly Revised and in part Rewritten. By G. E. MARINDIN, M.A. With many New Maps and Illustrations. Crown 8vo, 7s. 6d.

"The revision could not have been trusted to better hands. . . . Altogether the work has been so improved as to render it likely to hold its place with any competitors for another term of forty years."—*Glasgow Herald*.

**LITTLE ARTHUR'S HISTORY OF GREECE.** A Companion Volume to "Little Arthur's England" and "Little Arthur's France." By the Rev. A. S. WALPOLE, M.A. With Maps and Illustrations. 12mo, 2s. 6d. [In preparation.]

### THE STUDENT'S GIBBON.

Abridged from the Original Work by Sir WM. SMITH, D.C.L., LL.D. A New and Revised Edition in Two Parts. With Maps and Illustrations. Two Vols. Crown 8vo, 5s. each.

**Part I.—FROM THE ACCESSION OF COMMODOUS TO THE DEATH OF JUSTINIAN.** By A. H. J. GREENIDGE, M.A., Lecturer and late Fellow of Hertford College; Lecturer in Ancient History at Brasenose College, Oxford. [Published.]

**Part II.** nearly ready.

### A NEW FRENCH GRAMMAR.

**THE TECHNICAL SCHOOL FRENCH GRAMMAR.** By Dr. W. KRISCH, Teacher of Latin, Greek, French, German, and Spanish at the Wolverhampton Free Library Science School, Examiner in Modern Languages to the Midland Counties Union of Educational Institutions, 1897-99, &c. Crown 8vo, 2s. 6d.

**COMMERCIAL FRENCH COURSE.** In Two Parts. By W. MANSFIELD POOLE, M.A., Magdalen College, Oxford, Assistant-Master at Merchant Taylors' School; and MICHEL BECKER, Professor at the Ecole Alsacienne, Paris, Author of "L'Allemand Commercial," and "Lectures Pratiques d'Allemand Moderne."

**PART I.**—Consisting of Simple Sentences and Passages in French, with occasional Business Letters, arranged in a manner suited for Practical Teaching, and containing in an Appendix a clear system of French Grammar, with special reference to the Verb, is in course of active preparation. [In preparation.]

**PART II.**—Comprising an Advanced Commercial Reader, will be duly announced.

A COMPLETE ILLUSTRATED CATALOGUE OF STANDARD EDUCATIONAL WORKS PUBLISHED BY MR. MURRAY MAY BE HAD, POST FREE, ON APPLICATION. THIS CATALOGUE INCLUDES SIR WILLIAM SMITH'S FAMOUS SERIES OF STUDENTS' MANUALS, SMALLER MANUALS, DICTIONARIES, PRINCIPIAS, &c.

LONDON: JOHN MURRAY, 50A ALBEMARLE STREET, W.

## EDUCATIONAL WORKS

By A. K. ISBISTER, M.A., LL.B.

(LATE DEAN OF THE COLLEGE OF PRECEPTORS.)

New Edition. 12mo, price 1s. 6d.

**LESSONS IN ELOCUTION AND EXPRESSIVE READING FOR BOYS**, based on Grammatical Analysis; with a choice selection of Extracts for Reading and Repetition, classified, of Goldsmith's "Deserted Village," set out into Principal and Subordinate Sentences, illustrating the theory of Emphasis and Pauses.

New Edition. 12mo, price 1s. 6d.

**LESSONS IN ELOCUTION AND EXPRESSIVE READING FOR GIRLS**, based on Grammatical Analysis; with a choice selection of Extracts for Reading and Repetition, classified, under heads for practice in various styles of Reading, and annotated for Expression, Emphasis, and Pauses, and the Analysis of Sentences, with the figure [of a Girl] showing the proper attitude in Reading.

Ninth Edition. 12mo, price 1s.; or, with Answers, 1s. 6d.

**UNITARY ARITHMETIC**. Embodying the First Book of Arithmetic of the Irish National Board. With numerous additional Examples, and selections from recent Examination Papers; and a full exposition of the "Unitary" System, or Method of Working Arithmetic *without rules*.

\*.\* In this Edition, Questions in Proportion, Practice, Interest, Stocks, Partnership, Profit and Loss, &c., are, by the "Unitary" Method, solved by a single rule.

Sixth Edition. 12mo, price 3s. 6d.

**THE COLLEGE EUCLID**: Comprising the First Six and portions of the Eleventh and Twelfth Books read at the Universities. Chiefly from the Text of Dr. SIMSON. With a new arrangement of the Figures and Demonstrations; the Enunciations of the Propositions separately for Self-Examination, apart from the Text; Notes and Questions on each Book; and a Series of Geometrical Problems for Solution, from the most recent University Examination Papers.

New Edition. 12mo, price 9d.

**THE COLLEGE AND SCHOOL EXAMINER IN EUCLID**, containing the Enunciations of all the Propositions in the College and School Editions, Questions on the Definitions, Arithmetical and Algebraical Demonstrations of the Propositions in Books II. and V., and a large collection of Geometrical Problems for Solution. Designed for Class and Self-Examination, and adapted to all Editions of Euclid.

Fifteenth Edition. 12mo, price 2s. 6d.

**THE SCHOOL EUCLID**: Comprising the First Four Books. With Questions, Geometrical Exercises, &c.

THE SCHOOL EUCLID, Books I. & II. With Questions, Exercises, &c. 12mo, price 1s. 6d.

THE SCHOOL EUCLID, Book I. With Questions, &c. 12mo, price 1s.

Fifth Edition. Two Quarto Copy Books, price 6d. each.

**THE GEOMETRICAL COPY-BOOK**. Arranged for writing out the Propositions of Euclid in the Abbreviated and Symbolical Form adopted in the Universities and Public Schools.

Third Edition. 12mo, price 1s. 6d.

**FIRST STEPS TO EUCLID**: Comprising the Propositions of Book I., prepared for writing out, with a recapitulation of the steps of the Demonstration appended to each. Forming a Text-book for the above.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-KEEPING**, by SINGLE and DOUBLE ENTRY; with Practical Explanations and Exercises on the most useful Forms for Business.

Sixteenth Edition, with Map. 12mo.

**CÆSAR'S COMMENTARIES on the GALLIC WAR.**

BOOKS I.-V. With Notes Critical and Explanatory, a Vocabulary of all the Words in the Text, and Easy Reading Lessons for Beginners ..... price 3s. 6d.

BOOKS I.-VII. do. do. 4s. 6d.

Do. (without the Reading Lessons) ..... 4s. 0d.

Twenty-fifth Edition.

BOOK I. (with Vocabulary, Reading Lessons, &c.) ..... 1s. 6d.

LONDON: LONGMANS &amp; CO., PATERNOSTER ROW.

SEPTEMBER NUMBER NOW READY.

**THE SCHOOL WORLD.**

A MONTHLY MAGAZINE OF EDUCATIONAL WORK AND PROGRESS.

PRICE 6D.

Annual Subscription, including postage, 8s. net.

## LEADING CONTENTS.

**SPELLING: PROCEDURE AND PROCESS.** By P. A. BARNETT, M.A.

**OBSERVATIONAL ASTRONOMY. A Series of Notes upon the Positions and Apparent Motions of Celestial Bodies. II.** (Illustrated.) By Prof. R. A. GREGORY, F.R.A.S.

**DIFFICULTIES OF A DAY-SCHOOL HEADMASTER.** By E. SHARWOOD SMITH, M.A.

**SHORT CUTS IN MATHEMATICS.** (Illustrated.) By FRANK CASTLE, M.I.M.E.

**PRACTICAL WORK IN PHYSICAL GEOGRAPHY. II.: A River and River Action.** By Dr. A. J. HEBBERTSON, F.R.G.S.

**TEACHERS' NOTES ON ENGLISH HISTORY, 1399-1603. I.: Introductory.** By C. S. FEARENSIDE, M.A.

**CAMBRIDGE LOCAL EXAMINATIONS TEST PAPERS, December, 1900.**

MACMILLAN &amp; CO., LIMITED, ST. MARTIN'S STREET, LONDON, W.C.

NOW READY. Demy 8vo, cloth, 676 pp., price 2s. 6d., free by post. To Members of the College the price is 1s., or 1s. 6d. free by post.

THE

## CALENDAR

OF

The College of Preceptors,

FOR THE YEAR 1900:

CONTAINING

*All information respecting the objects and operations of the College, Lists of Officers, Examiners, and Members, the Regulations of the various Examinations, &c., with an Appendix containing the following Examination Papers:—*

1. Papers set at Examination of Teachers for Diplomas, Midsummer, 1899.
2. Do. do. do. Christmas, 1899.
3. Papers set at Examination of Pupils for Certificates, Midsummer, 1899.
4. Do. do. do. Christmas, 1899.
5. Papers set at Professional Preliminary Examination, March, 1899.
6. Do. do. do. September, 1899.
7. Papers set at Junior Forms Examination ... .. Midsummer, 1899.
8. Do. do. do. ... .. Christmas, 1899.

\*.\* Nos. 3, 4, 5, and 6 may be had separately, price, free by post, 7d. each set. Nos. 7 and 8, price, free by post, 4d. each set.

LONDON: FRANCIS HODGSON, 89 FARRINGDON STREET, E.C.

## DE FIVAS' FRENCH CLASS BOOKS.

**De Fivas, New Grammar of French Grammars.** By Dr. V. DE FIVAS, M.A. Fifty-fourth Edition, Revised and Enlarged. 450 pp., 2s. 6d., strongly bound. \*• KEY, 3s. 6d.

**De Fivas, Elementary French Grammar and Reader.** Fourth Edition, fcap. 8vo, 1s. 6d., cloth.

**De Fivas, Guide to Modern French Conversation.** Thirty-second Edition, 18mo, 2s. 6d., half-bound.

**De Fivas, Introduction à la Langue Française.** Twenty-eighth Edition, 12mo, 2s. 6d.

**De Fivas, Beautés des Écrivains Français, Anciens et Modernes.** Fifteenth Edition, 12mo, 2s. 6d.

**De Fivas, Le Trésor National.** Eighth Edition, 12mo, 1s. 6d. \*• KEY, 2s.

CROSBY LOCKWOOD & SON, 7 STATIONERS' HALL COURT, E.C.

400 pp., crown 8vo, 7s. 6d., cloth.

**A Handbook of English Literature.** Originally compiled by AUSTIN DOBSON. New Edition, Revised, with New Chapters, and Extended to the Present Time. By W. HALL GRIFFIN, B.A., Professor of English Language and Literature at Queen's College, London.

"Of this book we have to speak in terms of unqualified praise. . . . It may be pronounced a most excellent history of our literature."—*Literature*.

"The best compendium for English literary students, and a most reliable handbook for the literary man."—*Academy*.

"For truth of criticism it is about the best book of the kind."—*Westminster Review*.

"An excellent handbook of English literature."—*Athenæum*.

"Professor Hall Griffin and Mr. Dobson are to be thanked for a very acceptable handbook."—*Journal of Education*.

CROSBY LOCKWOOD & SON, 7 STATIONERS' HALL COURT, E.C.

## SHORT FRENCH EXAMINATION PAPERS (110),

Each containing Six Idiomatic Sentences to render into French. Price 2s. 6d., cloth.

Many of the grammatical questions are taken, by permission, from the Oxford and Cambridge Local Examinations, from those of the College of Preceptors, the London Matriculation, the Oxford and Cambridge Joint Board, and from the Cambridge Higher Local Examinations.

"A very useful set of questions."—*Modern Language Quart. Rev.*

"The English idioms for translation into French are well chosen. It is a useful little book."—*University Correspondent*.

"The exercises in the use of idioms are specially good."—*Bookman*.

"Will be found serviceable for rapid drill in the hands of a judicious teacher."—*Educational Times*.

"Would afford useful practice for intending candidates."—*Education*.

"We noticed at the time of its appearance this very useful collection of test papers, and need only here add that the key is full and accurate save for some obvious misprints and one or two slips that we have noticed."—*Journal of Education*.

"We are great advocates of abundant exercises; hence our immediate approval of this book."—*School Guardian*.

"We have much pleasure in recommending this useful collection of papers in grammar and idiomatic sentences. It will save the teacher many an hour of labour, and would be valuable for a class entering for an examination to work through steadily."—*Educational Review*.

A KEY, issued to Teachers and Private Students only, can be obtained from the Publishers. 6s. net. (A list of errata is issued with this.)

By H. R. LADELL, M.A., F.R.G.S.

## THE PUBLIC SCHOOL SPELLING CARD.

Thirtieth Thousand. Price 6d. By the same Author.

Containing nearly 1,000 words (in which actual mistakes have frequently been made, as collected from Dictations, Essays, Examination Papers, &c., during a period of more than fifteen years), with Rules.

Also, in Book Form, "HOW TO SPELL AND SPEAK ENGLISH." Third Edition. Price 1s.

This also embodies most of the errors in the sentences set for correction in the Examination Papers of the London Matriculation, the Oxford and Cambridge Locals, the College of Preceptors, &c.

## French Essentials and French Conversation Sentences.

Second Edition. Price 2s. cloth; 1s. 6d. boards. By the same Author.

"This short grammar is compiled by a master who knows his business. The type is good, the arrangement good, and there is nothing superfluous."—*Journal of Education*.

"Students preparing for examination in French grammar and composition will know the worth of this little book. The colloquial sentences at the end are a useful addition."—*Bookman*.

London: RELFE BROTHERS, Ltd., 6 Charterhouse Buildings, Aldersgate, E.C.

## MR. EDWARD ARNOLD'S EDUCATIONAL LIST.

### Arnold's School Shakespeare.

General Editor—J. CHURTON COLLINS, M.A.

One Shilling and Threepence.	One Shilling and Sixpence.
<b>AS YOU LIKE IT.</b>	<b>KING LEAR.</b>
<b>MACBETH.</b>	<b>RICHARD II.</b>
<b>TWELFTH NIGHT.</b>	<b>HENRY V.</b>
<b>JULIUS CÆSAR.</b>	<b>RICHARD III.</b>
<b>MIDSUMMER NIGHT'S DREAM.</b>	<b>KING JOHN.</b>
<b>THE MERCHANT OF VENICE.</b>	<b>CORIOLANUS.</b>
<b>THE TEMPEST.</b>	<b>HAMLET.</b>

**SELECTIONS FROM THE POEMS OF TENNYSON.** Edited, with Introduction and Notes, by the Rev. E. C. EVERARD OWEN, M.A., Assistant-Master in Harrow School. Crown 8vo, cloth, 1s. 6d.

**PASSAGES FOR DICTATION:** Consisting of Extracts from the Works of some of our best Prose Writers, which will be found useful to candidates for the Teachers' Examination, Civil Service, and other Competitive Examinations. 16d., in limp cloth.

Now Ready, New Volume of Arnold's Local Readers.

**THE STORY OF THE WEST COUNTRY.** Fully illustrated. 256 pages. Price 1s. 6d.

**ENGLAND IN THE NINETEENTH CENTURY.** By C. W. OMAN, Fellow of All Souls' College, Oxford; Author of "A History of England," "The Art of War in the Middle Ages," &c. One Vol., crown 8vo, 3s. 6d.

**ENGLISH HISTORY FOR BOYS AND GIRLS.** By E. S. SYMES, Author of "The Story of London," "The Story of Lancashire," &c. With Illustrations and Maps. Crown 8vo, cloth, 2s. 6d.

**A HISTORY OF ENGLAND.** By CHARLES OMAN, Fellow of All Souls' College, and Lecturer on History at New College, Oxford; Author of "Warwick the King-maker," "A History of Ancient Greece," "A History of Europe, A.D. 476-928," &c.

New and Revised Edition, fully furnished with Maps, Plans of the Principal Battlefields, and Genealogical Tables. 760 pp., crown 8vo, cloth, 5s.

Also, in Two Parts, each part complete with Index, 3s. Part I.: From the Earliest Times to 1603. Part II.: From 1603 to 1885.

**LESSONS IN OLD TESTAMENT HISTORY.** By the Ven. A. AGLEN, Archdeacon of St. Andrews, formerly Assistant-Master at Marlborough College. 450 pp., with Maps, 4s. 6d.

**AN ILLUSTRATED SCHOOL GEOGRAPHY.** By ANDREW J. HERBERTSON, M.A., F.R.G.S., Assistant-Reader in Geography at the University of Oxford. With sixteen pages of Coloured Maps, numerous Diagrams, and Photographs of Relief Maps, and several hundred magnificent Illustrations. Large 4to (about 12 by 10 inches), 5s.

**AFRICA AS SEEN BY ITS EXPLORERS.** Containing Extracts from the Writings of more than Fifty Explorers, from the time of Herodotus to the present day. Edited by E. J. WEBB, B.A. With Illustrations. Crown 8vo, cloth, 2s.

**LES FRANÇAIS EN MÉNAGE.** By JETTA S. WOLFE. With numerous Illustrations. Crown 8vo, cloth, 1s. 6d. An entirely original book, teaching the ordinary conversation of family life in France by a series of bright and entertaining scenes.

**A MANUAL OF ELEMENTARY CHEMISTRY.** By W. A. SHENSTONE, M.A., Lecturer in Chemistry at Clifton College.

### Simple French Stories.

An entirely new Series of easy Texts, with Notes and Vocabulary, prepared under the General Editorship of Mr. L. VON GLEHN, Assistant-Master at Merchant Taylors' School. Price of each Volume, 9d.

**UN DRAME DANS LES AILES.** By JULES VERNE.

**PIP-PAF.** By EDOUARD LABOULAYE.

**LA PETITE SOURIS GRISE;** and **HISTOIRE DE ROSETTE.** By Madame DE SÈGUR.

**MONSIEUR LE VENT ET MADAME LA PLUIE.** By PAUL DE MUSSET.

### Others in preparation.

**EXERCISES IN GERMAN COMPOSITION.** By RICHARD KAISER, of the Higher School, Glasgow. Price 1s. 6d.

**GERMAN WITHOUT TEARS.** An Edition in German of Mrs. HUGH BELL'S "French Without Tears." With Illustrations. Crown 8vo, cloth, Book I., 9d., Book II., 1s., Book III., 1s. 3d.

**LESSONS IN GERMAN.** A Graduated German Course, with Exercises and Vocabulary, forming a complete Introductory Manual of the Language, by L. INNES LUMSDEN, Warden of University Hall, St. Andrews. Crown 8vo, 3s.

**A FIRST GEOMETRY BOOK.** A simple Course of Exercises based on Experiment and Discovery. By J. G. HAMILTON, B.A., Lecturer on Geometry at the Froebel Educational Institute, and F. KETTLE, B.A., Headmaster of Clapham High School for Boys. Cloth, 1s.; Answers (to Teacher's order only), 6d.

**THE ELEMENTS OF EUCLID. Books I.-VI.** By R. LACHLAN, Sc.D., formerly Fellow of Trinity College, Cambridge. With Alternative Proofs, Notes, Exercises, all the standard Theorems, and a large collection of Riders and Problems. Crown 8vo, cloth, 4s. 6d.

The following separate editions are also issued:—**Book I.** Cloth, 1s. **Books I. and II.** Cloth, 1s. 6d. **Books I., II., and III.** Cloth, 2s. 6d. **Books III. and IV.** Cloth, 2s. **Books I.-IV.** Cloth, 3s. **Books IV.-VI.** Cloth, 2s. 6d.

**THE ELEMENTS OF ALGEBRA.** By R. LACHLAN, Sc.D., formerly Fellow of Trinity College, Cambridge. Crown 8vo, cloth, with or without answers, 2s. 6d. Answers separately, 1s.

### Arnold's British Classics for Schools.

General Editor—J. CHURTON COLLINS, M.A.

<b>PARADISE LOST.</b> Books I. and II. Cloth, 1s. 3d.	<b>MARIION.</b> Cloth, 1s. 6d.
<b>PARADISE LOST.</b> Books III. and IV. 1s. 3d.	<b>THE LADY OF THE LAKE.</b> Cloth, 1s. 6d.
<b>THE LAY OF THE LAST MINSTREL.</b> 1s. 3d.	<b>CHILDE HAROLD.</b> Cloth, 2s.
	<b>MACAULAY'S LAYS OF ANCIENT ROME.</b> Cloth, 1s. 6d.

A Complete Educational Catalogue will be forwarded post free on application.

LONDON: EDWARD ARNOLD, 37, BEDFORD STREET, STRAND.

# WILLIAMS & NORGATE'S LIST

## THE FRENCH LANGUAGE.

- DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. I.—First Year: Anecdotes, Tales, Historical Pieces. Edited, with Notes and a complete Vocabulary, by LÉON DELBOS, M.A., of H.M.S. "Britannia." Twelfth Edition. 166 pages. Crown 8vo, cloth, 2s.
- DELBOS.—THE STUDENT'S GRADUATED FRENCH READER.** For the Use of Public Schools. II.—Second Year: Historical Pieces and Tales. Edited, with Notes, by LÉON DELBOS, M.A., of H.M.S. "Britannia," late of King's College, London. Sixth Edition. 180 pages. Crown 8vo, cloth, 2s.
- "It would be no easy matter to find a French reader more completely satisfactory in every respect than that of M. Delbos."—*Athenæum*.
- "This is a very satisfactory collection from the best authors, selected with great care, and supplied with adequate notes. . . . A thoroughly good book of this kind should, in fact, be calculated to inspire a taste for literature in the student's mind. The volumes edited by M. Delbos fairly meet this requirement."—*Journal of Education*.
- "The notes are critical and explanatory. The book is well printed and excellently got up."—*Educational Times*.
- DELBOS.—LITTLE EUGÈNE'S FRENCH READER.** For Beginners. Anecdotes and Tales. Edited, with Notes and a complete Vocabulary. Fourth Edition. Crown 8vo, cloth, 1s. 6d.
- VICTOR HUGO.—LES MISÉRABLES.** Les Principaux Épisodes. Edited, with Life and Notes, by J. BOÏELLE, Senior French Master, Dulwich College. 2 Vols. Crown 8vo, cloth, each 3s. 6d.
- "A worthy addition to our stock of French reading books, which will be welcomed by numberless masters. . . . M. Boielle's notes are full and to the point, his philology is sound, and his translations idiomatic."—*Journal of Education*.
- VICTOR HUGO.—NOTRE-DAME DE PARIS.** Adapted for the use of Schools and Colleges. By J. BOÏELLE, B.A., Senior French Master, Dulwich College. 2 Vols. Crown 8vo, cloth, each 3s.
- "Equipped in the same excellent manner as the same author's 'Misérables.' . . . Makes an admirable school book."—*Scotsman*.
- FOA (Madame EUGEN).—CONTES HISTORIQUES.** (Chagrin de Louis XV.—Bertrand Duguesclin.—Dupuytren.—Grétry.—Greuze.) With Idiomatic Notes by G. A. NEVEU. Third Edition. Cloth, 2s.
- FLEURY'S HISTOIRE DE FRANCE,** racontée à la Jeunesse. Edited for the use of English Pupils, with Grammatical Notes, by AUGUSTE BELJAME. Second Edition. 12mo, cloth, 3s. 6d.

## GRAMMARS AND EXERCISES.

### FOR PUBLIC SCHOOLS WHERE LATIN IS TAUGHT.

- EUGÈNE'S THE STUDENT'S COMPARATIVE GRAMMAR OF THE FRENCH LANGUAGE.** With an Historical Sketch of the Formation of French. For the Use of Public Schools. With Exercises. By G. EUGÈNE FASNACHT, late French Master, Westminster School. Twenty-first Edition, thoroughly Revised. Square crown 8vo, cloth, 5s. Or, separately, Grammar, 3s.; Exercises, 2s. 6d.
- "In itself this is in many ways the most satisfactory grammar for beginners that we have as yet seen."—*Athenæum*.
- EUGÈNE'S FRENCH METHOD.** Elementary French Lessons. Easy Rules and Exercises preparatory to the "Student's Comparative French Grammar." By the same Author. Seventeenth Edition. Crown 8vo, cloth, 1s. 6d.
- "Certainly deserves to rank among the best of our elementary French exercise books."—*Educational Times*.
- EUGÈNE'S COMPARATIVE FRENCH-ENGLISH STUDIES.** Grammatical and Idiomatic. Being an entirely Re-written Edition of the "French Exercises for Middle and Upper Forms." Sixteenth Edition. Cloth, 2s. 6d.
- BOÏELLE (JAMES).—FRENCH COMPOSITION THROUGH LORD MACAULAY'S ENGLISH.** Edited, with Notes, Hints, and Introduction, by JAMES BOÏELLE, B.A. Univ. Gall., Senior French Master, Dulwich College, &c. Crown 8vo, cloth.
- Vol. I. Frederick the Great. 3s.  
Vol. II. Warren Hastings. 3s. 6d.  
Vol. III. Lord Clive. 3s.
- "This, we may say at once, is an exceedingly useful idea, well carried out, and one of the best things of its class that we have seen. . . . We can pronounce the equivalence of the idioms recommended to be quite unusually just."—*Saturday Review*.
- DELBOS (L.).—THE STUDENT'S FRENCH COMPOSITION,** on an entirely New Plan. With Introduction and Notes. (In use at Harrow, Eton, &c.) Crown 8vo, cloth, 3s. 6d.
- DELBOS (L.).—NAUTICAL TERMS IN ENGLISH AND FRENCH.** With Notes and Tables. By LÉON DELBOS, of H.M.S. "Britannia." Dartmouth. Third Improved and Enlarged Edition. Crown 8vo, cloth, 5s. net.
- ROGET (F. F.).—AN INTRODUCTION TO OLD FRENCH.** By F. F. ROGET, of Geneva University, late Tutor for Comparative Philology, Edinburgh. History, Grammar, Chrestomathy, and Glossary. Second Edition, with Map of French Dialects. Crown 8vo, cloth, 6s.
- ROGET (F. F.).—FIRST STEPS IN FRENCH HISTORY, LITERATURE, AND PHILOLOGY.** For Candidates for the Scottish Leaving-Certificate Examinations, the various Universities' Local Examinations, and the Army Examinations. Crown 8vo, cloth, 5s.

## THE GERMAN LANGUAGE.

- WEISSE'S COMPLETE PRACTICAL GRAMMAR OF THE GERMAN LANGUAGE.** With Exercises on Conversation, Letters, Poems, and Treatises, &c. Fourth Edition, almost entirely Re-written. Crown 8vo, cloth, 6s.
- "We have no hesitation in pronouncing this the fullest and most satisfactory German grammar yet published in England."—*Journal of Education*.
- WEISSE'S SHORT GUIDE TO GERMAN IDIOMS.** Being a Collection of the Idioms most in use. With Examination Papers. 8vo, cloth, 2s.
- MÖLLER (A.).—A GERMAN READING BOOK.** A Companion to Schlutter's "German Class Book." New Edition. Corrected to the Official German Spelling. With a complete Vocabulary. 12mo, cloth, 2s.
- HEIN'S GERMAN EXAMINATION PAPERS.** Comprising a complete set of German Papers set at the Local Examinations in the four Universities of Scotland. By G. HEIN, Aberdeen Grammar School. Crown 8vo, cloth, 2s. 6d.
- A SHORT SKETCH OF GERMAN LITERATURE.** Prepared for the Scottish Leaving-Certificate Examinations. By VIVIAN PHILLIPPS, B.A., Fettes College. Thoroughly Revised. Second Edition. Pott 8vo, 1s.
- APEL'S SHORT AND PRACTICAL GERMAN GRAMMAR FOR BEGINNERS,** with copious Examples and Exercises. Third Edition. 12mo, cloth, 2s. 6d.
- APEL (M.).—GERMAN PROSE STORIES FOR BEGINNERS** (including Lessing's Prose Fables), with an Interlinear Translation in the natural order of Construction. Second Edition. 12mo, cloth, 2s. 6d.

## ARMY SERIES.

EDITED BY J. T. W. PEROWNE, M.A.

- LE COUP DE PISTOLET, &c.** By PROSPER MÉRIMÉE. 2s. 6d.
- "The first two volumes are an excellent choice, and we advise any one, whether candidate or lay, to purchase the volume of Mérimée."—*Journal of Education*.
- VAILLANTE.** By JACQUES VINCENT. 2s. 6d.
- "The books are well got up, and in 'Vaillante' an excellent choice has been made."—*Guardian*.
- AUF VERLORNEM POSTEN, AND NAZZARENA DANTI.** By JOHANNES V. DEWALL. 3s.
- "The two stories by J. v. Dewall are well suited for their purpose: the style and diction are not too difficult for those whose acquaintance with German is not extensive, and ample explanatory annotation is provided."—*Saturday Review*.
- CONTES MILITAIRES.** By A. DAUDET. 2s. 6d.
- "Written at fever heat immediately after the great 1870 war, they show Daudet's power in many ways at its highest. . . . We therefore do more than recommend—we urge—all readers of French to get the stories in some form, and the present one is both good and cheap. The paper is excellent, and the type clear and bold. . . . A neat map of Paris will assist the reader in following the movement of the stories."—*Schoolmaster*.
- ERZÄHLUNGEN.** By E. HOEGER. 3s.

## SCHOOL DICTIONARIES.

Uniform in Binding. Price 3s. 6d.

- JAMES (WILLIAM) and O. STOFFEL.—GERMAN-ENGLISH AND ENGLISH-GERMAN DICTIONARY.** Complete Grammatical Dictionary of the German and English Languages. 1009 pages. 8vo. Thirty-fourth Edition. Special cloth binding.
- JAMES (WILLIAM) and A. MOLE.—FRENCH-ENGLISH AND ENGLISH-FRENCH DICTIONARY.** With Tables of Irregular Verbs. 1000 pages. Fifteenth Edition. Crown 8vo, special cloth binding.
- LARSEN (A.).—DANISH, NORWEGIAN, AND ENGLISH DICTIONARY.** Third Revised and Enlarged Edition. 688 pages. Large 8vo, strongly bound, half roan, 12s. 6d.
- BOSING (S.).—ENGLISH AND DANISH DICTIONARY.** Seventh Edition. 540 pages. Large 8vo, strongly bound, half roan, 11s. 6d.

WILLIAMS & NORGATE,

14 Henrietta Street, Covent Garden, London; 20 South Frederick Street, Edinburgh; and  
7 Broad Street, Oxford.

# DENT'S MODERN LANGUAGE SERIES.

Edited by WALTER RIPPMANN, M.A.

*Third Edition, completing 10,000. In fcap. 8vo, cloth, 1s. 6d. net.*  
**\*DENT'S FIRST FRENCH BOOK.** Based on the Hölzel Pictures of the Seasons. By S. ALGE and WALTER RIPPMANN.

*In fcap. 8vo, cloth, 1s. 6d. net.*  
**\*DENT'S SECOND FRENCH BOOK.** By S. ALGE and WALTER RIPPMANN. Consists mainly of a charming story by JEANNE MAIRET, "La Tache du Petit Pierre." Illustrated by C. E. BROCK.

The Second French Book can be taken with a class, even without previously working through the First Book. It will be found an excellent reading book. "We can heartily commend this reader as an exposition of the new method."

—*Journal of Education*, Dec., 1898.

*In fcap. 8vo, cloth, 1s. 6d. net.*  
**HINTS ON TEACHING FRENCH.** With a running Commentary to Dent's First and Second French Books.

Prof. FREDERIC SPENCER writes:—"Dent's First French Book appears most opportunely, supplying as it does, on the lines of the 'reform' method, a course which is both rational and eminently practical. . . . This little book, with Mr. Rippmann's running commentary, deserves the careful attention of every teacher of French."

*In fcap. 8vo, cloth, 2s. 6d. net.*  
**†FRENCH DAILY LIFE.** Common Words and Common Things. Adapted by WALTER RIPPMANN from Dr. KRON'S "Le Petit Parisien."

"For class use it is far better than anything we have previously seen. It is not, of course, intended for beginners. Students who, without much conversational facility, intend to join a French holiday course next midsummer might here find valuable assistance. The Englishman travelling in France will find here all the phrases essential to his comfort—not in formal lists, but strung together in a chatty and interesting narrative, which also contains information as to how and where the phrases are to be used."—*Education*.

*In fcap. 8vo, cloth, 1s. 6d. net.*  
**\*THREE SHORT PLAYS BY SOUVESTRE.** Edited by MARGUERITE NINET.

An easy reading book, suitable for both girls and boys, furnished with explanatory notes (in the French language) of any difficulties which the text may present.

*In fcap. 8vo, cloth, 3s. 6d. net.*  
**†OUTLINES OF FRENCH HISTORICAL GRAMMAR.** By A. T. BAKER, M.A. Ph.D. (Heidelberg).

Suitable for those who are preparing for the Medieval and Modern Language Tripos, the Honours Examinations at London, Victoria, and other Universities, the Examination for the Home and India Civil Services, &c.

*Ready shortly.*  
**\*ASINETTE.** A French Reading Book for Little People. By LILLY FRAZER (Mrs. J. G. FRAZER). With 8 Coloured and 200 smaller Illustrations by H. M. BROCK. Crown 8vo, cloth, 3s. 6d. net.

\* Specimen Copies of these may be had by Teachers on application.

*Just Published. In fcap. 8vo, cloth, 1s. 6d. net.*  
**\*UNE JOYEUSE NICHÉE.** (A Merry Houseful.) By MME. E. de PRESSENSÉ. Edited by S. ALGE. Illustrated by C. E. BROCK.

*Third Edition. In fcap. 8vo, cloth, 2s. net.*  
**\*DENT'S FIRST GERMAN BOOK.** Based on the Hölzel Pictures of the Seasons. By S. ALGE, S. HAMBURGER, and W. RIPPMANN.

M. PAUL PASSY says:—"Le meilleur livre pour l'enseignement de l'Allemand est probablement le Leitfaden" (Dent's First German Book).

"We have no doubt that, in the hands of a good teacher, excellent results would be obtained from the use of this work."—*University Correspondent*, March 25, 1899.

*In fcap. 8vo, cloth, 2s. 6d. net.*  
**\*DENT'S GERMAN READER.** By S. ALGE and WALTER RIPPMANN.

Suitable for pupils in their second or third year of German. With Exercises and a full Glossary.

"Pupils using these two books will receive an inspiring introduction to the German language."—*School World*.

*In fcap. 8vo, cloth, 1s. 6d. net.*  
**HINTS ON TEACHING GERMAN.** With a running Commentary to Dent's First German Book.

"We have no doubt that, in the hands of a good teacher, excellent results would be obtained from the use of this book."—*University Correspondent*.

*In fcap. 8vo, cloth, 2s. 6d. net.*  
**†GERMAN DAILY LIFE.** By Dr. KRON.

The Author of "Le Petit Parisien" has prepared a volume dealing with the daily life of his own countrymen, which he describes in a number of brightly written chapters, the general arrangement being the same as that in "French Daily Life," the lucidity of which has done so much to recommend it.

*In fcap. 8vo, cloth, 2s. 6d. net.*  
**ELEMENTS OF PHONETICS: English, French, and German.** Translated and Adapted by WALTER RIPPMANN from Prof. VIETOR'S "Kleine Phonetik." With numerous Diagrams.

"Mr. Rippmann has done well to add this little volume to his excellent series of modern language text-books. It is a good deal more than a mere translation, for no pains have been spared to bring together the substance of all that has been recently written by scholars on this attractive but difficult subject."—*Educational Times*.

*Just published. The School Edition of*  
**†MOLIÈRE'S LE BOURGEOIS GENTILHOMME.** Edited by Prof. FREDERIC SPENCER. With full Notes and Glossary. Cloth, 1s. 3d. net.

† Specimen Copies of these may be had by Teachers at half price.

J. M. DENT & CO., 29 AND 30 BEDFORD STREET, STRAND, W.C.

## WHITTAKER'S NEW BOOKS.

**FIRST FRENCH BOOK ON THE NEW METHOD OF TEACHING MODERN LANGUAGES.** By D. MACKAY, M.A., of Ayr Academy, and F. J. CURTIS, Ph.D., of Vienna University. With 44 Illustrations. 2s. 6d. [*Immediately.*]

Subject Picture coloured for use with above, 60 in. x 40 in.

**HIN OPFER DES BERUFS UND MEIN ONKEL AUS POMMERN.** Humoresken von ERNST VON WILDENBRUCH. Edited, with Exercises in Retranslation, by R. O. PERRY, M.A., Merchant Taylors' School, 2s.

**SCHILLER'S JUGENDJAHR.** Erzählung von FRANZ HOFFMANN. Edited, with Notes and Vocabulary, by W. HANBY CRUMP, M.A. 1s. 6d.

FOURTEENTH YEAR OF ISSUE. Price 1s. net. Postage 3d.

**THE SCHOOL CALENDAR, 1900-1.** A Handbook of Schools, Examinations, and Scholarships. [*Just Published.*]

**ELEMENTARY PRACTICAL CHEMISTRY.** For the Use of Students in Science Classes and in Schools of Science. By A. J. COOPER, B.A., B.Sc., F.I.C., Principal of the Harris Institute, Preston. With 44 Illustrations. 2s.

**VOLUMETRIC ANALYSIS.** Specially adapted to the Requirements of Students Entering for the Advanced Practical Chemistry Examinations of the Science and Art Department, and the Intermediate Science and Preliminary Scientific Examinations of the University of London. By J. B. COPPOCK, F.C.S., Lecturer at the Bath Technical Schools. 2s.

**MAGNETISM AND ELECTRICITY.** An Introductory Course of Practical, adapted to the Elementary Stage of the Science and Art Department Examinations. By J. REGINALD ASHWORTH, M.Sc., (Vict.), F.Phys.S., Lecturer in the Municipal Technical School, Rochdale. Second Edition. Thoroughly Revised. 2s. 6d.

"Great care and a considerable amount of thought have evidently been given to the work."—*Electrical Review*.

Catalogue post free on application.

London: WHITTAKER & Co., White Hart Street, Paternoster Square.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID,

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises. By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c. Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin. Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID." Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

**ANALYTICAL GEOMETRY** OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS. Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

### A TREATISE ON

**ELEMENTARY TRIGONOMETRY.** With numerous Examples and Questions for Examination. Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY. With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

**PLANE TRIGONOMETRY.** Containing an account of Hyperbolic Functions, with numerous Examples. Crown 8vo. Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

**SPHERICAL TRIGONOMETRY,** AND ITS APPLICATION TO GEODESY AND ASTRONOMY. With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN. LONDON: LONGMANS & CO.



## DAVID NUTT, 57-59 LONG ACRE.

### Mr. NUTT will issue for the Autumn Season

**English Composition.** A Manual of Theory and Practice. By L. COPE CORNFORD. Crown 8vo, xii., 225 pp., cloth. 3s. 6d.

**Lyra Heroica.** Notes and Elucidations. Compiled by L. COPE CORNFORD and W. W. GREG. Crown 8vo, sewed. 1s. 6d.

\*• The foregoing is intended as a Teachers' and Students' Companion to MR. HENLEY'S

**Lyra Heroica.** An Anthology selected from the best English Verse of the 16th, 17th, 18th, and 19th Centuries. Crown 8vo, cloth, 3s. 6d.  
Or, SCHOOL EDITION, 16mo, cloth, 2s.

Which is set for the London Normal Intermediate, 1900-1901.

Mr. Henley's "Lyra Heroica" is the finest collection of heroic and patriotic verse in the language. Printed at the Constable Press, it is, in its 3s. 6d. form, an attractive and handsome gift book.

Messrs. Cornford and Greg's "Notes and Elucidations" has been compiled under the direction of Mr. Henley.

### MR. NUTT'S LIST FOR THE STUDY OF FOREIGN LANGUAGES. WELLINGTON COLLEGE SERIES FOR THE STUDY OF FRENCH AND GERMAN.

The following Works have been issued in this Series, which comprises what are universally acknowledged to be the best School Grammars of the French and German languages ever published in this country. All Crown 8vo, cloth.

**The Wellington College French Grammar.** By H. W. EVE and F. DE BAUDISS. Thirteenth Edition. 4s. Accidence separately, 1s. 6d.

EXERCISES to accompany the above. By H. W. EVE and the Rev. J. H. D. MATTHEWS. 1896. 1s. 6d. KEY, 5s. net.

EXERCISES on the Accidence and Minor Syntax. By A. J. CALAIS. New Edition, 1898. 3s. 6d. KEY, 5s. net.

EXERCISES on the Longer Syntax. By A. J. CALAIS. 1888. 1s. 6d.

**French Reader.** Selected and Annotated by A. J. CALAIS. Second Edition, 1892. 2s. 6d.

**French Phrase Book.** Containing a Selection of Expressions and Idioms, with their English Equivalents. By A. J. CALAIS. 1890. 2s. 6d.

**A School German Grammar.** Uniform with "The Wellington College French Grammar." By H. W. EVE. Fifth thoroughly Revised Edition. 4s. 6d.

**German Accidence and Minor Syntax.** By H. W. EVE. 1897. 2s.

**First German Exercises.** By H. W. EVE and F. DE BAUDISS. Second Edition, 1897. 2s.

**Second German Exercises.** By H. W. EVE and F. DE BAUDISS. 2s. KEY to the above (for Teachers only), 5s. net.

**French and German Selections for Translation at Sight.** By J. H. D. MATTHEWS and H. A. BULL. Two Vols. Second Edition, 1890. Each 1s. 6d.

**Baumann (O.).—The Junior French Composition Book for all Public Examinations.** Crown 8vo, cloth, 1s. 6d.

**Baumann (O.).—The Senior French Composition Book for all Public Examinations.** Crown 8vo, cloth, 2s. 6d.

**Alex. Dumas' Le Maître d'Armes.** Edited for School Use by E. JOEL and H. LALLEMAND. Crown 8vo, cloth. 1899. 2s. KEY to the above (for Teachers only), 5s. net.

**The Public Examination French Handbook.** Being Materials for Reading and Translation, specially arranged for Advanced Pupils and Candidates for Public Examinations. By M. DESHUMBERT. Third and Fourth Thousand. 8vo, cloth, 4s. 6d.

**Deshumbert (M.).—Dictionary of Difficulties met with in Speaking and Writing French.** Sixth Edition. 1898. 12mo, cloth, 112 pages, 2s. 6d.

**Payen-Payne.—French Idioms and Proverbs.** Second Edition. Crown 8vo, cloth. 1897. 2s. 6d.

**Mignet.—Histoire de la Révolution Française, 1789-1814.** Crown 8vo, cloth, 3s. 6d.

**Mullins (W. E.).—Elementary German Exercises.** Fifth Edition. 1894. 12mo, cloth, net, 2s. KEY to Teachers only, net, 10s.

**Goethe (J. W. von).—Faust.** Part I. Edited, with a Literal Prose Translation and Notes for English Students, by "BETA." Crown 8vo, cloth, pp. viii., 384. 1895. 3s. 6d.

**A. von Bohlen.—Tables of Declension of the German Substantive.** Net, 1s.

**Halifax.—A Table of German Declensions.** Printed on Folding Card, mounted on linen, 9d.

### NUTT'S CONVERSATION DICTIONARIES.

**Jaschke (E.).—English-French Conversation Dictionary,** with French-English Vocabulary. 1892. Cloth, pp. 490, xxxiv. 2s. 6d.

**Jaschke (E.).—English-German Conversation Dictionary,** with German-English Vocabulary. 1893. Cloth, 2s. 6d.

**Jaschke (E.).—English-Italian Conversation Dictionary.** With an Italian-English Vocabulary. Cloth, pp. 424, viii. 2s. 6d.

**Jaschke (E.).—English-Spanish Conversation Dictionary.** With a Spanish-English Vocabulary and a Grammatical Appendix. Cloth, pp. iv., 460. 3s. 6d.

### PHONETIC SERIES.

By H. SWAN.

1. **Colloquial French.** A Handbook for English-speaking Travellers and Students. With the Exact Pronunciation. New Edition, 1897. 1s.

2. **Colloquial German.** 1897. 1s. 6d.

3. **Colloquial Italian.** Second Edition, 1894. 1s. 6d.

Just Published.

**A Simplified French Conversational Manual;** or, How to Converse in French whilst Travelling, at the Hotel, Restaurant, Shopping, with the Principal Routes to Paris and Places of Interest. By LOUISE LITTA. 12mo, 160 pp. Limp cloth, 1s. 6d.

\*• Equally suited for the Traveller or for use in the Class Room.

**CHAMBERS'S HIGHER ENGLISH READER.** An entirely new Reader for Advanced Classes, consisting of Selections from the Best Authors. Illustrated with Portraits. Price 2s.

## CHAMBERS'S ENGLISH READERS.

An admirable Series for Secondary Schools.

Edited by Prof. J. M. D. MEIKLEJOHN.

**Primer I.** Pictures—Words—Letters. Price 2d.

**Primer II.** Pictures—Sentences—Rhymes. Price 3d.

**Book I.** Easy Exercises—Poetry. Price 6d.

**Book II.** Narrative—Grammatical Practice—Composition. Price 8d.

**Book III.** Natural History—Grammar—Composition. Price 1s.

**Book IV.** The Months—Temperance—Etymology. Price 1s. 6d.

**Book V.** Noble Lives—History—Travels—Elocution. Price 1s. 6d.

**Book VI.** Biography—Adventure—Social Economy. Price 2s.

### SHAKESPEARE'S PLAYS FOR SCHOOLS.

With Introduction, Copious Notes, Examination Papers, and Plan of Preparation.

Edited by Prof. J. M. D. MEIKLEJOHN.

**Hamlet.** Cloth, 1s. 6d.

**Julius Cæsar.** Cloth, 1s.

**King Lear.** Cloth, 1s. 3d.

**Macbeth.** Cloth, 1s.

**Merchant of Venice.** Cloth, 1s.

**Richard II.** Cloth, 1s.

**The Tempest.** Cloth, 1s.

As You Like It; Coriolanus; Henry V.; Henry VIII.; King John; A Midsummer Night's Dream; Richard III.; Twelfth Night. Cloth, 1s. each.

### CHAUCER.—THE CANTERBURY TALES.

With Life, Grammar, Notes, Examination Papers, and an Etymological Glossary.

**The Prologus.** Edited by Prof. J. M. D. MEIKLEJOHN. 1s.

**The Squire's Tale; The Clerk's Tale; The Man of Lawes Tale.** 1s. 6d. each. **The Knightes Tale.** 2s.

### CHAMBERS'S CONTINUOUS READERS.

With Notes and Explanations.

**ON THE SPANISH MAIN.** By G. A. HENTY. 88 pages. Paper cover, 4d.; cloth, 6d.

**A HUMBLE HEROINE.** By L. E. TIDDEMAN. 88 pages. Paper cover, 4d.; cloth, 6d.

**SELECTED STORIES FROM HANS ANDERSEN.** 88 pages. Paper cover, 4d.; cloth, 6d.

**THE STORY OF PAUL DOMBEY.** (From "Dombey and Son," by CHARLES DICKENS). 88 pages. Paper cover, 4d.; cloth, 6d.

**BIOGRAPHICAL STORIES.** By NATHANIEL HAWTHORNE. 64 pages. Paper cover, 3d.; cloth, 5d.

**SELECTIONS FROM TENNYSON.** 80 pages. Paper cover, 4d.; cloth, 6d.

**ARITHMETIC, THEORETICAL AND PRACTICAL.** By J. S. MACKAY, M.A., LL.D., Author of "Mackay's Euclid." Price 4s. 6d.

The *Educational News* says:—"Altogether the work is of outstanding interest, and ought to take its place as a standard text-book on the subject."

Price 3s. 6d., cloth.

**THE ELEMENTS OF EUCLID. Books I. to VI., and parts of Books VII., XII.** By JOHN S. MACKAY, M.A., LL.D., Mathematical Master in the Edinburgh Academy. Separately: Book I., 1s.; II., 6d.; III., 9d.; XI., XII., 6d.

"This is, in many respects, the best school Euclid in existence."—FREDERICK SPENCER, M.A. Cambridge.

**CHAMBERS'S ALGEBRA FOR SCHOOLS.** By WILLIAM THOMSON, M.A., B.Sc. Crown 8vo, 576 pages, cloth, 4s. 6d.

"Among the very best elementary text-books this work will take a prominent place."—*Journal of Education*.

**CHAMBERS'S PRACTICAL MENSURATION. Stage I.** Price 4d. With numerous Exercises and Diagrams.

This little book is especially intended for use in Evening Continuation Schools. It possesses several novel features. The book is essentially *practical*, only such geometrical truths being referred to as are absolutely necessary. Simplicity of language has been constantly kept in view.

### CHAMBERS'S COMMERCIAL HANDBOOKS.

**COMMERCIAL ARITHMETIC.** By W. WOODBURN. 112 pages, 8d. With Answers, 1s.

**COMMERCIAL GEOGRAPHY OF THE BRITISH ISLES.** By Dr. A. J. HERBERTSON. 1s.

**COMMERCIAL CORRESPONDENCE AND OFFICE ROUTINE. First Year's Course.** By G. R. WALKER. 1s.

**COMMERCIAL CORRESPONDENCE AND OFFICE ROUTINE. Second Year's Course.** By G. R. WALKER. 1s. 6d.

**CHAMBERS'S SCHOOL HISTORY OF THE BRITISH COLONIES. Greater Britain: Its Rise and Growth.** 1s. 6d.

A brightly written and attractively illustrated volume, giving a most interesting account of the Acquisition and Growth of the Colonies and Foreign Possessions of Great Britain.

**CHAMBERS'S SCHOOL HISTORY OF THE VICTORIAN ERA. The Reign of Queen Victoria.** 1s. 6d.

The Leading Events in the Reign of Queen Victoria are treated in this volume in a vivid and picturesque manner, and it will be found an excellent little text-book for the lower forms.

**PRINCIPLES OF ENGLISH GRAMMAR.** With Analysis of Sentences, and Numerous Exercises. By W. WALLACE DUNLOP, M.A., Daniel Stewart's College, Edinburgh. Price 1s. 4d.

**THE CITIZEN OF ENGLAND: His Rights and Duties.** By G. ARMITAGE SMITH, M.A. Framed on the lines of the Evening Continuation School Code. Price 1s. 6d.

### CATALOGUES ON APPLICATION.

W. & R. CHAMBERS, Ltd., 47 Paternoster Row, London, E.C.; and Edinburgh by Google

# APPROVED SCHOOL BOOKS BY DR. CORNWELL, F.R.G.S.

"We are qualified by ample trial of the books in our own classes to speak to their great efficiency and value. We have never known so much interest evinced or so much progress made as since we have employed these as our school-books."—EDUCATIONAL TIMES.

**A School Geography.** 88th Edition; 3s. 6d., or, with 30 Maps, 6s. 6d.

"Very superior to the common run of such books. It contains a good deal of useful matter of a more practical kind than usual, which the exercises are likely to impress on the mind more deeply than by the parrot system."—*Athenæum*.

**A School Atlas.** Consisting of Thirty Small Maps. A Companion Atlas to the Author's "School Geography." 2s. 6d., or 4s. coloured.

**Geography for Beginners.** 68th Edition; 1s., or, with 48 pp. of Questions, 1s. 4d. Questions, 6d.

"A very useful series of Educational Works, of which Dr. Cornwell is either author or editor. It ('The Geography for Beginners') is an admirable introduction. There is a vast difficulty in writing a good elementary book, and Dr. Cornwell has shown himself possessed of that rare combination of faculties which is required for the task."—*John Bull*.

**Spelling for Beginners.** A Method of Teaching Reading and Spelling at the same time. 4th Edition, 1s.

**Allen and Cornwell's School Grammar.** 64th Edition; 2s. red leather, or 1s. 9d. cloth.

"The excellence of the Grammar published by the late Dr. Allen and Dr. Cornwell makes us almost despair of witnessing any decided improvement in this department."—*Athenæum*.

**Arithmetic for Beginners.** Combines simplicity and fullness in teaching the First Four Rules and Elementary Fractions. 9th Edition. 1s.

**Grammar for Beginners.** An Introduction to Allen and Cornwell's "School Grammar." 87th Edition; 1s. cloth, 9d. sewed.

"This simple introduction is as good a book as can be used."—*Spectator*.

The Book is enlarged by a Section on Word-Building, with Exercises for Young Children.

**The Young Composer: Progressive Exercises in English Composition.** 48th Edition, 1s. 6d. Key, 3s.

"The plan of the work is very superior. We are persuaded this little book will be found valuable to the intelligent instructor."—*Westminster Review*.

**Poetry for Beginners: A Selection of Short and Easy Poems for Reading and Recitation.** 13th Edition, 1s.

**The Science of Arithmetic.** A Systematic Course of Numerical Reasoning and Computations; with very numerous Exercises. By JAMES CORNWELL, Ph.D., and SIR JOSHUA G. FITCH, LL.D. 26th Edition. 4s. 6d.

"The best work on arithmetic which has yet appeared. It is both scientific and practical in the best and fullest sense."—*London Quarterly*.

**Key to Science of Arithmetic.** With the Method of Solution to every Question. Key, 4s. 6d.

"Eminently practical, well stored with examples of wider range and more varied character than are usually given in such books, and, its method of treatment being thoroughly inductive, it is pre-eminently the book for general use."—*English Journal of Education*.

London: Simpkin, Marshall, Hamilton, Kent, & Co., Limited.—Edinburgh: Oliver & Boyd.

## BOOKS FOR SCIENCE STUDENTS.

**FARM FOODS.** A Text-Book for Agricultural Students. Translated from the German of VON WOLFF by HERBERT H. COUSINS, M.A., Lecturer on Chemistry at the South Eastern Agricultural College, Wye. Post 8vo, 8s. 6d.

**ATTFIELD'S CHEMISTRY: General, Medical, and Pharmaceutical.** Adapted to the 1898 Edition of the British Pharmacopœia. Seventeenth Edition. Illustrated. 15s.

**CHURCH'S LABORATORY GUIDE, especially arranged for Students of Agricultural Chemistry.** Seventh Edition. 6s. 6d.

**HENFREY'S ELEMENTARY COURSE OF BOTANY: Structural, Physiological, and Systematic.** Illustrated by upwards of 600 Woodcuts. Fourth Edition. By MAXWELL T. MASTERS, M.D., F.R.S., &c., and A. W. BENNETT, M.A., B.Sc., &c. 15s.

**WINKLER'S HANDBOOK OF TECHNICAL GAS ANALYSIS.** Translated by Professor LUNGE. Fully Illustrated. 7s.

**GURNEY & JACKSON**

(Successors to Mr. VAN VOORST).

1 PATERNOSTER ROW.

**CAREY'S "GRADUS AD PARNASSUM,"**

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

## WORKS BY ALFRED HILEY, M.A.

### 1. MENSURATION AND LAND SURVEYING.

Fourteenth Edition. Pp. 244. Answers at end. Price 2s. 6d.

This work has been placed by the London School Board on their Requisition List for the Use of Pupil Teachers.

"We give it our verdict of unreserved approval."—*The Schoolmaster*.  
 "A well-known standard book on the subject."—*The School Guardian*.  
 "It still deservedly holds a high place amongst text-books on the subject."—*Educational Times*.

### 2. RECAPITULATORY EXAMPLES IN ARITHMETIC.

Sixteenth Edition. Pp. 243. 2s.

This work can now be had either with or without Answers. It contains Test Examples on each rule, and 1,736 Miscellaneous Questions, including 105 full Examination Papers set by University Local Examiners and others.

"Excellent collection of arithmetical examples."—*Schoolmaster*.  
 "Both works are marvels of cheapness and goodness."—*Journal of Education*.

Published by LONGMANS & CO., LONDON.

Leading Publishers of  
**VOCAL MUSIC FOR SCHOOLS.**

**J. CURWEN & SONS, Ltd.,**

invite applications for a copy of their

**School Music List.**

\*\* Parcels sent to Colleges and Schools on approval.

3 and 9 Warwick Lane, London, E.C.



A FEW OF THE PUBLICATIONS OF  
**MOFFATT & PAIGE, Ltd.**  
**ENGLISH CLASSICS.**

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

**THE PLAYS OF SHAKESPEARE.**

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

**REVIEWS:—**

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."  
 Sir HENRY IRVING.—"A most faithful and scholarly edition."  
*Daily Telegraph*.—"Julius Caesar" "... is invaluable as an aid to the study of the play."  
*South Africa*.—"What a handy 'book of the play' they form!"  
*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."  
*Athenaeum*.—"Essentially books for students."  
*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

	s.	d.
*AS YOU LIKE IT	2	0
*CORIOLANUS	2	6
*HAMLET	2	6
*HENRY V.	2	6
*JULIUS CAESAR	2	0
*KING JOHN	2	0
*KING LEAR	2	0
*MACBETH	1	6
*MERCHANT OF VENICE	1	6
*MIDSUMMER NIGHT'S DREAM	2	0
*RICHARD THE SECOND	1	6
*TEMPEST	2	0
*TWELFTH NIGHT	1	6

\* For Current Examinations.

**BACON.**

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

**MILTON.**

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation." s. d.

*PARADISE LOST. Books 1 and 2. (Just published.)	2	0
*SAMSON AGONISTES	2	0
*COMUS	1	6
*LYCIDAS, L'ALLEGRO, and IL PENNEROSO	1	4

\* For Current Examinations.

**SCRIPTURE.**

Edited by B. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

*MOFFATT'S GOSPEL OF ST. MATTHEW	1	6
*MOFFATT'S GOSPEL OF ST. MARK	1	6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

**FRENCH.**

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... 2 6

**GERMAN.**

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... 2 6  
 Type in German character.

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

**MOFFATT & PAIGE, Ltd.,**

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.

Works: Johnson's Court, Fleet Street.

**COLLEGE OF PRECEPTORS.**

**Lectures for Teachers.**

**THE THEORY AND PRACTICE OF EDUCATION.**

To be delivered by H. L. WITHERS, M.A., Professor of Education in the Owens College of the Victoria University.

The Fee for the Course of Twelve Lectures is Half-a-Guinea.  
 \* \* \* The Lectures will be delivered on SATURDAYS, from 5 to 6 o'clock, p.m., beginning on SATURDAY, 6th October, 1900, at the College, Bloomsbury Square, W.C.—Members of the College have free admission to the Course.

**SYLLABUS.**

**LECTURE I.—The Problems of Education.**

Relation of theory and practice, their combination in an inductive and experimental method; why such a method is requisite in the study of education.—How the problems arise in practice; and how theory (*i.e.*, reflexion and comparison) furnishes provisional hypotheses by help of which we may work intelligently towards their solution.—Some problems in instruction, illustrated from supposed case of a lesson to a fifth form on Milton's "Sonnet to Cromwell."

**LECTURE II.—The Appeal to Experience.**

Problems recapitulated; recourse to the procedure of successful educators.—Limits to the possibility and to the value of this recourse: apprenticeship even under the best conditions needs to be supplemented.—The example of the Great Masters: true meaning and right use of the history of education.—Illustrations from "Stanley's Life of Arnold."—The main purpose of education as Arnold practised it, *viz.*, the preparation of pupils for intelligent and responsible activity in a Christian community.—His adjustment of means to this end, (a) in the general school-life, (b) in his form-teaching.

**LECTURE III.—The Appeal to Science.**

Inadequacy of imitative and traditional methods: because our problems are *new*. Analogous failure of traditional methods in warfare.—New factors in education since Arnold's time, (a) social, industrial, and political changes, (b) new ideas in history and science.—Illustrations from the writings of Edmond Demolins.—Biological conceptions in education.—Perils of premature deduction: confusion of science as a whole with natural science.—The "mental and moral sciences" in their relation to education.

**LECTURE IV.—The Appeal to Literature and Life.**

Unfortunate isolation of ethics, logic, and psychology, as the studies on which a theory of education should be based.—Education deals only with the ascertained results of these studies, not with their speculations; and is influenced far more powerfully by social forces which do not strictly fall within the province of any of them.—Paramount importance to the educator of a knowledge of the world and of human nature, to be gained through intercourse and through literature.—Education arises out of *helplessness*, and is intended to be its cure, but pedantry is only an aggravated form of helplessness.—Sound and efficient mental habits: how the necessarily artificial character of school-training is to be saved from futility.

**LECTURE V.—Relation of Psychology to Education.**

Meaning and scope of psychology: in what sense a science.—Points of extreme value to the educator: (i.) relations of mind and body, and the conditions of healthy mental activity, (ii.) vitality and reproduction of ideas, (iii.) nature of habit in matters of mind and character, (iv.) analysis of voluntary rational action.—"Genetic psychology" and its relations to "child study": how far helpful in the practice of instruction.—Practical corollaries.

**LECTURE VI.—Relation of Ethics to Education.**

Valuelessness of speculative ethics for the educator.—Importance of an understanding of the motives which lead to action.—The problem of discipline, and the power of command.—The "tone" of a school.—Religion and religious teaching.—Physical training: the value and the limitations of games.—Type of character produced by English public schools, its excellences and defects.

**LECTURE VII.—Relation of Logic to Education.**

Logic must be held to include the theory of knowledge and a study of inductive method.—Value to the instructor of (i.) the syllogism, (ii.) the canons of induction.—Practical illustrations.—Relation of the "five formal steps" to logical laws.—Preparation of lesson notes and of schemes of lessons.—A criticism of some forms of "Freudianism," and of "heuristic methods."—What is meant by "sound mental habits"?

**LECTURE VIII.—School Administration and Government.**

A school as a centre of forces: (i.) the governing body, (ii.) the headmaster, (iii.) the staff, (iv.) influence of parents and "society," (v.) national and local authorities, (vi.) examining bodies.—Interaction of these forces; extreme importance of a true understanding of educational politics.—Education as a profession.—Futility of our theories if they do not touch controlling forces.

**LECTURE IX.—The School Curriculum.**

The idea of a liberal education: its history, and the dangers to which it is exposed at present from crude industrialism and from specialization.—Different conceptions of the curriculum for different stages of school-life.—Over-pressure.—The conflict of studies.—Necessity of correlation.—Educational values, and the time-table as a scale of values.

**LECTURE X.—Language-Teaching.**

The teaching of the mother-tongue.—The meaning of words, and the relation of language to life.—Different views expressed in various typical "methods" of language-teaching. The teaching of the classical languages: the "tradition of the scribes," that we should train commentators. Perils threatening the future of the classics as the staple of education in Christendom.—The teaching of modern languages: the "reform" or "direct methods."—Correlation of linguistics with literature and history.

**LECTURE XI.—The Teaching of History and Geography.**

Disrepute of these subjects as "crum-subjects."—The meaning of "crum," and the value of a study of successful "crumming" in contrast with successful educating.—How forms may be got to think and to work in history lessons.—What to teach in history.—Physical and commercial geography in relation to history and political geography.—Criticism of the theory that history should be the "core" of instruction.

**LECTURE XII.—Nature-Study.**

The place of natural science and mathematics in the scheme of a liberal education.—"Concrete methods" in mathematics: their use and abuse.—Importance of natural history and the "life-sciences" especially in the junior school.—How and when the study of abstract science should be begun.

# JACKSON'S SYSTEM OF UPRIGHT PENMANSHIP FOR BOTH HANDS.

TYPICAL REPORTS FROM RECENT  
EDUCATION BLUE BOOKS.

"Since the introduction of Jackson's Copy Books and System of Upright Penmanship THE RESULTS  
HAVE BEEN MARVELLOUS."

"THE ADMIRABLE  
WORK DONE IN  
JACKSON'S!!"

Jackson's  
System  
of  
Handwriting  
is  
The Best  
and the only Complete and  
Scientific System Existing

"The introduction  
of Jackson's System  
of Upright Handwriting  
WAS ATTENDED BY  
EXCELLENT RESULTS!"

"JACKSON'S System of Upright Penmanship is now adopted by many Schools. THE WRITING ON  
SLATES AND ON PAPER IS VERY GOOD!"

For Specimens, New Prize Lists, and Details of the Silver Challenge Shield Competition, apply to

**SAMPSON LOW, MARSTON & COMPANY, LTD.,**  
ST. DUNSTAN'S HOUSE, FETTER LANE, FLEET STREET, LONDON, E.C.

# CAMBRIDGE UNIVERSITY PRESS.

## Books Suitable for Examinations, 1900-1-2.

### COLLEGE OF PRECEPTORS, 1900-1901.

#### THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

AUTHOR.	WORK.	EDITOR.	PRICE.
Shakespeare	As You Like It	A. W. Verity	1 6
"	Henry V.	"	(shortly.)

#### PITT PRESS SERIES.

			s. d.
Macaulay	Lays of Ancient Rome (with Ivry and The Armada)	J. H. Fether	1 6
Milton	Paradise Lost, Books III. and IV.	A. W. Verity	2 0
Scott	Marmion	J. H. B. Masterman	2 6
"	Lay of the Last Minstrel	J. H. Fether	2 0
Caesar	De Bello Gallico, Books IV.-V. (Subject, Bk V.)	A. G. Peskett	1 6
"	De Bello Gallico, Book VI.	"	1 6
Cicero	De Senectute	J. S. Reid	3 6
Horace	Odes, Book III.	J. Gow	2 0
"	Odes, Book IV.	"	1 6
Livy	Book V.	L. Whibley	2 6
"	Book XXII.	"	2 6
Vergil	Aeneid, Books I., VI., and XII.	A. Sidgwick	each 1 6
Euripides	Medea	C. E. S. Headlam	2 6
"	Alcestis	W. S. Hadley	2 6
Lucian	Menippus and Timon	E. C. Mackie	3 6
Xenophon	Anabasis, Books III. and V.	A. Pretor	each 2 0
"	" Book II.	"	2 6

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

The following editions have COMPLETE VOCABULARIES.

Caesar	De Bello Gallico, Books V. and VI.	E. S. Shuckburgh	each 1 6
Vergil	Aeneid, Books I., VI., and XII.	A. Sidgwick	" 1 6
Xenophon	Anabasis, Books II., III., and V.	G. M. Edwards	" 1 6

\* \* \* Cambridge Editions of Caesar, Vergil, and Xenophon.—The attention of Schoolmasters is called to the fact that there are now two editions of some of the works of these authors in the Pitt Press Series and the Cambridge Series for Schools and Training Colleges. The Editions in the Cambridge Series for Schools and Training Colleges have Complete Vocabularies. If, in ordering, the Edition required is not specified, the Pitt Press Edition, without vocabulary, will be sent.

### OXFORD LOCALS.

July, 1901.

Euripides	Alcestis	W. S. Hadley	2 6
Thucydides	Book VII.	H. A. Holden	5 0
Xenophon	Anabasis I.-II.	A. Pretor	4 0
Caesar	De Bello Gallico, Books IV.-V.	A. G. Peskett	1 6
"	" Book VI.	"	1 6
"	" Books VI., V., and VI.	E. S. Shuckburgh	each 1 6
Horace	Odes, Book IV.	J. Gow	1 6
Livy	Book V.	L. Whibley	2 6
Vergil	Aeneid, Book I.	A. Sidgwick	1 6

#### THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

Shakespeare	Merchant of Venice	A. W. Verity	1 6
"	Henry V.	"	(shortly.)

New and Enlarged Edition (Thirty-sixth to Forty-fifth Thousand).

**The Elements of English Grammar.** By A. S. WEST, M.A., Trinity College, Cambridge. Fcap. 8vo. 2s. 6d.

*Prefatory Note to the Enlarged Edition.*—Some hundreds of additional Questions and Examples are given in the present edition, and in a few places the wording of the text has been altered. The numbers of the paragraphs remain the same.

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

(General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Professor of Education in Victoria University.)

**The Education of the Young in the Republic of Plato.** Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo. 2s. 6d.

**The Making of Character: some Educational Aspects of Ethics.** By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, cloth, 2s. 6d.; cloth extra, gilt top, 3s. 6d.

**A Short History of the Expansion of the British Empire, 1500-1870.** By W. H. WOODWARD. With 7 Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.  
"Thoroughly to be recommended."—*Athenæum*.

London: C. J. CLAY & SONS, Cambridge University Press Warehouse, Ave Maria Lane.

London: Printed by C. F. HODGSON & SON, 2 Newton Street, High Holborn, W.C.; and Published by FRANCIS HODGSON, 89 Farringdon Street, E.C.

### CAMBRIDGE LOCALS.

December, 1900.

#### THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

AUTHOR.	WORK.	EDITOR.	PRICE.
Shakespeare	As You Like It	A. W. Verity	1 6

#### PITT PRESS SERIES.

Malot	Remi en Angleterre	Mrs. Verrall	2 0
Mérimée	Colomba	A. R. Ropes	2 0
Maistre	Athalie	H. W. Eve	2 0
Freitag	Der Staat Friedrichs des Grossen	W. Wagner	2 0
Goethe	Hermann und Dorothea	W. Wagner and J. W. Cartmell	3 6
Klee	Die Deutschen Heldensagen (Hagen und Hilde, und Gudrun)	H. J. Wolstenholme	3 0
Milton	Paradise Lost, Books III. and IV.	A. W. Verity	2 0
Scott	Marmion	J. H. B. Masterman	2 6
Caesar	De Bello Gallico, Book VI.	A. G. Peskett	1 6
Cicero	De Senectute	J. S. Reid	3 6
Horace	Epistles, Book I.	E. S. Shuckburgh	2 6
Livy	Book XXI.	M. S. Dimsdale	2 6
Vergil	Aeneid, Book VI.	A. Sidgwick	1 6
Euripides	Hecuba	W. S. Hadley	2 6
Homer	Odyssey, Book XI.	J. A. Nairn	2 0
Lucian	Menippus and Timon	E. C. Mackie	3 6
Thucydides	Book III.	A. W. Spratt	5 0

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

The following editions have COMPLETE VOCABULARIES.

Caesar	De Bello Gallico, Book VI.	E. S. Shuckburgh	1 6
Ovid	Selections from the Tristia	H. F. M. Simpson	1 6
Vergil	Aeneid, Book VI.	A. Sidgwick	1 6
Xenophon	Anabasis, Book V.	G. M. Edwards	1 6

### LONDON MATRICULATION.

January, 1901.

Aeschylus	Prometheus Vincetus	H. Rackham	2 6
Vergil	Aeneid II.	A. Sidgwick	1 6

June, 1901.

Lucian	Charon, &c.	W. E. Heitland	3 6
"	Menippus and Timon	E. C. Mackie	3 6

January, 1902.

Horace	Odes, Book I.	J. Gow	2 0
Plato	Crito	J. Adam	2 6
"	Euthyphro	"	2 6

June, 1902.

Cicero	De Senectute	J. S. Reid	3 6
Euripides	Medea	C. E. S. Headlam	2 6

London B.A., 1901.

Juvenal	Satires	J. D. Duff	5 0
Livy	Book VI.	H. M. Stephenson	2 6
Homer	Iliad, Books XXII., XXIII., XXIV.	G. M. Edwards	2 0
More	Utopia	J. R. Lumby	3 6

### ENGLISH GRAMMAR.

**An English Grammar for Beginners.** By A. S. WEST, M.A. 1s.

*School World.*—"The smaller of these two works ought to be extensively used for the teaching of junior forms. Its matter is arranged with the greatest care, its explanations are full and easily adapted to juvenile intelligences. . . . Altogether the book is worthy of high commendation."

### CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

(General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Professor of Education in Victoria University.)

**The Education of the Young in the Republic of Plato.** Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo. 2s. 6d.

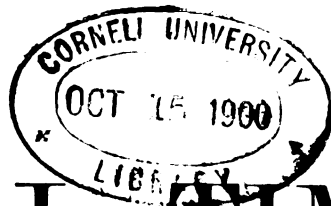
**The Making of Character: some Educational Aspects of Ethics.** By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, cloth, 2s. 6d.; cloth extra, gilt top, 3s. 6d.

**A Short History of the Expansion of the British Empire, 1500-1870.** By W. H. WOODWARD. With 7 Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.  
"Thoroughly to be recommended."—*Athenæum*.

London: C. J. CLAY & SONS, Cambridge University Press Warehouse, Ave Maria Lane.

London: Printed by C. F. HODGSON & SON, 2 Newton Street, High Holborn, W.C.; and Published by FRANCIS HODGSON, 89 Farringdon Street, E.C.





# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 474.

OCTOBER 1, 1900.

(Price to Non-Members, 6d.  
By Post, 7d.)

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 1st of January, 1901.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Christmas Examination for Certificates will commence on the 4th of December, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Christmas Examination will commence on the 4th of December, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 5th of March, 1901.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5. The Doreck Scholarship of £20 will be awarded on the results of the Christmas Examination.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

**PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 5th, 6th, and 7th of March, 1901.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, DECEMBER, 1900.

Notice is hereby given that at the above Examination the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book VI., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS

ON THE SCIENCE AND ART OF EDUCATION.

To be delivered by H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester, late Principal of the "Borough Road" Training College, Isleworth.

The Second Course of Lectures (Twenty-sixth Annual Series), will begin on Saturday, October 6, at 5 p.m.

For Syllabus, see p. 394.

The Fee for the Course is Half-a-guinea.

The Lectures will be delivered on Saturday Afternoons at 5 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., Secretary.

### UNIVERSITY DIPLOMA FOR WOMEN.

**THE UNIVERSITY OF ST. ANDREWS** grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

### L.L.A. ST ANDREWS UNIVERSITY.—

Oral Classes for London students in all subjects of this examination are held at the Day Training College, White Street, Finsbury Street, and Ropemaker Street, Finsbury Pavement, E.C., and are conducted by Mr. S. Blows, M.A. Honours Cantab., B.A. Honours, B.Sc., and Teacher's Diploma, London.

Correspondence Tuition in all subjects for country students.

All applications to be addressed to Prof. CUSACK.

### LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKET, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

**MR. JOHN JACKSON** lectures on THE TEACHING OF WRITING, of ARITHMETIC, and of AMBIDEXTERITY. He also gives Courses of (or introductory) Lessons in those subjects to Boys' or Girls' Schools.—The Hollies, West Norwood, S.E.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FOR MUSICAL EDUCATION, AND EXAMINATIONS IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KERN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANO-FORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in December, when certificates will be granted to all successful candidates. Last day for entry, November 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship also take place in December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Piano-forte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## CORRESPONDENCE TUITION,

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BOBLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

University  
Correspondence  
College.

FREE GUIDES

TO

LONDON  
UNIVERSITY EXAMINATIONS.

FREE GUIDE TO MATRICULATION

(Postage 1d.),

INTER. ARTS, B.A., INTER. SCIENCE, OR

INTER. LAWS EXAMINATION.

Any one of the above Arts or Science Guides, Prospectus, and further particulars will be sent post free on application to

THE SECRETARY,

(Univ. Corr. Coll., London Office.)

32 Red Lion Square, Holborn, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

Next Session begins October 2nd, 1900. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (held in September), more than twenty Scholarships and Exhibitions, ranking in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

## UNIVERSITY COLLEGE OF NORTH WALES.

(A Constituent College of the University of Wales.)

### DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.

(Recognized by the Cambridge Syndicate.)

Professor of Education—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAVESON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

## UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.

(One of the constituent Colleges of the Univ. of Wales.)

### TRAINING DEPARTMENT FOR SECONDARY TEACHERS, MEN AND WOMEN.

Recognized by the Cambridge Teachers' Training Syndicate.

Professor of the Theory, Practice, and History of Education—FOSTER WATSON, M.A. Lond. Assistant-Lecturers—Miss C. P. TREMAIN, B.A. Wales; D. R. HARRIS, B.A. Cantab. and Lond.

Preparation for (a) the Degrees in Arts and Science of the University of Wales, the curriculum for which includes the Theory and History of Education as an optional subject in the third year; (b) Cambridge Teachers' Certificate, Theory and Practice; (c) London University Teachers' Diploma; (d) College of Preceptors' Diplomas.

A Scholarship of £15 for one year will be awarded to a candidate entering in October, 1900. Composition Fee for the Session (including Lectures and Practice) £10.

Men Students reside in registered lodgings in the town, or in the Hostel for Men Students.

Women Students reside in the Hall of Residence for Women Students. Terms from 27 to 42 guineas.

For further particulars apply to

T. MORTIMER GREEN, Registrar.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations' Diploma of the College of Preceptors, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

The Council are about to appoint a LECTURER for January next. Stipend from £90 to £120, and residence. Special knowledge of Languages or Science required. Applications, with fifteen copies of testimonials, should be sent by October 15th, to the PRINCIPAL, Cambridge Training College, Wollaston Road, Cambridge, from whom further particulars may be obtained.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

Principal—Miss ETHEL HURLBATT.

The Session 1900-1901 will open on Thursday, October 4th. Students are requested to enter their names on Wednesday, October 3rd.

Lectures are given in all branches of General and Higher Education. Taken systematically, they form a connected and progressive course, but a single course of Lectures in any subject may be attended.

Courses are held in preparation for all the Examinations of the University of London in Arts and Science, for the Teachers' Diploma (London), and for the Teachers' Certificate (Cambridge); and also a Special Course of Scientific Instruction in Hygiene. Six Laboratories are open to students for Practical Work. Two Entrance Scholarships awarded yearly. A Gladstone Memorial Prize and the Early English Text Society's Prize are awarded to students each June.

The Art School is open from 10 to 4. Students can reside in the College.

Full particulars on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

### DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.

(Recognized by the Cambridge Syndicate.)

Head of the Department—Miss H. ROBERTSON, B.A.

The Third Term of the Session 1900 begins on Thursday, October 4th.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

The Council will, in December, award a Gilchrist Travelling Studentship, value £70.

Full particulars on application to Miss ROBERTSON.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

The object of this College is to give a professional training to educated women who intend to teach. In addition to the course of training, it offers the advantages of a College life and one year's residence in Cambridge.

The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers, and are prepared for the Cambridge Teachers' Certificate (Theory and Practice). Ample opportunity is given for practice in teaching science, languages, mathematics, and the other usual school subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEFIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

### TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## University Correspondence College.

## ANNUAL DINNER & RE-UNION

AT THE

### HOLBORN RESTAURANT,

Thursday, October 25, 1900,

AT 7 P.M.

Tickets may be had of the SECRETARY, 32 Red Lion Square, W.C.

## KING'S COLLEGE, LONDON.

### FREE SATURDAY MORNING LECTURES TO TEACHERS.

1. A Course of about Ten Lectures on "The Teaching of Mathematics," by Prof. HUDSON.
2. A Course of about Ten Lectures, Historical and Critical, on "The Pedagogy of John Locke," by Mr. ADAMSON.

The Courses begin on October 13 at 10 a.m. and 11.30 a.m., respectively, and will be continued on alternate Saturdays at the same hour.

For prospectus, apply to the SECRETARY, King's College, Strand.

## BIRKBECK INSTITUTION.

BREMS BUILDINGS, CHANCERY LANE, E.C.

Principal—G. ARMITAGE SMITH, M.A.

### DAY AND EVENING CLASSES.

New Session commences MONDAY, OCTOBER 1.

University of London.—Complete Courses of Study for all Examinations for the Science, Arts, and Law Degrees.

Science Classes in every branch, with Practical Work. Well equipped Laboratories for Chemistry, Physics, Zoology, Botany, and Metallurgy.

Courses in Political Economy, Commercial Geography, Common Law, Bankruptcy, Equity and Conveyancing, Logic, Psychology, and Ethics.

Classes in Latin, Greek, Modern Languages, Literature, English and Commercial Subjects, and for Civil Service.

School of Art—Drawing, Painting, Designing, Modelling, Life Classes, Wood Carving, &c.

Prospectus free, Calendar 6d. (by post, 8d.), on application to SECRETARY.

Now ready, price 1s. net (postage 4d. extra).

## PROGRAMME OF TECHNOLOGICAL EXAMINATIONS OF THE

CITY AND GUILDS OF LONDON INSTITUTE, containing the Regulations for the Registration and Inspection of Classes in Technology and Manual Training.

To be obtained from any bookseller, or from Messrs. WHITTAKER & Co., Paternoster Square, London.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

Principal—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## GLAMORGAN COUNTY GOVERNING BODY.

WELSH INTERMEDIATE EDUCATION ACT, 1899.

### INSTRUCTRESS OF PHYSICAL EXERCISES.

The COUNTY GOVERNING BODY desire to appoint a TRAVELLING INSTRUCTRESS to teach PHYSICAL EXERCISES in the County Schools.

Her whole time to be devoted to the service of the County Governing Body.

Salary £100 per annum, with travelling expenses. Applications, accompanied by a statement of the system, or systems, candidates are qualified to teach, their previous teaching experience and their diplomas, and not more than three recent testimonials, must be received by me not later than the morning of Wednesday, the 3rd day of October, 1900.

Personal canvassing will be a disqualification.

L. E. R. ALLEN,

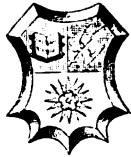
Clerk of the County Governing Body.

Glamorgan County Offices, Cardiff,  
15th September, 1900.

## ARMY SCHOOLMASTERS.—There

are a few vacancies in the Corps of Army Schoolmasters. Civilian Schoolmasters only will be accepted who have passed on second year's papers in the First or Second Division, or who hold a certificate, qualifying them to superintend pupil teachers, from the Board of Education. Students in Training Colleges will also be accepted under certain conditions. Candidates must not be over twenty-four years of age. Further particulars can be obtained on application, in writing, to the DIRECTOR OF ARMY SCHOOLS, War Office, London, S.W.

**LONDON UNIVERSITY EXAMINATIONS.**



**Day and Evening Classes**

ARE HELD FOR THE

**MATRICULATION**

AND OTHER

**EXAMINATIONS OF LONDON UNIVERSITY**

AT

**University Tutorial College,**

RED LION SQUARE, LONDON.

AT MATRICULATION, JUNE 1900,

**49**

Students of University Tutorial College

WERE SUCCESSFUL.

All communications regarding Oral work in London should be addressed to

**THE VICE-PRINCIPAL,**

University Tutorial College,

32 Red Lion Square, Holborn, W.C.

**A GERMAN LADY** (High School Teacher) desires to receive an English Lady as guest in her house, whom she would prepare for Examinations. Terms very moderate. Highest references. Address—Fraulein HERRKLOTSCH, Magdeburger Strasse, Cöthen in Anhalt (near Leipzig), Germany.

**MASTER** wanted for Commercial English in a German Public School. Salary to be agreed upon. Board and Lodging. Practical business experience in banking or wholesale house desirable. Apply to **HANDELSKAMMER, Leipzig.**

**RELIGIOUS TEACHING IN SECONDARY SCHOOLS.**

**A Problem of To-day.**

BY THE

**Rev. J. O. BEVAN, M.A., F.S.A.,**

Fellow of the College of Preceptors, and Examiner.

Price 6d., post free.

55 Gunterstone Road, West Kensington, W.

**A COMPLETE FRENCH CLASS BOOK.**

New Edition.

**HALL'S FIRST FRENCH COURSE AND FRANCE AND THE FRENCH.**

Price 1s. 6d. KEY, 1s. 8d.

Contains nearly 200 Exercises, French Grammar, Pronunciation Lessons, Questionnaire, Easy and Instructive Reading Lessons, with Glossaries, Maps, Vocabularies, &c.

LONDON:

**SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., Ltd.**

Third Edition. 12mo, price 1s. 6d.

**FIRST STEPS TO EUCLID:** comprising the Propositions of BOOK I., prepared for writing out, with a recapitulation of the steps of the Demonstration appended to each. Forming a Text-book for the above. By **A. K. ISBISTER, M.A., LL.B.**, late Dean of the College of Preceptors.

LONDON: LONGMANS & CO., PATERNOSTER ROW, E.C.

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: **Mr. J. CHARLESTON, B.A.**

(Honours, Oxon.; and Lond.).

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR

**MATRICULATION,**

**B.A., & B.SC.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—**Mr. J. CHARLESTON, B.A.,**

**BURLINGTON CLASSES,**

**27 CHANCERY LANE, LONDON.**

**CARLYON COLLEGE.**

55 AND 56 CHANCERY LANE.

**LONDON UNIVERSITY EXAMINATIONS.**

LONDON MATRICULATION, INTER. ARTS and SCIENCE, B.A., and B.Sc. Classes, October 2. Day and Evening Classes.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, B.U.I., &c.

Papers Corrected for Schools. Private tuition for all Examinations. Prospectus and full details on application to **R. C. B. KERIN, B.A. Lond.**, First of First Class Classical Honours, Editor of "Phædo," "Pro Plancio," &c.

**SUCCESSES.**

1892-1900.—London Matric., 74; Inter. Arts, Sc., and Prel. Sci., 88, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 36, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

**B.A. LONDON, 1899, 12 successful.**

**M.A., 2 (1898 and 1899).**

**Diploma Correspondence College.**

FOR

**A.C.P.,**

**L.G.P., AND F.G.P.**

SUCCESSES: 311 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**JOINT AGENCY FOR WOMEN TEACHERS.**

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

**JOINT AGENCY FOR ASSISTANT-MASTERS.**

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

- Headmasters' Conference.
- Incorporated Association of Headmasters.
- College of Preceptors.
- Teachers' Guild.
- Welsh County Schools' Association.
- Private Schools' Association.
- Association of Headmasters of Preparatory Schools.
- Association of Headmasters of Roman Catholic Schools.
- Assistant-Masters' Association.
- Association of Technical Institutions.
- &c. &c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

Tenth Edition. 12mo, price 3s. 6d.

**THE ILLUSTRATED PUBLIC**

**SCHOOL SPEAKER AND READER,** based on Grammatical Analysis, comprising a choice Selection of pieces for Reading and Recitation, annotated for Expression, Emphasis, and Pauses, and illustrated by Diagrams and Figures exhibiting to the eye the appropriate gestures and positions, to which is added a selection of Greek, Latin, French, and German Extracts, suitable for "Speech Days" at Public Schools. By **A. K. ISBISTER, M.A., LL.B.**, late Dean of the College of Preceptors.

LONDON: LONGMANS & CO., PATERNOSTER ROW, E.C.

New Edition. 18mo, price 9d.

**THE ELEMENTS OF BOOK-**

**KEEPING,** BY SINGLE AND DOUBLE ENTRY: with Practical Explanations and Exercises on the most useful forms for Business. By **A. K. ISBISTER, M.A., LL.B.**, late Dean of the College of Preceptors.

LONDON: LONGMANS & CO., PATERNOSTER ROW, E.C.

**EPPS'S COCOA.**

GRATEFUL.

COMFORTING.

Distinguished everywhere for Delicacy of Flavour, Superior Quality, and highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold in ½-lb. and ¼-lb. packets, and 1-lb. tins, labelled **JAMES EPPS & CO., Ltd., Homoeopathic Chemists, London.**

BREAKFAST.

SUPPER.

**EPPS'S COCOA.**

COLLEGE OF PRECEPTORS.

Lectures for Teachers.

THE THEORY AND PRACTICE OF EDUCATION.

To be delivered by H. L. WITHERS, M.A., Professor of Education in the Owens College of the Victoria University.

The Fee for the Course of Twelve Lectures is Half-a-Guinea.  
 \* \* \* The Lectures will be delivered on SATURDAYS, from 5 to 6 o'clock, p.m., beginning on SATURDAY, 6th October, 1900, at the College, Bloomsbury Square, W.C.—Members of the College have free admission to the Course.

SYLLABUS.

LECTURE I.—The Problems of Education.

Relation of theory and practice, their combination in an inductive and experimental method; why such a method is requisite in the study of education.—How the problems arise in practice; and how theory (i.e., reflexion and comparison) furnishes provisional hypotheses by help of which we may work intelligently towards their solution.—Some problems in instruction, illustrated from supposed case of a lesson to a fifth form on Milton's "Sonnet to Cromwell."

LECTURE II.—The Appeal to Experience.

Problems recapitulated: recourse to the procedure of successful educators.—Limits to the possibility and to the value of this recourse: apprenticeship even under the best conditions needs to be supplemented.—The example of the Great Masters: true meaning and right use of the history of education.—Illustrations from "Stanley's Life of Arnold."—The main purpose of education as Arnold practised it, viz., the preparation of pupils for intelligent and responsible activity in a Christian community.—His adjustment of means to this end, (a) in the general school-life, (b) in his form-teaching.

LECTURE III.—The Appeal to Science.

Inadequacy of imitative and traditional methods: because our problems are new. Analogous failure of traditional methods in warfare.—New factors in education since Arnold's time, (a) social, industrial, and political changes, (b) new ideas in history and science.—Illustrations from the writings of Edmond Demolins.—Biological conceptions in education.—Perils of premature deduction: confusion of science as a whole with natural science.—The "mental and moral sciences" in their relation to education.

LECTURE IV.—The Appeal to Literature and Life.

Unfortunate isolation of ethics, logic, and psychology, as the studies on which a theory of education should be based.—Education deals only with the ascertained results of these studies, not with their speculations: and is influenced far more powerfully by social forces which do not strictly fall within the province of any of them.—Paramount importance to the educator of a knowledge of the world and of human nature, to be gained through intercourse and through literature.—Education arises out of helplessness, and is intended to be its cure, but pedantry is only an aggravated form of helplessness.—Sound and efficient mental habits: how the necessarily artificial character of school-training is to be saved from futility.

LECTURE V.—Relation of Psychology to Education.

Meaning and scope of psychology: in what sense a science.—Points of extreme value to the educator: (i.) relations of mind and body, and the conditions of healthy mental activity, (ii.) vitality and reproduction of ideas, (iii.) nature of habit in matters of mind and character, (iv.) analysis of voluntary rational action.—"Genetic psychology" and its relations to "child study": how far helpful in the practice of instruction.—Practical corollaries.

LECTURE VI.—Relation of Ethics to Education.

Valuelessness of speculative ethics for the educator.—Importance of an understanding of the motives which lead to action.—The problem of discipline, and the power of command.—The "tone" of a school.—Religion and religious teaching.—Physical training: the value and the limitations of games.—Type of character produced by English public schools, its excellences and defects.

LECTURE VII.—Relation of Logic to Education.

Logic must be held to include the theory of knowledge and a study of inductive method.—Value to the instructor of (i.) the syllogism, (ii.) the canons of induction.—Practical illustrations.—Relation of the "five formal steps" to logical laws.—Preparation of lesson notes and of schemes of lessons.—A criticism of some forms of "Froebelianism," and of "heuristic methods."—What is meant by "sound mental habits"?

LECTURE VIII.—School Administration and Government.

A school as a centre of forces: (i.) the governing body, (ii.) the headmaster, (iii.) the staff, (iv.) influence of parents and "society," (v.) national and local authorities, (vi.) examining bodies.—Interaction of these forces: extreme importance of a true understanding of educational politics.—Education as a profession.—Futility of our theories if they do not touch controlling forces.

LECTURE IX.—The School Curriculum.

The idea of a liberal education: its history, and the dangers to which it is exposed at present from crude industrialism and from specialization.—Different conceptions of the curriculum for different stages of school-life.—Over-pressure.—The conflict of studies.—Necessity of correlation.—Educational values, and the time-table as a scale of values.

LECTURE X.—Language-Teaching.

The teaching of the mother-tongue.—The meaning of words, and the relation of language to life.—Different views expressed in various typical "methods" of language-teaching. The teaching of the classical languages: the "tradition of the scribes," that we should train commentators. Perils threatening the future of the classics as the staple of education in Christendom.—The teaching of modern languages: the "reform" or "direct methods."—Correlation of linguistics with literature and history.

LECTURE XI.—The Teaching of History and Geography.

Disrepute of these subjects as "cram-subjects."—The meaning of "cram," and the value of a study of successful "cramming," in contrast with successful educating.—How forms may be got to think and to work in history lessons.—What to teach in history.—Physical and commercial geography in relation to history and political geography.—Criticism of the theory that history should be the "core" of instruction.

LECTURE XII.—Nature-Study.

The place of natural science and mathematics in the scheme of a liberal education.—"Concrete methods" in mathematics: their use and abuse.—Importance of natural history and the "life-sciences" especially in the junior school.—How and when the study of abstract science should be begun.

C. R. HODGSON, B.A., Secretary.

FREE GUIDE TO THE CAMBRIDGE HIGHER LOCAL EXAMINATION,

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

APRIL EDITION (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

332 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1900, 60 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

BY JOHN S. RAWLE, F.S.A.,

Late Examiner to the Department of Science and Art.

SECOND GRADE PRACTICAL GEOMETRY, PLANE & SOLID, CURVES, SCALES & PATTERN DRAWING.

REVISED AND ENLARGED. NOW READY.

Containing the additional matter as required by the Departmental Circular of March, 1895, and forming a complete Text-Book for the Science and Art Examinations.

260th Thousand. MORE THAN 600 DIAGRAMS.

Price 1s. Bound in cloth, 2s.

Class Sheets for Practical Geometry	...	...	...	...	1s.
Practical Geometry Test Papers	...	...	...	...	4d.
Freehand Drawing Test Papers	...	...	...	...	1s.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO.

Seventh Edition. With an Appendix of Easier Exercises.

Fcap. 8vo, cloth, price One Shilling.

HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

OXFORD LOCAL SHAKESPEARE, 1901.

DINGLEWOOD SHAKESPEARE MANUALS, BY STANLEY WOOD, M.A.

HENRY THE FIFTH, QUESTIONS AND NOTES. 1s.

"A little brochure of some fifty pages, which will suggest some useful thoughts to masters teaching the play."—*Journal of Education*.

MERCHANT OF VENICE, QUESTIONS AND NOTES. 1s.

"Cannot but prove useful to candidates for whom these plays are set."—*Scotsman*.

CAMBRIDGE LOCAL SHAKESPEARE, 1900.

AS YOU LIKE IT, QUESTIONS AND NOTES. 1s.

"They will tend rather to discourage 'cram' than otherwise. . . . We can recommend the book as a distinctly useful 'aid.'"—*Guardian*.

Each of the Manuals contains about 250 Questions, of which all the most difficult (about one-third of the whole number) are fully answered as models.

JOHN HEYWOOD, LONDON AND MANCHESTER.

**JOSEPH GILLOTT'S** Gold Medals, Paris, 1878, 1889.

Numbers for Use in Schools—  
 351, 352, 382, 404, 729, 303,  
 170, 166, 5, 6, 292, 293,  
 291 (Mapping), 659 (Drawing);  
 and (for Vertical Writing) 1045, 1046.

**STEEL PENS.**

# GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS FOR THE College of Preceptors Examinations, July & December, 1901.

ENGLISH.		RELIGIOUS KNOWLEDGE.	
	s. d.		s. d.
Shakespeare's Henry V. Edited by STANLEY WOOD, M.A., author of the Dinglewood Shakespeare Series, and the Rev. F. MARSHALL, M.A. ... 1 6		Marshall's St. Matthew. Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo, cloth ... 1 6	
Containing— Introduction.—Source, Editions, Date, Scene of the Play; the Unities, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes. Text with marginal and foot notes, and paraphrase of difficult passages. Appendix.—Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.		Containing— 1. Introduction.—Author, Life and Purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazirite Vow, &c., &c. 2. Text of the Gospel, with marginal and foot notes. 3. Comments on the Revised Version. 4. Glossary, and Chapters on Our Lord's Teachings. 5. Appropriately Coloured Sketch Maps. 6. Critical Notes.	
The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A. ... 1 0		Marshall's Acts of the Apostles. Part II.: Chapters XIII.—end. Edited by the Rev. F. MARSHALL, M.A. ... 1 6	
The O. and C. Spelling ... 1 0		Marshall's Church Catechism. By the same Author ... 1 6	
Preparation Papers in English Grammar. Per packet ... 0 8		The Prayer Book. Edited by the Rev. F. MARSHALL, M.A. (In the press.) ... 2 6	
Normal Copy Books. In 12 numbers each ... 0 2		Preparation Papers on St. Matthew. Per packet ... 0 8	
<b>HISTORY.</b>		Preparation Papers on Acts of the Apostles. Per packet ... 0 8	
The Imperial History of England. By ROSCOE MONGAN, B.A. ... 2 6		<b>BOOK-KEEPING.</b>	
The O. and C. History of England ... 1 0		Sarll's Practical Book-keeping. 128 pp., cloth ... 1 0	
Outlines and Dates of English History. By A. A. GUNNIS ... 1 0		Sarll's Double-Entry Book-keeping. 256 pp., cloth ... 2 0	
This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &c.		Sarll's Exercises in Double-Entry Book-keeping. 128 pp., cloth ... 1 0	
History Notes. By GEORGE GILL, F.R.G.S. With Maps ... 0 6		The above with all introductory matter, full explanations, outline keys, &c.	
Europe in the Eighteenth Century. By T. J. WALKER, M.A. Oxon. With Maps, &c. ... 0 9		Manuscript Books published to accompany the above.	
<b>GEOGRAPHY.</b>		For Practical:—Cash Book ... 5d. Ledger ... 0 7	
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition Physical, Descriptive, Political, Industrial, Commercial, Social. ... 4 6		Ledger (100 Accounts) ... 7d.	
Also published in Sections as follows:—		For Double Entry:—Journal ... 5d. Ledger ... 0 7	
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.a. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.		Short and Introductory Exercises ... 7d.	
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes. New Edition (ready September, 1900) ... 2 6		Key to Double-Entry Book-keeping ... 3 0	
The O. and C. Geography (Revised Edition). By GEORGE GILL ... 1 0		Key to Practical Book-keeping ... 2 0	
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms, and particularly useful for the Junior Forms Examination.) ... 1 0		<b>MATHEMATICS AND ARITHMETIC.</b>	
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies ... 2 6		Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A. ... 2 6	
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps ... 1 0		Marshall's Examination Euclid. Books I.—IV. ... 1 0	
<b>LATIN AND FRENCH.</b> s. d.		The O. and C. Algebra ... 1 6	
The O. and C. Latin, Part I. ... 1 0		Preparation Papers in Algebra. By A. CUDWORTH, M.A. ... 0 8	
The O. and C. Latin, Part II. ... 1 0		The O. and C. "Practical Arithmetic." 176 pp., crown 8vo (New Edition), cloth, enlarged. (With Answers, 1s. 6d.) ... 1 0	
The O. and C. Latin, Part III. ... 1 0		The O. and C. "Tests in Arithmetic." (With Answers, 1s. 6d.) ... 1 0	
Commercial French Correspondence ... 1 0		A Graduated Examination Arithmetic. 160 pp., cloth ... 1 0	
The O. and C. French, Part I. ... 1 0		The Metric Chart (60 by 40). In Four Tints, mounted and varnished ... 10 6	
The O. and C. French, Part II. ... 1 0		The Long Tot Book. By the Rev. CHARLES BROOKE, M.A. ... 0 3	
Phœdrus, Books I. and II. ... 1 0		The Cross Tot Book. By the Rev. CHARLES BROOKE, M.A. ... 0 3	
Eutropius, Books I. and II. ... 1 0		Cambridge Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per pkt. ... 0 8	
Cæsar, Book VI. ... 1 0		Oxford Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per packet ... 0 8	
Vergil, Æneid, Book VI. ... 1 0		<b>DRAWING (Freehand, &amp;c.).</b>	
Cicero, De Senectute ... 1 0		The New Government Drawing Copies. 32 Subjects, upon stout card in case ... 1 4	
Preparation Papers in French ... 0 8		South Kensington Demonstration Sheets. For Class Teaching (in Colour). On Mahogany Guards, per set, 24 Subjects to each set ... 7 6	
Preparation Papers in Latin ... 0 8		Also Mounted and Varnished on Boards, in Box, each set ... 15 0	
		No. 1. Freehand.   No. 3. Freehand.   No. 6. Freehand and Model.	
		No. 2. Freehand.   No. 5. Freehand.   No. 8. Freehand and Geom.	
		No. 9. Casts and Vases, shaded ... 6 6	
		New School of Art Geometry, 192 pp., by T. W. GOOD, D.D. ... 1 0	
		Exactly meeting the requirements of the College of Preceptors Examinations.	
		Science and Art Geometry, in Two Parts, each ... 1 4	

**New.** **New.**

## GILL'S "CARTOGRAPHIC" WALL MAPS

Edited by GEORGE GILL, F.R.G.S.

WALL MAPS WITH NEW AND DISTINCTIVE FEATURES:

New Method of "Coast" production. New Method of "Hill" Work. New Treatment throughout.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Size,  
80 x 60 in.

Price 16s.

- \*ENGLAND AND WALES.
- \*IRELAND.
- INDIA.
- ASIA.
- \*SCOTLAND.
- \*EUROPE.
- \*AFRICA.
- \*N. AMERICA.
- WORLD (MERCATOR).


\* The Set Geography for the Examinations.

## 2/6 GILL'S MILITARY DRILL. 2/6

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.



 *Headmasters should apply for*

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

### DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## EXAMINATION PAPER

AS USED BY THE

### COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Beams of 480 Sheets ... .. per Beam, 2s. 6d.

" " " 960 " " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets. Remittance should accompany Order.

HEWARD & SHELBOURNE, Wholesale and Retail Stationers,  
63 HIGH HOLBORN, LONDON, W.C.

## CAREY'S "GRADUS AD PARNASSUM,"

WITH THE ENGLISH MEANINGS.

Revised, Corrected, and Augmented by a Member of the University of Cambridge.

Post 8vo, cloth, price 7s.

THE STATIONERS' COMPANY, STATIONERS' HALL, LONDON.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises. By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c. Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin. Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID." Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

### ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS. Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

### A TREATISE ON

### ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination. Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY. With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

### PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples. Crown 8vo. Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

### SPHERICAL TRIGONOMETRY,

AND ITS APPLICATION TO GEODESY AND ASTRONOMY. With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.  
LONDON: LONGMANS & CO.

## A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd. ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

### THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

#### REVIEWS:—

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."

*Daily Telegraph*.—(Julius Caesar) "... is invaluable as an aid to the study of the play."

*South Africa*.—"What a handy 'book of the play' they form!"

*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."

*Athenæum*.—"Essentially books for students."

*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

	s.	d.
*AS YOU LIKE IT	2	0
*CORIOLANUS	2	6
*HAMLET	2	6
*HENRY V.	2	6
*JULIUS CESAR	2	0
*KING JOHN	2	0
*KING LEAR	2	0
*MACBETH	1	6
*MERCHANT OF VENICE	1	6
*MIDSUMMER NIGHT'S DREAM	2	0
*RICHARD THE SECOND	1	6
*TEMPEST	2	0
*TWELFTH NIGHT	1	6

\* For Current Examinations.

### BACON.

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... .. 2 6

Essays I.—XXXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

### MILTON.

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation."

\*PARADISE LOST. Books 1 and 2. (Just published.) s. d.

\*SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENNEROSO 1 4

\* For Current Examinations.

### SCRIPTURE.

Edited by R. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

### FRENCH.

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... s. d.

2 6

### GERMAN.

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... s. d.

2 6

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

## MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director.

## Professor MEIKLEJOHN'S SERIES.

**A First French Book.** By J. DE CUSANCE. Crown 8vo, 120 pp. . . . . 1s.

"It is an uncommonly good French Grammar, full of valuable material, and will make a thoroughly practical text-book."—*The Educational News*.

**The Art of Writing English.** A Manual for Students. With Chapters on Paraphrasing, Essay Writing, Précis Writing, Punctuation, and other matters. By J. M. D. MEIKLEJOHN, M.A. Second Edition. Crown 8vo, 340 pp. . . . . 2s. 6d.

**One Hundred Short Essays in Outline.** By Professor MEIKLEJOHN. Third Edition. Crown 8vo, 110 pp. . . . . 1s.

**The English Language: its Grammar, History, and Literature.** By J. M. D. MEIKLEJOHN, M.A. Eighteenth Edition. Enlarged, with Exercises and additional Analysis. Crown 8vo, 470 pp. . . . . 4s. 6d.

**Fifty New Lessons in English.** Being a Historical Method of Parsing. By Professor J. M. D. MEIKLEJOHN, M.A. Crown 8vo, 102 pp. . . . . 1s. 6d.

**A Short Grammar of the English Tongue,** with Three Hundred and Thirty Exercises. Eleventh Edition. . . . . 1s.

**A New Geography on the Comparative Method.** With Maps and Diagrams and an Outline of Commercial Geography. By J. M. D. MEIKLEJOHN, M.A. Twenty-fourth Edition. 135th Thousand. Crown 8vo, 630 pp. . . . . 4s. 6d.

**A School Geography; with special reference to Commerce and History.** With Maps and Diagrams. By J. M. D. MEIKLEJOHN, M.A., and M. J. C. MEIKLEJOHN, B.A., F.R.G.S., Crown 8vo, 410 pp. . . . . 2s. 6d.

**A Short Geography,** with the Commercial Highways of the World. Sixteenth Edition. Crown 8vo, 196 pp. . . . . 1s.

**The Comparative Atlas.** By J. G. BARTHOLOMEW, F.R.G.S., and Edited by Professor MEIKLEJOHN. Containing 64 Plates and a General Index. . . . . 2s. 6d.

**A New History of England and Great Britain.** With Maps and Tables. By J. M. D. MEIKLEJOHN, M.A. Fourteenth Edition. Crown 8vo, 740 pp. . . . . 4s. 6d.

**A Short History of England and Great Britain.** B.C. 55 to A.D. 1890. Twelfth Edition. Crown 8vo . . . . . 1s.

**A Short Arithmetic.** By G. A. CHRISTIAN, B.A., and A. H. BAKER, B.A. Crown 8vo, 196 pp. . . . . 1s. 0d.  
With Answers, 1s. 6d.

**A New Spelling Book.** With Side Lights from History. Eighth Edition. Crown 8vo, 152 pp. . . . . 1s.

**The Spelling List.** For Civil Service and other Examinations. With a Key to Correct Spelling. Third Edition. Crown 8vo, 146 pp. . . . . 1s.

**A New Poetry Book for the Use of Schools and Families.** Fourth Edition. 156 pp. . . . . 1s.

**A School Algebra for Junior Forms.** By F. OSCAR LANE, B.Sc. Lond., Assistant-Master, King Edward's School, Birmingham. Crown 8vo, 232 pp. . . . . 1s. 6d.  
With Answers, 2s. 0d.

LONDON: A. M. HOLDEN, 11 PATERNOSTER SQUARE.

## MACMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

### A HISTORY OF GREECE TO THE DEATH OF ALEXANDER THE GREAT.

By J. B. BURY, M.A., Hon. Litt.D. Durham. With Maps and Plans. Crown 8vo, 8s. 6d.

*Saturday Review*.—"Prof. Bury has supplied a real want. At last we have to hand in a single volume a history of Greece which is at once comprehensive, critical, and up to date—a history, moreover, which may be read not only with profit but with pleasure. . . . Will, no doubt, be found useful even by specialists. To schoolmasters and tutors it is a veritable godsend."

#### ENGLISH.

**Tennyson.—The Lotos-Eaters, Ulysses, Ode on the Death of the Duke of Wellington, Maud, The Coming of Arthur, The Passing of Arthur.** With Introduction and Notes by F. J. ROWE, M.A., and W. T. WEBB, M.A. Globe 8vo, 2s. 6d. [*English Classics*].

"No one could desire a better introduction, marked as it is by lucidity of exposition and acuteness of judgment. . . . For scholastic purposes a more judicious selection could not have been made. Each poem is annotated in a clear, adequate, and scholarly manner. The book is moderate in price, and in every way well suited for the junior student."—*Educational News*.

**Charles Lamb.—Essays of Elia.** Second Series. Edited, with Notes, by Prof. N. L. HALLWARD, M.A. With an Introduction by S. C. HILL, B.A., B.Sc. Globe 8vo, 3s [*English Classics*]. Previously Published. FIRST SERIES. Globe 8vo, 3s.; sewed, 2s. 6d.

#### LATIN.

COMPLETION OF MR. PAGE'S EDITION OF  
**Virgil.**

Edited, with Introduction and Notes, by T. E. PAGE, M.A., formerly Fellow of St. John's College, Cambridge. In 3 Vols. Vol. I., **Bucolics and Georgics**. Vol. II., **Æneid**, Books I.-VI. Vol. III., **Æneid**, Books VII.-XII. (Just Published.) Fcap. 8vo, 5s. each. [*Classical Series*].  
*Educational Times*.—"The notes appear admirably sound, lucid, and sufficient; and treated with the same common sense which marks all Mr. Page's work."

**The Catiline of Sallust.** Edited, for the use of Schools, with Introduction, Notes, and Vocabulary, by the Rev. G. H. NALL, M.A. Pott 8vo, 1s. 6d. [*Elementary Classics*].

*Irish Teachers' Journal*.—"The notes are scholarly, and display a full knowledge of the difficulties beginners encounter in reading Sallust. They anticipate every difficulty, and render the path of the student pleasant and enjoyable. We know of no better edition of Sallust to place in the hands of those commencing the study of Sallust."

#### MATHEMATICS AND SCIENCE.

**Workshop Mathematics.** In 2 Parts. By FRANK CASTLE, M.I.M.E. Globe 8vo, 1s. 6d. each.

Book I. now ready.

**The Elements of Euclid.** By I. TODHUNTER, D.Sc., F.R.S. New Edition, Revised and Enlarged by S. L. LONEY, M.A. Globe 8vo. Book I., 1s.; Books I. and II., 1s. 6d.; Books I.-IV., 3s.; complete, 4s. 6d.

*Educational News*.—"We prophesy a new lease of life for 'Todhunter's Euclid' as the result of Mr. Loney's work."

**Elementary Physics and Chemistry.** In 3 Stages. By Prof. R. A. GREGORY, F.R.A.S., and A. T. SIMMONS, B.Sc. (Lond.). Globe 8vo, 1s. 6d. each.

*Guardian*.—"The illustrations are numerous and useful; the experiments are good and require only simple apparatus; and the text is simply, clearly, and carefully written."

**Public School Protractor Scale.** Price 6d.

**Introduction to Zoology.** A Guide to the Study of Animals for the use of Secondary Schools. By Prof. C. B. DAVENPORT, Ph.D. With 311 Illustrations. Crown 8vo, 6s.

PRIZE EDITION NOW READY.

**Curiosities of Natural History.** By FRANCIS TREVELYAN BUCKLAND. Popular Edition, with a few Illustrations. Each Series separately, in small 8vo, 2s. 6d. (extra gilt binding, 3s. 6d.), as follows:—

1ST SERIES.—Rats, Serpents, Fishes, Frogs, Monkeys, &c.

2ND SERIES.—Fossils, Bears, Wolves, Cats, Eagles, Hedgehogs, Eels, Herrings, Whales.

3RD SERIES.—Wild Ducks, Fishing, Lions, Tigers, Foxes, Porpoises.

4TH SERIES.—Giants, Mummies, Mermaids, Wonderful People, Salmon, &c.

OCTOBER NUMBER NOW READY.

## THE SCHOOL WORLD.

A Monthly Magazine of Educational Work and Progress. Price 6d. Annual Subscription, including Postage, 8s. net.

LEADING CONTENTS.

*Special Revision Test Papers for the College of Preceptors Examination in December, 1900, for Second and Third Class Certificates.*

**The Law Relating to the Teacher's Tenure of Office.** By T. A. ORGAN, Barrister-at-Law.—**International Educational Congresses at the Paris Exhibition.** (From our Special Correspondent.)—**A Teacher's Library of Pure Mathematics.** By Prof. G. B. MATHEWS, M.A., F.R.S.—**What is Technical Education?—Observational Astronomy.** A Series of Notes upon the Positions and Apparent Motions of Celestial Bodies. III. (Illustrated.)

By Prof. R. A. GREGORY, F.R.A.S.—**International Correspondence as an Aid to Language Teaching.** By NEVILLE W. ROSS, B.A. (Cantab.), B. & L. (Paris).—**The Teaching of Chemistry and its Development.** Address by Prof. W. H. PERKIN, Jun., F.R.S.

MACMILLAN & CO., LIMITED, St. Martin's Street, London, W.C.

# CAMBRIDGE UNIVERSITY PRESS.

**EDUCATIONAL AIMS AND METHODS:** Lectures and Addresses by Sir JOSHUA FITCH, M.A., LL.D., late Her Majesty's Inspector of Training Colleges, and Author of "Lectures on Teaching," "The Arnolds and their Influence on English Education." Small crown 8vo, 5s.

*Journal of Education.*—"Lectures on Education" has become a standard text-book on pedagogics. The present volume is a kind of supplement or appendix. More miscellaneous and systematic than the former, it deals with some aspects of educational work to which my own attention during a long official life has been specially directed . . . the borderland which separates the corporate life of a school from the larger life of the family and the community."

**FIFTEEN STUDIES IN BOOK-KEEPING.** By WALTER W. SNAILUM, P.A.S.I. Crown 8vo.

This book has been written to combine a thorough explanation of the principles of double-entry book-keeping with a course of work suitable for preparation for the examinations held by the Society of Arts, Civil Service, Lancashire and Cheshire Union of Institutes, and kindred examining bodies.

Part I, comprising the fifteen studies or lessons, examines thoroughly the principles of book-keeping and the form and use of the books and accounts kept by a merchant or trader. A series of exercises are given upon each study. The studies on Bills and Cheques are believed to give all the information thereon that it is necessary for a trader to possess in the ordinary conduct of business.

The book may be used by young students, and an elementary course is marked out for that purpose.

Part II, is devoted to examination work. It contains seven examination papers (including those set by the Society of Arts in the years 1900, 1899, and 1898) fully worked as models. A selection of examination papers is also given for solution by the student.

The work is eminently adapted for use in the winter evening classes that are held to prepare for the spring examinations.

## PITT PRESS MATHEMATICAL SERIES.—NEW VOLUME.

**THE ELEMENTS OF HYDROSTATICS.** By S. L. LONEY, M.A., Professor of Mathematics at the Royal Holloway College, sometime Fellow of Sidney Sussex College, Cambridge. Crown 8vo, 4s. 6d.

*Extract from Preface:*—"The present volume is intended to be for the use of the class of students for whom my 'Elements of Statics and Dynamics' was written, and may be regarded as a continuation of that book."

## CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.—NEW VOLUMES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Professor of Education in Victoria University.

**A Short History of the Expansion of the British Empire, 1500-1870.** By W. H. WOODWARD. With Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenæum.*—"Thoroughly to be recommended."

*Educational Times.*—"Mr. Woodward tells this story 'in usum scholarum' in an altogether admirable manner."

*School World.*—"It is full of wisdom applicable to our own day."

**The Making of Character: some Educational Aspects of Ethics.**

By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, cloth, 2s. 6d.; cloth extra, gilt top, 3s. 6d.

*Literature.*—"An acute and thoughtful book."

*Leeds Mercury.*—"A volume which deserves to be not merely read, but studied by all practical educationalists."

**The Education of the Young in the Republic of Plato.**

Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo, 2s. 6d.

*Literature.*—"A scholarly translation, with notes and introductions, sketching well and concisely the history of Greek education."

**Geometry for Young Beginners.** An Introduction to Theoretical and Practical Geometry. By F. W. SANDERSON, Headmaster of Oundle School. 1s. 4d.

*Journal of Education.*—"We have read this little book with interest and pleasure, and feel sure that it will prove a most useful introduction to theoretical and practical geometry."

**Geometrical Drawing.** With Notes and Examples. By W. H. BLYTHE, Jesus College. Part I.—Plane and Elementary Solid. 2s. 6d. Part II.—Solid or Descriptive Geometry. 2s.

*Extract from Preface.*—"Part I. contains Plane Geometrical Drawing and Solid Geometry, so far as it is included in the Syllabus, Geometrical Drawing (Art), Subject 1A, page 231, *Science and Art Directory*, 1899. In Part II. is added a course of instruction in Solid Geometry suited to the Elementary Stage of Science Subjects as given on page 78 of the above *Directory*. This book will also be found of use to all Army Candidates."

*Guardian.*—"The book is very inexpensively got up, and it should be well within the reach of all who want a sound and concise exposition of the important geometrical problems."

*Schoolmaster.*—"The illustrations of this little book are beautifully clear and instructive, the teaching is simple and direct, and the object of the book is fully attained."

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

Edited, with Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College.

*Oxford Magazine.*—"Mr. Verity is issuing apace his volumes of the 'Pitt Press Shakespeare for Schools,' and we congratulate the Syndics on having secured so competent an editor. He knows what is wanted by school-children, omits pedantic comments, and provides in lucid and readable paragraphs all the necessary information."

*Practical Teacher.*—"Of the many school editions of Shakespeare's plays this is certainly one of the very best."

*Public School Magazine.*—"Of all editions of Shakespeare I have yet seen it seems to me to be the one most suited for the schoolboy."

**As You Like It.** Second Edition. 1s. 6d.

**King Richard II.** Second Edition. 1s. 6d.

**Merchant of Venice.** Third Edition. 1s. 6d.

**King Lear.** Second Edition. 1s. 6d.

**Julius Cæsar.** Fifth Edition, with Additions and Corrections. 1s. 6d.

**The Tempest.** Fourth Edition, with Additions and Corrections. 1s. 6d.

**Twelfth Night.** Fourth Edition. 1s. 6d.

**A Midsummer Night's Dream.** Fifth Edition, with Additions and Corrections. 1s. 6d.

**King Henry V.**

[Shortly.]

## PITT PRESS SERIES.—NEW VOLUMES.

**Bacon.—The New Atlantis.** Edited, with Introduction and Notes, by G. C. M. SMITH, M.A., St. John's College, Cambridge. [Nearly ready.]

**Scott.—Old Mortality.** Edited, with Introduction, Notes, and Glossary, by J. A. NICKLIN, late Scholar of St. John's College, Cambridge, Members' Prizeman for English Essay. 2s. 6d.

*School World.*—"A very good attempt to edit Scott's celebrated novel as a school-book. The hand of a scholar is traceable everywhere. The Introduction is especially admirable—not too long, yet sufficiently clear. The notes and glossary will be found extremely serviceable. The more of Scott's novels we have in this form the better for literary taste; they supply the right kind of material for a real appreciation of Scott's genius, and ought to assist in clearing the field of numerous inefficient attempts to do this very useful kind of work."

**Hauff.—Der Soheik von Alessandrie und seine Sklaven.** Edited, with Notes and Vocabulary, by W. RIPPANN, M.A., Professor of German at Queen's College, London. 2s. 6d.

*Educational Times.*—" . . . A welcome addition to the elementary reading-books available for schools . . . and Mr. Rippmann's name is sufficient guarantee for good editing."

*Practical Teacher.*—"An admirable edition of one of Hauff's most charming tales. The notes are concise, and are very well adapted for beginners in German. The vocabulary we have found complete so far as we have tested it."

**Cæsar.—De Bello Civili. Book III.** Edited, with Introduction, Notes, and Maps, by A. G. PESKETT, M.A., President and Tutor of Magdalene College, Cambridge. 2s. 6d.

*Educational Times.*—"A careful and thorough piece of work well worthy of its position in the 'Pitt Press Series.'"

*School World.*—"This edition, marked alike by genuine scholarship and simplicity, ought to hold the field for all purposes for which the book may be required. We find here . . . everything which should be found in an edition for the use and stimulus of an intelligent mind."

**Cicero.—Pro Lege Manilia.** Edited, with Introduction and Notes, by J. C. NICOL, M.A., Trinity Hall, Master of Portsmouth Grammar School. 1s. 6d.

*Athenæum.*—"This is a satisfactory addition to the 'Pitt Press Series.' Mr. Nicol shows in his short, but pertinent, preface that he has had teaching experience. . . . More care than usual is paid to matters of text, and the translations given are good."

*Guardian.*—"Mr. J. C. Nicol . . . has produced a pleasant and useful edition of Cicero's 'Pro Lege Manili,' an interesting and readable speech which has been previously edited in English . . . but which is well worth bringing into further notice. . . . The book is good, and should prove useful."

**Horace.—Satires.** Edited, with Introduction and Notes, by J. GOW, Litt.D. [In the press.]

**Sallust.—Catiline.** Edited, with Introduction and Notes, by W. C. SUMMERS, M.A., Fellow of St. John's College. [In the press.]

## CONTENTS.

	Page		Page
A Five Years' Record .....	399	The State Simplification of French Syntax: Text of the Ministerial Decree .....	413
London University .....	400	Registration of Teachers .....	415
Notes .....	401	Reviews .....	415
Summary of the Month .....	402	School Board Work; Modern Languages in Secondary Education; Prof. Bury's "Greece"; English Letters; A School Plato; Rock-Pictures.	
The Scandinavian School Meeting at Christiania .....	404	General Notices .....	419
A London Truant School .....	405	Correspondence .....	420
Forecasts and Comments:—Fixtures .....	409	National Home-Reading Union; Unmanageable Girls.	
Education Gossip .....	410	Meeting of the Council of the College of Preceptors .....	421
Appointments and Vacancies .....	411	College of Preceptors Professional Preliminary Examination, and Certificate Examination (Colombo Centre) Pass Lists .....	421
Literary Gossip .....	411	Mathematics .....	421

## The Educational Times.

### A Five Years' Record.

THE Parliament elected in 1895—a year marked for many of us by the Report of the Royal Commission on Secondary Education—is dissolved. We have often appealed to the Government, criticized its action, appreciated its efforts to advance with the times, and welcomed one or two of its cautious and half-hearted reforms. We can appeal to it no more; and, if we criticize, it must be as men who recite a chapter of recorded facts, but no longer hope to influence a Minister or a Board. Of course, there is a theoretical continuity during a General Election, even amongst political heads of Departments, and there is actual continuity on the part of the permanent officials. But we must expect a certain suspense and delay of progress as inevitable. The permanent officials are almost, though not quite, omnipotent. They have had the direction of things pretty much to themselves under the Duke of Devonshire, and they have virtually (we will not say deliberately) tripped up Sir John Gorst whenever his attitude began to indicate energetic motion. Nevertheless the political heads must always count for something, however strong and able the officials may be; and the President and Vice-President have both left their mark on the history of our national education.

What have the outgoing Government done for education, and for secondary education in particular? Their record is sufficiently familiar to our readers, without any repetition of the details. They have, in one word, made a beginning of carrying out the chief recommendations of the Royal Commissioners. Considering how new the whole question of reorganization was to the general public in 1895, and how little inclined the ordinary politician in a Cabinet is to trouble himself over anything that has not a popular or influential cry behind it, the achievement of the past five years is by no means insignificant. The first attempt of the President and Vice-President of the Committee of Council, and of the permanent officials, to make a move in the right direction was not successful. The Bill of 1896 might have been carried if Sir John Gorst had been in the Cabinet. It fell to the ground, not, as is sometimes said, through the reluctance of the County Councils or any mere dispute as to the size of administrative areas, but because the Government had delayed the Bill too long, and Mr. Balfour neither understood it nor cared for it, and Sir John Gorst was not strong enough to push it.

As for the Act of 1899, every one who reads these words is familiar with its virtues and defects. It marks the limit of agreement and conviction which has been attained by a Conservative Government, the political heads and the permanent officials of the Education Department, in working out the principles of the Royal Commission on Secondary Education. A shrewd observer, reviewing recent educational progress in the *Times* of September 6, pointed out that the idea of the Commissioners in regard to a Central Authority had been that it should be a Department of the Executive Government, presided over by a Minister of Cabinet rank responsible to Parliament, and absorbing in itself the educational functions of the Charity Commission and the Science and Art Department. But the Duke of Devonshire, influenced partly by the reluctance of his colleagues in the Ministry, partly by the departmental advisers whom he mainly trusted, was content with something short of this. His Bill created a Board of Education, the organization of which was entrusted to a departmental committee, and which "turns out to be little more than a rearrangement of the Education Department and the Science and Art Department, with no special provision for dealing with secondary education properly so called."

As many persons consider the influence of the Science and Art Department upon secondary education to have been in many respects injurious, it is not reassuring to find secondary education treated as a mere branch of scientific and technical education, and placed under the control of the late chief of that Department. No attempt, again, has been made to absorb the educational functions of the Charity Commission. No attempt has been made to give to the new Central Authority its proper status under a Minister of Education, as in every civilized nation of Europe. As at present constituted it is the mere nucleus and shadow of what it must some day become if the organization of education is ever to be a reality and the Central Authority is to advise, control, and guide the Local Authorities to whose hands must ultimately be entrusted the administration of education. It is, however, a step in the right direction. It provides the raw material out of which some future Ministry more alive to the national importance of the whole question, and less timid and cautious in dealing with it, may frame a really efficient organization.

The Bill of 1900 carries us no further. It was probably not intended to pass; for this autumn dissolution seems to have been in the air of Downing Street since the beginning of the year. We have no doubt that the Duke of Devonshire, whose good will to education is manifest, was perfectly honest in putting forward his cautious measure as a basis of practical discussion, calculated to clear the ground in future, either for his own Government or for their successors. As things have turned out, there is now but little inducement to sort out the details of this Bill or to suggest a modification of one clause or an extension of

another. New men must prepare new measures; the old men have shot their bolt.

With respect to elementary education, and the debatable ground between the elementary and the secondary, there is a great deal in the policy and action of the Conservative Government which might lead us into party controversy. We will not discuss the Voluntary Schools Aid Act of 1897, and the assignment of an annual grant of £800,000 to denominational schools. It was not an economical grant, for it has checked the flow of voluntary subscriptions; and it would certainly be a better policy from the standpoint of education pure and simple if we could all agree on a national system of universal application. But that is just what we cannot do. As for the higher-grade schools, and the Minute of April 6, though we have often protested against the anomaly of School Boards running secondary schools, and have demanded the clearer limitation of elementary and secondary education, it seems to us that the frequenters of these schools and their parents will have a very real grievance if the higher-grade schools are closed before the State has made ample provision for the same boys and girls by way of alternative. After all, it was the Education Department which allowed these schools to grow up and develop, without taking any decided step to prevent discourage them. It will be seen from a couple of paragraphs in our Summary of the Month that the general body of working men are complaining rather bitterly of the threat of the Board of Education to deprive them of what they regard as their own public secondary schools.

To-day, the first of October, the Consultative Committee enters on its recognized operative career. We cannot say whether the Board has any special work prepared for it, but in the meantime it has its defined and statutory work, to devise a plan for the creation of a register of teachers. No task could well be more important, and the Committee is competent under the Act to set about its performance without delay.

*London University.* THE reconstituted University of London will begin its teaching and administrative work this month, and it may not be amiss to recapitulate the general conditions on which it has been modelled by the Statutory Commission. According to its new Statutes, it starts with the lofty triple purpose of holding forth to all classes and denominations in the United Kingdom and elsewhere an encouragement to pursue a regular and liberal course of education, of promoting research and the advancement of science and learning, and of organizing, improving, and extending higher education. The most important of the existing public educational institutions within a radius of thirty miles from the central office of the University have been combined with the old examining University in the following way. A central supreme governing and executive body, called the Senate, is constituted, consisting of fifty-six members, some appointed by the Crown, some by public bodies, some by the Faculties of the University, and sixteen others elected by Convocation. This central authority will, in a great measure, do its work by means of three Standing Advisory Committees. The first will be called the "Academic Council"; the majority of its members will be composed of those members of the Senate who are appointed by the Faculties, and, speaking generally, its function will be to report to the Senate "upon any matter relating to internal

students." The second will be called the "Council for External Students"; the majority of its members will be composed of the members of the Senate elected by Convocation, and its function will be to report "generally upon any matter relating to the external students." Some comfort may be found by members of the University anxious lest the old high standard should be lowered in the fact that, while the first Committee will consist of twenty members, the second will number twenty-eight. The third Advisory Committee will be called the "Board to Promote the Extension of University Teaching."

To assist in the general government of the University, the Senate may appoint a Principal Officer with such title, powers, duties, and salary as it may deem fit, and may assign such powers, duties, and salary to the Vice-Chancellor. Further, the Senate will appoint three paid Registrars, or other officers, to act as clerks of the three Standing Committees. As regards the admission of students, there is to be a Board to advise the Senate upon all questions relating to the admission of students. This Board will consist of the Chancellor, the Vice-Chancellor, and the Chairman of Convocation, and a number of members of the Senate nominated by that body. One third of the members so nominated must be members of the Academic Council, and one third must be members of the Council for External Students. There are to be eight Faculties, and each Faculty is to elect one of its members to be Dean for two years. Two of these Faculties more or less exist at present merely on paper. A Joint Committee of the four Inns of Court having reported adversely to the proposals made by the London University Commissioners, all the Inns declined to take any part in the University, and, although the Incorporated Law Society proved friendly to the scheme, yet the Commissioners say that "to our great regret we have not succeeded in forming at present any effective Faculty of Laws." There has been a similar difficulty with regard to the Faculty of Music.

Three Faculties—viz., Theology, Engineering, and Economics and Political Science—are quite new. Students at King's College and other theological colleges will now be able to obtain, instead of a mere Associateship, the degrees of Bachelor and Doctor of Divinity. In the other two new Faculties students will be able to take degrees in Science. The subjects comprised in these Faculties have yet to be determined by the Senate. In connexion with the eight Faculties, twenty-four schools and institutions have already been made the "first schools of the University." Boards of Studies have been prescribed, and no fewer than thirty-two provisionally appointed, covering an extremely wide and up-to-date range of studies. Among them will be a Board of Marine Engineering and Naval Architecture.

Two classes of "teachers of the University" have been created: viz., the professors, readers, and so on, appointed directly by the Senate, and therefore called "appointed teachers," and the teachers on the staffs of public educational institutions within a radius of thirty miles from the central office, either already recognized by the Regulations (see page 5) or to be recognized by the Senate as "recognized teachers." Appointed teachers will be entitled to retiring pensions, and their lectures will be open, if the Senate thinks fit, to external as well as internal students on payment of the fees, &c. As regards matriculation, the Senate may make provision for holding separate matriculation examinations for different classes of students, having regard to the course of study which the



students propose to follow. Useful as no doubt such a provision will be to enable the various schools of the University to continue their work, it is to be hoped that the Advisory Board will insist, *mutatis mutandis*, on a properly high standard.

In general, examinations for internal and external students will be separately conducted, and certificates and diplomas will state whether the holder passed as an internal or as an external student. Candidates for the Senate have for a long time been busy. We have not seen a complete list of those already in the field and supported respectively by the "Union" and by the "Association." No doubt, every member of Convocation has already received the rival lists. It is to be hoped that the best candidates in both lists will be elected. The following remarks of the Statutory Commissioners need to be kept prominently in evidence for some time to come:—

We cannot but feel that statutes and regulations will not make a living University. Large funds will be required for the remuneration of University professors and lecturers and the provision and maintenance of libraries, museums, laboratories, and workshops.

Let all who realize the importance of the Metropolitan University unite in pressing on Parliament, the City, the London County Council, and other municipal bodies to provide these funds in no niggardly spirit.

### NOTES.

MANY of our readers must have observed how the fever of travelling is spreading among schoolmasters and mistresses. A decade or so ago most were content with a quiet visit to an English or Welsh watering-place, or with a leisurely amble in Scotland. Now, unless they be votaries of golf, teachers take their tickets for a long Continental tour, or a cruise to the North Cape or the Levant, whilst the ink of their mark lists is scarcely dry. Soon we shall find them emulating a University Local examiner we once knew who corrected his papers on a journey from London to Switzerland. Are salaries, at last, increasing, or is the general level of scholastic culture higher, leading to plain living and high thinking during term time and a yearning for the sublimest of Nature and the delights of Continental art galleries when the holidays come? Or is it merely an indication of the general national inability to withstand the blandishments of Messrs. Cook, Lunn, & Co.?

In his opening address before the Mathematics and Physics Section of the British Association at Bradford, Dr. Larmor, of Cambridge, made some remarks on the true function of examinations, which deserve attention from the Universities. In his opinion, except in the particular case of workers in rapidly progressive branches of technical science, a broad education is better adapted to the purposes of life than special training over a narrow range. In England we are apt to mix up the methods, and we find examinations based on the assumption that some amount of original research has been done by undergraduates at periods when they would be far more profitably employed in widening their ideas of learning. Dr. Larmor even advocates the confining of all examinations to general views of literature and science, leaving the stimulus of personal interest to lead students into specialized grooves of research. It seems a hard saying from the mouth of one of the most brilliant Senior Wranglers of this generation, but experience shows it to be sound advice. Examinations may have improved general

learning and culture, but they certainly do not make pioneers of research.

In that effervescent *pot-pourri* of literature, music, art, and craft known as the Welsh National Eisteddfod—this year held at Liverpool—one does not look to find much that is either solid or practical in educational constructive criticism. Its patrons are far too expectant of bardic and musical delights to grapple seriously with the prosaic. Principal Reichel's paper on the defects of technical education read before the Cymmrodorion section would probably have attracted greater attention before a more professional audience. Much remains to be done, as he pointed out, before the University Colleges are equipped to provide the full measure of technical education which the country requires. In its final stage, technical education is really education in a particular business or manufacture, needing all the latest appliances to keep the students in touch with the latest scientific discoveries. Somehow or other the money must in time be provided.

It would be well to use the term "applied technical education" for the special form of scientific instruction just referred to, in order to distinguish it from the more general preparation for a commercial or industrial, as opposed to a professional, career which is usually given in schools. It is for a satisfactory code of technical training in this sense that the secondary schools of the country have looked in vain, but which, we hope, the Board of Education will soon supply. It is, perhaps, not to be wondered at that South Kensington groped for it ineffectually in the past, as the task needs a wide knowledge of our national industries with a philosophical grasp of the principles of science on which their development is based. For this we require a philosopher who is an educationist. Can he be found in a Government administrative Department? If he can, it will be unnecessary to throw Latin to the wolves in the search of a code, as Principal Reichel seems prepared to do.

It is some satisfaction to find that, in spite of the seething turmoil of social and political life in South Africa, the work of the educational institutions seems to suffer no serious disturbance. To judge from a report in the *Cape Times* of the proceedings on degree day at the University at Cape Town, held last month, the "alarms and excursions" of the war were banished from the mind—or, at any rate, from the speech—of Dr. Muir, the Vice-Chancellor, when delivering his address. Even Sir Alfred Milner succeeded in divesting himself of the cares of Government in order to be present. Dr. Muir's speech was of spheres of education, and the true influence of school and University in the formation of character. One is somehow reminded of Izaak Walton writing his "Compleat Angler" during the upheavals of the Cromwellian revolution. The only reference made by the Vice-Chancellor to the temporary check which the University had received was calculated to inspire his audience with buoyant hopes:—"Fortunately the check is less than might have been anticipated, and there is also good ground for hope that it is of the nature of the momentary lull which precedes a forward movement of great magnitude and importance." We sincerely trust he will not be disappointed.

Not only Cambridge, but the friends of education everywhere,

suffer loss by the death of Henry Sidgwick. He had every opportunity of aiding and advancing good causes, for he was as well endowed with this world's goods as with mental and moral acquirements; but the point to his credit is that, having the opportunities, he used them. A genial appreciation in the *Athenæum*, signed by the initial of one of his closest Cambridge friends, reminds us that Sidgwick's pecuniary benefactions to the University were very large.

He not only gave a most generous donation towards the erection of new buildings for Physiology, but on two occasions, on his own proposition, his annual stipend as Professor was largely reduced for a term of years. In the first instance this was done in order to found a Readership in English Law, which enabled the University to secure the services of Dr. Maitland; in the second instance it secured the more speedy foundation of the Professorship of Logic and Mental Philosophy. By Sidgwick's death the University has lost a generous benefactor, a valued adviser, and one of its most learned professors, while many of us here have lost a much-loved personal friend.

As we mention in another column, Henry Sidgwick was largely concerned in the foundation and endowment of Newnham College. It is too early, as pointed out in an obituary notice in the *Guardian*, to estimate the extent of Sidgwick's influence on the mind of this generation or the next. Trained in the school of Bentham and Mill, he was eminently an English philosopher, and was not thought to have much sympathy for German metaphysics and idealism. Indeed, a famous *mot* attributed to him in regard to the papers of some examination candidate, who had been "doing his possible" to expound Hegelianism, makes him say: "I can see this is nonsense, but is it the right kind of nonsense?"

THE many friends of wild birds have started a crusade against the use of stuffed specimens for the purpose of object-lessons in schools. Were teachers content with London sparrows or pigeons, no harm would be done; but when sparrow-hawks and owls are widely sought for we certainly feel inclined to join the crusade. Besides, it is doubtful if stuffed birds are more useful for teaching purposes than good illustrations. The latter show the object's habitat and true pose and movement in a far more satisfactory manner than a stuffed glass-eyed glass-cased bird can be expected to do. It is not so much an accurate and detailed knowledge of a particular species which is necessary in the education of a child, but a love of Nature and country life. An enthusiasm for the joys of the country will be more easily created by good illustrations and descriptions supplied by a teacher than by passing a stiff and staring bird round a class. Were such perfect groups as some of those mounted in South Kensington Museum generally available, the extinction of a species would be far too great a price to pay even for such a boon.

THE Students' Association familiarly known in France as "l'A" was founded in Paris some fifteen years ago, with the object of cultivating friendly relations between students in the capital and students in the provinces, and then between these and students of other nations. Representatives are now to be found in nearly all, if not in actually all, the Universities of Europe. The French and foreign members, with the honorary members—these latter being largely professors—number some thousands. The Association publishes a monthly magazine and an *Annuaire*, international meetings are arranged, and its standing is so far recognized academically that in France announcements as to its proceedings are formally posted on the

notice-boards of the faculties. Some ten years ago the work even then accomplished was *reconnue d'utilité publique* by the Government; indirect pressure has been brought to bear by the Committee on more than one legislative measure, and some of the great Frenchmen of the age—Ernest Renan, Pasteur, Carnot when President, M. Anatole France, M. Sully Prudhomme, and M. Gréard among them—have shown active sympathy with the movement, by attending receptions, presiding at banquets, and delivering addresses. The headquarters have for a long time past been a five-storied house close to the Sorbonne and the Collège de France. The *commission des fêtes* is an important side of the organization—it could hardly be otherwise where French students are concerned—and not a few English visitors had the opportunity of seeing "l'A" very much to the fore on the occasion of the Students' Congress, with its fifty delegations, recently arranged in connexion with the Exhibition.

## SUMMARY.

### THE MONTH.

THE British Association met this year at Bradford, under the presidency of Sir William Turner. A correspondent of the *Liverpool Post* writes that one of the results of this gathering, which is likely to have an important and far-reaching effect, was an informal, but influential, meeting at which it was proposed to found a section for the discussion of educational questions, and to prepare the ground for a wider and more effective system of scientific and technical instruction.

The effect on those best qualified to guide public opinion is nowhere better shown than in the influence it exercised over Dr. Lodge, who, when he entered the room, thought that the topic was one of passing interest, which could be met by an educational conference; but, as speaker after speaker urged the importance of the subject, he became convinced of the necessity of the formation of a permanent section, which would be competent to treat of the subjects brought before it from time to time, and ended by seconding the proposal which Dr. Armstrong moved, recommending that the annual meetings of the Association be utilized for the discussion of questions relating to the scientific methods of education. The final outcome, announced at the general meeting of the Association, was to the effect that the Committee would deliberate during the year, and report on the whole subject at the next meeting, to be held in Glasgow.

ON September 14 Mr. Bryce presided over a meeting of the British-American group of the International Association for the Advancement of Science, Arts, and Education, which was held in the United States pavilion of the Paris Exhibition. Mr. Bryce said:

He hoped all present would endeavour to bring the aims of the organization to the knowledge of those who would be able to give it financial help. Science and learning proverbially went hand and hand with poverty, so that those engaged in the work rarely could give more than their work. But many had never known poverty, and were anxious to give of their wealth to works of public utility. He urged on those the modest claim which this Association put before them. He would not detail the work of the Assembly, but he wished to dwell for a moment on the excellent evidence of international co-operation which was to be seen in this Association. Lately there had been a meeting of their Chambers of Commerce in Paris, and much had been said of the advantages to be gained from peace and harmony among the nations. But commerce, much as they desired it to be a means of peace, sometimes led to strife. He thought there was something which made for peace far more strongly than commerce, and that was the science and learning which did not depend for their growth on competition and rivalry. For this reason he felt that their Association should be a great factor towards international understanding. It was a significant fact that their first meeting should take place in Paris—the home of the great University of the middle ages, the leader and instructor of Europe. In the twelfth century a beacon fire had been lit in Paris which had done more to advance the civilization of Europe than any other. Thither had come the teachers and scholars of all lands to discuss together the deep questions for which solutions were being sought. The Exhibition had made an opportunity for the coming together of the *savants* of the world, and the International Association gave the means to continue the friendly relations there begun.

THE Assistant-Masters' Association met at Manchester on

September 14-15. On the former date the Association dined at the Grand Hotel. Mr. A. R. Gridley, of Emanuel School, London, presided, and amongst those present were Archdeacon Wilson, Prof. A. S. Wilkins, Mr. E. J. Broadfield, Mr. H. D. Rouse (Rugby), Mr. E. Kitchener (Rugby), Mr. S. Winbolt (Christ's Hospital), Mr. A. G. Munro (City of London School) Mr. H. W. Atkinson (Rossall), the Rev. W. C. Massey (Bedford Grammar School), Mr. G. F. Bridge (Ipswich), and Mr. Francis Jones (Manchester Grammar School). Archdeacon Wilson, in proposing the toast of "the Association," mentioned that forty years ago he was a member of a similar society known as the "U.U.'s," or "United Ushers," which Dr. Temple, when on one occasion it met at Rugby, facetiously designated the "Uneasy Underlings." Out of that society, or at any rate out of the need which it indicated, had doubtless sprung the present association. He thought there was need for such an organization, in addition to the National Union of Teachers. The Archdeacon advised the Assistant-Masters' Association to place efficiency before mere pecuniary advantage. They must not degenerate into anything that could be called a trade union. As long as they placed efficiency of education first, and not their own personal interests, they would have the support of everybody interested in education; but they might easily forfeit this if there was a suspicion of trade unionism about their Association.

On the 15th a number of interesting papers were read, and the following resolutions were carried:—

That the meeting, while thanking the Government for the Bill for enabling Local Authorities to aid secondary education, is of opinion that some coercive force will be found necessary to compel the right disbursement of the money, and also that in the constitution of the Committee some member shall be selected as representing institutions for secondary education in the locality.

That the position of assistant-masters in public secondary schools constitutes a serious obstacle to the efficiency and progress of secondary education, and demands the immediate consideration of the Government and of educational authorities, and that this meeting would especially draw attention to the inadequate salaries paid to assistant-masters, the absence of a general pension scheme or of any system of promotion, and the anomalous conditions of service under which assistants hold their posts at the pleasure of headmasters.

DEALING, on September 17, with the subjects raised at the meeting of the Assistant-Masters' Association, the *Manchester Guardian* made some very pertinent comments:—

In no department of public service is a contented mind more essential to the efficient discharge of duty than in the case of the school-master. Yet at a meeting of teachers at Altrincham on Saturday the complaint of general insecurity was repeated, and substantiated by undeniable facts. "Every one deplores," wrote Mr. Howard, one of the inspectors of schools, "the want of some arrangement under which teachers can rest content, feeling that they cannot suffer at the hands of capricious managers of School Boards." When it is not only asserted, but proved, that many teachers, and especially rural teachers, have to guide their practice by the precepts of Macchiavelli rather than by Locke if they would retain their posts the matter assumes public importance. What kind of training can a teacher be expected to give who manifests sturdiness of character or independence in the discharge of his duty at the risk of his livelihood? Time after time the Minister of Education has admitted in the House of Commons the injustice of many of these dismissals. And, if it were not only for the trade unionism of which teachers are advised to beware, matters would be still worse. The demand, peacefully pressed for thirty years, is that efficient elementary teachers of good moral character shall not be dismissed at the caprice of an arrogant manager, or the whim of a small School Board, without appeal. If this is not a reasonable request, what is?

THE Trade Union Congress adopted the following resolutions in regard to secondary—that is, the extension of public elementary—education, which had been prepared by the standing Parliamentary Committee, professedly in consequence of a deputation which had waited on it in July, "on the subject of higher-grade education":—

1. That the scheme of national education foreshadowed by the Act of 1870 shall be completed and made secure by the appointment in every district of Education Authorities elected as freely and democratically as other municipal bodies.

2. That they shall be empowered to provide efficient and suitable education for all who require it.

3. That clerical managers and clerical organizations shall not be allowed to control the education of the people, to serve sectarian purposes.

4. That the elementary and higher education of the people shall be at the public expense—free, unsectarian, and under the management of the elected representatives of the people.

THE circular of the Parliamentary Committee in which these resolutions were put forward was a very outspoken document. It complained that the late Conservative Government, whilst making an annual grant of nearly £800,000 to clerical organizations, had impaired the settlement of 1870 and failed to give "democratic control over education" to the people at large.

But it is in regard to the higher education of children of humble birth that the greatest mischief is being accomplished. Six-sevenths of the nation pass through the elementary schools; does any one suppose that the highest intelligence is confined to the other seventh? Even "hewers of wood and drawers of water" need foremen and managers better equipped than themselves, and all history shows that not only foremen and managers, but some of the greatest masters in trade and manufacture, and even in the professions and in art and science, have struggled painfully upwards from the humblest ranks of society. Who can estimate the value to the nation of those who rose through ignorance and poverty and years of manual toil to their proper work? And, still more, who can estimate the national loss in the crushed intellects of those gifted sons who never surmounted the initial difficulties of life? This is above all others the greatest problem of national education. This is the problem which the democratic School Boards in the great towns have, during the last thirty years, attempted to solve by creating "higher-grade" schools and classes in which those scholars who remained at school could acquire more advanced knowledge.

In brief, the circular complains that the Government dealt a fatal blow at the higher-grade Board schools, without making any adequate provision for the continuance of their work.

THE Scottish Universities Commission, appointed under the Universities (Scotland) Act of 1889, has published a General Report on the expiry of its mandate. The powers of this body were, under the Statute, to remain in force until January 1, 1892, but the term was extended by Order in Council to January 1, 1898. Those powers included the arrangement of the financial affairs of the Universities, including the distribution of the Parliamentary grant of £42,000 a year, and the rules for the granting of pensions to principals and professors, the regulation of the manner and conditions in and under which students should be admitted to the Universities, of the course of study, manner of teaching, and of examinations for degrees, the revision of foundations, the foundation of new professorships and lecture-ships, the regulation of the admission of women to graduation, and of many other matters specified in the Act. The number of ordinances reached 169. The Report gives a full account of the proceedings of the Commissioners, and describes and explains their action regarding many details of University administration and curriculum.

THE Commissioners made various reforms in regard to curriculum, examinations, bursaries, &c. Amongst other changes of curriculum, they allowed students to select among the recognized subjects any number not exceeding five, and to substitute modern languages for either Latin or Greek. The Report points out that the influence of the bursary examinations on the whole educational system is very great. They guide and determine in a remarkable degree the character of the advanced teaching in the secondary schools. Any discouragement which their arrangements may offer to the study of classics will be quickly felt in every school. Without a safeguard such as the clause in question provides, grave and far-reaching mischief is likely to be done to the classical education and, ultimately to the higher learning, of Scotland. The Commissioners explain the reasons which caused them to abolish the old system of the payment of Scottish professors by fees. Now these fees are treated as earned by the University; and the professors receive salaries, which, in some cases, are appreciably lower than the incomes they derived under the old arrangement. The Report concludes with a lengthy explanation and defence of the attitude of the Commissioners in the matter of the affiliation of University College, Dundee, to St. Andrews University, which led to prolonged difficulty and litigation.

THE Board of Education has issued a circular to training colleges calling attention to the fact that after 1900 the grants for science and art will be paid upon the reports of the inspectors, and not, as hitherto, upon examination results. The authorities of the training college will have to send to the Board of Education a statement of the proposed courses of instruction for the ensuing academical year, and, unless the syllabus to be

followed is one of those contained in the "Science and Art Directory," a syllabus of the course is to be forwarded and approved. Each course must consist of at least twenty-eight lessons of not less than an hour each, and must extend over three terms. The rooms in which science instruction is given must be open to inspectors at all times when instruction is proceeding. No student may be registered for more than two courses in the same year. Students must take the examination held by the Board of Education or a University examination, or else an examination held by the college authorities. Grants will be made at the rate of 25s. per student for each approved course in mathematics or theoretical mechanics, and at the rate of 35s. for each approved course in any other subject of science, and 10s. for drawing.

A REPORT by the Scottish Education Department upon the inspection of higher-class schools and the examination for leaving certificates in Scotland for the present year has been published. The high schools inspected numbered eighty-seven, and in no case has an inspector's report been sufficiently unfavourable to call for the withholding of certificates. An appreciative statement of the advantages conferred upon Scottish education by the higher-class schools is followed by an expression of regret that where liberal educational provision has been made the inspectors have so often to lament that the pupils are withdrawn at an age too early to benefit fully by it. This is, indeed, one of the most serious difficulties against which secondary education in Scotland has to contend. Attention is also drawn to the fact that scholars who go to the secondary from the State-aided schools "are not always fitted by previous education to take their places in the same class with those who have had the advantage of being trained with a view to higher education."

THE Joint Agricultural Council in the East and West Ridings of Yorkshire are promoting an extensive scheme for the study of agriculture in the year 1900-1901, for which the Yorkshire College at Leeds is adopted as the centre. At the Manor Farm, Garforth, near Leeds, the practical experiments are carried on, and special exhibitions are offered so as to enable farmers' sons to take the winter course of instruction. The County Major Scholarships are available for agricultural study at the college. Competitive examinations are provided for, and arrangements have been made for the carrying out of experiments at Manor Farm with stock and crops or tests of new implements and varieties of seeds.

PROF. H. SIDGWICK, who recently retired from the Chair of Moral Philosophy at Cambridge, died on August 28. Henry Sidgwick was born at Skipton in 1838, and was educated at Rugby and Trinity College, Cambridge, where he graduated as Senior Classic. He was Fellow of Trinity College from 1859 to 1869, and Lecturer of Trinity College from 1859 to 1875, when he was appointed Prælector of Moral and Political Philosophy. He was appointed Knightbridge Professor of Moral Philosophy in 1883. Prof. Sidgwick was the author of "The Methods of Ethics" (1874), "Outlines of the History of Ethics," "The Principles of Political Economy," "Elements of Politics" (1891), "Practical Ethics" (1898), and of several articles on philosophical and literary subjects. He took a prominent part in the promotion of the higher education of women at Cambridge, especially in the foundation and management of Newnham College. He was Litt.D., LL.D. of Edinburgh, Glasgow, and St. Andrews, and D.C.L. of Oxford. He married in 1876 Eleanor Mildred, daughter of the late James Maitland Balfour, of Whittinghame, and sister of the Right Hon. A. J. Balfour, M.P. Mrs. Sidgwick is Principal of Newnham College. Mr. Arthur Sidgwick, of Oxford, is his brother, and his sister was the wife of the late Archbishop Benson.

THE premises of the Royal College of Art, under the Board of Education, at South Kensington, are being modified to meet the requirements of the reorganization which has been adopted by the Board on the advice of the Council for Art. This Council consists of Sir William Richmond, R.A., Mr. T. G. Jackson, R.A., Mr. E. Onslow Ford, R.A., and Mr. Walter Crane. The Headmaster of the college is Mr. Augustus Spencer. M. Lantéri is the Professor of Sculpture and Modelling, and the appointments to the Professorships of Painting, of Architecture, and of Design are likely to be announced shortly. The total number of students to be admitted to the college is 350, of whom 150 may be fee-paying students. The fee for each fee-paying student will be £12. 10s. per term, and there are two terms in each session of

twelve months. All students admitted (either free or on payment of fees) must have satisfied the Council of their ability to profit by the special courses of instruction, to provide for which the college has been divided into an Upper and a Lower School. Students will be placed in one or other, according to their proficiency, and will be required to pass through the four divisions of each school—namely, those for ornament and design, drawing and painting, modelling, and architecture. As part of the Upper School course, technical instruction will be given at evening classes in a few of the following subjects:—Book illustration, etching and lithography, stained glass, stone and marble carving, wood carving, mosaic, plaster and gesso work, metal work, shuttle-weaving, tapestry-weaving, embroidery, furniture and cabinet work, pottery, &c.

THE Board of Education has prepared a new syllabus of work introductory to the study of hygiene. The introductory section deals with the chemistry of food and other matters relating to domestic science. We understand that the organization of this comprehensive scheme of hygienic work is largely due to Miss Deane. It is intended that the instruction in Section I. should be based on experiments performed, as far as possible, by the students themselves, and should be taken in a spirit of inquiry or research. The suggestions for practical work are intended to indicate the kind of experiments that are desirable, and not in any way to limit or define what these shall be. The object of the course is to inculcate habits of accuracy in reasoning and manipulation, as well as to show on what scientific principles domestic management and hygiene are governed.

HERE is a full list of the *grands prix* awarded at Paris to British educational institutions, &c. The "etcetera" is necessary, seeing that this very comprehensive list includes a Government Department and an individual publisher.

1. *Primary Education*.—Education Committee of the Royal Commission (Organization of English Section), Education Committee of the Royal Commission (Organization of Scottish Section), London School Board, British and Foreign School Society, National Society.

2. *Secondary Education*.—Collective Exhibit of Preparatory and Public Schools, Girls' Public Day School Company, Collective Exhibit of Secondary Schools of Scotland, Collective Exhibit of Intermediate Schools of Wales.

3. *Higher Education*.—University of Oxford, University of Cambridge, Victoria University, Education Committee of the Royal Commission (Organization of English Section), H. Frowde (Oxford University Press).

4. *Special Artistic Education*.—The Board of Education, South Kensington, for Collective Exhibit of Schools of Art of the United Kingdom.

5. *Technical and Commercial Education*.—London County Council (Central School of Arts and Crafts), City and Guilds of London Institute (Examinations Department).

In addition to the *grands prix*, a very large number of medals have found their way to this country.

THE University Court of St. Andrews, in addition to creating a new Chair of Anatomy, endowed by the munificence of Lord Bute, has resolved to continue the present Lectureship in Botany as a permanent lectureship. It will also proceed at once with the creation of a Professorship of Physiology, to come into effect on the death or resignation of the present Chandos Professor of Medicine, and to be then endowed with the revenues payable to that Professor. Until the endowment is available, the present Lectureship in Physiology will be continued.

THE programme of courses of London University Extension Lectures arranged for the Michaelmas Term is very comprehensive. Nearly fifty local centres—two or three as far as twenty miles from Charing Cross—will benefit by the lectures, which include a great variety of subjects, such as "The History of London Local Government," "The Poetry of Tennyson," "English Architecture," "Masters of Modern English Fiction," "Greek Sculptors," and "London Men of Letters."

THE sub-committee of the London School of Economics appointed to consider the candidates for the Research Studentship on Compensation, have elected Mr. C. P. Sanger, M.A., Fellow of Trinity College, Cambridge.

### THE SCANDINAVIAN SCHOOL MEETING AT CHRISTIANIA.

THE four days' school meeting at Christiania, which was attended, from August 7 to August 10, by sixteen hundred teachers from Sweden, two hundred from Finland, thirteen hundred from Denmark, and two

thousand from Norway, is of some importance to us in England; for these countries, we are beginning to learn, can teach us much more than Sloyd. The Danes can show us their people's high schools, the Swedes their proof-year for University men intended for secondary schools, the Finlanders their *Samskoeler*, and the Norsemen a modernizing of the secondary school that takes our breath away. But, for a country like our own, with very many private schools, which the State in its organization of secondary education is puzzled what to do with, the lessons and varied experience to be derived from Northern Europe are simply invaluable.

The State-recognized private school—it sounds like a contradiction in terms to an English ear—plays a great part, often a leading part, in all these four countries. This is especially so in Christiania and Copenhagen. In those two capitals every secondary school, with a single exception in either case, is a private school. The statesmen of the North have learnt how to saddle the willing horse, and then to give him his head; they know how to make education cheap without creating a State monopoly. When the facts come to be known in their fullness, they may give our senators and administrators an altered estimate of the capacities, under fitting conditions, of an instrument which for want of some principle of discrimination has in our country fallen into undue discredit.

This quinquennial school meeting in the North (*Det Ottende Nordiske Skolemøde*) is the eighth of its kind. Like our own Teachers' Guild, it draws its members from every part of the teaching profession, from the highest to the lowest. The Minister for Church and Schools in Norway (Eitarsraad Wexelsen) was present, and preached one of the opening sermons. There were many members of Parliament from the various countries, and some professors from the Universities. Eminent secondary teachers were well to the fore, both as readers of papers and as participators in discussion; but the great majority of the members were not secondary teachers, but teachers from the elementary schools. They found, on their arrival, a series of useful documents prepared for them—*e.g.*, full lists of the members from the different countries, a full programme of the meeting, containing maps, abstracts of the thirty-three papers to be read, and the words of twenty-one songs, mostly of a national character; also a brief historical account, drawn up by a score of experts, of the chief developments in Scandinavian schools since the last meeting ("De Nordiske Landes Undervisningsvæsen, 1895-1900." pp. 136).

Of the thirty-three papers read, twenty-one related to subjects interesting to teachers of all schools; seven were of especial interest to elementary teachers, and five to secondary. Five of the papers were taken at general meetings and twenty-eight at sectional meetings. Of the former, the most interest was shown in a set of three papers on "Co-operation between the Schools of the North"; in Dr. Nørregård's contention that the school-history should not be a history of Norway, or Sweden, or Denmark, but of all three in their relation to one another; and in Rector S. Almquist's paper on "The Period between Youth and Manhood." Of the sectional papers may be mentioned Miss Anna Sandström's, on "The Method of Incorporating the History of Culture with the Ordinary History-Lesson," and a paper asking the question whether the development-hypothesis can usefully be introduced into the religious lesson in school.

In the papers and discussions no Swede tried to speak Norse, nor did any Dane speak Danish in the Norse way. Each spoke as he speaks at home; and it was interesting to see how readily each was understood. There is a greater difference in each country between the King's speech and the more pronounced dialects than between any of the three languages and the other two. There was no sort of indication that the speakers came from three or four different countries of varying political conditions. They met as friends and brothers. In such easy interchange of opinions and plans going on every day in numberless newspapers and periodicals, and brought to a focus at the great meetings, every new departure in the schools of one country immediately becomes the subject of comment or criticism amongst its neighbours. In no country are the educational questions entirely different from those in the other three; in no two countries are they entirely the same.

It is interesting to watch whether a change in one country is adopted or not adopted by its neighbour, to notice how long the adoption may be delayed, whether the adoption be partial or entire, and what new elements may be introduced in the passage from one country to another. It is this that makes the North a quite unique laboratory of educational research. Of such research the Conference just closed constitutes, by its printed documents, by its discussions, and equally, perhaps, by its informal friendly meetings, a valuable five years' record.

It seems incredible that such developments taking place in countries so near akin to us in blood, in religion, and love of freedom should so long have been to England as an unopened book. If the introduction of comparative grammar revolutionized our study of language, so that, as Prof. Skeat once said, we have made more progress in thirty years than in the previous two thousand, the study of comparative education must prove equally fruitful. It is a study that is, of course, always going on among cultivated peoples. But in Scandinavia it is, in the circumstances of the case, closer, more varied, more fully informed than elsewhere.

When the last meeting was held, in Stockholm, five years ago, the relations between Norway and Sweden were much more strained than, happily, they now are; and it was remarked by a competent observer how great the influence of the meeting had been in diminishing differences—how impossible it was for anything like war to break out between people who met one another with such hearty good will. At the meeting just concluded there was one mute reason why Scandinavians should draw more closely together, which in its sad intensity was not present five years ago. The two hundred Finns, though all of course speaking Swedish, took no part in the reading of papers and very little part in the discussions. No wonder, with their case and that of North Sleswick before him, that Dr. Nørregård, of Testrup, in Jutland, and some of his friends have been so active last year and this in promoting meetings for deepening the feeling of Scandinavian unity. In his paper, or rather address, at the school meeting on Wednesday, August 8, he exclaimed: "There is for us but one language, one Fatherland." This may be called the incident of the meeting. The Norwegians have been maintaining, as against the Swedes, that "the kingdom of Norway is a free, independent, indivisible kingdom, not to be bartered away" (so runs the written Constitution of 1814), and that the only union between Norway and Sweden lies in their having one King. They will not acknowledge that Norway and Sweden are parts of one Fatherland. The matter was at once briefly debated, and was discussed at greater length, in the best of tempers, at private meetings afterwards. At the final meeting of the Conference, held in the open air at St. Hanshangen two days later (when the weather fortunately was a little more propitious than on the previous days), the President of the Conference, Mr. Otto Anderssen, an accomplished member of the Norwegian Left, had an opportunity of defining more exactly the Norwegian position. "The thought of a united North," he said, "has, time after time, formed ideals which lie like shattered wrecks on the shore of history. Such an ideal for noble and high-spirited thinkers, as for ambitious statesmen, has been indissolubly connected with that of a political community, wherein the separate peoples were merged as in a higher unity. History shows a different picture—the Northern peoples steadily developing their individuality. And we shall hail this development with gladness; for it denotes for our spiritual life a richer play of colour and new paths wherein to walk. The national idea is right, when it gives the powers free play; wrong, when it dwindles into prejudice and shrinks from the light. And so little does it stand in the way of close, sympathetic relations with other peoples that, on the contrary, it longs for and demands them. Let us not be afraid to acknowledge the truth that, when the Northern peoples work heartily together in all the paths of culture, we have in view a blessed end, a blessed duty. . . . We schoolmen and women will teach our young people to love their own land and their own people; but we will also teach them to honour the other peoples of the North, and give them the next warmest place in their heart."

J. S. THORNTON.

### A LONDON TRUANT SCHOOL.

THE London School Board now spends quite a princely sum every year on the education of half a million children. Despite all efforts, a considerable proportion of London children absent themselves; they refuse to be penned inside the pleasant educational fold. Sometimes their parents aid and abet this refusal by frequent midnight fittings. The inscription of the postman on certain missives might be chalked on their doors: "Gone away; left no address." In some cases the children not only defy the omnipotent Board, but the parents themselves. This is usually the case where the father works all day, betakes himself to the public-house at night, and where the mother is one of those poor simpletons who has no weight at all in the home.

Parents are prosecuted, whether the fault be theirs or not, and the youthful offender usually has a sentence of three months' committal to the truant school passed upon him. At intervals the legal luminary on the Bench, most dignified dispenser of justice, spectacles on nose, will look down benevolently on the small urchin in the dock:—"Why don't you go to school?" Usually there is no answer, as there are moments even in the career of small boys when cheek forsakes them. But, occasionally, the colloquy runs as follows:—"I dunno." "Does the teacher beat you?"—"No, Sir." "Do the other boys tease you?"—"No, Sir." "Then [a trifle more asperity in the voice] why don't you go?"—"Please, Sir, I don't like it." "Three months." This is the sentence for a first offence, four months for a second, six for a third; nine being the maximum. The law always acts as if truancy were a mere temporary aberration, curable by a brief stay at the truant school. It may be so in about 50 per cent. of the cases, but in the remainder officers find that children appear in the school over and over again. Such "repeats" are, so far as present experience goes, incurable; there are boys at Highbury now serving their seventh term, and who have received all their education within the walls of the institution. This school, which I recently visited, was started by the London Board some ten years



ago. It accommodates two hundred boys at once; as the sentences are short, some five hundred pass through every year.

The work is divided into two parts, manual instruction and book learning. Half the boys have a three hours' spell of books in the morning, the remainder in the afternoon. Three schoolmasters deal with this part of the work. All appeared mild and gentle with the boys, and I had not the least difficulty in believing what one of them stated, that they have no trouble whatever with their pupils, who distinctly recognize that all resistance is useless. One of the masters stated that about 7 per cent. of the boys cannot make progress. One of these, a fairly developed boy of eleven, was called out of his place. The master pointed to a large *the*: the boy did not recognize it, knew *h*, called *e*, *b*. It is, of course, evident that such boys should be carefully weeded out and placed in the special schools of the Board for the mentally defective. There, with the kindergarten system, and under women's tuition, which includes a large amount of intuition, some progress would be possible, or, at least, the boy's mental defect would be recognized—always a step in the right direction.

Another big boy, now undergoing his seventh detention, was called out of his place and questioned as to why he did not like school, but no satisfaction was obtained. He is so well behaved that he can be trusted with the oversight of small boys. Intelligence hardly seemed a strong point; the master and I fell on an argument as to whether some hereditary nomadic instinct does not reappear in such cases, making practical objection to the dull uniformity of civilization. Some of the boys read with considerable fluency; and, after all, there is no better test of education than good reading.

In the manual departments about twenty boys are told off to do the housework, and they do it excellently well; everything is spotlessly clean—the distemper on the walls, the well scrubbed boards, the polished windows, the bedding, the slated corridors, all were clean. Other boys enter the laundry, where they wash, mangle, iron. Should fate send them to South, West, or any other point of Africa, such boys may rejoice that they have learned the art of washing their own shirts. Smaller boys were usefully employed in the matron's room, sorting linen, darning socks, and in other light work. In the tailoring department boys were making coats and trousers under a master tailor. All the garments I saw were well made; their particular use is for appearance at church on Sunday. No suits are ever given away. It did not strike me at the moment to ask what was done with the accumulation of coats and trousers as the years roll on. Another department manufactured capital coir mats, large and small. The large mats are used in London Board schools. It seemed a fitting Nemesis that they who hasten to school with glad feet should wipe them on mats manufactured by those who have failed to obey Britannia's mild behests. In imagination I saw her sitting on her wheel, and waving directions with her trident to have those mats made. Rule, Britannia! In the bakery a few boys work under the direction of a master baker.

Another batch of boys were making boots. They are not the kind of boots supplied by wicked, money-grabbing contractors to our unfortunate troops in South Africa, but a most solid and substantial article, a trifle weighty; probably they could be guaranteed to last a year at least. The youthful shoemakers pursued their various tasks in silence; they did not seem at all unhappy. But, for once, the London Board seems determined to exact the pound of flesh; and the various masters of trades see that it is done. The woodwork department is another useful branch. Sixteen boys are taught at once to use their hands. They make picture-frames, soap, salt, and other boxes, card-trays, tables, dovetails, letter-racks, and so forth. There were not many objects to be seen on the occasion of my visit, as a class of boys had just completed their course, and the Governor, Mr. Peall, had wisely permitted them to carry home all the articles they had made.

The dining room is quite a handsome apartment—lofty, well lighted, pleasantly coloured. The tables are of wood, well scoured every day after dinner. Everything was beautifully clean; and, if it be true that cleanliness is next to godliness, the inmates of the truant school are pressing on towards the mark. Each boy has a bed of his own in one of the eight dormitories. An iron bedstead has canvas laced on it, and the bedding is folded up in military fashion during the daytime. The boys looked very clean and healthy. The dietary is laid down by the managers, and approved by H.M. Inspector of Industrial Schools. Breakfast consists of porridge with sugar, and bread; supper of bread, dripping, and cocoa; dinner of meat thrice weekly, once fish, twice soup, once suet pudding. Potatoes, or other vegetables, are added to the dinner.

Highbury certainly needs a larger and loftier schoolroom; a hot summer's day is not the one for the fastidious to test the ventilation. Play is only for thirty or forty minutes daily, and this short space of time is in two instalments. Might not an hour be given, with advantage, and in one period, even without losing sight of the Board's intention, which is to punish rather than cocker those who attempt to evade its mild and gentle sway?

It costs £8,566 per annum to board and lodge truant scholars in Highbury, in Homerton, and a few at Lichfield. The cost of educating a child in a London Board school is £4. 7s.; the average cost per child at Highbury is £21. 10s.; at Homerton £28. 6s. 8d.; a certain proportion of these sums being contributed by the State. C. S. B.

# OXFORD UNIVERSITY PRESS.

THE OXFORD CLASSICAL TEXTS.

SCRIPTURUM CLASSICORUM BIBLIOTHECA OXONIENSIS.

Crown 8vo.

Two new Volumes now ready:—

**Caesaris Commentarii de Bello Gallico.** By R. L. A. DU PONTET  
Paper covers, 2s.; limp cloth, 2s. 6d.

**Vergili Opera.** By F. A. HIRTZEL. Paper covers, 3s.; limp cloth, 3s. 6d.; on Oxford India paper, 4s. 6d.

**A Book for the Beginner in Anglo-Saxon.** By JOHN EARLE.  
2s. 6d.

By HENRY SWEET.

**First Steps in Anglo-Saxon.** 2s. 6d.

**An Anglo-Saxon Primer,** with Grammar, Notes, and Glossary.  
2s. 6d.

**A Primer of Historical English Grammar.** 2s.

**Old English Reading Primers:**

I. Selected Homilies of Ælfric. Second Edition, 2s.

II. Extracts from Alfred's Orosius. Second Edition, 2s.

**First Middle English Primer,** with Grammar and Glossary.  
Second Edition. Extra fcap. 8vo, 2s. 6d.

**Second Middle English Primer.** Extracts from Chaucer, with  
Grammar and Glossary. Second Edition. Extra fcap. 8vo, 2s. 6d.

**Elementarbuch des gesprochenen Englisch.** Grammatik, Texte  
und Glossar. Third Edition. Extra fcap. 8vo, stiff covers, 2s. 6d.

**A Primer of Spoken English.** Second Edition, Revised. Extra  
fcap. 8vo, 3s. 6d.

**An Icelandic Primer,** with Notes, Grammar, and Glossary. Second  
Edition. Extra fcap. 8vo, 3s. 6d.

**A Primer of Phonetics.** Extra fcap. 8vo, 3s. 6d.

**A Primer of English Etymology.** By W. W. SKEAT. 1s. 6d.

**Elementary Political Economy.** By E. CANNAN. 1s.

**Elementary Politics.** By T. RALEIGH. 1s.

**Music Primer.** By J. TROUTBECK and R. F. DALE. 1s. 6d.

**The Educational Systems of Great Britain and Ireland.** By  
GRAHAM BALFOUR, 7s. 6d.

**First Latin Reader.** By T. J. NUNNS. 2s.

**A Latin Prose Primer.** By J. Y. SARGENT. 2s. 6d.

**Eudimenta Latina.** Comprising Accidence, and Exercises of a  
very Elementary Character, for the use of Beginners. By J. B. ALLEN. 2s.

**A Greek Primer,** for the use of Beginners in that Language. By  
the Right Rev. C. WORDSWORTH. 1s. 6d.

**A Primer of Greek Prose Composition.** By J. Y. SARGENT, M.A.  
3s. 6d.

\* \* A Key to the above, price 5s. net. Supplied to Teachers only, on application  
to the Secretary, Clarendon Press, Oxford.

**A Greek Testament Primer.** By E. MILLER. 2s.

**An Old High German Primer.** With Grammar, Notes, and  
Glossary. By J. WRIGHT. 3s. 6d.

**A Middle High German Primer.** With Grammar, Notes, and  
Glossary. By the same Author. 3s. 6d.

**A Primer of the Gothic Language,** With Grammar, Notes, and  
Glossary. By the same Author. 4s. 6d.

**Primer of French Literature.** By G. SAINTSBURY. 2s.

**A Greek-English Lexicon.** By H. G. LIDDELL and R. SCOTT. 4to.  
£1. 16s.

**An Intermediate Greek-English Lexicon,** founded upon the  
Quarto Edition. 12s. 6d.

**A Greek-English Lexicon,** abridged from the Quarto Edition,  
chiefly for the use of Schools. 7s. 6d.

**A Latin Dictionary,** founded on Andrews' edition of Freund's  
Latin Dictionary. Revised, Enlarged, and in great part Rewritten, by C. T.  
LEWIS and C. SIORT. £1. 5s.

**A School Latin Dictionary.** By C. T. LEWIS. 18s.

**An Elementary Latin Dictionary.** By the same Author. 7s. 6d.

Complete Catalogue, post free, on application.

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE,  
AMEN CORNER, E.C.

# MESSRS. BELL'S EDUCATIONAL LIST.

EDUCATIONAL CATALOGUE POST FREE ON APPLICATION.

Crown 8vo, 3s. 6d.  
**SOPHOCLES.—ANTIGONE.** Edited by G. H. WELLS, M.A. With numerous Illustrations. "Of the style in which this volume is printed, bound, and illustrated, it is impossible to speak too highly. . . . A highly meritorious edition which should certainly make its way into schools."—*Educational Times*.

Crown 8vo, 6s.  
**PLATO'S REPUBLIC, BOOK I. AND BOOK II., cc. i.-x. THE PROEM TO THE IDEAL COMMONWEALTH OF PLATO.** (An Introduction to the Language and Substance of the "Socratic" Dialogues.) With Introduction and Critical and Explanatory Notes by T. G. TUCKER, Litt.D. (Camb.), Hon. Litt.D. (Dublin), Professor of Classical Philology in the University of Melbourne.

New Edition, thoroughly Revised, with New Figures throughout.  
**THE ELEMENTS OF EUCLID.** (Books I.—VI., and part of Book XI.) Newly translated from the Greek Text, with Supplementary Propositions, Chapters on Modern Geometry, and numerous Exercises. By HORACE DEIGHTON, M.A., formerly Scholar of Queens' College, Cambridge, Headmaster of Harrison College, Barbados. Complete, crown 8vo, 4s. 6d. Or in Parts:—Book I., 1s. Books I. and II., 1s. 6d. Books I., II., and III., 2s. 6d. Books I.—IV., 3s. Books III. and IV., 1s. 6d. Books V., VI., XI., &c., 2s. 6d. Key (for Teachers only), 5s. net.

## BELL'S SCIENCE SERIES.

New Volumes.  
 Edited by PERCY GROOM, M.A., and Prof. G. M. MINCHIN, M.A., F.R.S.  
**AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE ANATOMY OF ANIMALS.** By GILBERT C. BOURNE, M.A., F.L.S., Fellow and Tutor of New College, Oxford; University Lecturer in Comparative Anatomy.  
 Vol. I.—**Animal Organization. The Protozoa and Coelenterata.** Crown 8vo, illustrated, 288 pages, 4s. 6d.  
 "His book is simply charming, and well worthy his reputation; and, while its literary style should alone ensure for it a wide circulation, it cannot fail to exercise a leavening and humanizing influence on the youthful mind."—*Nature*.

**THE STUDENT'S DYNAMICS.** Comprising Statics and Kinetics. By G. M. MINCHIN, M.A., F.R.S., Professor of Applied Mathematics in the Royal Indian Engineering College, Cooper's Hill. Crown 8vo, 3s. 6d.

## WORKS BY CHARLES PENDELBURY, M.A.,

Chief Mathematical Master at St. Paul's School.

**ARITHMETIC FOR SCHOOLS.** Twelfth Edition. Complete with or without Answers, 4s. 6d.; or in Two Parts, 2s. 6d. each. Key to Part II., 7s. 6d. net.

**EXAMPLES IN ARITHMETIC.** 8,000 Examples extracted from the above Arithmetic. Tenth Edition, with or without Answers, 3s.; or in Two Parts, 1s. 6d. and 2s.

**A SHILLING ARITHMETIC.** Second Edition. Small crown 8vo, 192 pages. Cloth, 1s.; or, with Answers, 1s. 4d. The Answers may be had separately, 4d. net.

**ELEMENTARY ARITHMETIC.** Fifth Edition. Crown 8vo, 1s. 6d., with or without Answers.

**COMMERCIAL ARITHMETIC.** Second Edition. Crown 8vo, 250 pages, 2s. 6d.

**COMMERCIAL ARITHMETIC.** Part I. 152 pages. Crown 8vo, with Answers, 1s.

**GRADUATED ARITHMETIC.** For Private and Junior Schools. In cloth. Parts I., II., and III., 3d. each; IV., V., and VI., 4d. each; VII., 6d. Answers to Parts I. and II., 4d.; III., IV., V., VI., and VII., 4d. each.

**LONG TOTS AND CROSS TOTS (Simple and Compound).** Containing 864 Sums for the use of Pupils in Evening Continuation Schools and Day Schools under the Education Department. Price, 2d.; in cloth, 3d. Answers, cloth, 4d.

**EXAMINATION PAPERS IN ARITHMETIC.** Fourth Edition. Crown 8vo, 2s. 6d. Key, 5s. net.

**ELEMENTARY TRIGONOMETRY.** Second Edition, Revised. Crown 8vo, 4s. 6d.

**A SHORT COURSE OF ELEMENTARY PLANE TRIGONOMETRY.** Crown 8vo, 2s. 6d.

## BELL'S ILLUSTRATED CLASSICS.

Edited by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School.

Full Illustrated Prospectus of this Series post free on application.

THE special object of this Series is to make the editions as interesting and helpful as possible to the intelligent learner; and, with this object, numerous Illustrations have been introduced. Though based on authentic sources, these are not mere copies of antiquities, such as are to be found in every Classical Dictionary, but pictures drawn with a view to bringing the reality of Greek and Roman life before the reader.

Views of places, as well as Maps and Plans, are also freely introduced.

The volumes are equipped with Introductions, Notes, Grammatical Appendices, and, in some of the prose authors, Exercises on the Text. Vocabulary is also given, but the volumes may be had without the Vocabulary if preferred.

The volumes are printed at the Oxford University Press, post 8vo, and are issued in three forms:

1. With Notes and Vocabulary complete, 1s. 6d.
2. Without Vocabulary, 1s. 6d.
3. Text and Vocabulary, without Notes, 1s.

THE FOLLOWING VOLUMES ARE NOW READY UNLESS OTHERWISE STATED:—

**Caesar.—De Bello Gallico. Book I.** Edited by A. C. LIDDELL, M.A. With Exercises.

— **Book II.** Edited by A. C. LIDDELL, M.A. With Exercises.

— **Book III.** Edited by F. H. COLSON, M.A., and G. M. GWYTHYR, M.A.

— **Book IV.** Edited by the Rev. A. W. UPCOTT, M.A.

— **Book V.** Edited by A. REYNOLDS, M.A. With Exercises.

— **Book VI.** Edited by J. T. PHILLIPSON, M.A. With Exercises.

**Cicero.—Speeches against Catiline I. and II.** Edited by F. HERRING, M.A. With Exercises.

**Selections from Cicero.** Edited by J. F. CHARLES, B.A. With Exercises.

**Cornelius Nepos.—Epaminondas, Hannibal, Cato.** Edited by H. L. EARL, M.A.

**Eutropius.—Books I. and II.** Edited by J. G. SPENCER, B.A.

**Horace's Odes.—Book I.** Edited by C. G. BOTTING, B.A.

— **Book II.** Edited by C. G. BOTTING, B.A. [Preparing.]

— **Book III.** Edited by H. LATTEY, M.A.

**Livy.—Book IX., cc. i.-xix.** Edited by W. C. FLAMSTEAD WALTERS, M.A.

**Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI., and edited by F. E. A. TRAYES, M.A.

**Ovid's Metamorphoses.—Book I.** Edited by G. H. WELLS, M.A.

**Selection from Ovid's Metamorphoses.** Edited, with Introduction and Notes, by J. W. E. PEARCE, M.A.

**Ovid's Tristia.—Book III.** Edited by H. R. WOOLRYCH, M.A.

**Phaedrus.—A Selection** Edited by the Rev. E. H. CHAMBERS, M.A.

**Stories of Great Men.** Edited by the Rev. F. CONWAY, M.A.

**Vergil's Aeneid.—Book I.** Edited by the Rev. E. H. ESCOTT, M.A.

— **Book II.** Edited by L. D. WAINWRIGHT, M.A.

— **Book III.** Edited by L. D. WAINWRIGHT, M.A.

— **Book IV.** Edited by A. S. WARMAN, B.A.

— **Book VI.** Edited by J. T. PHILLIPSON, M.A.

**Vergil.—Selection from Aeneid, Books VII.-XII.** Edited by W. G. COAST, B.A.

**Xenophon's Anabasis.—Book I.** Edited by E. C. MARCHANT, M.A.

— **Book II.** Edited by E. C. MARCHANT, M.A.

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the ILLUSTRATED CLASSICS. Price One Shilling each.

**Scalae Primae.** Simple Stories and Fables for Translation, with Notes and Vocabulary. By J. G. SPENCER, B.A. With 29 Illustrations.

**Scalae Mediae.** Extracts from Eutropius and Caesar. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. With 20 Illustrations.

**Scalae Tertiae.** Graduated Extracts in Prose and Verse from Phaedrus, Ovid, Nepos, and Cicero. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. [Shortly.]

Specimen Copy sent to Headmasters with a view to Introduction.

# BLACKIE & SON'S NEW BOOKS

## MACAULAY'S ESSAY ON WARREN HASTINGS.

Edited by JOHN DOWNIE, M.A., Lecturer in English at the Free Church Training College, Aberdeen, Editor of Macaulay's "Essay on Milton." 2s. [In October.]

**MACAULAY'S ESSAY ON CLIVE.** Edited by JOHN DOWNIE, M.A. 2s.

**MACAULAY'S ESSAY ON HORACE WALPOLE.** Edited by JOHN DOWNIE, M.A. 2s.

**DRYDEN'S ESSAY OF DRAMATIC POESY.** Edited by D. NICHOL SMITH, M.A., Editor of "Henry VIII." (The Warwick Shakespeare) and Boileau's "Art Poétique." 2s.

This is the most fully equipped edition of Dryden's famous Essay yet published. The Introduction discusses the circumstances which gave rise to the Essay, and ably summarizes it: the Notes are explanatory and critical: and an Appendix gives Sir Robert Howard's criticism of the Essay and Dryden's rejoinder.

**GOLDSMITH'S RETALIATION.** Edited by G. H. BLAKENEY, M.A., Headmaster of Sir Roger Manwood's Grammar School, Sandwich. Paper, 2d.; cloth, 3d.

**COWPER'S EXPOSTULATION.** Edited by A. A. BRAYLEY, B.A., Headmaster of the Pupil Teachers' Centre, Acton and Chiswick School Boards (Blackie's "Junior School English Classics.") Paper, 2d.; cloth, 3d.

**A BRIEF COMMERCIAL GEOGRAPHY OF THE WORLD.** By the Rev. FREDERICK SMITH, formerly Science Master in Dollar Academy. 1s. 9d.

An interesting, vivid sketch of Commercial Geography, not a dry-as-dust manual.

## FRENCH COMMERCIAL CORRESPONDENCE BY EASY STAGES.

By ALFRED STARCK, formerly Assistant-Master in Honiton Grammar School. 1s. 6d.

This book consists of short and simple progressive lessons, introducing gradually a large variety of commercial terms and forms.

**LE COUP DE PISTOLET.** (Prosper Mérimée's well-known popular story.) Edited by J. E. MICHELL, M.A., Ph.D., Assistant-Master in Westminster School. 1s.

**FABLIAUX FRANCAIS.** A Selection of French Fables. Edited by EMILE B. LE FRANÇOIS, French Master in Bristol Higher-Grade School, &c. 1s. [In October.]  
These books are each suited for a single term's work in French.

**A FIRST COURSE OF GERMAN COMMERCIAL CORRESPONDENCE.** By A. OSWALD, Lecturer in the Atheneum Commercial College, Glasgow. 2s.

This will be found a very complete and well arranged introduction to German Commercial Correspondence.

**KEY TO BAUMANN'S FIRST GERMAN COURSE.** 2s. 6d. net.

Mr. Baumann's First German Course, a companion volume to Beuzemaker's First French Course, has been provided with a Key for teachers only.

**GREEK UNSEENS. INTERMEDIATE SECTION.** Paper cover, 4d.

This new book is uniform with Greek Unseens, Junior and Senior Sections, and comes between them in point of difficulty.

**A SHORT HISTORY OF FRENCH LITERATURE.**

By L. E. KASTNER, B.A., and H. G. ATKINS, M.A. Lond. Crown 8vo, cloth, 4s. 6d.

# THE WARWICK SHAKESPEARE

**General Editor — Professor C. M. MERFORD, Litt.D.,**

Trinity College, Cambridge; Professor of English at University College, Aberystwyth.

THE WARWICK SHAKESPEARE is now in use in most of the leading Schools, Colleges, and Universities throughout the British Empire. It is acknowledged to be "*infinitely superior to any other school edition.*" Of the second latest volume ("Henry VIII.") *THE ATHENÆUM* says:—"Compiled with extreme care and pains and with that fulness of annotation and attention to 'æsthetic' comment to which we are accustomed in the 'Warwick Shakespeare.'"

To the whole series may be applied the verdict of *THE ACADEMY* on "A Midsummer Night's Dream": "*In brief, here is an edition to be unreservedly recommended.*"

**The Guardian** says of "Coriolanus":—"The most complete edition of 'Coriolanus' with which we are acquainted."

**The Athenæum** says of "Henry the Fifth":—"Edited with great care. . . . No better edition could be found either for the class teacher or for the solitary student."

**The Journal of Education** says of "The Merchant of Venice":—"One of the best small editions that we have seen. . . . We heartily recommend this edition."

*The Publishers will be pleased to send Specimen Copies with a view to introduction.*

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

Digitized by Google

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1901.

SUITABLE BOOKS IN THE  
University Tutorial Series.

## SPECIAL SUBJECTS, 1901.

- Caesar.—Gallic War, Book II.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- Euripides.—Alcestis.** By J. H. HAYDON, M.A. Lond. and Camb. Text and Notes. **3s. 6d.**
- Horace.—Odes, Book IV.** By A. H. ALLCROFT, M.A. Oxon., and F. G. PLAISTOWE, M.A. Lond. and Camb. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- Livy.—Book V.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **2s. 6d.** Vocabulary. **1s.**
- Vergil.—Aeneid, Book I.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- Shakespeare.—Henry V.** Edited, with Introduction and Notes, by Prof. W. J. ROLFE, D.Litt. **2s.**
- English History, The Intermediate Text-Book of.** By C. S. FRANKS, M.A. Oxon., and A. JOHNSON EVANS, M.A. Camb., B.A. Lond. Vol. IV., 1714-1837. **4s. 6d.**

(Other Special Subjects will be announced in January, 1901.)

# SCIENCE AND ART (BOARD OF EDUCATION) EXAMINATIONS.

SUITABLE BOOKS IN THE  
Organized Science Series.

## FOR THE ELEMENTARY STAGE. 2s. each Vol.

- Practical Plane and Solid Geometry.** [In preparation.]
- Machine Construction and Drawing.** [In preparation.]
- First Stage Mathematics.** Containing all the Algebra and Euclid required. [In preparation.]
- First Stage Mechanics (Solids).** By F. ROSENBERG, M.A., B.Sc. *Third Edition.*
- First Stage Mechanics of Fluids.** By G. H. BRYAN, Sc.D., F.R.S., and F. ROSENBERG, M.A., B.Sc. *Second Edition.*
- First Stage Sound, Heat, and Light.** By JOHN DON, M.A.
- First Stage Magnetism and Electricity.** By R. H. JUDE, M.A., D.Sc. *Second Edition.*
- First Stage Inorganic Chemistry (Theoretical).** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, LL.D., M.A., F.C.S.
- First Stage Botany.** By A. J. EWART, D.Sc., Ph.D., F.L.S.
- First Stage Physiography.** By A. M. DAVIES, A.R.C.S., B.Sc., F.G.S.
- First Stage Hygiene.** By R. A. LYSTER, B.Sc.
- Price **1s.**
- First Stage Inorganic Chemistry (Practical).** By F. BEDDOW, Ph.D., D.Sc. *Second Edition.*
- Price **1s. 6d.**
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

## FOR THE ADVANCED STAGE. 3s. 6d. each Vol.

- Second Stage Mathematics.** Being the Additional Algebra and Euclid with the Trigonometry required for the Second Stage. Edited by WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. *Second Edition.*
- Advanced Mechanics.** By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Vol. I., Dynamics. Vol. II., Statics. *Second Edition.*
- Advanced Heat.** By R. W. STEWART, D.Sc. Lond. *Second Edition.*
- Advanced Magnetism and Electricity.** By R. WALLACE STEWART, D.Sc.
- Advanced Inorganic Chemistry.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Heidelberg. Edited by WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. *Second Edition.*
- Price **2s.**
- Advanced Inorganic Chemistry (Practical).** By R. WALLACE STEWART, D.Sc., and WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S.
- Price **1s. 6d.**
- Practical Organic Chemistry.** By GEORGE GEORGE, F.C.S.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS' London University (including the Special Subjects for 1901 and 1902), Cambridge and Oxford Local, Science and Art, and other Examinations, free on application.

UNIVERSITY TUTORIAL PRESS (University Correspondence College Press).  
W. B. CLIVE: 13 BOOKSELLERS ROW, LONDON, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	" 2 10 0	.....	"	3 0 0
Quarter Page	" 1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 3s. 6d. for 6 lines, or 4s. 6d. the inch.

Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 3d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

October 1, 1900.

PROF. WITHERS'S Lectures for Teachers at the Fixtures. College of Preceptors on "The Practice of Education" will be delivered on Saturday afternoons at 5 o'clock, beginning on October 6.

\* \*

THE new session of the Birkbeck Institution, for day and evening courses of study, begins on October 1. On the same date the Young Men's Christian Association opens its new Central College of Shorthand and Journalism for students of both sexes.

\* \*

THE evening classes of the Horological Institute, Northampton Square, begin on October 4. The Institute also provides instruction by correspondence.—The same date is fixed for the first meeting of the session of the Civil and Mechanical Engineers' Society.

\* \*

IN connexion with the Oxford School of Geography (which co-operates with the Royal Geographical Society) an examination for one geographical scholarship, of the value of £60, will be held on October 9. Candidates, who must have taken Honours in one of the final schools of the University, should send in their names to Mr. H. J. Mackinder, Christ Church, not later than October 3. The scholar elected will be required to attend the full course of instruction at the School of Geography during the academic year 1900-1901, and to enter for the University Diploma in Geography in June, 1901.

\* \*

THE chief arrangements of the School for the Michaelmas Term are as follows:—The Reader in Geography (Mr. Mackinder) will lecture on "The Historical Geography of the British Islands," on Wednesdays, commencing October 17. The Reader will lecture on "The Development of Geographical Ideas," on Fridays, commencing October 19. The Lecturer on Physical Geography (Mr. Dickson) will lecture on "The Atmospheric Circulation," on Fridays, commencing October 19. The Assistant to the Reader (Mr. Herbertson) will lecture on "The Geographical Cycle," on Wednesdays, commencing October 17. The Lecturer on Ancient Geography (Mr. Grundy) will lecture on "The Geographical Development of the Roman Empire," on Saturdays, commencing October 20. Practical instruction in geography will be given on Mondays, Tuesdays, Thursdays, and Saturdays. The Laboratory will also be open on Tuesdays, Wednesdays, and Fridays.

\* \*

THE Teachers' Guild (Section B) will begin its autumn meetings on October 10, at 8 p.m., with a lecture by Mr. Bernard Shaw on "A Dramatist's Notions on Education." This lecture, which will be held in the Botanical Theatre of University College, Gower Street, will be followed by a discussion, and it is open to all who are interested in education.

\* \*

PROF. HUDSON will give a course of about ten lectures, at King's College, London, on "The Teaching of Mathematics," on alternate Saturdays, at 10 a.m., beginning on October 13. This County Council class is free to bona fide teachers. Application

should be made to Prof. Hudson, 15 Altenburg Gardens, S.W., to whom full information should be given as to the applicant's present position and previous training.

\* \* \*

OWING to structural alterations, the opening of the College of Art at South Kensington has been postponed until October 16. Applications for free and other admissions should be made to the Registrar on October 3.

\* \* \*

ON October 9 Convocation of London University will proceed to elect sixteen members of the Senate. The election of Senators by the various Faculties is fixed for October 12. The first meeting of the Senate, under the new constitution, will take place on October 24. A final meeting of the Senate, as now constituted, is expected to be held on the 8th inst.

\* \* \*

A VARIED and interesting course of lectures, from outside lecturers, has been provided for the students of both divisions of the Datchelor Training College during the current term. Mr. P. A. Barnett, M.A., will lecture on "Formulæ in Education" (October 4), "Method in Teaching Æsthetics," and "Examinations"; Miss Ward will deal with "The Cultivation of Observation in School Work" (November 8), "The Application of Froebelian Principles to School Work," and "Questionings, Illustrations, and Home Work"; Miss Emily Phillips gives three lessons in the teaching of model drawing. The lecturers on literary and historical subjects are Mr. H. E. Malden, M.A., and Miss Elizabeth Lee. The former will deal with "The Commercial Relations of England and Burgundy in the Fifteenth Century" (October 11), More's "Utopia," "The Dramatic and the True Character of Richard III.," "The Prince Hal and Henry V. of Shakespeare compared with the Historical Character," and Spenser's "Foure Hymns"; the latter will lecture on "The Elizabethan Novel" (November 19), and "John Smith, the Founder of Virginia." The Clothworkers' Company have recently made a further grant of books to the college library.

\* \* \*

THE following course of six lectures, entitled "The World we Live on," will be delivered at the Kensington Town Hall, at 4.45 p.m., on Thursdays, October 18, 25, November 1, 8, 15, and 22. "The World when Young," by the Rev. J. O. Bevan, M.A.; "The Chemistry of the Earth's Crust," and "How Rocks are Made," by Cecil Carus-Wilson, F.R.S. Edin.; "The Life of the Past," by F. W. Rudler, F.G.S.; "Land and Scenery," by H. R. Mill, D.Sc., LL.D., Librarian to the Royal Geographical Society; and "Some Electrical Discoveries," by Prof. Ashley Carus-Wilson, M.A. The course will be illustrated by photographic lantern views, chemical and physical experiments, &c.

\* \* \*

THE examination in religious knowledge for candidates wishing to enter Church training colleges will take place on October 27, at some hundred and forty centres in England and Scotland. The Society for Promoting Christian Knowledge offers an exhibition of £2 to every pupil-teacher who obtains a place in the First Class at this examination, provided he or she afterwards enters a training college. The syllabus for 1901 will be as follows:—Old Testament, Genesis; New Testament, to the Transfiguration, exclusive; the Catechism; Prayer Book, Morning and Evening Prayer; Church History, and the Early Persecutions and Martyrs. Church History will not be obligatory, but, if taken as an additional subject, will count towards a First Class.

\* \* \*

THE Council of the Sanitary Institute (Parkes Museum) have arranged for examinations in practical hygiene for school-teachers on February 8 and 9 in London, and June 28 and 29 at Bradford.

Education Gossip.

THERE is an influential movement amongst members of the City Corporation in favour of establishing a new commercial college, for the systematic training of business men. Ideas on this subject have developed in a remarkable measure since the foundation of the Cowper Street Central School for the evolution of a new type of City clerk. The present scheme is far more ambitious. It is proposed to fix a minimum age of fourteen and a minimum course of three years. These limits seem to point to a school rather than a college, and yet it is recommended that specialization should be carried out to its extreme limit. "There will be, according to the embryo scheme, a few general classes, in which tuition will be given in the ruling principles of commerce and in modern languages; but the pupils will be encouraged, and, indeed, expected, to devote their especial attention to one particular branch." On those lines a student will not be ripe for commerce until he is nearly twenty.

\* \* \*

DURING the recess, considerable additions and improvements have been made at the Birkbeck Institution, by the aid of a gift of 2,000 guineas from Mr. F. Ravenscroft, to commemorate his completion of a membership of fifty years. A new reading room, a new magazine room, and a social room have been provided, and a well appointed metallurgical laboratory has been added.

\* \* \*

It will interest some of our readers to take note of the syllabus of the Oxford School of Geography, which is as follows:—

The figure of the Earth and the determination of positions on its surface. The principles of surveying and of mapping. Map projections on the plane, the cylinder, and the cone, and their commoner modifications. The reading, reduction, and generalization of maps, and the representation of climatic and statistical data. The methods of meteorological and hypsometrical observation. The configuration of the continents and of the bed of the ocean. The characteristics, history, and distribution of the chief land forms, of the several types of mountain systems, river courses and river basins, and of the coastal belt. The cartographical analysis of the forms, structures, and activities of the physical regions of the world. The distribution of solar energy on the rotating Earth and the resulting circulations of air and water. The modifying effects of the distribution of land and water. The climatic provinces of the Earth. The physical conditions of the oceanic areas and the methods of observing and representing them. The chief generalizations regarding the distribution of animals and plants. The geographical distribution of men according to number, race, and economic and political condition. The influence of physical features in determining the position of settlements and lines of communication. The outlines of historical geography considered in relation to the influence of physical features. The history of geographical ideas. The outlines of the history of discovery.

\* \* \*

THE Committee of the School is constituted as follows:—The Vice-Chancellor (*ex officio*); Sir Clements R. Markham, K.C.B., F.R.S., President of the Royal Geographical Society; the Hon. George C. Brodrick, D.C.L., Warden of Merton College; Major-General Sir Charles W. Wilson, R.E., K.C.B., F.R.S. (nominated by the Council of the Royal Geographical Society); Henry F. Pelham, M.A., President of Trinity College, Camden Professor of Ancient History; Frederick York Powell, M.A., Fellow of Oriel College, Regius Professor of Modern History; Henry A. Miers, M.A., F.R.S., Fellow of Magdalen College, Waynflete Professor of Mineralogy; John L. Myers, M.A., Student of Christ Church (nominated by the Delegates of the Common University Fund).

\* \* \*

THE increase in the number of evening schools under Government inspection during the past fifteen years is very striking. In 1885 the schools numbered 839, and the registered pupils 40,854; last year the numbers were 5,971 and 474,563 respectively. This increase is doubtless due, in large measure, to the work of the Recreative Evening Schools Association, which was founded in 1885.

\* \* \*

THE first International Congress, held in Paris, on the teaching of drawing, ranks among recent educational events. It



lasted from August 29 to September 1, and the opening meeting was held under the presidency of M. Georges Leygues, Minister of Public Instruction and the Fine Arts.

\* \* \*

THE following persons, well known in English as well as in French educational circles, have been nominated *chevaliers* of the Legion of Honour:—M. Dreyfus-Brissac, former editor of *La Revue Internationale de l'Enseignement*, and a juror at the Exhibition in one of the educational sections; M. Larnaude, Professor in the Faculty of Laws at the University of Paris, and Secretary to the International Congress on Higher Education; M. Henry Bérenger, a writer on pedagogic subjects, and Secretary to the International Congress on Secondary Education; and M. Emile Girard, President of the Association of the Directors of Institutions for Secondary Education, who has "rendered important service to the cause of free education."

\* \* \*

THE Governors of Guy's Hospital have started a fund for the endowment of education and research in their Medical School, which, in two years, has reached £12,000. The treasurer, Mr. Cosmo Bonsor, has lately received from "a friend of the hospital" £5,000, with a request that the interest should be used "to increase and spread the knowledge of the means of preventing and treating disease."

\* \* \*

THERE are ten grammar schools in Queensland—six for boys and four for girls. Separate schools for boys and girls have been established at Brisbane, Ipswich, Maryborough, and Rockhampton; and schools for boys at Toowoomba and Townsville. The school for boys at Ipswich, which was opened in 1863, was the first grammar school established. Endowment at the rate of £1,000 per annum is paid by the State to each grammar school, making a total endowment of £10,000 annually to the grammar schools. On December 31, 1899, the aid granted by the State from the first institution of grammar schools reached a total of £256,535. 9s. 11d.

\* \* \*

AMONGST pious donors for the month may be reckoned Mr. Alfred L. Jones, of Liverpool, who offers £1,000 a year for five years towards a fund for establishing a comprehensive system of technical education in Wales. This is the same gentleman who provides bursaries for Jamaica students at University College, Bristol.

\* \* \*

THERE are eight agricultural colleges in England and Wales. They have all been established during the past ten years to make local provision for the higher forms of agricultural instruction, and they are now working in connexion with thirty-seven separate administrative counties which have associated their educational machinery with the colleges in question. A grant of £7,750 is provided by the Government for the assistance of these institutions, which render valuable assistance to the Board of Agriculture and the farming population generally.

\* \* \*

AT the last examination for admission to the Royal Military College at Sandhurst and the Royal Military Academy at Woolwich no fewer than 1,000 candidates presented themselves for entry to these two establishments.

Appointments and Vacancies. MR. THOMAS RALEIGH, D.C.L., has been nominated Vice-Chancellor of the Calcutta University. Dr. Raleigh has been legal member of the Council of the Viceroy of India since March, 1899, and previously for three years held the post of Registrar of the Privy Council. He was educated at the Universities of Edinburgh and Oxford, and at both had a distinguished career. In 1884 he was appointed University Reader in English Law at Oxford, and was subsequently elected Quain Professor of Historical and Comparative Law in University

College, London. Dr. Raleigh, who is in his fiftieth year, was called to the Bar at Lincoln's Inn in 1877.

\* \* \*

SIR HUBERT PARRY, Sir A. C. Mackenzie, Sir Frederick Bridge, and Sir George Martin, with Dr. Stanford, have been appointed to select three musicians willing to accept the Ormond Professorship of Music at Melbourne, at the stipend of from £800 to £1,000 a year. The income comes from a sum of £27,000, bequeathed by the Hon. Francis Ormond, founder of the Ormond Presbyterian College of Melbourne, and the post has been held for ten years by Mr. Marshall Hall. Candidates are to send in their applications to the Agent-General for Victoria before October 20.

\* \* \*

PROF. ROBERTS LATTI, M.A., D.Phil., Lecturer in Logic and Philosophy in the University of St. Andrews, has been appointed to the Chair of Moral Philosophy in the University of Aberdeen, vacant by the transfer of Prof. Sorley, M.A., LL.D., to the corresponding chair at Cambridge.

\* \* \*

MR. L. R. WILBERFORCE, Demonstrator in Physics at the Cavendish Laboratory, Cambridge, and University Lecturer in Physics, has been appointed to the Lyon Jones Chair of Experimental Physics at University College, Liverpool, vacated by the removal of Dr. Oliver Lodge to the University of Birmingham.

\* \* \*

THE Chair of English Law at Queen's College, Belfast, is vacant by the death of Mr. W. N. Watts, LL.D.

\* \* \*

WE regret to note the death of the Rev. Richmond Frederick Clarke, M.A., Principal of the Roman Catholic Hall, known as "Clarke's Hall," at Oxford. He was a member of Trinity College, and rowed in the University eight in 1859. He was a Fellow and Tutor of St. John's College, Oxford, and an examiner in the University. Mr. Clarke joined the Roman Catholic Church in 1865.

\* \* \*

AT a recent meeting of the Hartley Council on Wednesday, Prof. Spencer W. Richardson, D.Sc. (London), Lecturer on Mathematics and Physics at the University College, Nottingham, was elected Principal of the College and Professor of Physics.

\* \* \*

THE Principalship of the Liverpool University College will be vacated by the Rev. F. Dyson's appointment as Junior Dean of St. John's College, Cambridge.

\* \* \*

MR. A. H. GARDNER, B.A. Oxford, has been appointed Headmaster of Bungay Grammar School, in succession to the Rev. W. Boyce, resigned.

\* \* \*

MR. A. C. K. HATT, assistant-master at St. Olave's Grammar School, has been appointed to the Headmastership of the Grammar School of Howden, in Yorkshire.

\* \* \*

MR. J. REES FOSTER, B.Sc. Wales, has been appointed Headmaster of the new intermediate school at Llanberis. Mr. Foster's appointment was strongly opposed on the ground that he did not speak Welsh, but he received a majority of votes.

\* \* \*

MR. MURRAY'S new *Monthly Review* is a portly literary volume in itself, full of excellent promise. It is almost the equivalent of a quarterly in bulk, but it is much lighter and more varied than the ordinary quarterly review, and it is illustrated. The contents are political, military and naval, scientific and artistic, biographical and critical, with a serial story, a poem, and an essay. It would have been hard to devise a better first number, and we can only hope that the editor, Mr. Henry Newbolt, and the publisher may be able to live (for ever) up to the standard they have raised.

PERHAPS nearest to our special lines of interest in these pages is Mr. Quiller-Couch's sketch of the late T. E. Brown, master of the modern side at Clifton under Dr. Percival. (We are not clear, by the way, as to what the writer of the article means by speaking of a "fellowship" at Christ Church, or of "the night after he won his double first.") "T. E. B." is an interesting personality; but he seems to have lacked the bite of character which might have raised him to higher things:—

Was he happy [Mr. Quiller-Couch asks] in his many years' work at Clifton? On the whole, and with some reservation, we may say "Yes." "Yes," although in the end he escaped from it gladly and enjoyed his escape. One side of him, no doubt, loathed formality and routine. He was, as he often proclaims himself, a Nature-loving, somewhat intractable Celt; and, if one may hint a fault in him, it was that now and then he soon *tired*. A man so spendthrift of emotion is bound at times to knock on the bottom of his emotional coffers; and no doubt he was *true to a mood* when he wrote:

"I'm here at Clifton, grinding at the mill  
My feet for thrice nine barren years have trod,  
But there are rocks and waves at Scarlett still,  
And gorse runs riot in Glen Chase—thank God!"

"Alert I seek exactitude of rule,  
I step and square my shoulders with the squad,  
But there are blackberries on old Barrule,  
And Laugness has its heather still—thank God!"

\* \* \*

M. CAMILLE SÉE, who is intimately associated with girls' secondary education in France, has brought out an enlarged edition of his "*Lycées et Collèges de Jeunes Filles*." All the decrees, Parliamentary discussions, and laws affecting the subject during the last twenty years are recorded by M. Sée, together with facts and figures bearing on examination and other matters of educational interest. The book is valuable for reference.

\* \* \*

IN a recent number the *Noroye Fremya* printed a lively diatribe against the study of Greek and Latin in schools, which is really worth reading:—

The classical schools are isolated hot-houses, monstrosities in our civilization. They are essentially nihilistic with respect to our own culture, being a negation thereof and an expression of disrespect and distrust for it. After Newton, we still dream of Plutarch; after Guizot and Ranke, of Titus Livy; after the orations of Burke, Fox, and the Pitts, of Cicero! The anachronism is incomprehensible. Shakespeare and Molière are unknown to our youth; yet they must know Sophocles and the "*Miles Gloriosus*" of Plautus, and in the severely classical schools the students are made to perform "*Oedipus*" and other Greek tragedies. But do they believe in Fate? No, they believe in Christ? And what are these choruses, moving slowly and ominously, indistinctly prophesying? They represent Nemesis. But we do not know Nemesis; we know the judgment day! And our youths remain strangers to Shakespeare, Goethe, Schiller, and Pushkin, while they are being "educated" by the comical dolls of antiquity!

There is no better argument for a classical education—of course, in the wider sense of the term—than the narrowness with which it is sometimes condemned.

\* \* \*

THE following decree has lately been issued by the French Minister of Public Instruction:—"The second volume ('France and Europe from 1848 to 1899') of contemporary history from 1789 to the present time, by E. Maréchal, continued by Emile Auzou, is forbidden in public schools of all kinds."—The history is, and has long been, very largely used by students and teachers, and apparently the decree is directed against M. Auzou's part in the work. The election of M. Loubet as President, the Auteuil and other incidents are discussed in such a way as to prove that the writer is incapable of treating "the other side" with fairness.

\* \* \*

MR. DAVID SALMON, Principal of Swansea Training College, has reprinted, from the *Educational Record*, his interesting account of "The Welsh Charity Schools." The brochure is published by Messrs. Eyre & Spottiswoode. Speaking of the work of Griffith Jones, of Llanddowror, and Mrs. Bevan, Mr. Salmon patriotically says that, "should the day ever come

when teaching the people of our own land is held as honourable as slaying the people of other lands, Carmarthen will have a public monument to Griffith Jones beside Sir Thomas Picton's, and a statue to Mrs. Bevan beside Gen. Nott's.

\* \* \*

MR. W. CAREW HAZLITT'S "*History of the Venetian Republic*," which was published forty years ago and has long been out of print, is about to be reissued by Messrs. A. & C. Black, not as a new edition, but as an almost entirely new work, having undergone, in the long interval, a thorough process of recension, rearrangement, and augmentation, so as not only to bring down the historical narrative itself, for the first time, to the close of Venetian independence, but to expand the sections relating to social and economical institutions. Advantage has been taken of all the most recent discoveries illustrative of the career of Venice as a State; and a leading result of the new undertaking, as it claims to be, is to show that the Republic was, in fact, the greatest European empire between Rome and Great Britain, and not merely a rich and powerful commercial city.

\* \* \*

AMONGST the announcements of the Cambridge University Press we note "*Bacchylides, the New Poems and Fragments*," a revised text, with introduction, critical notes, and commentary, by Sir R. C. Jebb, Litt.D., Regius Professor of Greek; "*Herondas, the Mimes*," edited, with a commentary, by Walter Headlam, M.A., Fellow of King's College; "*Two Greek Grammars of the Thirteenth Century*," edited, with introduction and notes, by the Rev. Edmond Nolan, Trinity College; "*Sophocles, Translated into English Prose*," by Prof. Jebb; and "*Songs of Modern Greece*," with introductions, translations, and notes, by G. F. Abbott, B.A. Emmanuel College.

\* \* \*

IN mathematics the same Press announces new volumes of "*Scientific Papers*," by Lord Rayleigh, the late Dr. John Hopkinson, Prof. Osborne Reynolds, and Prof. Couch Adams. In history we are promised "*The Teaching of History*," edited by Lord Acton, Regius Professor of Modern History, and W. A. J. Archbold, M.A. Among the contributors, each of whom will deal with a different aspect of history teaching, will be Prof. Gwatkin, Mr. R. L. Poole, Dr. Cunningham, Mr. Tanner, Mr. Woodward, Mr. Marten, and Prof. Ashley. Lord Acton will write an introduction. Very interesting volumes will be "*Political Theories of the Middle Ages*," by Dr. Otto Gierke, translated by F. W. Maitland, Litt.D., Downing Professor of the Laws of England, and a "*Handbook to Politics and General Culture, 1492-1899*," by G. P. Gooch, M.A., with an introductory note by Lord Acton.

\* \* \*

MR. DAVID NUTT will shortly publish Vols. XXVII.-XXXII. of his "*Tudor Translations*," edited by Mr. W. E. Henley—"The *Chronicles of Froissart*," translated by Lord Berners, with an introduction by Mr. W. Paton Ker. This edition is limited to six hundred copies. Mr. Nutt also announces a third volume of "*Arthurian Romances*" unrepresented in Malory—"Guingamor; Lanval; Tyolet; The Were Wolf: Four *Lais* translated from the French of Marie de France and others," by Jessie L. Weston, with designs by Caroline Watts.

\* \* \*

THE essay on "England under Protector Somerset," by Mr. A. W. Pollard, which lately gained the Arnold Prize at Oxford, is to be published by Messrs. Kegan Paul & Co.

\* \* \*

A HISTORY of the Isle of Man, based on a thorough study of the original sources, is to be published by Mr. Fisher Unwin this week in two volumes under the title "A History of the Isle of Man." The author is Mr. A. W. Moore, the Speaker of the House of Keys, who has had unique advantages for obtaining valuable material from old records, &c. Special attention has been given to the social and economic conditions of the

people, and to the growth of the native industries. In the treatment of constitutional questions, help has been received from the Manx Judges and Attorney General; and Sir Spencer Walpole has looked through the chapters on constitutional history (civil), and on the period during which he was Governor of the island.

## THE STATE SIMPLIFICATION OF FRENCH SYNTAX.

### TEXT OF THE MINISTERIAL DECREE.

WE give below a translation of a recent Decree of the French Minister of Public Instruction, intended to regularize sundry anomalies and dubious uses in syntax and spelling, with the long schedule of particular injunctions and regulations. This schedule has been drawn up by the Conseil Supérieur of the Ministry of Public Instruction, on the recommendation of a Commission composed as follows:—MM. Gaston Paris (President), Gréard, Croiset, Paul Meyer, Bernès, Clairin, Devinat, Comte.

#### DECREE.

"1. In all examinations, competitive or otherwise, controlled by the Department of Public Instruction, and involving, or not involving, special orthographical tests, no candidate shall suffer any loss of marks for using the forms contained in the appended list.

"2. No forms or constructions contrary to those contained in the list shall be taught as rules in any State school of any grade."

July 31, 1900.

### LIST OF SIMPLIFICATIONS.

#### THE SUBSTANTIVE.

**NUMBER.**—*Témoin*.—Placed at the beginning of a proposition, this word may be either singular or plural, even though a plural substantive follows: e.g., *témoin*, or *témoins*, *les victoires qu'il a remportées*. This applies equally to the expression *prendre à témoin*: e.g., *Je vous prends tous à témoin* or *à témoins*.

**PLURAL OR SINGULAR.**—In all constructions in which the sense allows the substantive-complement to be understood either in the singular, or plural, both numbers will be allowed: e.g., *des habits de femme* or *de femmes*; *des conitures de groseille* or *de groseilles*; *des prêtres en bonnet carré* or *en bonnets carrés*; *ils ont ôté leur chapeau* or *leurs chapeaux*.

#### SUBSTANTIVES OF TWO GENDERS.

1. *Aigle*.—It is customary to make this word masculine. The best authors have also made it feminine. Both genders will be allowed: e.g., *un aigle* or *une aigle*.

2. *Amour, orgue*.—It is customary to make these words masculine in the singular. In the plural either gender will be allowed: e.g., *les grandes orgues*; *un des plus beaux amours*.

3. *Délice* and *délices* are really two different words. The former is rare and somewhat affected. It should have no place in elementary instruction.

4. *Automne, enfant*.—These two words being of common gender, it is unnecessary to pay special attention to them. The same remark applies to all substantives of common gender.

5. *Gens, orgue*.—Adjectives agreeing with *gens* may in all cases be made feminine: e.g., *instruits*, or *instruites*, *par l'expérience*, *les vieilles gens sont soupçonneux*, or *soupçonneuses*.

*Orgue* may be used in the feminine in all cases: e.g., *orgue carrée*, *orgue mondée*, *orgue perlée*.

6. *Hymne*.—There is no sufficient reason for attaching two different meanings to this word according to its gender. Both national hymns and religious hymns may be of either gender: e.g., *un bel hymne* or *une belle hymne*.

7. *Œuvre*.—The use of this word in the masculine in certain expressions is based upon a very subtle distinction. The feminine will be allowed in all senses: e.g., *une grande œuvre*, *la grande œuvre*.

8. *Pâques*.—This word may be used in the feminine to denote a date as well as the religious festival: e.g., *à Pâques prochain* or *à Pâques prochaines*.

9. *Période*.—Even in the special sense of this word in which it is customary to employ the masculine, the feminine will be allowed: e.g., *arriver à la plus haute période* or *au plus haut période*.

#### PLURAL OF SUBSTANTIVES.

**PLURAL OF PROPER NAMES.**—Inasmuch as the greatest obscurity exists in the rules and exceptions laid down in the grammars, all proper names preceded by the plural article will be allowed to take the plural inflexion: e.g., *les Corneilles* as well as *les Gracques*; *des Virgiles* (types) as well as *des Virgiles* (editions). The same rule will apply to the names of persons used to denote the works of those persons: e.g., *des Meissonniers*.

**PLURAL OF BORROWED NOUNS.**—When borrowed nouns have become

thoroughly French, they may form their plural according to the general rule: e.g., *des exécutés* as well as *des défects*.

#### COMPOUND NOUNS.

The same compound nouns are to be found to-day both with and without the hyphen. It is useless to weary children with contradictions that cannot be justified. The absence of the hyphen in *pomme de terre* does not prevent this expression from forming as true a compound as *chef-d'œuvre* for instance.

Every one will be free to conform to the existing rules for compound nouns, but modifications may be introduced according to the following principles:—

1. Nouns formed of a verb and substantive may be written in one word and form the plural in the ordinary way: e.g., *un essuie-main*, *des essuie-mains*; *un abat-jour*, *des abat-jours*; *un fesse-mathieu*, *des fesse-mathieus*; *un gagnepetit*, *des gagnepetits*; *un garde-côte*, *des garde-côtes*. But in such expressions as *garde forestier*, *garde général*, in which the presence of the adjective clearly indicates that *garde* is a substantive, the words will continue to be written separately.

2. Nouns formed of a substantive and adjective may be joined or separated. In either case the plural will follow the general rule: e.g., *un coffre fort* or *coffrefort*, *des coffres forts* or *coffreforts*.

3. Nouns formed of an adjective and substantive may be treated similarly: e.g., *une basse cour* or *bassecour*, *des basses cours* or *bassecours*; *un blanc seing* or *blancseing*, *des blancs seings* or *blancseings*; *un blanc bec* or *blancbec*, *des blancs becs* or *blancbecs*. An exception will be made in the case of the words *bonhomme* and *gentilhomme*, in which the middle *s* is pronounced: *des bonhommes*, *des gentilhommes*. The following may be written as one word without apostrophe:—*grandmère*, *grandmèsse*, *grandroute*.

4. Nouns formed of an adjective and substantive, denoting a new object named from one of its qualities, may be similarly treated: e.g., *un rouge gorge* or *rougegorge*, *des rouges gorges* or *rougegorges*.

5. Nouns formed of two adjectives denoting a person or thing may be written separately, without hyphen, each retaining its own inflexions: e.g., *un sourd muet*, *une sourde muette*, *des sourds muets*, *des sourdes muettes*;  *douce mère*, &c.

6. Nouns formed of two substantives in apposition may either be written as two words, each taking the sign of the plural, or as one word without hyphen, taking the plural sign at the end only: e.g., *un chou fleur* or *choufleur*, *des choux fleurs* or *choufleurs*; *un chef lieu* or *cheflieu*, *des chefs lieux* or *cheflieux*.

7. Nouns formed of two substantives, or of a substantive and adjective, one being the complement of the other, but with no particle to show the connexion, may be written as one word, the last component only taking the sign of the plural: e.g., *un timbreposte*, *des timbrepostes*; *un terreplein*, *des terrepleins*.

For the words *hôtel Dieu*, *fête Dieu*, it seems preferable to maintain the existing usage and to separate the constituent elements. It will not, however, be counted an error to write them as one word: *hôteldieu*, *fêtedieu*.

No attention need be paid to the plural of the words *hôtel Dieu*, *fête Dieu*, *bain marie*, as they are not used in the plural. No attention need be paid either, in elementary instruction, to the plural of *trou madame*, a word denoting an obsolete game.

8. Nouns formed of a numeral adjective and substantive or adjective may be written, even in the singular, as one word, with the plural inflexion at the end: e.g., *un troisquarts*, *des troisquarts*; *un troisquarts*, *des troisquarts*.

9. Nouns formed of two substantives joined by a preposition are to be written separately, each part obeying the general rules of syntax: e.g., *un chef d'œuvre*, *des chefs d'œuvre*; *un pot au feu*, *des pots au feu*; *un pied d'alouette*, *des pieds d'alouette*; *un tête à tête*, *des tête à tête*.

10. Nouns formed of various elements borrowed from substantives, verbs, adjectives, adverbs, and foreign words may be written separately or in combination. If in combination, they will take the ordinary sign of the plural at the end: e.g., *un chassé croisé* or *un chassécroisé*, *des chassés croisés* or *des chassécroisés*; *un fier à bras* or *un fierabras*, *des fiers à bras* or *des fierabras*; *un pique nique* or *un piquenique*, *des pique niques* or *des piqueniques*; *un soi disant* or *un soisdisant*, *des soi disant* or *des soisdissants*; *un te Deum* or *un tedeum*, *des te Deum* or *des tedeums*; *un er voto* or *un ervoto*, *des er voto* or *des ervotos*; *un vice roi* or *un viceroi*, *des vice rois* or *des vicerois*; *un en tête* or *un entête*, *des en têtes* or *des entêtes*; *une plus (moins) value* or *une plusvalue (moinsvalue)*, *des plus (moins) value* or *des plusvalues (moinsvalues)*; *un gallo romain* or *un galloromain*, *des gallo romains* or *des galloromains*.

The strangely formed word *sot l'y laisse* need not be considered, and, in a general way, it is useless to complicate elementary instruction with the plurals of such compound nouns as *laisser aller*, *ouï dire*, which, on account of their meaning, are not used in the plural.

**HYPHEN.**—Even when the constituent elements of compound nouns are separated, the hyphen may always be omitted.

#### THE ARTICLE.

**THE ARTICLE BEFORE PROPER NAMES OF PERSONS.**—It is customary to employ the article before certain Italian family names: *le Tasse*, *le Corrège*, and sometimes (erroneously) before personal names: *(le)*

*Dante, (le) Guide.* Ignorance of this custom will not be regarded as an error. Great uncertainty also exists as to the proper way of writing the article which is part of certain French proper names: *la Fontaine, la Fayette, or Lafayette.* In dictation the way of writing such names should be pointed out.

**SUPPRESSION OF THE ARTICLE.**—When two adjectives joined by *et* refer to the same substantive so as to denote two different things, the suppression of the article before the second adjective will be allowed: e.g., *L'histoire ancienne et moderne*, as well as *l'histoire ancienne et la moderne.*

**PARTITIVE ARTICLE.**—*Du, de la, des* will be allowed instead of *de* before a substantive preceded by an adjective: e.g., *de or du bon pain, de bonne viande or de la bonne viande, de or des bons fruits.*

**ARTICLE BEFORE *plus, moins, &c.***—The rule as to the use of *le plus, le moins, le mieux* as invariable neuters is very subtle and of little value. It is superfluous to introduce it into elementary instruction. *Le plus, la plus, les plus, les moins, les mieux, &c.*, will be allowed in such constructions as: *On a abattu les arbres le plus or les plus exposés à la tempête.*

#### THE ADJECTIVE.

**AGREEMENT OF ADJECTIVE.**—In the phrase *se faire fort de*, agreement of the adjective will be allowed: e.g., *se faire fort, forte, fortes, fortes de . . .*

**ADJECTIVE CONSTRUCTED WITH SEVERAL SUBSTANTIVES.**—When a qualifying adjective follows several substantives of different genders it may always be put in the masculine plural, whatever the gender of the nearest substantive: e.g., *appartements et chambres meublés.* Agreement with the nearest substantive will also be allowed: e.g., *un courage et une foi nouvelle.*

*Nu, demi, feu.*—These adjectives may agree with the substantive they precede: e.g., *nu, or nus, pieds; une demi, or demie, heure* (without hyphen); *feu, or feue, la reine.*

**COMPOUND ADJECTIVES.**—The constituent words may be combined into a single word forming its feminine and plural according to the general rule: e.g., *nouveauté, nouveauté, nouveautés, nouveautés; courtvêtu, courtvêtue, courtvêtus, courtvêtues, &c.*

But compound adjectives of colour which, in consequence of an ellipse, have become genuine substantives will be treated as invariable: e.g., *des robes bleu clair, vert d'eau, &c.*, as well as *des habits marron.*

**INVARIABLE PAST PARTICIPLES.**—At present the participles *approuvé, attendu, ci-inclus, ci-joint, excepté, non compris, y compris, ôté, passé, supposé, vu*, placed before the substantive to which they are joined are invariable. *Excepté* is already treated as a preposition. The agreement of these participles will be optional, and there will be no insistence on the application of the rules as to their position, and as to the substantive being defined: e.g., *ci joint, or ci jointes, les pièces demandées* (without hyphen between *ci* and the participle); *je vous envoie ci joint, or ci jointe, copie de la pièce.*

The same choice will be allowed for the adjective *franc*: e.g., *envoyer franc de port, or franche de port, une lettre.*

**AVOIR L'AIR.**—It will be permissible to write indifferently *elle a l'air doux or douce, spirituel or spirituelle.* The subtle difference of sense, according as the adjective agrees with the word *air* or with the word denoting the person referred to, will not be taken into consideration.

**NUMERAL ADJECTIVES: *Vingt, cent.***—Euphony justifies in certain cases the existing rule, which requires these words to be in the plural when they are multiplied by another number. The plural form will be allowed when a number follows: e.g., *Quatre vingt dix, or quatre vingts dix, hommes; quatre cent trente, or quatre cents trente, hommes.*

The hyphen will not be insisted on between the word denoting the units and the word denoting the tens: e.g., *dix sept.*

In dates *mille* will be allowed instead of *mil*: e.g., *l'an mil huit cent quatre vingt dix, or l'an mille huit cents quatre vingts dix.*

#### DEMONSTRATIVE ADJECTIVES, INDEFINITES, AND PRONOUNS.

*Ce.*—The particles *ci* and *là* may be joined to the pronouns which precede them, without any distinction being drawn between *qu'est ceci, qu'est cela* and *qu'est ce ci, qu'est ce là.* In the latter constructions the hyphen may be suppressed.

*Même.*—After a plural substantive or pronoun *même* may be put in the plural without hyphen: e.g., *nous mêmes, les dieux mêmes.*

*Tout.*—The agreement of *tout* with a following feminine adjective may take place whether the adjective begins with a consonant or *h* aspirate, or with a vowel or *h* mute: e.g., *des personnes tout heureuses or toutes heureuses; l'assemblée tout entière or toute entière.*

*Tout* before the name of a town may in all cases agree, the somewhat subtle distinction between such constructions as *tout Rome* and *toute Rome* being disregarded. Similarly, when a woman is supposed to be speaking, it will be permissible to write either *je suis tout à vous* or *je suis toute à vous.*

When *tout* is used in the indefinite sense of *chaque*, both *tout* and the following substantive may be used in the singular or plural indifferently: e.g., *des marchandises de toute sorte or de toutes sortes; la sottise est de tout (tous) temps et de tout (tous) pays.*

*Aucun.*—With a negative this word may be used either in the singular or in the plural: e.g., *ne faire aucun projet or aucuns projets.*

*Chacun.*—When this pronoun follows the verb and refers to a plural subject or object, the possessive *son, sa, ses* or the possessive *leur, leurs* may be used indifferently: e.g., *ils sont sortis chacun de son côté or de leur côté; remettre des livres chacun à sa place or à leur place.*

#### THE VERB.

**COMPOUND VERBS.**—The apostrophe and hyphen may be suppressed: e.g., *entrouvrir, entrecroiser.*

**HYPHEN.**—The hyphen may be suppressed when the pronoun-subject follows the verb: e.g., *est il ?*

**APPARENT SUBJECT AND REAL SUBJECT:** e.g., *sa maladie sont des vapeurs.*—Rules need not be laid down for such constructions as these, which cannot be studied profitably apart from the texts in which they occur. It is a question of style rather than of grammar, and has no place either in elementary instruction or in examinations.

**CONCORD OF THE VERB PRECEDED BY SEVERAL SUBJECTS NOT JOINED BY THE CONJUNCTION *et.***—If the subjects are not resumed by an indefinite word like *tout, rien, chacun*, the verb may always be employed in the plural: e.g., *sa bonté, sa douceur le font admirer.*

**CONCORD OF THE VERB PRECEDED BY SEVERAL SINGULAR SUBJECTS JOINED BY *ni, comme, avec, ainsi que* AND OTHER SIMILAR LOCUTIONS.**—The verb may always be in the plural: e.g., *ni la douceur ni la force n'y peuvent rien or n'y peut rien; la santé comme la fortune demandant à être ménagées or demande à être ménagée; le général avec quelques officiers sont sortis, or est sorti, du camp; le chat ainsi que le tigre sont des carnivores or est un carnivore.*

**CONCORD OF THE VERB WHEN THE SUBJECT IS A COLLECTIVE.**—Whenever the collective is followed by a plural complement, the verb may agree with the complement: e.g., *un peu de connaissances suffit or suffisent.*

**CONCORD OF THE VERB WHEN THE SUBJECT IS *plus d'un.***—The present custom being to put the verb in the singular, the singular will be allowed even when *plus d'un* is followed by a plural complement: e.g., *plus d'un de ces hommes était, or étaient, à plaindre.*

**CONCORD OF THE VERB PRECEDED BY *un de ceux (une de celles) qui.***—Should the verb of the relative sentence be singular or plural? This is a delicate point, which has no place either in elementary instruction or in examinations.

***C'EST, CE SONT.***—As the present practice in the use of these forms differs widely, and as the best writers often use *c'est* before a plural substantive or a plural pronoun of the third person, the use of *c'est* instead of *ce sont* will be allowed in all cases: e.g., *c'est, or ce sont, des montagnes et des précipices.*

**SEQUENCE OF TENSES.**—The present subjunctive, instead of the imperfect, will be allowed after a conditional: e.g., *il faudrait qu'il vienne or qu'il vint.*

#### THE PARTICIPLE.

**PRESENT PARTICIPLE AND VERBAL ADJECTIVE.**—Attention should be paid to the general rule, according to which the participle points to the action, the adjective to the state. In doubtful cases it will be sufficient for pupils and candidates to show proof of common sense. In class work all subtleties should be carefully avoided: e.g., *des sauvages vivent errant, or errants, dans les bois.*

**PAST PARTICIPLE.**—The existing rules for the concord of the past participle constructed with *avoir* have always been more or less questioned by writers and grammarians. The rules have gradually become more and more complicated, and the exceptions—according to the form of the object that precedes the participle, the use of the verb in a literal or figurative sense, and the dependence of other verbs upon the participle—more and more numerous. Moreover, the rules are ceasing to be rigidly observed, and it seems useless to persist in galvanizing into life rules which are only a source of perplexity in the class-room, which do not in any way serve to develop the intelligence, and which render the study of French very difficult for foreigners.

There is nothing to change in the rule according to which the past participle, when used as an epithet, agrees with the word it qualifies, or, when used as an attribute with the verb *être* or an intransitive verb, agrees with the subject: e.g., *des fruits gâtés; ils sont tombés; elles sont tombées.*

The past participle constructed with *avoir*, however, will be allowed to remain invariable in all cases in which it has hitherto been expected to agree with the object: e.g., *les livres que j'ai lu or lus; les fleurs qu'elles ont cueilli or cueillies; la peine que j'ai pris or prise.*

Similarly the past participle of reflexive verbs will be allowed to remain invariable in all cases: e.g., *elles se sont tu or tués; les coups que nous nous sommes donné or donnés.*

#### THE ADVERB.

***Ne* IN SUBORDINATE PROPOSITIONS.**—The use of this negative particle gives rise in many cases to complicated and difficult rules which are often contrary to the usage of the best writers. Without regard to the character of the principal sentence—whether affirmative, negative, or interrogative—the suppression of *ne* will be allowed in all subordinate propositions depending on such verbs or phrases as the following:—*empêcher, défendre, éviter que, &c.*: e.g., *défendre qu'on vienne or qu'on ne vienne; craindre, désespérer, avoir peur, de peur que, &c.*: e.g., *de peur qu'il aille or qu'il n'aille; douter, contester, nier que, &c.*

*e.g., je ne doute pas que la chose soit vraie or ne soit vraie; il tient à peu, il ne tient pas à, il s'en faut que, &c. : e.g., il ne tient pas à moi que cela se fasse or ne se fasse.*

Similarly, the suppression of *ne* will be allowed—(1) after comparatives or words expressing a comparison, such as *autre, autrement que, &c.*: *e.g., l'année a été meilleure qu'on l'espérait or qu'on ne l'espérait; les résultats sont autres qu'on le croyait or qu'on ne le croyait*; (2) after the conjunctions *à moins que* and *avant que*: *e.g., à moins qu'on accorde le pardon or qu'on n'accorde le pardon.*

#### NOTE.

In examinations it is desirable that mistakes which prove nothing against the intelligence or the real knowledge of the candidates, but which merely betray ignorance of some shade of meaning or some grammatical subtlety, should not be treated as serious faults. Such mistakes, for instance, as bear on the following points should especially be treated very lightly:—(1) Substantives which change their gender according as they are abstract or concrete, such as *aide, garde, manoeuvre, &c.*, or which have a slight difference of meaning according to their gender, such as *couple, merci, relâche, &c.* (2) Special and technical plurals, such as *aieuls and aieux, ciels and cieux, ails and veur, travaux and travaux, &c.* (3) The use of the article and of different prepositions before masculine names of countries: *e.g., aller en Danemark, en Portugal, but aller au Japon, au Brésil.*

### REGISTRATION OF TEACHERS.

We print below the memorandum recently drawn up by the Training of Teachers' Joint Committee on certain questions which will arise in the framing of regulations for the creation of a Teachers' Register:—

By Section 4 of the Board of Education Act, 1899, "it shall be lawful for Her Majesty, in Council, by Order, to establish a Consultative Committee . . . for the purpose." *inter alia*, "of framing, with the approval of the Board of Education, regulations for a Register of Teachers, which shall be formed and kept in manner to be provided by Order in Council; provided that the Register so formed shall contain the names of the registered teachers, arranged in alphabetical order, with an entry, in respect to each teacher, showing the date of his registration, and giving a brief record of his qualifications and experience."

We are on the eve of the appointment of this Consultative Committee; and, as it is more than probable that professional opinion will shortly be asked with reference to the conditions of registration, it is important that associations and individuals should be considering the points involved.

But, while this general Register must be formed forthwith, its division into sections may be postponed until a Register of Efficient Schools has been formed; and the Board of Education should be urged to deal with this matter without delay.

Such a Register of Schools seems to the Training Committee essential, as affording assurance that any practical experience or systematic course of training that shall be required for admission to the Register of Teachers should have been obtained in connexion with an efficient school.

The report of the Training Committee, issued in December, 1897, following, in most respects, the lines laid down by the Report of the Royal Commission on Secondary Education, may be accepted generally as expressing the voice of the teaching profession as to the principles which should be adopted by the Consultative Committee of the Board of Education, in formulating a standard of training to be required by it, as necessary for the admission of teachers to the Register. In December, 1899, and January, 1900, the Headmasters' Conference and the Headmasters' Association respectively passed the following resolution:—

"That this Conference [Association] is of opinion that, after the expiration of five years from the commencement of the Board of Education Act, no new member of the profession should be qualified for a place on the Register of Secondary Teachers who has not undergone a systematic course of training."

The Committee desires that public opinion be formed on the following questions:—

(a) How shall the conditions of registration be defined for—  
(i.) Teachers who are now in the profession? (ii.) Teachers who shall join the profession within the next five years? (iii.) Teachers who shall apply for registration after the lapse of five years?

(b) Granted that, as in the legal and medical professions, professional training must be a condition of registration, what is the minimum to be required?

1. The Training Committee recommends the following as conditions of admission to the Register of Teachers for those seeking admission on or after April 1, 1905:—

1. That candidates for admission should be graduates of a British University, or should be in possession of a diploma equivalent to a degree.

2. That they should hold a certificate, approved by the Consultative Committee, that they had followed a course of training in the theory and practice of education subsequent to their graduation.

3. That they should give proof of two years' efficient service in a school approved for the purpose.

In reference to condition 2, a considerable minority of the Committee were of opinion that, under exceptional circumstances, this course of professional training might be concurrent with the period of study for the degree.

II. Those who are already teachers must be admitted on easy terms. All headmasters and assistant-masters of, say, five years' standing in any one efficient school would find their place on a Register, as a matter of right. For men of less experience, or for those who have moved about from school to school, it would be necessary that the testimonial of a headmaster in whose school they had been teaching, for not less than twelve months within the three years immediately preceding the formation of a Register, should be presented to the Consultative Committee, countersigned by at least two other schoolmasters, qualified by right, as aforesaid, for registration. Where a teacher has served for two years in a school from the time of admission to a degree in arts and science, by some University in Great Britain or Ireland, to the formation of the Register, it should be sufficient that the application be endorsed by the headmaster of the school alone. It is recommended that the condition of entry on the Register in the case of women teachers should be, in all respects, similar to those for men.

Graduate teachers in elementary schools holding Her Majesty's Certificates shall be eligible for admission to the Register of Teachers, provided that they have taught for three years in one school, and can produce a certificate of efficiency, signed by the Chairman of their School Board, or, in the case of the voluntary schools, by the Chairman of the Body of Managers.

It would follow that against the names of all registered teachers all the schools in which they had gained their experience, with the length of their service in each, should be placed.

III. A similar elasticity must be applied in the case of those who shall become teachers within the next five years. Due notice must be given to boys and girls in our schools, intending to enter the profession, that the conditions of admission will be more stringent than they have been hitherto. Meanwhile, teachers who seek registration shall be required to pass an examination in the theory and practice of education, of which the more important part shall be oral, as well as to satisfy such conditions as to experience in an efficient secondary school as may be approved by the Board of Education. Special facilities for registration should be afforded to those teachers who have, during the interval, availed themselves of the training afforded by colleges and other institutions already in existence.

There must be also for a considerable number of years, under the existing order of things, many secondary teachers, particularly in special subjects—such as music, drawing, &c.—who will be debarred, by circumstances, from graduation, but whose valuable and efficient work ought not to be stigmatized by their exclusion from the Register. Their case would be met by the production of satisfactory proof of a liberal education of a standard not less than that required for matriculation at one of the Universities, together with a prolonged period of service and training, according to the circumstances of the case.

### REVIEWS.

#### SCHOOL BOARD WORK.

*The Work of the London School Board.* By T. A. Spalding, LL.B., assisted by T. S. A. Canney, B.A. (P. S. King & Son.)

This volume was prepared for the Paris Exhibition by direction of the Chairman of the Board, Lord Reay. It sets forth the development of the policy of the Board and the ways in which it sought to solve the very difficult problems that constituted its task. It offers a broad and continuous view of the Board's labours, with very little reference to differences of opinion that have manifested themselves amongst the members. By a mere record of facts arranged in order of occurrence and explained, a very marked tribute or testimonial is given to the common sense and cautious judgment, as well as to the conscientious zeal, of successive Boards. The first part deals with the history of education in England prior to 1870. This is the weakest part, and we find not a little in the twenty-four pages with which we entirely disagree. It opens with a section headed "The Influence of the Reformation," in which it is denied that the Reformation had any influence for good as regards education. The conclusion is stated as follows:—

It has been assumed that national education in England was the offspring of the Reformation, and to the sickly boy who is known to history as Edward VI. has been attributed the glory of having founded the English system of secondary education. The fallaciousness of this doctrine has been sufficiently exposed. . . . The Commissioners of



Edward VI. succeeded in strangling most of the schools of England, and more especially the elementary schools. . . . Their action crippled the progress of elementary education for nearly three centuries.

It is very remarkable that so little credit should here be given to the spirit of the Reformation, to which may be traced the notion of the universal need of education and the right of all to receive the benefit of it. This notion, started by the chief Reformers, was the germ which ultimately led to the establishment of a free and general education. It will be sufficient to call as a witness of this the chief of the Reformers, Archbishop Crammer. It was proposed, three centuries ago, to admit to Canterbury Grammar School none but the sons of gentlemen.

Whereunto [says Strype in his "Memorials"] the Most Reverend Father the Archbishop, being of a contrary mind, said that he thought it not indifferent so to order the matter; "for," said he, "poor men's children are many times endued with more singular gifts of Nature, which are also the gifts of God, as with eloquence, memory, apt pronunciation, sobriety, and such like, and also commonly more apt to apply their study, than is the gentleman's son, delicately educated." Hereunto it was on the other part replied, "that it was meet for the ploughman's son to go to plough, and the artificer's son to apply the trade of his parent's vocation, and the gentleman's children are meet to have the knowledge of government and rule in the commonwealth. For we have," said they, "as much need of ploughmen as any other State; and all sorts of men may not go to school." "I grant," replied the Archbishop, "much of your meaning herein as needful in a commonwealth; but yet utterly to exclude the ploughman's son and the poor man's son from the benefits of learning as though they were unworthy to have the gifts of the Holy Ghost bestowed on them as well as upon others is as much as to say that Almighty God should not be at liberty to bestow His great gifts of grace upon any person, nor no where else but as we and other men shall appoint them to be employed, according to our fancy, and not according to His most Godly will and pleasure, Who giveth His gifts both of learning and other perfections in all sciences unto all kinds and states of people indifferently."

This well expresses the attitude of all the leading Reformers to education, and it might be supplemented by much stronger statements by both bishops and lay politicians.

The succeeding chapters on statistics, school management, and compulsion are interesting reading, and are not open to the charge of looseness and inaccuracy which may be made against the first. The writers evidently deal with matters on which they have a clear knowledge. The statistical chapter describes the efforts of the earlier Boards to estimate the number of children for whom they had to provide. The Registrar-General, when applied to, asked for at least two years for the work. The Education Department had given a sixth of the population as the number of school age, but the Board, by its own methods, arrived at one-seventh as the nearer fraction, and from this made a number of deductions. They certainly did not over-estimate the number of places they had to provide; and, as many schools taken over temporarily by the Board failed to make themselves efficient, the estimate of the number of children for whom places were required rose rapidly. These methods of climbing to the true estimate by experiment are characteristically English. They are exhibited again in regard to the school buildings. The first Board resolved to obtain information of the Prussian system of class divisions before beginning to build. This system they agreed to try, and the Ben Jonson School at Stepney was the result. The Prussian system was soon found to have many defects, and the Board gave up the plan of employing different architects to work out variations of that system, and appointed an architect of its own. Gradually the Board drifted to the conclusion that neither the Prussian system nor the Board's own scheme ought to be rigidly adhered to, but that each school should be planned according to the needs of the neighbourhood in which it is built. When once the Board was emancipated from adherence to a fixed scheme, experience added knowledge, and each school plan was an improvement on its predecessors. So long as this readiness to learn from experience continues, the Board will be healthy: when it ceases, it will soon become corrupt.

The chapter dealing with the vexed question of compulsion presents only the School Board aspect of the question, with too much of an assumption that the majority of parents are perverse and unreasonable and need compulsion. The chapter on educational progress does not notice the effect of the Board's operations in withdrawing children from the secondary schools of the metropolis. The fact that, while, through the building of new endowed schools, the available school places in second-grade schools have increased by more than 50 per cent. in twenty years, the

number of scholars has remained nearly stationary, is altogether ignored. Indirectly, however, there is an acknowledgment of the effect of the Board's policy in providing substitutes for secondary schools.

In tracing the causes of improvements in the quality of the education, the writers say:

The children at present in school are undoubtedly of greater mental receptivity than their forerunners, and are, on that account, capable of a wider range of instruction. If this were not the case, the introduction of a larger number of subjects would tend to diminish the efficiency of the schools; but this has not been the case. They are, to a large extent, the children of parents who have had experience of the advantages of education and are desirous that their offspring should profit more completely in a similar manner.

There can be no doubt that, to a considerable extent, the increased capacity of the pupil which has been observed is due to the attraction of pupils who, but for the operations of the School Board, would have been found in the endowed and other secondary schools of the metropolis. It is a grave question whether it would not be detrimental to education to carry this tendency further than it has gone at present, and herein lies the pressing need of a really strong Minister of Education at the head of the recently enlarged Department.

These criticisms, however, do not diminish our appreciation of the magnitude of the work devolving upon the School Board for London, and the excellence of the methods it has adopted to surmount its great difficulties, as these are clearly and fairly described in the work before us.

#### MODERN LANGUAGES IN SECONDARY EDUCATION.

*Report of the Committee of Twelve of the Modern Language Association of America.* (Boston: Heath.)

IN 1896 a Committee was appointed by the Association, under the presidency of Prof. Calvin Thomas, to consider the position of modern languages in secondary education, and to make recommendations. Their inquiries brought out the greatest variety, both in the modern language teaching of the schools and in the requirements of the colleges at their entrance examinations. Their first year's work resulted in a single resolution to the effect that "secondary instruction in French and German should not be differentiated according as the pupil is, or is not, preparing for college." The result of their subsequent labours is embodied in the book before us. In considering the general purpose of the study of modern languages, the Committee, though by no means taking up an anti-classical attitude, point out that, at any rate, modern languages "give a quicker return on the investment" of time and energy than Latin and Greek. They regard them as valuable instruments of general culture, and urge that conversational facility should be regarded as subordinate to literary linguistic training and to the acquisition of the power of reading French and German books. The conditions in the United States are, they argue, different from those in some European countries, where the speaking of two or three languages is of great practical importance.

Coming to the more technical part of this subject, they pass in review several methods of instruction. The pure "grammar method" they dismiss as uninteresting and as failing to give either insight into foreign life and thought or appreciation of literary masterpieces. To the so-called "natural method," which relies mainly on unsystematic imitation, they raise the obvious objections, and treat it as likely to be eventually regarded rather as a vivifying influence than as an independent method. The "psychological method"—i.e., Gouin's system, introduced into America by Bétis—they consider, while recognizing some of its advantages, especially as a means of fixing the attention, to afford but little opportunity for the exercise of judgment, and to delay too long anything like literary study. In dealing with the "phonetic method"—the method, that is, of the "Reformers," or *neuere Richtung*—they recognize its merits in cultivating the habit of attention and in securing from the first correct pronunciation; but, as in the case of the "psychological method," they are dissatisfied with the postponement of translation and the comparative neglect of the literary side of training. In their opinion its adoption requires considerably more time to be devoted to modern languages than is at present possible in American schools; but they are not indisposed to regard it as a "counsel of perfection." Lastly, they discuss the "reading method," in which translation into English is the main object, and grammar, composition, and pronunciation are kept in the background. To this they raise the objection, among others,

that it often fails to secure attention on the part of the pupils and energy on the part of the teacher.

Their own recommendations are of an eclectic character. They indicate a preference for "oral" methods in the first instruction of those who take up a foreign language at an early age, and of the "reading" method, modified by suggestions taken from other systems, for those who begin later or whose time of study is limited. These general recommendations are worked out in the form of elementary, advanced, and intermediate courses. The courses for German, as probably the language most studied in the United States, are given in greater detail; we in England are still very far from even putting German and French on an equality. In laying out the courses, especially the elementary course, due importance is given to the memorizing of colloquial sentences with a view to the cultivation of *Sprachgefühl* and to pronunciation, notice being taken of the importance of correcting the provincial accent of so many of the German population of the States. Grammar, "with little theory and much practice," and systematic drill in German on the reading-lessons are insisted on, and stress is laid on "free reproduction." Some hints on translation into English are added, and a useful list of reading-books, both in French and in German, is appended. Throughout the report, as we have already pointed out, the necessity of making modern languages an instrument of general education, and, in particular, of systematic training in good English, is fully recognized—a consideration sometimes overlooked by the more zealous partisans of modern methods.

#### PROF. BURY'S "GREECE."

*History of Greece.* By J. B. Bury. (Macmillan.)

This is an admirable book. Prof. Bury has contrived within the limits of a single volume to present the political, social, religious, and literary life of the Greeks; and he has presented them with so much learning and such skill that his history may fairly be expected to satisfy the requirements both of the learner and of the mature reader. The views expressed are studiously moderate. Prof. Bury does not take sides, like Grote and Mitford. He writes without disapproval of the imperial policy of Pericles, and he supports his war policy. He is not enthusiastic over Demosthenes as a politician, but declares that "only his political opponents would deny that he was the most eloquent of orators and the most patriotic of citizens." He holds, as we have long held, that Philip of Macedon has received less than his due from history. A statesman whose patriotism was not, like that of Demosthenes, "purblind"—the word is Prof. Bury's—would surely have come to terms with Philip, who was, if not dazzled, at least attracted, by the glory of Athens, and might have set her once more at the head of the Greek world if she would have let him. But, of course, this opinion is wholly at variance with the views of Niebuhr and Grote.

The references to literature are cunningly interwoven with the general narrative. Scholars will turn with curiosity and respect to the author's literary judgments; and they will find that here, too, Prof. Bury is free from strong prejudices. His opinions are, in some cases, in amusing contrast with those of his distinguished colleague, Prof. Mahaffy. Thus, in a striking passage in which he contrasts Thucydides and Herodotus, the balance is decidedly in favour of the son of Olorus. Not only is his history "still without a rival," but even his theme, so often depreciated by modern writers, is great; "for it is the story of the decline and fall of the Athenian Empire, and, at this period, Athens is the centre of ecumenical history." On the other hand, Prof. Mahaffy has praised Xenophon's narrative of the Retreat of the Ten Thousand as "one of the most delightful chapters of Greek history," and herein Prof. Bury agrees with him. "The charm of the 'Anabasis,'" he says, "depends on the simple directness and fullness with which the story is told. . . . There is a charm of actuality in the early chapters, with their recurring phrases, like brief entries in a diary." This is, surely, a far juster estimate than is Mr. Pretor's depreciatory criticism of these same opening chapters. It is to be regretted that the limitations of space prevent more than a bare reference to many of the greatest authors, for the too brief remarks on literature are all of much worth. Prof. Bury, it is plain, could write an excellent history of Greek literature.

In a very useful collection of notes and references Prof. Bury indicates the sources, both ancient and modern, from which he draws. Men reading for Honour Schools at the Universities will find these lists very convenient. Where there is a conflict of authority, as, for instance, in the account of the overthrow of the

Pisistratids, of the Four Hundred and the Thirty at Athens, it would have been well to indicate clearly which author is followed. In such cases, when ancient authors differ, it will generally be found that Prof. Bury decides in favour of Prof. Wilamowitz-Möllendorff. That mode of untying the knot is a simple and very good working solution of the difficulty; but we should prefer to know when we are following Thucydides, Xenophon, Aristotle, and when we are frankly giving them all up, and surrendering without conditions to the ingenious author of "Aristoteles und Athen." These notes produce a deep impression of the great width of the author's learning, and the extraordinary industry with which he has explored the Great Sahara of foreign periodicals.

Prof. Bury's criticism of the disastrous Athenian expedition to Sicily, and his estimate of that unfortunate devotee of fortune, Nicias, may be quoted as an example of the freshness of manner and the independence of judgment that characterize the whole book:—

Timid as a general, timid as a statesman, hampered by superstition, the decorous Nicias was a brave soldier and an amiable man, whose honourable qualities were the means of leading him into a false position. If he had been less scrupulous and devout, and had been endowed with better brains, he would not have ruined his country.

And, as for the Sicilian expedition:—

It is often said that it was a wild venture, an instance of a whole people going mad, like the English people in the matter of the Crimean War. It is hard to see how this view can be maintained. . . . The failure was due to nothing in the enterprise itself, but entirely to the initial mistake in the appointment of the general. And it was quite in the nature of things that the Athenian sea-power, predominant in the East, should seek further expansion in the West. An energetic establishment of Athenian influence in that region was recommended by the political situation. It must be remembered that the most serious and abiding hostility with which Athens had to reckon was the commercial rivalry of Corinth; and the close alliance of Corinth with her Dorian daughters and friends in the West was a strong and adequate motive for Athenian intervention.

These are not new views; but they are sane views expressed in an attractive form. It is the singular merit of this "History of Greece" that, while it is learned, it is never dull, and, while small details are omitted, a vivid and accurate picture is presented of Hellenic life. Prof. Bury's book forcibly reminds us of the "Short History of the English People." For it is bright and entertaining; it is not a mere record of politics and kings and battles; and it employs all the results of modern investigation and research to illustrate what is old. The life of Athens seems to pass before us as vividly as it passes in the plays of Aristophanes. It is a monument to the skill and industry of its author, and it is wholly worthy of his great reputation.

#### ENGLISH LETTERS.

*Tutorial History of English Literature.* By A. J. Wyatt, M.A. (Clive.)

Mr. Wyatt aims at writing his history of English literature, from Beowulf to Charles Lamb, on scientific principles. He has barely two hundred and twenty pages to work in, and so he practically ignores the smaller writers, linking the more important ones together by sketches rather historical than biographical. He urges that in this task he has "no model to improve upon"—a remark which we fail to understand, since more than one recent writer has done precisely the same thing, though not precisely in Mr. Wyatt's manner. More distinctive in its way is the consistent effort to steer a simple course of narrative between childish phrasing and talking over the reader's head. In order to avoid the last-mentioned danger, Mr. Wyatt boldly adopts and commends a method of study which would be excellent if it could be carried out—which, indeed, can be fully carried out by a student who is prepared to spend several hours daily on the thorough study, not of English literature, but of so much literature as this "tutorial history" sees good to give him. Mr. Wyatt's plan is that the reading of each of his chapters shall be preceded by the reading of "one work by each of the authors dealt with." If that is not possible, then one complete work representative of each period must be read.

To facilitate the plan, Mr. Wyatt gives a list of authors and recommended works, of which we will only say that there are thirty authors and about forty works or selections, and that any one who will study these may boast of a very good acquaintance with a literature which is, as Mr. Wyatt says, "the greatest that the world has ever seen," and written in a language which "bids fair to be some day the universal language." We like the way in

which Mr. Wyatt approaches and performs his task. He has a good perception of the literary qualities, and he deals with literature reverently. His judgments are well balanced and sensible, not off-hand or dogmatic:—

One word summarizes "Augustan" literature—common sense: common sense glorified, deified, beprosed, berimed, and bestanzaed out of all recognition of itself. "Wit and fine writing," says Addison after Boileau, "doth not consist so much in advancing things that are new as in giving things that are known an agreeable turn. It is impossible for us who live in the latter ages of the world to make observations in criticism, morality, or in any art or science, which have not been touched upon by others. We have little else left us but to represent the common sense of mankind in more strong, more beautiful, or more uncommon lights."

"True wit is Nature to advantage dress'd,  
What oft was thought, but ne'er so well express'd"—

the same thought again. The utmost brilliance of form combined with sheer banality of matter—that is Augustan literature.

This comes, perhaps, rather near to dogmatism. It is truer of Pope and Addison and Boileau than of real Augustan literature—of Virgil or Horace, for instance.

We strongly recommend Mr. Wyatt as a guide in the ascent of the easier slopes of Parnassus.

#### A SCHOOL PLATO.

*Proem to the Ideal Commonwealth of Plato.* An Introduction to the Language and Methods of the "Socratic" Dialogues. By T. G. Tucker. (Bell & Sons.)

It is not easy to discover "a long felt want" in school-books, and, when discovered, it requires more than the average learning and ordinary skill to supply that want. But a good school edition of the "Republic" has long been a *desideratum*. The tenth book has been done rather well; and the President of Magdalen has edited in a leisurely fashion the first five books in one volume. But the eighth, so well suited to be read by young historical and classical students, is neglected; and the first, which, though overloaded with fallacious dialectic, is, none the less, an admirable introduction to the sterner stuff of the later Plato, has hitherto received but little attention at the hands of English editors. At length we have an excellent edition of Book I. and Book II., chapters i.-x., by Prof. Tucker. This is altogether the best form of initiation into the Platonic mysteries that we know; and we trust that the sale of the book will be sufficient to encourage the editor to extend his labours, and to edit other parts of Plato's Utopia on the same lines.

Prof. Tucker's work is always fresh and interesting. He can write readable notes, and he presents his subject in an original manner. This book is no exception to the rule. We have read through the commentary, and find that every page contains something to interest the student of Attic Greek. The illustrative quotations are plentiful, and the notes are a storehouse of information on Attic usage. The introduction, which extends to eighty pages, contains an abstract of the "Proem," with which is included some useful comment on the subject-matter, such as we have not hitherto seen in school-editions of Plato. Prof. Tucker holds that the first book was written by Plato as a separate work, and that the remainder of the "Republic" belongs to a much later date in the philosopher's life. In this case, the speeches of Glaucon and Adeimantus in Book II. would be an ingenious device for connecting the latter with the earlier and shorter dialogue. Of course the "Hellenica" of Xenophon exists as a proof that ancient authors did sometimes return to their earlier works and write continuations of them; and, in the case of the "Republic," the linguistic data strongly support the argument from contents.

The text—if we except restorations of Attic forms—is conservative. There are brief, but sufficient, critical footnotes, and considerable prominence is given in the commentary to various readings. The grammatical notes are likely to stimulate interest, and they are replete with scholarship. We wonder that Prof. Tucker lends any countenance to Jowett and Campbell's *οὐ δὲ θαμιζεις ἡμῖν* for the MSS. *οὐδὲ*, &c. at page 328 C. We are decidedly of opinion that *οὐ δὲ* in two words is not Greek, and we do not think that Jowett and Campbell would persuade us that it is. On the interesting phrase *ἐπὶ γήραος οὐδῶς*, which is quoted by Plato a little further on, there is a good comment. Whether we are to understand "on the threshold of old age," or, as Dr. Leaf will have it, "on the road of old age," it is certain that the meaning is "in extreme old age." Nevertheless, we do not agree with the editor that "the threshold (of death) which consists in

old age" can be meant: it is a far-fetched and unnatural explanation. The statement of the ancient grammarians that *πρωγῆρος* denotes *moral*, and *πρόνηρος* *physical*, badness is accepted, and the MSS. are corrected in accordance with it. But this is a point on which the old grammarians are unsafe guides. We formerly believed in the rule, but the evidence of MSS. lends it no support; and we cannot think that there is any sense in it. We should class the statement with the *εἶργω* and *εἶργω* mare's nest; and we do not see how *húman* and *humáne*, cited by Prof. Tucker, is in any sense parallel. But we might go on picking holes *ad infinitum*, and still should not damage materially the substantial fabric that Prof. Tucker has raised, and for which schoolmasters should be grateful to him.

Any student who reads the introduction and notes carefully will know as much about ancient dialectics and Platonic diction as he can possibly need to know before going to the University. The remarks on the shifting, or fluid, character of the terms used and the fallacious arguments that are consequently permitted "to count" are valuable and quite fresh. It remains only to be observed that the printing is, for a school-book, unusually elaborate—spacing, indenting, and heavy type being usefully employed to help towards clearness.

#### ROCK-PICTURES.

(1) *Studies in Fossil Botany.* By Dunkinfield Henry Scott, M.A., Ph.D., F.R.S. (A. & C. Black.) (2) *Outlines of Field Geology.* By Sir Archibald Geikie, F.R.S. Fifth Revised Edition. (Macmillan.)

(1) Dr. Scott, Honorary Keeper of the Jodrell Laboratory at Kew, reprints, in this volume, a special course of lectures given by him four years ago at University College, London. Much of the work has been recast, and about one-fifth of the present text is entirely new matter; but a special feature and attraction of the letters in their permanent form are the hundred and fifty excellent illustrations, many of which quite deserve the title of rock-pictures. Over forty of them are new, and many others are redrawn. They give the volume a particular value as a book of reference for students of botanical palæontology—a progressive and increasingly interesting branch of science, and one in which accurate and elaborate diagrams are of the utmost importance. Dr. Scott does not claim to have written a manual of fossil botany; though that is very much what his book amounts to, seeing that it is a classified description of the principal palæozoic families, and especially of the Permian groups—the lepidodendrons, sigillarias, and calamites—and the rich Carboniferous formation. The introductory remarks on incrustation and petrification as methods of plant preservation will be found practically useful to the student who wishes to turn his attention to the botany of the rocks; and the final chapter of general results will be found to be a clear and comprehensive summary of the conclusions reached by recent studies in fossil botany. As for the influence of these studies of antiquity on our modern plant knowledge, Dr. Scott says:

Only twelve years ago it was said that fossil botany had contributed little to our knowledge of the affinities of plants. Whether true or not at the time it was made, such a statement would certainly not hold good now. Our whole conception of two at least of the great divisions of the vegetable kingdom—the Pteridophyta and the Gymnosperms—and of their mutual relations, is already profoundly influenced by the study of the ancient forms. Far greater results may be confidently expected from further research; but, by the work already accomplished, fossil botany has borne no small part in the advancement of our knowledge respecting the natural affinities of plants.

This may sound rather sanguine as to the future; and, indeed, it may be doubted whether anything more than an inspired generalization can be obtained from a process of ideas which must, of necessity, be diagrammatic and never purely biological. Still, as Dr. Scott remarks in the passage just quoted, there has of late been an undeniable movement in our physical knowledge of plants and plant life, especially in the two sub-kingsdoms which he names, distinctly due to researches in fossil botany. And no small part of the advance may be put down to the credit of Dr. Scott himself.

(2) Sir Archibald Geikie has revised and slightly increased his excellent little introduction to earth study and practical field geology. It is still the simplest and best book, at any rate for its size, for students and amateurs who intend to devote adequate time to open-air study. Its ninety figures admirably illustrate the text.

## GENERAL NOTICES.

## CLASSICS.

*The Odes of Horace, Book III.* Edited by H. Latta. (Bell & Sons.)

This is the second illustrated edition of the Third Book of the "Odes" which has come under our notice in the last few months. Except for the sake of the illustrations, it is difficult to see why either of the editors should have ventured into a field already so well occupied. Mr. Latta's notes are straightforward and unpretending, but they add nothing in the way of felicitous rendering or appreciation of Horace's meaning to what we already find in Page and Wickham, to whose editions he is chiefly indebted; nor do they bring difficult points of scholarship more within the range of schoolboys. It is, in fact, a pity that alternative versions, the discussion of which does so much to stimulate thought, are, for the most part, purposely avoided. Sometimes the less scholarly rendering, or, at any rate, that least approved by modern editors, is adopted. For example, "conjugo barbara turpis maritus vixit" is rendered "disgraced by a barbarous spouse," and "destituit deos mercede pacta" by "cheated the gods of their promised wages," without further comment. On "immunis aram si tetigit manus" there is a thoughtful discussion; but Dr. Gow's pretty suggestion that "immunis" means "unofficial," and points to a private man's offering, without pomp or ceremony, is not noticed; nor are any of Dr. Verrall's suggestive discussions alluded to. The Murena dissertation is, perhaps, beyond the range of schoolboys, and its views are not generally accepted; but surely the ingenious interpretation of "Aeli vetusto," as a playful address to his steward Lamia, deserves a place. The illustrations are good; and there is a useful "classical dictionary" of proper names.

*Vergil, Aeneid VI.* Edited by J. T. Phillipson. (Bell & Sons.)

An editor of the "Aeneid," and especially of the Sixth Book, labours under the same difficulty as the one who attacks the "Odes" of Horace. Conington's famous edition was not, it is true, written for schoolboys, but both Sidgwick's and Page's editions are within their range, and it is not easy for an accomplished scholar to improve upon them. Mr. Phillipson has used their editions very freely, as he tells us in his preface, and has done his work fairly, but it does not seem as if his renderings were happier or his explanations more lucid. In some cases, indeed, he has committed himself to questionable translations, as, for example, *longa dies*, "a far-off day"; *tenent media omnia silvae* "compass all between"; *ardentem et torva tuentem animum*, "her burning and frowning soul." Nor can we approve his note on the historic infinitive, which he says is used "in relating the climax of a series of actions," and "corresponds to our use of the present indicative." Neither of these statements is borne out by the best grammars. Riemann expressly says that it should not be rendered by the present in French, while the other characteristic mentioned, though applicable in some cases, is hardly universal. The illustrations, many of which are taken from the Vatican "Vergil," are interesting.

*Selections from Cicero.* Edited by J. F. Charles. (Bell & Sons.)

The selection is a good one. It falls into two groups. The first, illustrating the chief incidents of Cicero's career, begins with the description of his oratorical studies from the "Brutus," and includes well chosen extracts from the orations, such as the scourging of a Roman citizen by Verres, the murder of Milo, and the offer of a crown to Caesar from the second "Philippic." The other group contains some stories, such as the sale of the gardens of Canius and the passages from the "De Officiis" about Themistocles, Aristides, and Fabricius. The notes are clear and useful, and point to careful comparison of standard editions. One might object to *chiasmus* being described as "a double antithesis in introverted order," which suggests Dr. Johnson's famous definition of network. The appendix contains a very full list of constructions, as well as sentences for retranslation, and, like the other volumes of the series, a catalogue raisonné of proper names.

*Stories of Great Men.* Edited by F. Conway. (Bell & Sons.)

This reading book consists of selections from Livy and other authors, giving an idea of some of the chief heroes of Roman history from Romulus to Scipio Aemilianus. The idea is, of course, not a new one, but the extracts are well chosen, both as illustrations of the qualities the Romans most admired and as materials for an outline of Roman history. The group of extracts on the Second Punic War seem particularly well selected with a view to exhibiting, among other points the characters of Scipio Africanus and of Hannibal. The story is carried on to the death of the Carthaginian hero and the tragic close of his great rival's career. The book is nicely annotated, the introduction is carefully written and to the point, and the illustrations, except that of flogging in a Roman school, are well selected. It is well worth considering whether a set of extracts of this kind is not, in view of the limited time given to Latin reading in many schools, preferable to

a single book of Caesar or Livy, which examinations almost inevitably impose on teachers.

*Fables of Phaedrus: a Selection.* Edited by R. H. Chambers. (Bell & Sons.)

Phaedrus has many advantages as a reading book, and it is convenient to have a selection. The notes are very fair, but not unexceptionable. For example, on *suadebat asino fugere* we find "suadeo with infinitive is to persuade of a fact, not persuade to an action." *Suadeo* never means "to persuade," and occasionally takes an infinitive in its ordinary sense in Vergil and even in Cicero. Again, *defectus animi* should scarcely be described as a "middle," nor need *desertus viribus* be taken as an example of the ablative after a word expressing emptiness. "Well-turned phrases" for *verbosis strophis* misses the force of *verbosis*. But many of the notes are good. The introduction, dealing mainly with the fable, strikes one as a little above the heads of schoolboys. The illustrations seem not to be taken, as in other volumes of the series, from classical sources.

*The Catiline of Sallust.* Edited by G. H. Nall. (Macmillan.)

This is a good school edition of the "Catiline." The notes are sound and to the point, and state with clearness the arguments for and against conflicting interpretations. The edition has a vocabulary like the rest of the series. One is inclined to doubt whether it is desirable to postpone so long the possession of a dictionary and the learning how to use it. There is also a short and well written introduction summarizing the history of the conspiracy. The editor accepts Mommsen's view that Caesar was to some extent accessory to it, though it admits the antecedent improbability of it. This opinion is not universally held; Mr. Long considers there is no good evidence for it, and Prof. Beesly, in an interesting attempt to whitewash Catiline himself, very reasonably urges that Caesar, though rapidly coming to the front, was not yet a leader of the democratic party.

*First Latin Sentences and Prose.* By K. P. Wilson. (Blackwood.)

Mr. Wilson's book is not distinguished by any special features from many other books of the same class; and it, accordingly, calls for no detailed notice. We are not disposed to read through another Latin exercise book that proceeds on the orthodox lines from "of the table" to continuous prose by easy stages. Mr. Wilson has prefixed a few pages of English grammar to the Latin sentences, and these may be of use to those teachers who are forced to teach Latin to young children before they are fit to be taught it. But we really see no reason for the publication of this work.

*Arrian's "Coursing": Arriani "Cynegetica" notulis illustrabat*  
H. H. Johnson, B.A. (Dent.)

From title-page to finish this is an odd little shillingsworth. The imperfect *illustrabat* at once shows that Mr. Johnson has queer notions. Is it the imperfect of *laborious effort*, or does it denote *imperfection*, pure and simple? The civilized world, roughly speaking, has agreed with Cicero and the schoolmen that the so-called "perfect" is the appropriate tense of the Latin verb in this connexion. The title-page is followed by a strange preface, all quotations from books on coursing; but it offers no clue to the *raison d'être* of the edition. Then comes a long list of *errata* and *addenda*, in notes and text; but the list is by no means complete, and itself contains several misprints, though the book has been revised by a "First Class in Classic, [sic] Tripos." Next we have the notes, wherein is contained some curious information, interspersed with commonplace and elementary remarks on Greek. Last of all is placed the text of the treatise in the original. We are inclined to think that this sort of thing is better "in translations, sir." Certainly, the few sportsmen who can stand Arrian in the Greek original will scarcely need to be told that "Artemisium is a promontory of Eubœa," or that  $\mu\eta$  for  $\delta\upsilon$  is late Greek.

*Exercises in the Syntax and Idioms of Attic Greek.* By W. H. D. Rouse and J. M. Sing. (Rivingtons.)

This is a good book, intended, and well planned, for the use of upper forms. The idea of the compilers is that, even when pupils have arrived at "continuous prose," it is advisable to practise them from time to time with short sentences. It is, as we know, frequently the despair of composition masters that the idioms learnt in the earlier stages are afterwards forgotten. Here is the very book for those who experience the difficulty. The exercises are grouped in four series, which deal respectively with rules of syntax, differences between English and Greek idiom, technical phrases, and miscellaneous matters. There are well planned appendices on conditional sentences, the use of certain verbs, the calendar, fractions, proverbs, and interest; and there is a good general vocabulary. The only passage to which we take exception is one in which "general" and "particular" conditions are classified. The editors do not say clearly that the constructions in both kinds of conditions, when *future* time is referred to, are identical. Thus  $\delta\alpha\nu \epsilon\lambda\pi\omega, \delta\acute{\epsilon}\sigma\omega$  is on one page rendered, "If I find, I will give"; on another, "If ever I find, I will give." And, stranger still, the constructions used in "general" conditions referring to *present* time are entirely omitted. The whole of this section is confused, and should be rewritten. We can, however, confidently recommend Messrs. Rouse and Sing's book, as a whole, to the notice of those who have to teach candidates for college scholarships.

## SCIENCE.

"Organized Science Series."—*First Stage Hygiene*. By R. A. Lyster, B.Sc. (Clive.)

The author justly claims for this book the merit of being one connected whole, instead of a series of disjointed subjects. The earlier part follows the lines of an elementary treatise on physiology, with the difference that the pure physiology is kept down, and the practical applications are made most of. By the time the subject of digestion is reached we part company with our original companion and pass on to what is hygiene in its more special sense. The style is simple and clear, and the illustrations are clearly drawn. We again protest against the publisher's custom of placing no date on the title-page.

*Domestic Science*. By Thomas Cartwright, B.A., B.Sc. (Nelson.)

This gives us a course of experimental work in elementary physics and chemistry, in which, as far as possible, the things and processes of common household life are taken as the basis of study. The course is very well arranged and the wording simple. The book should serve a useful purpose.

*An Introduction to the Study of the Comparative Anatomy of Animals*. By G. C. Bourne, M.A. Vol. I. (Bell.)

Addressed "not to children, but to persons whose education is well advanced," this book is notable for its thoroughness of treatment. One half of it consists of a description of the frog, and succeeds in treating that much monographed "type" with some freshness of method. The second half deals with a number of Protozoa and Coelenterata. Accurate and first-hand information characterizes the whole. An intended second volume is delayed by the author's military duties.

"Organized Science Series."—*First Stage Botany*. By A. J. Ewart, D.Sc. (Clive.)

This is a very good introduction to the botany of flowering plants. The author begins with the general structure of the plant-cell, and then goes on to the structure of seeds and the physiology of a growing seedling. This early introduction of elementary notions of physiology, as illustrated by specific cases, and not merely in the abstract, is a very good feature. We should have preferred to find it preceding the section on the cell; and, indeed, the author himself suggests that students may take it in this order. Succeeding chapters deal with the root, shoot, flower, fruit, and natural orders. Instructions for practical work, including physiological experiments, are given in each chapter. Illustrations are abundant and good. It is a pity that Fig. 80 is printed upside down; and we are surprised to find the author falling into the vulgar error of calling the common *solanum* the *deadly* nightshade.

## MISCELLANEOUS.

*English Composition: a Manual of Theory and Practice*. By L. Cope Cornford. (David Nutt.)

It is hardly possible to conceive a more difficult task than that of writing a satisfactory English grammar. A book to teach the art of writing a good English style is incalculably more difficult to produce, if it is not an actual impossibility. Certainly neither of these tasks should be lightly undertaken. We have seen some good books designed to assist a boy or girl in putting together a simple essay, and we noticed one of them a few months ago; but a manual on the theory of English composition is something different from that. It might be a long matter to enumerate the necessary qualifications for setting about the construction of such a manual. One of them, perhaps, would be the gift of writing, and of invariably writing, clear and correct English. In the second sentence of his introduction Mr. Cornford says: "There is no subject in the teaching of which the personal element does not count for a chief factor; and in none, perhaps, more than in the teaching of *Composition*." How would Mr. Cornford justify to his pupils the words which we have italicized? What is their syntax? The best feature of this book is its collection of extracts from good authors, each followed by an analysis of its qualities, and suggestions for a parallel piece of work. That, at any rate, is on right lines, and calculated to be helpful.

*Laudate: a Hymn and Tune Book for use in Secondary Schools*.

Compiled by J. J. Findlay. (A. & C. Black.)

Dr. Findlay has done an excellent thing by putting together this collection of well written hymns set to melodious and generally familiar tunes. He says, what is undoubtedly true, that there is a demand for hymns in schools which are undenominational in character and which cannot use publications especially intended for the use of churches or chapels. The selection is thoroughly liberal and judicious; almost every well known hymn writer has been drawn on, both for words and tunes, and the book is certain to be useful for its intended purpose. It includes psalms as well as hymns, and there is an alternate sol-fa arrangement on every page.

*Lamb's Essays of Elia*. Second Series. Edited, with Notes, by N. L. Hallward, M.A. (Macmillan.)

This is a worthy pendant to Mr. Hallward's former volume, and completes an edition of the "Essays" of Lamb which is specially designed for Indian students of English. The notes are more copious than they need be for an English reader of Lamb, but entirely suited for one who has had to learn the language before he can enjoy its literature.

*The Manipulation of the Brush, as applied to Design*. By Stanley Thorogood. (Philip & Son.)

This large quarto, with many plates of progressive brush work designs in various colours, is intended as a course for higher-grade elementary and secondary schools. Mr. Thorogood says that he has felt the want of some useful handbook on the use of the brush as a means of expressing form and training the hand and the eye. We must say that, if he has really felt such a want, he must have failed to look about him, for there are plenty of books answering to the description. No doubt the present one is more than usually systematic, comprehensive, and suggestive. It is very well suited to its purpose, and provides ample material for the work of a term.

The month brings us a number of new Readers. In Prof. Meiklejohn's series we have Book V. of the "Caxton Historical Readers," *The Tudor Period, with Biographies of Leading Persons* (Holden). This is a good, simple summary, brightly written, in the sense that the brightest things are culled out of contemporary records. There are some appropriate illustrations.—*Great Irishmen: Short Lives written for Young Children* (Bell & Sons) is by the author of "Great Englishmen." The stories are well told, and they will certainly interest young readers.—Messrs. Chambers print a first and second *Infant Reader*, with coloured illustrations.

In the way of Reprints we have from Messrs. Macmillan F. T. Buckland's *Curiosities of Natural History*, which remain in the third generation scarcely less attractive and instructive than they were forty years ago.—Messrs. Cassell & Co. send an annual volume of their boy's magazine, *Chums*, from August to August, with thousands of pictures, tales, anecdotes, and jokes.—From the same publishers we have an anticipation of the special picture-book season, *Peter Piper's Peepshow*, by S. H. Haines, with some very humorous illustrations by Lewis Baumer and H. B. Neilson; and the annual volume of *Work*.

## CORRESPONDENCE.

## NATIONAL HOME-READING UNION.

To the Editor of the Educational Times.

DEAR SIR,—May I be allowed to remind your readers that the syllabus of subjects for the twelfth reading season of the National Home-Reading Union is ready?

For the information of those who are not acquainted with the Union, I should like to state that its aim is, briefly, to render reading attractive and profitable by issuing lists drawn up by authorities of the best books in various subjects, and by publishing magazines which contain introductions to the subjects under study, suggestions as to the best methods of reading the prescribed books, answers to questions, and criticism of essays, as well as news of other readers' doings.

The subjects included in the Young People's Course are:—(1) History and Biography, with special reference to King Alfred and his times; (2) Literature (Shakespeare, Prose, and Poetry); (3) Travel; (4) Romance and Humour; and (5) Nature-Study (for this, special editions of Richard Jefferies' "The Open Air" and "Nature near London" have been obtained).

For the General Course—a section intended for those who have but little leisure—the subjects are:—(1) Social Science; (2) The Reformation and the Revival of Learning (for this group special editions of the following have been obtained: Koestlin's "Luther," Froude's "Erasmus," Hudson Shaw's "Lectures on the Oxford Reformers," and Mrs. Charles' "Chronicles of the Schönberg-Cotta Family"); (3) Geology; (4) Italy in the Revival of Learning; (5) Rome; (6) Travel; (7) Biography; (8) Novels, Essays, and Poetry; and (9) a group of books chosen especially for Sunday school teachers.

The Special Course Section is intended for more advanced students who desire to receive systematic tutorial help, and includes the following subjects:—(1) English History, from 1789; (2) Modern English Literature; (3) The Tragedies of Shakespeare; (4) Browning; (5) Mediæval and Early Renaissance Literature; (6) India; (7) French History; (8) German Lyrical Poetry; (9) Education; (10) Astronomy.

Full information may be obtained from the Secretary, N.H.R.U., Surrey House, Victoria Embankment, London, W.C.—Yours faithfully,  
M. C. MONDY, Secretary.

## UNMANAGEABLE GIRLS.

To the Editor of the Educational Times.

SIR,—Our unmanageable girls are evidently a very real difficulty in the present day. To what a pass have things come when voluntary cases, as they are called, are taken in industrial schools—that is, cases which are voluntarily sent by the parents and paid for by them! There is even one institution in the North of London where such cases are taken from thirteen to nineteen (the more usual age is sixteen). But is there nothing that can be done short of this? Not improbably there are school-mistresses who have made this kind of girl their *spécialité*. If they, or parents who have been successful in treating such specimens, would write and state their experience, some good might be done.



**MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.**

A MEETING of the Council was held on September 15. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Baumann, Rev. J. O. Bevan, Rev. A. W. Boulden, Mr. Brown, Mr. Butler, Mr. Charles, Mr. Eve, Mr. Millar-Inglis, Mr. Milne, Mr. Pinches, Rev. Dr. Scott, Rev. J. Stewart, and Rev. J. E. Symus.

The minutes of the last meeting were read and confirmed.

The Secretary reported that the London School Board had resolved to grant Honour Certificates to pupils in their schools who obtain Certificates of the First Class, or the 1st Division of the Second Class, at the College Examinations.

Diplomas were granted to the following who had completed their subjects at the last Midsummer Examination of Teachers:—*Licentiate-ship*—Mrs. E. M. M. Shipham; *Associateship*—E. R. Booth, W. S. Carrick, T. Pickard, Miss E. S. Scriven, J. P. S. Varcoe.

The Report of the Finance Committee was adopted.

The Report of the Examination Committee was adopted.

The following persons were elected members of the College:—

- Miss M. K. Bell, A.C.P., L.L.A., 61 Grosvenor Place, Margate.
- Mr. W. W. Hayward, Barker Memorial School, Lomas de Zamora, Buenos Aires.
- Mr. N. Venkataswami Iyya, 44 College Street, Calcutta.
- Mr. T. H. Kirkby, 11 Chestnut Avenue, Derby.
- Miss M. P. Lovett Turner, A.C.P., 28 Hampton Road, Redland, Bristol.

The following books had been presented to the Library since the last meeting of the Council:—

- By W. B. CLIVE.—Wyatt's Tutorial History of English Literature.
- By Mr. J. L. LEES.—Lees' Metric Weights and Measures.
- By Mr. J. P. A. MARTIN.—Thierry-Mieg's Examen Critique des Sténographies Françaises et Étrangères.
- By Mr. J. F. MOON.—Aristotle's *Politica* et (*Economica*): Blouet's Class-Book of French Composition; Buckley's Translation of *Æschylus' Tragedies*; Fouquier's *Sintram*; Galpin's British Botany; Hume's History of England (6 vols.); Homer's *Iliad* and *Odyssey*; Kohlrausch's *Deutsche Geschichte*; Rühlé's French Examination Papers; Sargent's Easy Passages for Translation into Latin; Sims's *Mendelssohn's Letters*; Tarver's *Dumas' Monte Christo*; Welb's *Martial for English Readers*; *Weber's Weltgeschichte*.
- By the UNIVERSITY OF THE STATE OF NEW YORK.—Report of the College Department on the Professional Education in the United States.
- By the VOLTA BUREAU, WASHINGTON.—Helen Keller Souvenir, No. 2: Reports relating to the Education of the Deaf.
- By Prof. VICTOR SPIERS.—Spiers' First French Book.
- By A. & C. BLACK.—Hartog's Cours de Grammaire Française Élémentaire; Lyde's School Geography of the World.
- By BLACKIE & SON.—Blackie's Handbooks of English, Nos. I.-IV.; Science Handbook, No. IV.; South Kensington Drawing Sheets, Set IV.; Synopsis of Warner's Brief Survey of British History; Frew's Object Lessons in Geography and Science, Part 2; Kustner and Atkin's Short History of French Literature; Macaulay's Prophecy of Cypus; Sandford's *Virgil's Æneid*, Book III.; Smith's Dryden's Essay of Dramatic Poesy; Weekley's *Le Songe d'Or* and other Stories.
- By G. BELL & SONS.—Conway's Stories of Great Men; Charles' Selections from Cicero; Chambers' Selections from Phædrus; Lutter's *Horace*, Book III.; Bell's Reading Books; Great Irishmen; Phillipson's *Virgil's Æneid*, Book VI.; Marchant's *Xenophon's Anabasis*, Book I.; Minchin's *The Student's Dynamics*; Wells' *Sophocles' Antigone*.
- By T. BURLEIGH.—Popular Handbook of the British Constitution.
- By C. J. CLAY & SONS.—Cambridge Higher Local Examination Papers, June 1900; Blythe's Geometrical Drawing, Part II.; Nicklin's *Scott's Old Mortality*; *Peskett's Caesar*, De Bello Civili, Book III.
- By HACHETTE & Co.—Berthou's *Eckmann-Chatrion's Histoire d'un Conserit de 1813*; Testard's *Graduated French Naval Course*.
- By A. M. HOLDEN.—De Cusance's First French Book; Flux's *Building of the British Empire*.
- By MACMILLAN & Co.—Bury's *History of Greece*; Page's *Æneid of Virgil*, Books VII.-XII.
- By J. MURRAY.—Krisch's Technical School French Grammar.
- By SIR ISAAC PITMAN & SONS.—Vizetelly's *A Child's First Steps in French*.
- By W. RICE.—Anderson and Storr's *French Words and Phrases*.
- By WHITTAKER & Co.—Programme of Technological Examinations of the City and Guilds of London Institute
- Calendars of Edinburgh University, Glasgow University, St. Andrews University, Yorkshire College, Leeds, Queen's College, Cork, University of Birmingham, University College, Bristol.
- N.U.T. Report, 1900.
- List of Members, &c., of the Society of Accountants and Auditors.

**COLLEGE OF PRECEPTORS.**

**PROFESSIONAL PRELIMINARY EXAMINATION—PASS LIST.**

SEPTEMBER, 1900.

THE Supplementary Examination by the College of Preceptors for Certificates recognized by the General Medical Council, the Incorporated Law Society, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, the Education Department, and other bodies, was held on the 4th, 5th, and 6th of September, in London, and at four other local centres, viz., Birmingham, Bristol, Leeds, and Liverpool. The following candidates obtained Certificates:—

<b>FIRST CLASS.</b>		
<i>Pass Division.</i>		
Acland, J. H. D.	Ironside, A. E.	Rossiter, H. T.
Adler, J. E.	Johnson, V. G.	Shaw, E. H.
Austin, G. E.	Macdonald, A. H.	Stevens, R. H. E.
Daw, S. W.	Ockwell, C. M.	Thompson, E. M.
Doo, H.	Page, G. F.	Thompson, G. S.
Eager, G.		
<b>SECOND CLASS.</b>		
<i>First Division.</i>		
Armstrong, A. G.	Boome, E. J.	Taylor, R. T.
Bennett, C. N.	Bracey, H. C. H.	
<b>Second Division.</b>		
Aveston, J. J.	Keates, C. C.	Roberts, W. R. S.
Barker, R. S.	Marshall, C. H.	Sanson, F. A.
Belcher, E.	Matheson, D. C.	Sebastian, G. N. B.
Bevan, L. E. W.	Miller, H. A. W.	Sheppard, C. W.
Binks, H. W.	Morson, A. C.	Taylor, C. H.
Carless, S.	Owen, H. J.	Walker, H. A. H.
Casey, E. R.	Phillips, F. E. L.	Weller, C.
Clough, A. H.	Pickett, A. C.	Wilkinson, W. C.
Gaunt, J. K.		
<b>Third Division.</b>		
Balchin, E. J.	Hagger, W. A.	Kavanagh, L.
Beadnell-Gill, R.	Hindle, J. W.	Sanders, R.
Butcher, W.	Ievers, H. W.	Sewell, E. D.
Cutt, A. H. H.	Jago, W. J.	Wellington, C. P.
Fenn, R. P.	Jarvis, H.	Young, J. S.
Fielder, T. J. G.		

**CERTIFICATE EXAMINATION (MIDSUMMER, 1900).**

The following is the list of the successful candidates at the Colombo-Centre:—

N.B.—The small italic letters denote that the candidate to whose name they are attached was distinguished in the following subjects respectively:—  
*a* = Arithmetic, *e* = Euclid, *eu* = English,  
*al* = Algebra, *g* = Geography.

The small figure 1 prefixed to name in the Second Class List denotes that the candidate was entered for the First Class.

<b>Boys.</b>	
<b>SECOND CLASS.—2ND DIVISION.</b>	
1Sattrukulasinge, A. B.	Private tuition.
<b>SECOND CLASS.—3RD DIVISION.</b>	
Cadiranelu, K. P.	City College, Colombo.
De Silva, A.	" "
<b>THIRD CLASS.—1ST DIVISION.</b>	
D'Zilva, D. O.	<i>e.g.a.al.</i> City College, Colombo.
Thambayah, S.	<i>eu.</i> " "
Wijayaratne, R. J. V. de S.	" "
<b>THIRD CLASS.—2ND DIVISION.</b>	
Hesse, A.	Private tuition.

**JUNIOR FORMS EXAMINATION.**

<b>Boys.</b>	
Blackett, E.	City College, Colombo.
Fernando, M. J.	" "
Gavaramattu, B.	" "
Jacob de Silva, S. M.	" "
Kunagaratnaw, W. R.	" "
Lye, B.	" "
Mutukumaru, T.	" "

**CERTIFICATE EXAMINATION (MIDSUMMER, 1900).**

**ERRATUM IN CLASS LIST.**

SECOND CLASS (GIRLS).

Insert in 2nd Division: Hill, G. B. B., St. Margaret's School, Streatham Common.

**MATHEMATICS.**

**14520** (Professor N. BHATTACHARYYA) and **14670** (E. W. ADAIR).—Required a *direct* proof of the old problem:—If the bisectors of the base angles of a triangle, being terminated at the opposite sides, be equal, show that the triangle is an isosceles one. (See TODDUNTER'S *Euclid*.)

I. Solution by Rev. T. ROACH, M.A.

Let  $A = 2\theta + 2\phi$ ,  $B = 2\theta - 2\phi$ ;

$$\therefore \frac{\sin(2\theta + 2\phi)}{\sin(3\theta + \phi)} = \frac{BE}{BA} = \frac{AD}{AB} = \frac{\sin(2\theta - 2\phi)}{\sin(3\theta - \phi)}$$

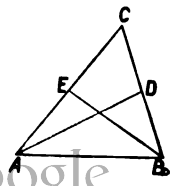
$$\therefore \cos 2\theta \sin 2\phi \{ \sin(3\theta - \phi) + \sin(3\theta + \phi) \}$$

$$= \sin 2\theta \cos 2\phi \{ \sin(3\theta + \phi) - \sin(3\theta - \phi) \};$$

$$\therefore \sin \phi = 0 \text{ or}$$

$$\cos 2\theta \sin 3\phi \cdot 2 \cos^2 \phi = \sin 2\theta \cos 3\theta \cos 2\phi;$$

$$\therefore 2 \cos^2 \phi \sin \theta = -2 \sin \theta \cos \theta \cos 3\theta;$$



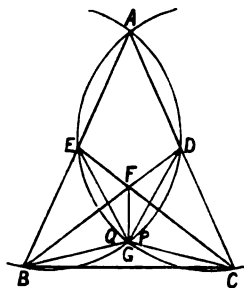
∴  $\sin \theta = 0$ , which is impossible, or  $\cos 2\phi + 1 = -(\cos 4\theta + \cos 2\theta)$ ;  
 ∴  $\cos 2\phi + \cos 2\theta = -(1 + \cos 4\theta)$ ; ∴  $2 \cos(\theta + \phi) \cos(\theta - \phi) = -2 \cos^2 2\theta$ ,  
 which is impossible, as each factor is positive; therefore  
 $\sin \phi = 0$ , and  $A = B$ .

II. Solution by R. CHARTRES.

(i.) *Indirect*.—By Euc. VI. B,  $ac - ab^2c/(a+c)^2 = ab - abc^2/(a+b)^2$ ,  
 or  $a(c-b) = abc \{b/(a+c)^2 - c/(a+b)^2\}$ ,  
 of which  $c-b$  is a factor; therefore  $b=c$ , or the triangle is isosceles.  
 Indirect proofs are given in TODHUNTER'S *Euclid*, p. 317, and in NIXON'S  
*Euclid Revised*, p. 383.

The following is submitted as a direct proof:

(ii.) *Direct*.—Since  $BD = CE$  and they subtend the same angle  $A$ , therefore the circumcircles of  $ABD$  and  $AEC$  are equal, and therefore the chords  $DG, GC$  are equal and likewise  $GE = GB$ ; therefore the triangles  $EGC, DGB$  are equal in all respects, and therefore the perpendiculars from  $G$  on  $BD, EC$  are equal, or  $GF$  bisects the angle  $BFC$ .  $F$  is clearly the incentre; therefore  $AF$  bisects  $A$ . Consequently  $AF$  passes through both  $P$  and  $Q$ , the middle points of the equal arcs  $DGB, EGC$ , points equally distant from  $BD$  and  $EC$ , and therefore on opposite sides of  $FG$ ; that is, they coincide at  $G$ , and the line  $AFG$  bisects both  $BFC$  and  $A$ ; that is,  $ABC$  is isosceles.



[Dr. J. S. MACKAY observes:—"A direct proof of this Question will be found in the *London, Edinburgh, and Dublin Philosophical Magazine* (Fourth Series), Vol. XLVII., pp. 354-7 (1874)."

Mr. R. TUCKER further observes:—"This Question was proposed as Quest. 1907 in *The Lady's and Gentleman's Diary* for 1856, and is solved on p. 58 (1857) by Messrs. T. T. WILKINSON, J. W. ELLIOTT (the Proposer), and (analytically) by others. Mr. WILKINSON returns to the problem in his 'Notæ Geometricæ' in the *Diary* for 1859 (p. 87). A historical note is added on p. 88 which traces the Question back to the *Nouvelles Annales* for 1842. Professor SYLVESTER drew attention to the subject in the *Philosophical Magazine* for November, 1852. Dr. ADAMSON further discusses the matter in the *Philosophical Magazine* for April, May, and June, 1853. The best article I know on Quest. 1907 (*Diary*) appears in § 11 of WILKINSON'S 'Horæ Geometricæ,' in the *Diary* for 1860, pp. 84-86, with a neat proof by the Rev. W. MARON. I find that the above references are given in Dr. MACKAY'S *Euclid*, p. 108. In the Key to this work Dr. MACKAY prints a proof by M. DESCURS (cf. p. 92)."

And Mr. W. J. GREENSTREET adds the following interesting information:—"For this and the similar theorem for two symmedians, v. *Intermédiaire des Mathématiciens*, Vol. II. (1895), pp. 151, 325. If the external bisectors of  $B$  and  $C$  are equal, it does not always follow that the triangle is isosceles. The data lead to  $4Rr_1 = a^2 + bc$  in the triangle sides  $a, b, c$  (v. *Mathesis*, p. 261, 1895)."

14251. (R. KNOWLES, B.A.)—Prove that the sum of the first  $r$  coefficients in the expansion of  $(1-x)^{-n}$  is  $\{r(r+1) \dots (r+n-1)\}/n!$ .

Solution by Rev. T. MITCHESON, B.A.; and others.

TODHUNTER shows that the sum of the first  $r+1$  coefficients in this expansion is  $(n+1)(n+2) - (n+r)/r!$ . For  $r$  put  $r-1$ ; then we have  $(n+1)(n+2) - (n+r-1)/(r-1)! = (n+r-1)!/n!(r-1)!$   
 $= \{(n+r-1)(n+r-2) \dots r\}/n!$

14250. (ROBERT W. D. CHRISTIE.)—Prove the following very general theorem:—  $x \cdot 10^{pn+k} = \frac{Pm+x}{\{ \frac{1}{10} (XP+1) \}^k \pmod{P}}$  (mod P),

where  $x, n, k$  are any integers,  $P$  any odd prime,  $p$  the period of  $1/P$ ,  $m$  any integer required to make the remainder an integer (always possible).

Ex. gr.—(1)  $x = 3, k = 5, P = 7, X = 1, 3, 7, 9$ , when  $P$  ends in 9, 3, 7, 1, respectively. Therefore

$$3 \cdot 10^{6n+5} = \frac{7m+3}{5^5 \pmod{7}} \pmod{7} = \frac{7m+3}{3} = 1 \pmod{7}.$$

Thus  $3 \cdot 10^{6n-1} = 1 \pmod{7}$ .

(2)  $n = 7, k = 1, P = 19$ .

$$7 \cdot 10^{18n+k} = (19m+7)/2^k = 13 \pmod{19}.$$

Thus  $7 \cdot 10^{18n+1} = 13 \pmod{19}$ .

Solution by Lt.-Col. ALLAN CUNNINGHAM, R.E.; and the PROPOSER.

Let  $a$  be any base prime to the prime  $P$ , and let  $p$  be the least exponent giving  $a^p \equiv 1 \pmod{P}$ . Let  $X$  be a number such that  $(XP+1)+a = \text{integer}$ .

Then  $x \cdot a^{np+k} \{ (XP+1)/a \}^k = x \cdot a^{np} \cdot (XP+1)^k \equiv x \pmod{P}$

[because  $a^{np} \equiv 1$ , and  $(XP+1)^k \equiv 1 \pmod{P}$ ]. Now substitute the residue of  $(XP+1)+a$  to mod  $P$  in the sinister, as is clearly admissible; therefore

$$x \cdot a^{np+k} [\text{residue of } \{ (XP+1)/a \}^k \pmod{P}] \equiv x \pmod{P} = (mP+x).$$

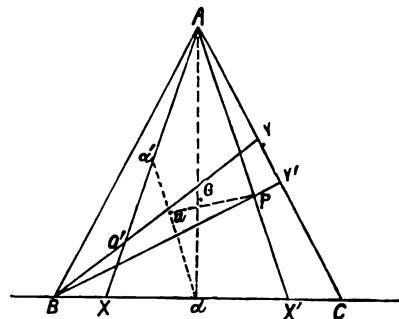
Now make  $a = 10$ , and divide by the expression in the brackets [...]; this gives the required result.

14430. (J. A. THIRD, D.Sc.)—A conic, whose centre is  $O$ , touches the sides  $BC, CA, AB$  of a triangle at  $X, Y, Z$ , and  $O'$  is the point of concurrence of  $AX, BY, CZ$ . Show that  $O$  bears to  $ABC$  the same relation that the isotomic conjugate of  $O'$  bears to the anticomplementary triangle of  $ABC$  (the triangle formed by parallels through  $A, B, C$  to the opposite sides).

Solution by Professor A. DROZ-FARNY; and Professor K. J. SANJANA, M.A.

Il suffit de démontrer que  $O$  est le point complémentaire du conjugué isotomique de  $O'$ , point de GERGOINNE de la conique inscrite.

Soit  $P$  un point quelconque du plan du triangle  $ABC$  et  $g$  une transversale quelconque passant par  $P$ . Cette droite coupe les côtés en  $A', B', C'$ . Soit  $A''$  sur  $BC$  l'isotomique de  $A'$ ; les trois points  $A'', B'', C''$  sont sur une ligne droite  $g'$  la transversale réciproque de  $g$  (nomenclature de M. DE LONGCHAMPS). Comme on le démontre aisément, lorsque  $g$  tourne autour de  $P$ ,  $g'$  enveloppe une conique inscrite au triangle et touchant les côtés aux points  $X, Y, Z$  isotomiques des points d'intersection de  $PA, PB, PC$  respectivement avec  $BC, AC, AB$ . Les points  $O'$  et  $P$  sont donc conjugués isotomiques. Soient  $a$  le point milieu de  $BC$  et  $a'$  celui de  $AX$ . D'après une proposition connue, cas particulier du théorème de NEWTON sur le lieu des centres des coniques inscrites dans un quadrilatère,  $O$  est le point de croisement des droites  $aa', bb', cc'$ . Or,  $G$  étant le centre de gravité du triangle, soit  $u$  le point d'intersection de  $PG$  avec  $aa'$ . Les triangles  $AGP$  et  $uaG$  étant semblables,  $Ga : GP = Ga : GA = 1 : 2$ ;  $u$  est donc le complémentaire de  $P$  et par conséquent un point fixe sur  $PG$  par lequel passeront de même  $bb'$  et  $cc'$ ;  $u$  coïncide donc avec  $O$ ; d'où la proposition.



14412. (H. A. WEBB.)—Three equilateral triangles are described outwards on the sides of any triangle as bases. Prove geometrically that the centres of these three equilateral triangles form the vertices of a fourth equilateral triangle.

Solution by J. G. SMITH; W. J. GREENSTREET, M.A.; and many others.

The three circles round the equilateral triangles meet in a point. For let two meet in  $O$ ; then  $\angle BOC = \angle COA = 120^\circ$ . Therefore  $\angle BOA = 120^\circ$ . Therefore  $O$  is on the circle  $ABR$ .

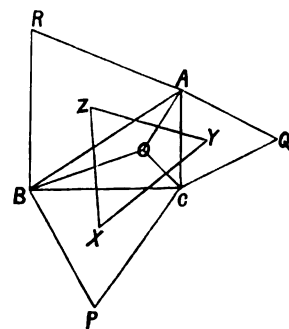
Join  $OA, OB, OC$ , and the centres of the circles  $X, Y, Z$ . Then  $OA$  is common chord of circles  $ARB$  and  $CAQ$ . Therefore  $YZ$  is perpendicular to  $OA$ . Similarly,  $XY$  is perpendicular to  $OC, ZX$  to  $OB$ ; but  $OA, OB, OC$  are equally inclined to one another. Therefore  $YZ, ZX, XY$  are equally inclined. Therefore  $XYZ$  is equilateral.

Extensions.—(1) Same holds if the triangles are inscribed inwards.

(2) This theorem may be extended thus:—If any similar triangles be described inwards or outwards on the sides of any triangle so that each angle may be in turn vertical angle, then the centres of the circles round those triangles form the vertices of a new triangle similar to the described triangles.

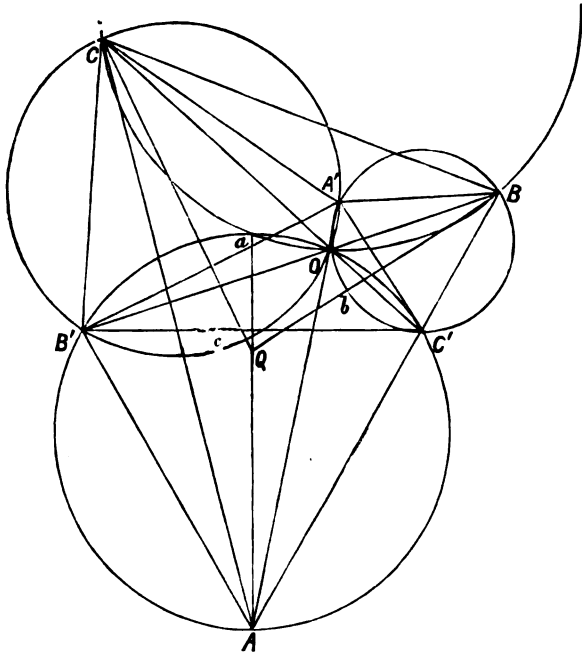
The circles will meet in a point, and so on.

14522. (J. H. TAYLOR, M.A.)—If  $A, B, C$  are vertices of equilateral triangles described all externally, or all internally, on the sides of a triangle  $A'B'C'$ , and  $Aa, Bb, Cc$  are diameters of circles circumscribing those equilateral triangles, then  $AA', BB', CC'$  are equal and concurrent, and  $a, b, c$  form an equilateral triangle and are middle points, each of a pair of arcs, on sides of the triangles  $ABC, A'B'C'$ .



*Solution by the PROPOSER and Professor SANJANA.*

AA', BB', CC' are concurrent, since the equilateral triangles are a particular case of similar isosceles triangles. (Quest. 14493.)  
 B'A', A'B = CA', A'C', each to each, and  $\angle B'A'B = CA'C'$ ; therefore  $B'B = CC' = AA'$  in like manner.  
 a, b, c are middle points of arcs containing angles of  $120^\circ$ , and therefore are centres of equilateral triangles described internally on the sides of the triangle B'CA'; therefore abc is an equilateral triangle. (Quest. 14412.)  
 It has been shown (Quest. 14382) that AA', BB', CC' intersect at  $60^\circ$ .



$\angle aOB' = aC'B' = 30^\circ = aOC$ ; therefore a is the mid-point of arc containing angle of  $120^\circ$  on CB, and it is also mid-point of a similar arc on CB.

[Regarding this Question as well as Quest. 14412, Mr. GREENSTREET observes:—For complete discussion of the numerous properties connected with these triangles, with copious bibliographical references, v. *Proc. Ed. Math. Soc.*, Vol. xv., p. 100 (Dr. J. S. MACKAY on "Isogonic Centres").]

**11069.** (J. J. BARNIVILLE.)—Prove that

$$1^5 + (1^5 + 2^5) 2^{-1} + (1^5 + 2^5 + 3^5) 2^{-2} + \dots = 2744,$$

$$1^3 + (1^3 + 3^3) 2^{-1} + (1^3 + 3^3 + 6^3) 2^{-2} + (1^3 + 3^3 + 6^3 + 10^3) 2^{-3} + \dots = 6416,$$

$$1^2 + (1^2 + 4^2) 2^{-1} + (1^2 + 4^2 + 10^2) 2^{-2} + (1^2 + 4^2 + 10^2 + 20^2) 2^{-3} + \dots = 2016;$$

$$n \cdot 1^3 + (n-1) 2^3 + \dots + 2(n-1)^3 + 1 \cdot n^3 = \frac{1}{2} n(n+1)(n+2)(3n^2 + 6n - 1);$$

in the figurate series 1, 7, 28, ...,  $66u_n + 26(u_{n+1} + u_{n-1}) + u_{n+2} + u_{n-2}$   
 = a sum of consecutive fifth powers;  
 the ultimate term of the series 1,  $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \dots$  is  $2 \sin \frac{1}{10} \pi$ .

*Solution by H. W. CURJEL, M.A.*

Let  $S(x) = 1^5 + (1^5 + 2^5)x + (1^5 + 2^5 + 3^5)x^2 + \dots$   
 and  $S_n = 1^n + 2^n x + 3^n x^2 + \dots$

$$S_0 = \frac{1}{1-x}, \quad S_1 = \frac{1}{(1-x)^2}, \quad S_2 = \frac{1}{1-x} (-S_0 + 2S_1) = \frac{1+x}{(1-x)^3},$$

$$S_3 = \frac{1}{1-x} (3S_2 - 3S_1 + S_0) = \frac{1+4x+x^2}{(1-x)^4},$$

$$S_4 = \frac{1}{1-x} (4S_3 - 6S_2 + 4S_1 - S_0) = \frac{1+11x+11x^2+x^3}{(1-x)^5},$$

$$S_5 = \frac{1}{1-x} (5S_4 - 10S_3 + 10S_2 - 5S_1 + S_0) = \frac{1+26x+66x^2+26x^3+x^4}{(1-x)^6};$$

therefore  $S_x = \frac{1+26x+66x^2+26x^3+x^4}{(1-x)^7} \dots (1);$   
 therefore first series =  $S(\frac{1}{2}) = 4328.$

[The rest in Volume.]

**14463.** (R. C. ARCHIBALD, M.A.)—Express the coordinates of any point on the cardioid as rational functions of a variable parameter, and show that the locus of a point which moves such that the triangle formed by joining the points of contact of the tangents drawn therefrom to the cardioid is of constant area and in general a curve of the eighth degree. [This theorem is due to Professor ZAHRAUDUK.]

**11427.** (R. LACHLAN, M.A.)—If the points of contact of the three tangents which can be drawn from the point P to the cardioid

$r = a(1 + \cos \theta)$  be collinear, prove that (1) the locus of P is a circle  $r + a \cos \theta = 0$ ; and (2), if the feet of the three normals which can be drawn from P be collinear, the locus of P is the circle  $3r = a \cos \theta$ .

*Solution by Professor SANJANA, M.A.*

We have  $x = r \cos \theta = 2a \cos^2 \frac{1}{2} \theta \cos \theta = 2a(1-t^2)/(1+t^2)^2,$   
 and  $y = r \sin \theta = 2a \cos^2 \frac{1}{2} \theta \sin \theta = 4at/(1+t^2)^2,$   
 where  $t = \tan \frac{1}{2} \theta.$

The normal makes with the radius vector the angle  $\frac{1}{2} \theta$ ; hence, its inclination to the axis of x is  $\frac{3}{2} \theta$ , that of the tangent  $\frac{1}{2} \pi + \frac{1}{2} \theta$ . Thus the equation of the normal at t is

$$y - \frac{4at}{(1+t^2)^2} = \frac{3t-t^3}{1-3t^2} \left( x - \frac{2a(1-t^2)}{(1+t^2)^2} \right),$$

or, on reduction,  $y(1-3t^2) - x(3t-t^3) + 2at = 0.$

Similarly, the equation of the tangent is

$$y(3t-t^3) + x(1-3t^2) - 2a = 0.$$

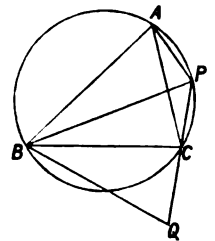
From any point P (hk), let three tangents be drawn to the curve; then the three points of contact are given by the cubic

$$kt^3 + 3ht^2 - 3kt + 2a - h = 0. \quad [\text{The rest in Volume.}]$$

*Alternative Proof of PTOLEMY'S Theorem, by R. F. DAVIS, M.A.*

Let P be a point on the circumcircle of ABC, between A and C (say). Produce PC to Q so that the angle PBQ = ABC. Then, obviously, the triangles PBQ, ABC are similar; and so also the triangles OBQ, ABP.

Thus  $PQ = (b/c) PB;$   
 $QC = (a/c) PA.$   
 Since  $PQ = QC + PC,$   
 $bPB = aPA + cPC.$



**14478.** (Rev. T. MITCHESON, B.A.)—P, Q are the ends of conjugate semi-diameters of an ellipse, and a straight line drawn from the intersection of the normals at P and Q, through the centre C, meets PQ in S, whilst the tangents meet at the point (h, k); show that

$$CS = \frac{a^2 b^2}{(a^2 k^2 + b^2 h^2)^{3/2}}$$

*Solution by R. TUCKER, M.A.; F. H. PRACHELL, B.A.; and others.*

Let the normals meet in O; then the equation to OC is

$$ax/(\cos \phi - \sin \phi) = by/(\cos \phi + \sin \phi) \dots (i.),$$

and to PQ is

$$hx/a^2 + ky/b^2 = 1 \dots (ii.),$$

whence

$$(h/a)(\cos \phi + \sin \phi) = (k/b)(\cos \phi - \sin \phi) \dots (iii.).$$

From (i.) and (iii.)

$$a^2 kx - b^2 hy = 0,$$

but (ii.) gives

$$b^2 hx + a^2 ky = a^2 b^2;$$

hence OC is perpendicular to PQ; whence

$$CS = \sqrt{(x^2 + y^2)} = \&c.$$

**QUESTIONS FOR SOLUTION.**

**14675.** (The late Professor WOLSTENHOLME, M.A., Sc.D.)—In the tetrahedron OABC the sum of the faces ABC, OBC is equal to the sum of the faces OCA, OAB. Prove that

$$(a-x)/\sin \frac{1}{2}(X-A) = (b-y)/\sin \frac{1}{2}(B-Y) = (c-z)/\sin \frac{1}{2}(C-Z)$$

= some positive quantity.

[The lengths OA, OB, OC are denoted by a, b, c; and the lengths BC, CA, AB by x, y, z; and the dihedral angles opposite these edges by A, B, C, X, Y, Z respectively.]

**14676.** (Professor NEUBERG.)—On donne deux points A, A', et deux courbes  $\Delta, \Delta'$ . En un point quelconque M de  $\Delta$  on mène la tangente, qui coupe  $\Delta'$  en un point M'. Les droites AM et BM' se coupent en un point P. Trouver la tangente à la courbe décrite par P lorsque M parcourt  $\Delta$ .

**14677.** (Professor JAN DE VRIES.)—The sides of three complete  $(2n+1)$ -laterals are touched by a conic. Prove that their vertices are joined by a curve of degree  $3n$ .

**14678.** (Professor E. J. NANSON.)—Show that the coordinates of the points of intersection of a conic S with the polar of the point xyz are given by

$$\begin{aligned} &= \Delta x^2 - AS & : & \Delta xy - HS + \Theta u_3 & : & \Delta xz - GS - \Theta u_2 \\ &= \Delta yx - HS - \Theta u_3 & : & \Theta y^2 - BS & : & \Delta yz - FS + \Theta u_1 \\ &= \Delta xz - GS + \Theta u_2 & : & \Delta zy - FS - \Theta u_1 & : & \Delta z^2 - CS, \end{aligned}$$

where  $u_1, u_2, u_3$  are the half-differential coefficients of S;  $\Delta$  is the discriminant of S; A, B, &c., are the co-factors of a, b, &c., in  $\Delta$ ; and  $\Theta^2 = -\Delta S$ .

**14679.** (J. A. THIRD, M.A., D.Sc.)—If P be the centre of a conic circumscribed to a triangle ABC, and Q the point of concurrence of the joins of A, B, C to the opposite vertices of the triangle formed by the

tangents at A, B, C, then P and Q are isotomic conjugates with respect to the complementary triangle of ABC

**14680.** (Professor SANJANA, M.A.)—Prove that the locus of points from which tangents drawn to the ellipse  $x^2/a^2 + y^2/b^2 - 1 \equiv S = 0$  form with their chords of contact triangles whose orthocentres lie on S is the sextic

$$x^4y^2a^2(a^2 - b^2)^2 + x^2y^4b^2(a^2 - b^2)^2 - 2x^2y^2(a^4 - a^4b^4 + b^4) - x^4a^2b^6 - y^4b^2a^6 + x^2b^6(a^2 + b^2)^2 + y^2a^6(a^2 + b^2)^2 = 0.$$

Show that this sextic breaks up into the conic  $a^2x^2 + b^2y^2 = (a^2 + b^2)^2$  and the quartic  $b^6x^2 + a^6y^2 = x^2y^2(a^2 - b^2)^2$ ; and explain the result. In the parabola  $y^2 = 4ax$  the locus is the quartic

$$(x + 2a)(xy^2 + 2ay^2 + 4a^3) = 0.$$

Explain the appearance of the two factors.

**14681.** (Professor U. CHANDRA GHOSH.)—Determine the maximum ellipse having double contact with a given conic, the chord of contact being a given line.

**14682.** (Professor E. N. BAKISIEN.)—Soit ABC un triangle. Calculer le rayon d'un cercle tangent à la fois au cercle inscrit et aux côtés AB, AC.

**14683.** (Professor P. LEVERRIER.) Etant donné un triangle ABC et un cercle O, on demande de couper le triangle par une transversale  $a\beta\gamma$  telle que les cercles  $a\beta C$  et  $a\gamma B$  soient égaux et que leur axe radical soit tangent au cercle O.

**14684.** (D. BRIDDLE.)—If a tetrahedron have its opposite edges equal, the point of contact of the inscribed sphere with any face is at the circumcentre of the face.

**14685.** (R. TUCKER, M.A.)—Find the H.C.F. of

$\cos(C - \omega) \cos(A - \omega)$	$-\cos \omega \cos(A - \omega)$	$\cos^2 \omega$
$\cos^2 \omega$	$\cos(A - \omega) \cos(B - \omega)$	$-\cos \omega \cos(B - \omega)$
$-\cos \omega \cos(C - \omega)$	$\cos^2 \omega$	$\cos(B - \omega) \cos(C - \omega)$
and		
$c \cos(A - \omega)$	$-a \cos \omega \cos(A - \omega)$	$a \cos^2 \omega$
$a$	$b \cos(A - \omega)$	$-b \cos \omega$
$b \cos(C - \omega)$	$c \cos^2 \omega$	$c \cos(B - \omega) \cos(C - \omega)$

**14686.** (R. F. DAVIS, M.A.)—If S be a given point, and KK' a given line, P a variable point moving in such a manner that  $SP \cdot PM = \text{constant}$ , PM being the perpendicular upon KK', prove the following construction for the tangent at P:—Produce SP to Q so that  $PQ = nSP$ ; draw QR perpendicular to SP meeting KK' in R; join QP, which will be the tangent at P.

**14687.** (R. C. ARCHIBALD, M.A.)—If a base angle of an isosceles triangle moves round a given circle with centre O, while the side (whose end traverses the circle) passes through a fixed point S of the circle; if, furthermore, the middle point of the base (which always passes through O) also lies on the circle, show that the vertex of the triangle traces out a cissoid of DIOCLES, while the free side envelops a cardioid.

Choose S as origin. Then any radius vector  $SP'$  of a point  $P'$  of the cissoid cuts the cardioid in a point P. If  $SP_1 = PP'$  be measured off in  $SP'$ , the locus of  $P_1$  is the conchoid of NICOMEDES, which has the same cusp and asymptote as the cissoid of DIOCLES. Its equation is  $r = 2a(1/\cos \theta - 1)$  when  $SO = a$ .

**14688.** (Rev. T. ROACH, M.A.)—TP, TP' are supplemental chords equally inclined to the curve (ellipse). Prove that  $TP : TP' = 2SP : S'P$ .

**14689.** (G. H. HARDY, B.A.)—Prove that

$$\psi(x) = x \log x \dots \log^{(\mu-1)} x \{ (\log x)^\nu \sin^2 \log^{(\mu-1)} x + (\log x)^\mu \cos^2 \log^{(\mu-1)} x \},$$

where  $\mu + 1 > \nu > \mu > 0$ , and  $\log x \equiv \log x$ ,  $\log^2 x = \log \log x$ , ..., tends steadily to  $\infty$  with  $x$ , from a certain value of  $x$ , while its infinity (croissance) is not comparable with that of any function of the logarithmic scale; and, further, that  $\int \frac{dx}{\psi(x)}$  is finite and determinate if

$$\mu + \nu > 2 > \mu + 1 > \nu > 1 > \mu > 0.$$

For example,  $\mu = \frac{3}{2}$ ,  $\nu = \frac{5}{2}$ .

**14690.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Solve (in integers), with numerical examples, the equations  $N_1 \cdot \beta_2 = N_2 \cdot \beta_1$ , where  $N_r = x^r + 4y^r$ ,  $\beta_r = (x^r + 3^3 \cdot y^r) + (x^r + 3y^r)$ .

**14691.** (Rev. J. CULLEN.)—A point P is taken in the plane of a given triangle ABC. AP, BP, CP cut the sides in D, E, F. The circle DEF cuts the sides again in D', E', F'; then AD', BE', CF' concur in a point Q. Show that (1), if P lies on the isogonal transformation of the LEMOINE line, then Q lies on the radical axis of DEF and the circumcircle; (2) if P lies on  $f(A, B, C) = 0$ , then Q lies on  $f(A^{-1}, B^{-1}, C^{-1}) = 0$ , where  $A = (b\beta + c\gamma)/\beta\gamma$ , &c.; (3) hence, if P lies on a conic circumscribing the triangle ABC, the isogonal conjugate of Q lies on a conic circumscribing the triangle whose vertices are the associated symmedian points. [If the latter locus be the circumcircle, that of P is  $\Sigma \cos(B - C)/a = 0$ ; and, if the locus of P be KIEPERT'S hyperbola, the other is  $\Sigma (\cos B - \cos C)/a = 0$ , a rectangular hyperbola, with respect to which ABC is self-conjugate.]

**14692.** (ROBERT W. D. CHRISTIE.)—Find perfectly general expressions for the sum of any  $n$  integral squares equal to the sum of  $n$  others when the sums of their roots are equal, also ( $n > 2$ ): e.g.,  $n = 3$ ,  $(a + b + c)^2 + (a + d + c)^2 + (a + c - b - d)^2$

$$= (a + c - b)^2 + (a + c - d)^2 + (a + b + c + d)^2.$$

**14693.** (J. J. BARNVILLE, B.A.)—Having  $u_n = u_{n-2} + u_{n-3}$ , prove that

$$\begin{aligned} \frac{1}{2 \cdot 4 \cdot 5} + \frac{1}{3 \cdot 5 \cdot 7} + \frac{1}{4 \cdot 7 \cdot 9} + \frac{1}{5 \cdot 9 \cdot 12} + \dots &= \frac{1}{24}, \\ \frac{1}{2 \cdot 3 \cdot 4 \cdot 5 \cdot 9} + \frac{1}{3 \cdot 4 \cdot 5 \cdot 7 \cdot 12} + \frac{1}{4 \cdot 5 \cdot 7 \cdot 9 \cdot 16} + \dots &= \frac{1}{840}, \\ \frac{2 \cdot 4 \cdot 12}{3 \cdot 5 \cdot 7 \cdot 9} + \frac{3 \cdot 5 \cdot 16}{4 \cdot 7 \cdot 9 \cdot 12} + \frac{4 \cdot 7 \cdot 21}{5 \cdot 9 \cdot 12 \cdot 16} + \dots &= \frac{1}{4} + \frac{1}{4} - \frac{1}{7}, \\ \frac{2^2}{1 \cdot 3 \cdot 5} + \frac{3^2}{1 \cdot 4 \cdot 7} + \frac{4^2}{1 \cdot 5 \cdot 9} + \frac{5^2}{2 \cdot 7 \cdot 12} + \dots &= \frac{41}{24}, \\ \frac{1}{9^2 - 1^2} + \frac{2}{12^2 - 2^2} + \frac{2}{16^2 - 2^2} + \frac{3}{21^2 - 3^2} + \dots &= \frac{1}{16}. \end{aligned}$$

**14694.** (R. CHARTRES.)—If a line be divided at random into  $n$  parts, and M be the mean value of the product of the parts, and  $m$  the maximum value of the product find the value of  $(m/M)^{1/n}$  when  $n$  is infinite.

**14695.** (R. KNOWLES.)—Prove that the sums to  $r$  terms of the series

- (1)  $1 - (m + 1) + (2m + 1) - (3m + 1) \dots \pm (mr - m + 1)$ ,
- (2)  $1 - (m + 1)^2 + (2m + 1)^2 - (3m + 1)^2 \dots \pm (mr - m + 1)^2$ ,
- (3)  $1 - (m + 1)^3 + (2m + 1)^3 - (3m + 1)^3 \dots \pm (mr - m + 1)^3$

are respectively

$$-\frac{1}{2}rm, \frac{1}{2}rm(m - rm - 2), \text{ and } -\frac{1}{2}rm \{ r(2r - 3)m^2 + 6(r - 1)m + 6 \},$$

when  $r$  is even,

$$\text{and } \frac{1}{2}(mr - m + 2), \frac{1}{2}rm \{ (rm - m + 2) - 2(m - 1) \},$$

$$\text{and } \frac{1}{2} \{ (r - 1)^2 (2r + 1)m^3 + 6r(r - 1)m^2 + 6(r - 1)m + 4 \},$$

when  $r$  is an odd number.

**14696.** (V. DANIEL.)—Show that  $\Sigma \cot A$  is an invariant function of the angles for a system of triangles inscribed to a triangle ABC, so that their vertices divide all three sides in the same ratio. Also, if this ratio is  $k/(1 - k)$  for a particular triangle A'B'C',

$$\Sigma a'^2 = \lambda \Sigma a^2; \quad \Sigma a'^4 = \lambda^2 \Sigma a^4; \quad \text{where } \lambda = 1 - 3k + 3k^2.$$

**14697.** (G. D. WILSON, B.A.)—From the definition "A focus of a conic is a point at which every two conjugate lines are perpendicular" find the ordinary equations for the foci of the general conic (areal coordinates), and thence show that the tangents from the foci to the conic pass through the circular points at infinity.

**14698.** (C. BICKERDIKE.)—

Four maids bright and fair  
As the rose that is rare  
Each one did declare  
She married would be.  
The equations below,  
Their ages will show.  
Will some friend find so  
Their ages for me?

$$(x^2 + u^2 + y^2)x = 26850, \quad (x^2 + u^2 + y^2)z = 23238, \quad (x^2 + z^2 + y^2)u = 24654,$$

$$(x^2 + z^2 + u^2)y = 24750.$$

**14699.** (SALUTATION.)—A circle, of centre O and radius  $r$ , is cut orthogonally by an ellipse, which has its major axis partly coincident with a diameter of the circle. The semi-axes of the ellipse being  $a, b$ , find the positions of its foci.

**14700.** (Professor LANGHOENE ORCHARD, M.A., B.Sc.)—If  $8\alpha = \pi$ ,

$$\text{show that } \sqrt{2} \left\{ 1 + \alpha - \left( \frac{\alpha^2}{2!} + \frac{\alpha^3}{3!} \right) + \left( \frac{\alpha^4}{4!} + \frac{\alpha^5}{5!} \right) - \dots \right\}$$

$$\times \left\{ 1 - \alpha - \left( \frac{\alpha^2}{2!} - \frac{\alpha^3}{3!} \right) + \left( \frac{\alpha^4}{4!} - \frac{\alpha^5}{5!} \right) - \dots \right\} = 1.$$

**14701.** (R. F. MUIRHEAD.)—Find the motion of a particle fixed to a massless elastic stretched cord when made to vibrate by a violin-bow drawn over the particle with uniform pressure and uniform velocity at right angles to the cord. In particular, find how the period of vibration compares with that of the natural period of the particle vibrating freely. Assume that the coefficients of static and kinetic friction are different and constant.

**14702.** (H. A. WEBB.)—A stream of incompressible fluid is projected uniformly vertically upwards, in *vacuo*, from a pipe with a horizontal circular nozzle. Show that the diameter of the fluid at any point varies inversely as the fourth root of the depth below the horizontal plane in which it comes to rest, and that in this plane the fluid is in a state of infinite dispersion. [This seems to be the theoretical explanation of the mushroom-like appearance of the cloud of dust over an active volcano,

and also of the great distance to which the products of an eruption are sometimes carried.]

14703. (Professor COCHEZ.)—N étant un nombre entier, démontrer que le nombre  $n^6 - 5n^3 + 4n$  est divisible par 120.

#### OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

6704. (Professor WOLSTENHOLME, M.A.)—A circle is drawn touching the parabola  $2a = r(1 + \cos \theta)$ , passing through the focus S, and meeting the parabola again in two points: prove that (1) the locus of T, the common point of the two common tangents to the circle and parabola, is  $4r = (\cos \frac{1}{2}\theta)^4$ , the second negative pedal of the parabola  $a = 2r(1 + \cos \theta)$ ; (2) the tangent at T to the locus of T bisects at right angles the radius of the circle drawn from S; and (3) the locus of the centre of the circle is the first negative pedal of the parabola  $a = 2r(1 + \cos \theta)$ .

6705. (Professor KOEHLER.)—Construire les courbes suivantes:—

$$2x^2y^3 + x^4 - y^4 = 2xy, \quad 4x^2y^5 + x^6 - y^6 + 5x^2y^2(x^2 - y^2) = 4xy.$$

6707. (Sir W. THOMSON, F.R.S., now Lord KELVIN.)—On a clear night you are suddenly placed in a boat somewhere hundreds of miles from land in the northern hemisphere, on either the Atlantic or the Pacific, with a *Nautical Almanac* (and a light to read it), knowing the month) but not the day or hour: you see the Moon with a bright star close beside her, as near the meridian as you can judge by reference to the Pole-star. Find the correct date, and tell whether you are in the Atlantic or the Pacific.

6716. (A. MARTIN, M.A.)—Having given the chances  $p, q, (p + q = 1)$  of the happening and failing of an event upon a single trial, find the chances of its happening (1) exactly  $m$  times in succession, and (2) at least  $m$  times in succession out of  $n$  trials.

6717. (Col. CLARKE, C.B., F.R.S.)—P and Q are points on a diameter, and equidistant from the centre of a given circle C; another circle wholly within C encloses one of these points: find the chance that it will enclose both.

6719. (E. W. SYMONS, M.A.)—A variable conic osculates a given rectangular hyperbola, and has one focus fixed at its centre: prove that the common tangents to the curves meet on the lemniscate  $r^2 = a \cos 2\theta$  (the centre of the hyperbola being pole, and its axis the initial line).

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

NOTICE.—Vol. LXXII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.C. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

#### THE LONDON MATHEMATICAL SOCIETY.

The following papers have been received or promised for the Annual Meeting in November:—

"In a Simple Group of an Odd Composite Order every System of Conjugate Operators or Sub-groups includes more than fifty": Dr. G. A. MILLER.

"Prime Functions on a Riemann Surface": Prof. A. C. DIXON.

(i.) "Further Notes on Isoscelians"; (ii.) "On two In-triangles which are similar to the Pedal Triangle": R. TUCKER.

"A general Congruence Theorem relating to the Bernoullian Function": Dr. GLAISHER.

## J. Curwen & Sons, Ltd.

### SCHOOL OPERETTAS.

Head Teachers, apply for a parcel on approval from Curwens'.

### CONCERT ACTION PIECES.

One shilling each. Send for Catalogue.

### SCHOOL CHORUSES AND GLEES.

Curwens' List is the longest and best.

### PENNY SCHOOL SONG BOOKS.

Let each child have one.

### HIGH CLASS SCHOOL MUSIC.

By HENRY SMART, J. L. HATTON, STERNDALÉ BENNETT, CERO PENSTUL. Send for List.

LONDON: J. CURWEN & SONS, LTD., 8 AND 9 WARWICK LANE, E.C.

## CASSELL'S EDUCATIONAL BOOKS.

Ready Shortly.

**THE TROUBADOUR.** Selections from English Verse.

Edited and Annotated by PHILIP GIBBS, Author of "Founders of the Empire," &c. 1s. 6d.

**OUR GREAT CITY; or, London the Heart of the**

**Empire.** By H. O. ARNOLD-FORSTER, M.A. About 300 pages. Crown 8vo. With a Series of Full-Page Illustrations. Strongly bound in cloth, price 1s. 9d.; or, bound in cloth with gilt edges, for presentation, 2s. 6d.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS.

256 pages. With 4 Coloured Plates and numerous Illustrations. Price 1s. 8d.; cloth gilt, 2s. 6d.

**IN DANGER'S HOUR; or, Stout Hearts and Stirring**

**Deeds.** 240 pages. With 4 original Coloured Plates and numerous Illustrations. Price 1s. 8d., in blue cloth; cloth gilt, 2s. 6d.

**THE CITIZEN READER.** By H. O. ARNOLD-FORSTER,

M.A. Fully Illustrated. 1s. 6d. 335th Thousand.

**BOUND THE EMPIRE.** By G. R. PARKIN. Fully

Illustrated. 110th Thousand. 1s. 6d.

**THE MAKING OF THE HOME.** By MRS. SAMUEL

A. BARNETT. 75th Thousand. 1s. 6d.

The Publishers will be pleased to receive applications for Specimens from Teachers, with a view to adoption.

CASSELL & CO., LTD., LUDGATE HILL, LONDON, E.C.

## PARSING AND ANALYSIS BOOKS.

By Rev. G. LITTING and GEORGE HOME.

**ENGLISH PARSING BOOK,** Price 6d.

Ruled, with printed headings. Large post quarto, 36 pages, thick nonpareil marble covers.

**FRENCH PARSING BOOK.** Price 6d.

**LATIN PARSING BOOK.** Price 6d.

**ENGLISH ANALYSIS BOOK.** Price 6d.

**OXFORD AND CAMBRIDGE ANALYSIS BOOK.**

40 pages. Price 4d.

Apply, for Specimen and Particulars, to the Publishers:

The Educational Supply Association,  
42 Holborn Viaduct, London.



# Blackie's Illustrated Latin Series

General Editor—Professor R. Y. TYRRELL, Litt.D.

Examiner to the Universities of London and Glasgow, &c.

With full-page COLOURED Plates; full-page Photographs of Bas-reliefs, Statues, &c., beautifully printed on superfine art paper; numerous black and white Illustrations specially drawn for this Series.

The Volumes are issued]

NEW VOLUMES.

[with or without Vocabularies.

**CAESAR'S GALLIC WAR, BOOK I.** Edited by JOHN BROWN, M.A., Professor of Latin in the University of New Zealand. 1s. 6d. [Ready October 15.]

A re-issue with slight modifications, and a large number of new illustrations, of Professor Brown's popular edition, the first to make this commonly-read book interesting to school-children. The new edition contains **six** full-page plates, **twenty-four** illustrations in the text, **five** maps and plans, and a **coloured** map of Gaul.

**VIRGIL'S GEORGICS, BOOK I.** Edited by S. E. WINBOLT, M.A., Assistant-Master in Christ's Hospital. 1s. 6d.

The illustrations in this volume are **two** full-page coloured plates, one from a bas-relief specially photographed in Rome, the other from a vase-painting, and **twenty-four** engravings in the text and notes. The introduction is an exceedingly well written and interesting piece of work, and includes a very careful account of Virgil's use of the hexameter.

**LIVY, BOOK VI.** Edited by W. CECIL LAMING, M.A., Classical Master in Edinburgh Academy. 2s. 6d.

This is a companion to Mr. Laming's edition of Book V. already published. The frontispiece is a **coloured** representation of a Roman *patera*, and the other illustrations include **two** full-page plates, with a map of Italy and a **coloured** plan of Rome.

**SALLUST'S CATILINE.** Edited by the Rev. W. A. STONE, M.A., Assistant-Master in Bristol Grammar School. 1s. 6d.

The illustrations include a **coloured** plate representing a chased silver vase, and **two** other full-page plates, as well as a number of illustrations through the text.

**CICERO'S CATILINE ORATIONS.** Edited by C. HAINES KEENE, M.A., Professor of Greek at Queen's College, Cork. **Second edition.** 2s. 6d. This second edition contains **three** full-page plates.



Illustration from]

Romans constructing a New Camp.

[Caesar's Gallic War I.

## VOLUMES ALREADY ISSUED.

**CICERO—THE FIRST CATILINE ORATION.**

Edited by Professor C. H. KEENE, M.A. 1s. 6d.

**EUTROPIUS, BOOKS I. and II.** Edited by W. CECIL LAMING,

M.A., Classical Master in Edinburgh Academy. 1s. 6d.

**LIVY, BOOK V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.

**HORACE—THE ODES, BOOKS I., II., III., and IV.** Edited by STEPHEN GWYNN, B.A. 1s. 6d. each.

**TACITUS—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS, M.A. 1s. 6d.

**VIRGIL—AENEID III.** Edited by Professor SANDFORD, M.A. 1s. 6d.

THE PUBLISHERS WILL BE PLEASED TO SEND SPECIMEN COPIES WITH A VIEW TO INTRODUCTION.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.



1900

# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 475.

NOVEMBER 1, 1900.

{ Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

**1. DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 1st of January, 1901.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

**2. CERTIFICATE EXAMINATIONS.**—The Christmas Examination for Certificates will commence on the 4th of December, 1900.

**3. JUNIOR FORMS EXAMINATIONS.**—The Christmas Examination will commence on the 4th of December, 1900.

**4. PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 5th of March, 1901.

**5. INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5. The Doreck Scholarship of £20 will be awarded on the results of the Christmas Examination.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Sciences, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

**PRELIMINARY EXAMINATION OF MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 6th, 6th, and 7th of March, 1901.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.—

EXTRACT FROM THE BY-LAWS.

Section II, clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## WINTER MEETING FOR TEACHERS (JANUARY, 1901).

Conducted by the

COLLEGE OF PRECEPTORS  
(Bloomsbury Square, London, W.C.)

Arrangements are being made for holding a Winter Meeting of Teachers at the College of Preceptors in the first fortnight in January, 1901.

The Programme will be ready for issue before the end of November. Amongst the subjects to be dealt with will be the Teaching of Mathematics, including Arithmetic, and the Teaching of Languages, Ancient and Modern.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— (Bloomsbury Square, W.C.)

The next Monthly Evening Meeting of the Members will take place on Wednesday, the 14th of November, when the Rev. J. O. BEVAN, M.A., F.C.P., will read a Paper entitled "Education at the Paris Exhibition."

The Chair will be taken at 7.30 p.m., and a discussion will follow the reading of the Paper.

Members have the privilege of introducing their friends.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, DECEMBER, 1900.

Notice is hereby given that at the above Examination the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar*, *Gallie War*, Book vi., *Virgil*, *Aeneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS

ON THE SCIENCE AND ART OF EDUCATION.

To be delivered by H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester, late Principal of the "Borough Road" Training College, Isleworth.

The Second Course of Lectures (Twenty-sixth Annual Series) began on Saturday, October 6, at 5 p.m.

The Fee for the Course is Half-a-guinea.

The Lectures will be delivered on Saturday Afternoons at 5 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., Secretary.

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

**LONDON MATRICULATION and**  
B.A. Course, College of Preceptors Examinations, Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c. Orally and by post. Numerous successes every year. Terms moderate.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

FORMUSICAL EDUCATION, AND EXAMINATIONS  
IN PRACTICAL AND THEORETICAL MUSIC.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in December, when certificates will be granted to all successful candidates. Last day for entry, November 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship also take place in December.

SYLLABUS for the year 1900, containing important alterations (including the new Primary section in Pianoforte Playing), may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

T. WEEKES HOLMES, Secretary.

## CORRESPONDENCE TUITION,

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

University  
Correspondence  
College.

FREE GUIDES

TO

LONDON  
UNIVERSITY EXAMINATIONS.

FREE GUIDE TO MATRICULATION

(Postage 1d.).

INTER. ARTS, B.A., INTER. SCIENCE, OR

INTER. LAWS EXAMINATION.

Any one of the above Arts or Sciences Guides, Prospectus, and further particulars will be sent post free on application to

THE SECRETARY,

(Univ. Corr. Coll., London Office.)

32 Red Lion Square, Holborn, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)

Principal—H. R. REICHEL, M.A.

The Session began October 2nd, 1900. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (held in September), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to

JOHN EDWARD LLOYD, M.A.,

Secretary and Registrar.

## UNIVERSITY COLLEGE OF NORTH WALES.

(A Constituent College of the University of Wales.)

### DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.

(Recognized by the Cambridge Syndicate.)

Professor of Education—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAVESON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

Principal—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Heriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## PUPIL TEACHER CENTRE,

CAMBRIDGE.—HEADMISTRESS required at Christmas. £150. P.T. Centre, or similar experience. Apply—Rev. C. H. W. JOHNS, Queens' College, Cambridge.

## REQUIRED AT CHRISTMAS,

Non-Resident Post as ASSISTANT-MISTRESS in a Secondary School. Good experience and qualifications. Preparation for Locals and University Examinations.—A. B., *Educational Times* Office, 89, Farringdon Street, London, E.C.

## RELIGIOUS TEACHING IN SECONDARY SCHOOLS.

A Problem of To-day.

BY THE

Rev. J. O. BEVAN, M.A., F.S.A.,

Fellow of the College of Preceptors, and Examiner.

Price 6d., post free.

55 Gunterstone Road, West Kensington, W.

## TRANSLATION OF THE MINISTERIAL DECREE ON THE SIMPLIFICATION OF FRENCH SYNTAX.

Reprinted from the *Educational Times*.

Post free, 1½d. each, or 7s. 6d. per 100.

J. RUSSELL, CRIPPLEGATE, WOKING.

A GERMAN LADY (High School Teacher) desires to receive an English Lady as guest in her house, whom she would prepare for Examinations. Terms very moderate. Highest references. Address—Fräulein HERRKLOTSCHE, Magdeburger Strasse, Cothen in Anhalt (near Leipzig), Germany.

## BEDFORD COLLEGE, LONDON (FOR WOMEN),

YORK PLACE, BAKER STREET, W.

Principal—Miss ETHEL HURLBATT.

The Michaelmas Half Term begins on Monday, November 12th.

The College prepares for the University of London Examinations in Arts and Science.

Students can also enter for College Courses, the Training Department, the Hygiene Department, or the Art School. Six Laboratories are open to Students for Practical Work.

Further information on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN),

YORK PLACE, BAKER STREET, W.

### DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.

Head of the Department—Miss HANNAH ROBERTSON, B.A.

The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

The Session begins on January 17th, 1901.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

A residential College providing a year's professional training for Teachers.

The course includes preparation for the Cambridge Teachers' Certificate (Theory and Practice), and for the Teachers' Diploma of the London University. The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers. Ample opportunity is given for practice in teaching science, languages, mathematics, and other subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## THE CHELTENHAM LADIES' COLLEGE.

A GILCHRIST TRAVELLING STUDENTSHIP for Women Teachers, of the value of £70, will be awarded by the Council of the Cheltenham Ladies' College. All information can be obtained from the LADY PRINCIPAL, to whom application for the Studentship, accompanied by a statement of the Candidate's qualifications, should be made by December 1st.

## WESTFIELD COLLEGE,

FINCHLEY ROAD, HAMPESTEAD, N.W.—Two ENTRANCE SCHOLARSHIPS, of the value of from £40 to £50 a year for two years, will be offered for competition among women students at an Examination to be held on September 12 and 13. Candidates must have passed the Matriculation Examination of London University, and the successful competitors will be required to enter into residence in October next, and to read for the B.A. or B.Sc. degree of London University. Further particulars and entrance forms may be obtained from the Secretary, Miss S. M. SMEE.

THE

## FROEBEL EDUCATIONAL INSTITUTE,

TALGARTH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEFIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

### TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

### KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergarten and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged.

Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## JOINT AGENCY FOR ASSISTANT-MASTERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.  
Incorporated Association of Headmasters.  
College of Preceptors.  
Teachers' Guild.  
Welsh County Schools' Association.  
Private Schools' Association.  
Association of Headmasters of Preparatory Schools.  
Association of Headmasters of Roman Catholic Schools.  
Assistant-Masters' Association.  
Association of Technical Institutions.  
&c. &c.

As the Agency is not working with a view to profit but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

## CARLYON COLLEGE.

55 AND 56 CHANCERY LANE.

### LONDON UNIVERSITY EXAMINATIONS.

LONDON MATRICULATION, INTER. ARTS and SCIENCE, B.A., and B.Sc. Classes. Day and Evening Classes (small). Private tuition.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, B.U.L., &c.

Papers Corrected for Schools.

Private tuition for all Examinations.

Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Phaedo," "Pro Plancio," &c.

### SUCCESSSES.

1892-1900.—London Matric., 74; Inter. Arts, Sc., and Prel. Sci., 88, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.L., Indian Civil, Oxford and Cambridge, &c.

B.A. LONDON, 1899, 12 successful.

M.A., 2 (1898 and 1899).

### CAMBRIDGE LOCAL EXAMINATION.

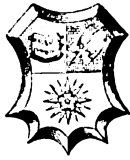
## SPECIAL NOTICE TO SCHOOLS.

Charles Fry's Costume Recitals with Miss Olive Kennett and Company. "Henry VIII.," "As You Like It," "Twelfth Night," and "Love's Labour Lost." St. George's Hall, Saturdays 3.30. November 10th, 17th, 24th, and December 1st. Tickets 5s., 2s. 6d., and 1s. Half-price to Schools. Apply before day to F. CHARLTON, Manager, 21, Park Avenue, Willesden Green. A Schoolmistress writes:—"I consider it an education for them to hear a play rendered as 'Hamlet' was."

## TUITION.—B.A., B.Sc. London,

VISITS or RECEIVES STUDENTS or CLASSES for all Preliminaries, Matriculation, and the Degree Examinations; highest references; 20 years' experience.—BUTLER SMITH, 14 Hemstead Road, West Hampstead.

**LONDON UNIVERSITY EXAMINATIONS.**



**Day and Evening Classes,**

Covering the whole of the Theoretical and Practical Work for the Examinations of London University, are held at University Tutorial College, Red Lion Square, Holborn.

**Recapitulation Classes**

Are held during the Christmas Vacation.

For Matriculation, January, 1901, commencing Monday, December 17th, 1900; and for Prelim. Sci. (M.B.), January, 1901, commencing Thursday, December 27th.

**Vacation Classes,**

Covering the Practical Work for Inter. Sc. and B.Sc., commence Tuesday, December 18th.

All communications regarding Oral work in London should be addressed to

**THE VICE-PRINCIPAL,**  
University Tutorial College,

**32 Red Lion Square, Holborn, W.C.**

A COMPLETE FRENCH CLASS BOOK.  
*New Edition.*

**HALL'S FIRST FRENCH COURSE AND FRANCE AND THE FRENCH.**

Price 1s. 6d. KEY, 1s. 8d.

Contains nearly 200 Exercises, French Grammar, Pronunciation Lessons, Questionnaire, Easy and Instructive Reading Lessons, with Glossaries, Maps, Vocabularies, &c.

LONDON:  
**SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., Ltd.**

**THE BURLINGTON CLASSES.**

27 Chancery Lane, London.

Principal: **Mr. J. CHARLESTON, B.A.**

(Honours, Oxon.; and Lond.)

**TUTORS.**

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

**Preparation by Correspondence**

FOR  
**MATRICULATION, B.A., & B.Sc.,**

(London Univ., Royal Univ., Dublin Univ.),

**L.L.A.**

(Degree for Ladies—St Andrews),

**A.C.P., L.C.P., F.C.P.**

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—**Mr. J. CHARLESTON, B.A.,**  
**BURLINGTON CLASSES,**  
**27 CHANCERY LANE, LONDON.**

Third Edition. 12mo, price 1s. 6d.

**FIRST STEPS TO EUCLID:** comprising the Propositions of Book I, prepared for writing out, with a recapitulation of the steps of the Demonstration appended to each. Forming a Text-book for the above. By **A. K. ISBISTER, M.A., LL.B.**, late Dean of the College of Preceptors.

LONDON: **LONGMANS & CO., PATERNOSTER ROW, E.C.**

**BIRKBECK INSTITUTION.**  
BREAMS BUILDINGS, CHANCERY LANE, E.C.  
Principal—**G. ARMITAGE SMITH, M.A.**

**DAY AND EVENING CLASSES.**

New Session commenced **MONDAY, OCTOBER 1.**  
*University of London.*—Complete Courses of Study for all Examinations for the Science, Arts, and Law Degrees.

*Science Classes* in every branch, with Practical Work. Well equipped Laboratories for Chemistry, Physics, Zoology, Botany, and Metallurgy.

*Courses in Political Economy, Commercial Geography, Common Law, Bankruptcy, Equity and Conveyancing, Logic, Psychology, and Ethics.*

*Classes in Latin, Greek, Modern Languages, Literature, English and Commercial Subjects, and for Civil Service.*

*School of Art*—Drawing, Painting, Designing, Modelling, Life Classes, Wood Carving, &c.

Prospectus free, *Calendar* 6d. (by post, 8d.), on application to **SECRETARY.**

**Diploma Correspondence College.**

FOR

**A.C.P.,**  
**L.C.P., AND F.C.P.**

**SUCCESSES: 311 at A.C.P.; 20 at L.C.P.**

Full particulars on application to the Principal—

**Dr. KNIPE, Dip. Corr. Coll., Fishponds, Bristol.**

**THE MOST NUTRITIOUS.**

**E P P S ' S**

**GRATEFUL—COMFORTING.**

**C O C O A**

**BREAKFAST—SUPPER.**

**FREE GUIDE TO THE CAMBRIDGE HIGHER LOCAL EXAMINATION,**

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

**APRIL EDITION** (76 pages), containing advice as to books to read for the 1900 and 1901 Examinations, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, **Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.**

**332 U.E.P.I.** candidates passed the Cambridge Higher Local from 1895 to 1900, **60** with distinction.

The Institution prepares through the post for various University Examinations and for the **A.C.P., L.C.P., and F.C.P.**

**EXAMINATION PAPER**

AS USED BY THE

**COLLEGE OF PRECEPTORS.**

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Beams of **480 Sheets** ... per Beam, **2s. 6d.**

" " **960** " " " " **5s. 0d.**

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

**NEWARD & SHELBOURNE, Wholesale and Retail Stationers,**  
**63 HIGH HOLBORN, LONDON, W.C.**

**NINTH EDITION, REVISED.**

Crown 8vo, 10s. 6d.

**AN ELEMENTARY TREATISE ON THE DIFFERENTIAL CALCULUS.**

Containing the Theory of Plane Curves, with numerous Examples.

By **BENJAMIN WILLIAMSON, Sc.D., F.R.S.,**  
Senior Fellow of Trinity College, Dublin.

**THIRD EDITION, REVISED AND ENLARGED.**

Crown 8vo, 10s. 6d.

**AN ELEMENTARY TREATISE ON DYNAMICS.**

Containing Applications to Thermo-Dynamics, with numerous Examples.

By **BENJAMIN WILLIAMSON, Sc.D., F.R.S.,**  
Senior Fellow of Trinity College, Dublin;

AND

**FRANCIS A. TARLETON, Sc.D., LL.D.,**  
Fellow of Trinity College, and Professor of Natural Philosophy in the University of Dublin.

**LONGMANS, GREEN, & CO., LONDON, NEW YORK, AND BOMBAY.**

*Seventh Edition.* With an Appendix of Easier Exercises.  
Fcap. 8vo, cloth, price One Shilling.

# HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these *Hints* would prove a valuable supplement to any grammar that might be in use. . . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—*The Practical Teacher*, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

## OXFORD LOCAL SHAKESPEARE, 1901.

DINGLEWOOD SHAKESPEARE MANUALS, BY STANLEY WOOD, M.A.

**HENRY THE FIFTH, QUESTIONS AND NOTES. 1s.**

"A little brochure of some fifty pages, which will suggest some useful thoughts to masters teaching the play."—*Journal of Education*.

**MERCHANT OF VENICE, QUESTIONS AND NOTES. 1s.**

"Cannot but prove useful to candidates for whom these plays are set."—*Scotsman*.


## CAMBRIDGE LOCAL SHAKESPEARE, 1900.

**AS YOU LIKE IT, QUESTIONS AND NOTES. 1s.**

"They will tend rather to discourage 'cram' than otherwise. . . . We can recommend the book as a distinctly useful 'aid.'"—*Guardian*.

Each of the Manuals contains about 250 Questions, of which all the most difficult (about one-third of the whole number) are fully answered as models.

JOHN HEYWOOD, LONDON AND MANCHESTER.

 Headmasters should apply for

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

### DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

## JOSEPH GILLOTT'S

Gold Medals,  
Paris, 1878,  
1889.

Numbers for Use in Schools—  
351, 352, 382, 404, 729, 303,  
170, 166, 5, 6, 292, 293,  
291 (Mapping). 659 (Drawing);  
and (for Vertical Writing) 1045, 1046.

## STEEL PENS.

Now Ready.

ENGLISH, NEW CODE (1900).

## FIRST GRAMMAR READER,

By JOHN R. TIMSON, B.A. (St. Mark's, 1875-6).

Teacher's Oral Text-Book (Standards I.-IV.) and Revision Reader (Standards V.-VII.).

For the First Year's Course in English this work contains just what can be well done and no more. Forty Lessons are graduated for forty weeks, with easy Explanations in simple language, and careful Revisions as worked out in many years of actual teaching. No long Exercises and dry lists. Brief Memory Notes.

Large type, strongly bound, 1s. 6d.

JOHN MARSHALL & CO., PATERNOSTER ROW, E.C.  
E. J. ARNOLD & SON, LEEDS.

# A FEW OF THE PUBLICATIONS OF MOFFATT & PAIGE, Ltd. ENGLISH CLASSICS.

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

## THE PLAYS OF SHAKESPEARE.

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

### REVIEWS:—

*Saturday Review*.—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."

*Daily Telegraph*.—"Julius Cæsar" ". . . is invaluable as an aid to the study of the play."

*South Africa*.—"What a handy 'book of the play' they form!"

*Student's Friend, Bombay*.—"Decidedly the very best for students, be they Indian or English."

*Athenæum*.—"Essentially books for students."

*Educational News*.—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

*AS YOU LIKE IT	...	...	...	...	...	2 0
*CORIOLANUS	...	...	...	...	...	2 6
*HAMLET	...	...	...	...	...	2 6
*HENRY V.	...	...	...	...	...	2 6
*JULIUS CÆSAR	...	...	...	...	...	2 0
*KING JOHN	...	...	...	...	...	2 0
*KING LEAR	...	...	...	...	...	2 0
*MACBETH	...	...	...	...	...	1 6
*MERCHANT OF VENICE	...	...	...	...	...	1 6
*MIDSUMMER NIGHT'S DREAM	...	...	...	...	...	2 0
*RICHARD THE SECOND	...	...	...	...	...	1 6
*TEMPEST	...	...	...	...	...	2 0
*TWELFTH NIGHT	...	...	...	...	...	1 6

\* For Current Examinations.

## BACON.

*Schoolmaster*.—"The edition will stand as an exemplar." s. d.

**BACON'S ESSAYS. Part 1** ... .. 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

## MILTON.

*Practical Teacher*.—"Marked by those features of almost exhaustive annotation." s. d.

\*PARADISE LOST. Books 1 and 2. (Just published.) 2 0

\*SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENSEROSO 1 4

\* For Current Examinations.

## SCRIPTURE.

Edited by R. J. WOOD, B.A.

*Educational Times*.—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

## FRENCH.

**FRENCH COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

## GERMAN.

**GERMAN COURSE.** By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times*.—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

## MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.  
ERNEST A. PAIGE, Managing Director  
Works: Johnson's Court, Fleet Street.



# GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS FOR THE College of Preceptors Examinations, July & December, 1901.

ENGLISH.		s. d.	RELIGIOUS KNOWLEDGE.		s. d.
Shakespeare's Henry V. Edited by STANLEY WOOD, M.A., author of the Dinglewood Shakespeare Series, and the Rev. F. MARSHALL, M.A. ...	1	6	Marshall's St. Matthew. Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo, cloth ...	1	6
Containing— Introduction.—Source, Editions, Date, Scene of the Play; the Unities, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes. Text with marginal and foot notes, and paraphrase of difficult passages. Appendix.—Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.			Containing— 1. Introduction.—Author, Life and Purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazarene Vow, &c., &c. 2. Text of the Gospel, with marginal and foot notes. 3. Comments on the Revised Version. 4. Glossary, and Chapters on Our Lord's Teachings. 5. Appropriately Coloured Sketch Maps. 6. Critical Notes.		
The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A. ...	1	0	Marshall's Acts of the Apostles. Part II.: Chapters XIII.—end. Edited by the Rev. F. MARSHALL, M.A. ...	1	6
The O. and C. Spelling ...	1	0	Marshall's Church Catechism. By the same Author ...	1	6
Preparation Papers in English Grammar. Per packet ...	0	8	The Prayer Book. Edited by the Rev. F. MARSHALL, M.A. (In the press.)	2	6
Normal Copy Books. In 12 numbers each ...	0	2	Preparation Papers on St. Matthew. Per packet ...	0	8
			Preparation Papers on Acts of the Apostles. Per packet ...	0	8
<b>HISTORY.</b>			<b>BOOK-KEEPING.</b>		
The Imperial History of England. By ROSCOE MORGAN, B.A. ...	2	6	Sarll's Practical Book-keeping. 128 pp., cloth ...	1	0
The O. and C. History of England ...	1	0	Sarll's Double-Entry Book-keeping. 256 pp., cloth ...	2	0
Outlines and Dates of English History. By A. A. GUNNIS ...	1	0	Sarll's Exercises in Double-Entry Book-keeping. 128 pp., cloth ...	1	0
This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &c.			The above with all introductory matter, full explanations, outline keys, &c.		
History Notes. By GEORGE GILL, F.R.G.S. With Maps ...	0	6	Manuscript Books published to accompany the above.		
Europe in the Eighteenth Century. By T. J. WALKER, M.A. Oxon. With Maps, &c. ...	0	9	For Practical:—Cash Book ... 5d. Ledger ... 0 7 Ledger (100 Accounts) ... 7d. Ledger ... 0 7		
<b>GEOGRAPHY.</b>			For Double Entry:—Journal ... 5d. Ledger ... 0 7 Short and Introductory Exercises ... 7d.		
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition Physical, Descriptive, Political, Industrial, Commercial, Social. Also published in Sections as follows:— Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.a. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.	4	6	Key to Double-Entry Book-keeping ... 3 0 Key to Practical Book-keeping ... 2 0		
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes. New Edition (ready September, 1900) ...	2	6	<b>MATHEMATICS AND ARITHMETIC.</b>		
The O. and C. Geography (Revised Edition). By GEORGE GILL ...	1	0	Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A. ...	2	6
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms, and particularly useful for the Junior Forms Examination.) ...	1	0	Marshall's Examination Euclid. Books I.—IV. ...	1	0
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies ...	2	6	The O. and C. Algebra ...	1	6
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps ...	1	0	Preparation Papers in Algebra. By A. CUDWORTH, M.A. ...	0	8
<b>LATIN AND FRENCH.</b>			<b>MUSIC.</b>		
The O. and C. Latin, Part I. ...	1	0	Theory of Music, Part I. ...	1	0
The O. and C. Latin, Part II. ...	1	0	Theory of Music, Part II. ...	1	0
The O. and C. Latin, Part III. ...	1	0	Imperial Theory of Music ...	2	6
Commercial French Correspondence ...	1	0	<b>NATURAL SCIENCE.</b>		
The O. and C. French, Part I. ...	1	0	Physical Measurements ...	2	6
The O. and C. French, Part II. ...	1	0	or in Three Parts ... each	0	9
Phædrus, Books I. and II. ...	1	0	Elementary Physics ...	2	6
Eutropius, Books I. and II. ...	1	0	Applied Mechanics ...	2	6
Cæsar, Book VI. ...	1	0	Mechanics of Solids ...	2	0
Vergil, Æneid, Book VI. ...	1	0	Mechanics of Fluids ...	2	0
Cicero, De Senectute ...	1	0	Magnetism and Electricity ...	2	6
Preparation Papers in French ...	0	8	Physiological Charts, Set of Three ...	2	0
Preparation Papers in Latin ...	0	8	Elementary Chemistry ...	2	6
			Chemical Laws and Problems ...	2	6
			Chemistry of Common Objects ...	2	6
			Chemistry Notes ...	1	0

## New. **GILL'S** "CARTOGRAPHIC" **WALL MAPS** New.

Edited by GEORGE GILL, F.R.G.S.

WALL MAPS WITH NEW AND DISTINCTIVE FEATURES:

New Method of "Coast" production. New Method of "Hill" Work. New Treatment throughout.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Size,  
80 x 60 in.

Price 16s.

\*ENGLAND AND WALES. \*IRELAND. INDIA. ASIA.  
\*SCOTLAND. \*EUROPE. \*AFRICA. \*N. AMERICA. WORLD (MERCATOR).

\* The Set Geography for the Examinations.

## 2/6 **GILL'S MILITARY DRILL.** 2/6

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# MESSRS. LONGMANS & CO.'S LIST.

## Just Published.

With 534 Illustrations. Crown 8vo, pp. xxii.+896.  
Price 10s. 6d.

## A TEXT-BOOK OF PHYSICS.

By W. WATSON, A.R.C.S., B.Sc. (LONDON),

ASSISTANT-PROFESSOR OF PHYSICS AT THE ROYAL COLLEGE OF SCIENCE, LONDON.

"Although the ranks of science text-books are so crowded, we believe there is plenty of room for so carefully-written and well produced a volume as this is, and we think it will speedily win for itself a deservedly high and widespread reputation amongst both teachers and students."—*Model Engineer*.

By J. HAMBLIN SMITH, M.A.

**A Treatise on Arithmetic.** With an Appendix on Approximation, in which a New Method of Decimalisation of Money is given with a view to Shortening and Simplifying much of the Work in Commercial Arithmetic. Crown 8vo, 3s. 6d. (Copies may be had without the Answers.) *A KEY*, 9s.

**Exercises in Arithmetic.** Arranged and Adapted to the Sections in Hamblin Smith's "Treatise on Arithmetic." Crown 8vo, 1s. 6d.; with Answers, 2s. *A KEY*, 6s. 6d.

**A Shilling Arithmetic.** For the use of Elementary Classes and Preparatory Schools. Cr. 8vo, 1s.; with Answers, 1s. 6d.

**Elementary Algebra.** New Edition, with a large number of Additional Exercises. With or without Answers, crown 8vo, 3s. 6d. Answers separately, 6d. *A KEY*, 9s.

\*.\* The Old Edition can still be had.

**Exercises on Algebra.** Small 8vo, 2s. 6d. (Copies may be had without the Answers.)

**Elementary Trigonometry.** Sm. 8vo, 4s. 6d.

*A KEY*, 7s. 6d.

**Elementary Statics.** Crown 8vo, 3s.

**Elementary Hydrostatics.** Cr. 8vo, 3s.

*A KEY to Statics and Hydrostatics*, 6s.

**Geometrical Conic Sections.** Crown 8vo, 3s. 6d.

**Elements of Geometry.** Containing Books I. to VI., and Portions of Books XI. and XII., of Euclid, with Exercises and Notes, arranged with the Abbreviations admitted in the Cambridge University and Local Examinations. Crown 8vo, 3s. 6d.

Books I. and II. may be had separately, limp cloth, 1s. 6d. *A KEY*, 8s. 6d.

By CYRIL RANSOME, M.A.

**Short History of England.** From the Earliest times to the Present Day. For the use of Middle Forms of Schools. With Tables, Plans, Maps, Index, &c. Crown 8vo, 3s. 6d.

Or, in Two Parts. 2s. each. Part I.: To the Death of Elizabeth, A.D. 1603. Part II.: 1603 to 1895.

**A Summary of Ransome's Short History of England.** With 22 Maps and Plans, and 34 Genealogical Tables. Price 1s.

By SAMUEL RAWSON GARDINER, M.A., LL.D.

**A Student's History of England.** From the Earliest Times to 1885. Vol. I.: B.C. 55—A.D. 1509. With 173 Illustrations. Crown 8vo, 4s. Vol. II.: 1509—1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.: 1689—1885. With 109 Illustrations. Crown 8vo, 4s.

COMPLETE IN ONE VOLUME, with 378 Illustrations, crown 8vo, 12s. Preparatory Questions on the above. By R. SOMERVELL, M.A., Assistant Master at Harrow School. Crown 8vo, 1s.

**A School Atlas of English History.** With 66 Maps and 22 Plans of Battles, etc. Fcap. 4to, 5s.

**Outline of English History,** B.C. 55 to A.D. 1895. With 96 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By F. YORK POWELL, M.A., and T. F. TOUT, M.A.

**History of England.** NEW EDITION, in One Volume. Thoroughly Revised, with New Matter and Index. Crown 8vo, 7s. 6d.

\*.\* To be had also in Three Parts. Price 2s. 6d. each.

By the Rev. J. FRANCK BRIGHT, D.D.,  
Master of University College, Oxford.

## A History of England.

Period I.—**Mediæval Monarchy:** The Departure of the Romans to Richard III. From A.D. 449 to 1485. Crown 8vo, 4s. 6d.

Period II.—**Personal Monarchy:** Henry VII. to James II. From 1485 to 1688. Crown 8vo, 5s.

Period III.—**Constitutional Monarchy:** William and Mary to William IV. From 1689 to 1837. Crown 8vo, 7s. 6d.

Period IV.—**The Growth of Democracy:** Victoria. From 1837 to 1880. Crown 8vo, 6s.

## EPOCHS OF ENGLISH HISTORY.

YORK POWELL'S EARLY ENGLAND to the NORMAN CONQUEST. 1s.

CREIGHTON'S (Mrs.) ENGLAND A CONTINENTAL POWER, 1066-1216. 9d.

BOWLEY'S RISE of the PEOPLE and the GROWTH of PARLIAMENT, 1214-1485. 9d.

CREIGHTON'S (Bishop) TUDORS and the REFORMATION, 1485-1603. 9d.

GARDINER'S (Mrs.) STRUGGLE against ABSOLUTE MONARCHY, 1603-1688. 9d.

BOWLEY'S SETTLEMENT of the CONSTITUTION, 1689-1784. 9d.

TANCOCK'S ENGLAND during the AMERICAN and EUROPEAN WARS, from 1765-1820. 9d.

BROWNING'S MODERN ENGLAND from 1820-1897. 9d.

**Epochs of English History.** Complete in One Volume, with 27 Tables and Pedigrees and 23 Maps. Fcap. 8vo, 5s.

## EPOCHS OF ANCIENT HISTORY.

10 Vols., with Maps, 2s. 6d. each.

BEESELY'S GRACCHI, MARIUS, and SULLA.

CAPESE'S EARLY ROMAN EMPIRE. CAPESE'S ROMAN EMPIRE of the SECOND CENTURY.

COX'S GREEKS AND THE PERSIANS.

COX'S ATHENIAN EMPIRE.

CURTEIS'S RISE of the MACEDONIAN EMPIRE.

IHNE'S ROME to its CAPTURE by the GAULS.

MERIVALE'S ROMAN TRIUMPHS.

SANKEY'S SPARTAN AND THEBAN SUPREMACIES.

SMITH'S (BOSWORTH) ROME AND CARTHAGE.

## EPOCHS OF MODERN HISTORY.

19 Vols., with Maps, 2s. 6d. each.

AIRY'S ENGLISH RESTORATION and LOUIS XIV., 1648-1678.

CHURCH'S BEGINNING of the MIDDLE AGES.

COX'S CRUSADES.

CREIGHTON'S AGE of ELIZABETH.

GAIRDNER'S HOUSES of LANCASTER and YORK.

GARDINER'S THIRTY YEARS' WAR.

GARDINER'S FIRST TWO STUARTS.

GARDINER'S (Mrs.) FRENCH REVOLUTION, 1789-1795.

HALE'S FALL of the STUARTS, and WESTERN EUROPE, from 1678 to 1697.

JOHNSON'S NORMANS in EUROPE. LONGMANS' FREDERICK the GREAT and the SEVEN YEARS' WAR.

LUDLOW'S WAR of AMERICAN INDEPENDENCE, 1775-1783.

MCCARTHY'S EPOCH of REFORM, 1830-1850.

MOBERLY'S THE EARLY TUDORS.

MORRIS'S AGE of ANNE.

MORRIS'S THE EARLY HANOVERIANS.

SEEBOHM'S PROTESTANT REVOLUTION.

STUBBS' THE EARLY PLANTAGENETS.

WARBURTON'S EDWARD THE THIRD.

By JAMES SULLY, M.A.

**Outlines of Psychology.** Crown 8vo, 9s.

**The Teacher's Handbook of Psychology.** Crown 8vo, 6s. 6d.

**Studies of Childhood.** 8vo, 10s. 6d.

**Children's Ways:** being Selections from the Author's "Studies of Childhood," with some additional Matter. With 25 Figures in the Text. Crown 8vo, 4s. 6d.

By Rev. the Hon. E. LYTTETON.

**Training of the Young in Laws of Sex.** FOURTH IMPRESSION. Crown 8vo, 2s. 6d. net.

# MESSRS. LONGMANS & CO.'S LIST.

By Dr. B. H. KENNEDY.

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. and J. E. KENNEDY, and H. WILKINSON, M.A. Crown 8vo, 1s. 6d.

A KEY, for the use of Masters only. 2s. 9d. net, post free.

By ARTHUR SIDGWICK, M.A.

**A First Greek Writer.** Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.**

With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus.

**Euripides.**—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alceste. Bacchae. Hecuba. Medea.

**An Introduction to Greek Verse Composition.**

By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A. With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By G. G. BRADLEY, D.D., Dean of Westminster.

**Aids to Writing Latin Prose.** Containing 144

Exercises. With an Introduction comprising Preliminary Hints, Directions, Explanatory Matter, &c. Edited and Arranged by T. L. PAPILLON, M.A. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. G. LIDDELL, D.D., and ROBERT SCOTT, D.D.

**Greek-English Lexicon.** 4to, 36s.

**Greek-English Lexicon.** Abridged from the above. Revised throughout. Square 12mo, 7s. 6d.

By H. R. HEATLEY, M.A.

**Graecula.** A First Book of Greek Translation. With Rules, Short Sentences, Stories for Translation, and a Vocabulary. Fcap. 8vo, 1s. 6d..

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. R. HEATLEY, M.A., and H. N. KINGDOM, M.A.

**Gradatim.** An Easy Latin Translation Book for Beginners. With Vocabulary. Fcap. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Excerpta Facilia.** A Second Latin Translation Book.

Containing a Collection of Stories from various Latin Authors. With Notes at end, and a Vocabulary. Fcap. 8vo, 2s. 6d.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

By H. R. HEATLEY, M.A., and A. SLOMAN, M.A.

**Exercises on Gradatim.** Small 8vo, 1s. 6d.

By LÉON CONTANSEAU, M.A.

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

By T. K. ARNOLD, M.A.

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

By FRANCIS DAVID MORICE, M.A.

**Stories in Attic Greek.** With Notes and Vocabulary. Crown 8vo, 3s. 6d.

By F. RITCHIE, M.A.

**First Steps in Greek.** Crown 8vo, 2s.

**A Practical Greek Method for Beginners.**

By F. RITCHIE, M.A., and E. H. MOORE, M.A. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Easy Greek Grammar Papers.** Fcap. 8vo, 1s. 6d.

**First Steps in Latin.** Crown 8vo, 1s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Fabulae Faciles.** A First Latin Reader. Containing Detached Sentences and Consecutive Stories. With Notes and Vocabulary. Crown 8vo, 2s. 6d.

**Imitative Exercises in Easy Latin Prose.**

Based on "Fabulae Faciles." Crown 8vo, 1s. 6d.

**Exercises in Latin Prose Composition.** Crown 8vo, 2s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Easy Continuous Latin Prose.** Crown 8vo, 3s. 6d.

**First Latin Verse Book.** Crown 8vo, 2s.

**Easy Latin Passages for Translation.** Small 8vo, 2s.

**Latin Grammar Papers.** Fcap. 8vo, 1s.

By ALEXANDER BAIN, LL.D.

**A First or Introductory English Grammar.** 18mo, 1s. 4d.

KEY, with additional Exercises. 18mo, 1s. 9d.

**A Higher English Grammar.** Fcap. 8vo, 2s. 6d.

**A Companion to the Higher English Grammar.** Being intended as a help to the thorough mastery of English. Crown 8vo, 3s. 6d.

**English Composition and Rhetoric.** Original Edition. Crown 8vo, 4s.

**English Composition and Rhetoric.** Enlarged Edition. (Two Parts.) Part I.: The Intellectual Elements of Style. Crown 8vo, 3s. 6d. Part II.: The Emotional Qualities of Style. Crown 8vo, 3s. 6d.

**On Teaching English,** with Detailed Examples and the Definition of Poetry. Crown 8vo, 2s. 6d.

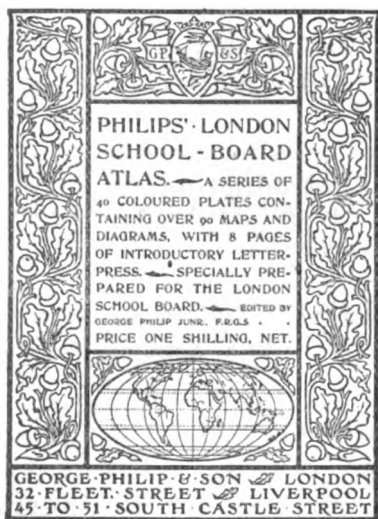
By THOMAS ARNOLD, M.A.

**A Manual of English Literature,** Historical and Critical. Ninth Edition, Revised. Crown 8vo, 7s. 6d.

By A. A. SOMERVILLE, M.A.

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

A REAL EDUCATIONAL ATLAS THAT CONVEYS ITS MAIN PURPOSE ON BROAD LINES INSTANTLY.



# PHILIPS' ELEMENTARY ATLAS OF COMPARATIVE GEOGRAPHY.

LONDON SCHOOL BOARD EDITION.

90 Maps and plans, printed in Colours on 40 plates, with 8 pages of text. Large 4to (11x9 inches), stiff cover, cloth back. Price 1s. net.

NOTE.—This Atlas can also be obtained without the 4 plates specially prepared for the London School Board. Price 1s.

THE GENERAL SCHEME, on the basis of which the ATLAS has been compiled, embodies the recommendations of a SPECIAL ADVISORY COMMITTEE of the LONDON SCHOOL BOARD, and has, besides, received the approval of the GEOGRAPHICAL ASSOCIATION, by one of whose Members the Maps have been revised.

### SPECIAL FEATURES.

1. EACH MAP an ESSENTIAL PART of a GENERAL SCHEME.
2. BRITISH EMPIRE given special prominence.
3. PHYSICAL FEATURES in great detail. Land coloured according to elevation.
4. UNIFORMITY OF SCALE AND COMPARATIVE AREAS. Only 10 scales employed, all bearing a simple and definitely expressed proportion to that of the British Isles, which has been adopted as a unit.

5. SELECTION AND SPELLING OF NAMES. Overcrowding avoided. Towns classified according to population. Spelling according to rules of the Royal Geographical Society.

6. INTRODUCTORY LETTERPRESS, illustrated with numerous Diagrams, dealing with Map Reading, Geographical Terms, Scales of Maps, Projections, &c.

Detailed Prospectus sent gratis on application.

GEORGE PHILIP & SON, 32 Fleet Street, London. Liverpool: PHILIP, SON, & NEPHEW, 45-51 South Castle Street.

Just Published. Demy 4to (11 x 8 in.). In stiff wrapper, 1s. 6d.

## FREEHAND DRAWING OF ORNAMENT.

Consisting of 24 Photographic Reproductions of Examples of Relief Ornament, and 68 Analytical Diagrams of Construction, designed and arranged in graduated order, with directions to the student as to the method of proceeding.

BY JOHN CARROLL,

Art Master and Examiner in Drawing;

Author of "Practical Geometry for Science and Art Students," &c.

"No private student wants better or more complete help in this subject than is to be found in the pages of this book. It has sound advice, excellent teaching, and 24 beautifully produced photographs to work from in a neat, well-arranged, and graduated form."—*Schoolmaster.*

BURNS & OATES, LTD., 28 ORCHARD STREET, LONDON, W.

BY JOHN S. RAWLE, F.S.A.,

Late Examiner to the Department of Science and Art.

## SECOND GRADE PRACTICAL GEOMETRY,

PLANE & SOLID, CURVES, SCALES & PATTERN DRAWING.

REVISED AND ENLARGED. NOW READY.

Containing the additional matter as required by the Departmental Circular of March, 1895, and forming a complete Text-Book for the Science and Art Examinations.

260th Thousand. MORE THAN 600 DIAGRAMS.

Price 1s. Bound in cloth, 2s.

Class Sheets for Practical Geometry	...	...	...	...	1s.
Practical Geometry Test Papers	...	...	...	...	4d.
Freehand Drawing Test Papers	...	...	...	...	1s.

LONDON:

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO.

## CASEY'S EUCLID.

### THE ELEMENTS OF EUCLID.

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI. Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises. By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c. Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.

### A KEY TO THE EXERCISES

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID." By JOSEPH B. CASEY, Tutor, University College, Dublin. Second Edition. Small 8vo, price 6s.

### A SEQUEL TO THE

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID." Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

### A TREATISE ON THE

### ANALYTICAL GEOMETRY

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS. Containing an account of its most recent Extensions, with numerous Examples. New Edition. Crown 8vo.

### A TREATISE ON

### ELEMENTARY TRIGONOMETRY.

With numerous Examples and Questions for Examination. Third Edition. Small 8vo, 148 pp., price 3s.

### KEY TO THE EXERCISES

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY. With numerous Examples and Questions. Second Edition. Price 3s.

### A TREATISE ON

### PLANE TRIGONOMETRY.

Containing an account of Hyperbolic Functions, with numerous Examples. Crown 8vo. Second Edition.

Crown 8vo, price 5s.

### A TREATISE ON

SPHERICAL TRIGONOMETRY, AND ITS APPLICATION TO GEODESY AND ASTRONOMY. With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN. LONDON: LONGMANS & CO.

# MACMILLAN & CO.'S NEW AND RECENT EDUCATIONAL BOOKS.

**A History of Greece to the Death of Alexander the Great.** By J. B. BURY, M.A., Hon. Litt.D. Durham. With Illustrations, Maps, and Plans. Crown 8vo, 8s. 6d.

*Spectator*.—"Told with such clearness, fulness, and sense of proportion that the book will stand as a model of one-volume history, rivalled only by J. R. Green's similar work on the English people. . . . Has all the qualities of accuracy, lucidity, and art in arrangement which are the special merits of a short history. The book also contains numerous excellent illustrations."

**A Text-Book of Book-keeping.** By FRANK IRESON, B.A. 8vo, 4s. 6d.

*Commerce*.—"A book we can thoroughly recommend as being up-to-date, and containing every information necessary to the student of this branch of commercial education."

## ENGLISH.

**Tennyson.—The Lotos-Eaters, Ulysses, Ode on the Death of the Duke of Wellington, Maud, The Coming of Arthur, The Passing of Arthur.** With Introduction and Notes by F. J. ROWE, M.A., and W. T. WEBB, M.A. Globe 8vo, 2s. 6d. [*English Classics.*]

*Educational News*.—"No one could desire a better introduction, marked as it is by lucidity of exposition and acuteness of judgment. . . . For scholastic purposes a more judicious selection could not have been made. Each poem is annotated in a clear, adequate, and scholarly manner. The book is moderate in price, and in every way well suited for the junior student."

**Charles Lamb.—Essays of Elia.** Second Series. Edited, with Notes, by Prof. N. L. HALLWARD, M.A. With an Introduction by S. C. HILL, B.A., B.Sc. Globe 8vo, 3s. [*English Classics.*]

Previously Published. FIRST SERIES. Globe 8vo, 3s.; sewed, 2s. 6d.

*Educational News*.—"A scholarly and useful edition."

**Elements of Rhetoric and English Composition.** Globe 8vo, 3s. 6d.

**Elements of Rhetoric and English Composition.** Second High School Course. By Prof. G. R. CARPENTER. Crown 8vo, 3s. 6d.

**Exercises in Rhetoric and English Composition.** (Advanced Course.) Crown 8vo, 4s. 6d.

## FRENCH.

**French Course for Evening Classes. First Year.** By A. C. POIRÉ, Principal of the Northern Institute of Languages, Leeds and Bradford. Globe 8vo, 1s.

**LATEST ADDITIONS TO SIEPMANN'S ELEMENTARY FRENCH SERIES.**

**Cœur.—L'Âme de Beethoven.** PAR PIERRE CŒUR. Adapted and Edited by DE V. PAYEN-PAYNE, Principal of Kensington Coaching College. Globe 8vo, 2s.

WORD AND PHRASE BOOK, sewed, 6d. KEY, 2s. 6d. net.

**Daudet.—La Tour des Maures.** PAR ERNEST DAUDET. Adapted and Edited by A. H. WALL, M.A., Assistant-Master at Marlborough College. Globe 8vo, 2s.

WORD AND PHRASE BOOK, sewed, 6d. KEY, 2s. 6d. net.

*Educational News*.—"Deserves the highest commendation."

**Normand.—L'Émeraude des Incas.** PAR CHARLES NORMAND. Adapted and Edited by the late F. ASTON BINNS, M.A., Balliol College, Oxford. Globe 8vo, 2s.

WORD AND PHRASE BOOK, sewed, 6d. KEY, 2s. 6d. net.

*School World*.—"The story is full of incident, and is suitable for rapid reading. The notes are thoroughly satisfactory, and the vocabulary has been compiled with commendable care."

**Verne.—Le Tour du Monde en Quatre-Vingts Jours.** PAR JULES VERNE. Adapted and Edited by LOUIS A. BURR, B.A., Headmaster of the Modern Language Department in the Glasgow Academy. Globe 8vo, 2s.

WORD AND PHRASE BOOK. Globe 8vo, sewed, 6d. KEY, 2s. 6d. net.

*Academy*.—"An excellent and amusing class-book. . . . The notes are satisfactory and so is the vocabulary."

**LATEST ADDITION TO SIEPMANN'S ADVANCED FRENCH SERIES.**

**Daudet.—Tartarin de Tarascon.** PAR ALPHONSE DAUDET. Adapted and Edited by OTTO SIEPMANN. Globe 8vo, 2s. 6d.

WORD AND PHRASE BOOK, sewed, 6d. KEY, 2s. 6d. net.

**A Historical French Grammar.** By Prof. ARSÈNE DARMESTETER. Edited by Prof. ERNEST MURET and Prof. LÉOPOLD SUDRE. Authorized English Edition by Prof. ALPHONSE HARTOG. Crown 8vo, 12s. 6d.

*Educational Times*.—"MM. Muret and Sudre have done their work very thoroughly. . . . The outcome appears to be very satisfactory."

**An Elementary French Grammar.** By G. EUGÈNE FASNACHT, sometime Assistant-Master in Westminster School, Editor of Macmillan's Series of "Foreign Classics." Globe 8vo, 1s. 6d.

*Journal of Education*.—"Clear, methodical, and scholarly, like all M. Fasnacht's work."

## LATIN.

COMPLETION OF MR. PAGE'S EDITION OF  
**VIRGIL.**

Edited, with Introduction and Notes, by T. E. PAGE, M.A., formerly Fellow of St. John's College, Cambridge. In 3 Vols. Vol. I., **Bucolics and Georgics**. Vol. II., **Æneid**, Books I.-VI. Vol. III., **Æneid**, Books VII.-XII. (Just Published.) Fcap. 8vo, 5s. each. [*Classical Series.*]

*Educational Times*.—"The notes appear admirably sound, lucid, and sufficient; and treated with the same common sense which marks all Mr. Page's work."

**The Catiline of Sallust.** Edited for the use of Schools, with Introduction, Notes, and Vocabulary, by the Rev. G. H. NALL, M.A. Pott 8vo, 1s. 6d. [*Elementary Classics.*]

*Irish Teachers' Journal*.—"The notes are scholarly, and display a full knowledge of the difficulties beginners encounter in reading Sallust. They anticipate every difficulty, and render the path of the student pleasant and enjoyable. We know of no better edition of Sallust to place in the hands of those commencing the study of Sallust."

## MATHEMATICS AND SCIENCE.

**Workshop Mathematics.** In 2 Parts. By FRANK CASTLE, M.I.M.E. Globe 8vo, 1s. 6d. each.

*Board Teacher*.—"Well arranged, and containing numerous practical examples."

**Elementary Mechanics of Solids.** By W. T. EMTAGE, M.A. (Oxon.) Globe 8vo, 2s. 6d.

NEW AND ENLARGED EDITION.

**Elementary Lessons in Electricity and Magnetism.** By Prof. SILVANUS P. THOMPSON, D.Sc., B.A., F.R.S., F.R.A.S. Fcap 8vo, 4s. 6d.

**Elementary Physics and Chemistry.** In 3 Stages. By Prof. R. A. GREGORY, F.R.A.S., and A. T. SIMMONS, B.Sc. (Lond.). Globe 8vo, 1s. 6d. each.

*Guardian*.—"The illustrations are numerous and useful; the experiments are good and require only simple apparatus; and the text is simply, clearly, and carefully written."

**Public School Protractor Scale.** Price 6d.

ENLARGED AND REVISED EDITION.

**Lessons in Elementary Physiology.** By THOMAS H. HUXLEY, LL.D., F.R.S. Fcap 8vo, 4s. 6d.

*Educational News*.—"We unhesitatingly state that this is now, even more than before, the best Elementary Physiology in the market."

PRIZE EDITION NOW READY.

**Curiosities of Natural History.** By FRANCIS TRAVELMAN BY K. LAND. Popular Edition, with a few Illustrations. Each Series separately, in small 8vo, 2s. 6d. (extra gilt binding, 3s. 6d.), as follows:—

1ST SERIES.—Rats, Serpents, Fishes, Frogs, Monkeys, &c.

2ND SERIES.—Fossils, Bears, Wolves, Cats, Eagles, Hedgehogs, Eels, Herrings, Whales.

3RD SERIES.—Wild Ducks, Fishing, Lions, Tigers, Foxes, Porpoises.

4TH SERIES.—Giants, Mummies, Mermaids, Wonderful People, Salmon, &c.

NOVEMBER NUMBER NOW READY.

## THE SCHOOL WORLD.

A Monthly Magazine of Educational Work and Progress. Price 6d. Annual Subscription, including Postage, 8s. net.

LEADING CONTENTS.

**The Training of Probationers in Secondary Schools.** By F. J. R. HENDY, M.A.—**Historical Novels and their Uses in Teaching.** II. By C. S. FEARENSIDE, M.A.—**The Law Relating to the Teacher's Tenure of Office.** By T. A. ORGAN, Barrister-at-Law.—**Observational Astronomy** A Series of Notes upon the Positions and Apparent Motions of Celestial Bodies. IV. (Illustrated.) By Prof. R. A. GREGORY, F.R.A.S.—**Typical School Time-Tables.** I. **Rugby.—Practical Work in Physical Geography.** IV. Observations on the Atmosphere. By Dr. A. J. HERBERTSON, F.R.G.S.—**Notes for Lantern Lectures.** IV. The Continent of Africa. By B. B. DICKINSON, M.A., F.R.G.S.—**Senior, Junior, and Preliminary Cambridge Local Examinations,** December, 1900. Revision Test Papers, No. 2.



# CAMBRIDGE UNIVERSITY PRESS.

## PITT PRESS MATHEMATICAL SERIES.

NEW VOLUME BY PROFESSOR LONEY.

**The Elements of Hydrostatics.** By S. L. LONEY, M.A., Professor of Mathematics at the Royal Holloway College, some time Fellow of Sidney Sussex College, Cambridge. Crown 8vo, 4s. 6d.

*Extract from Preface:*—"The present volume is intended to be for the use of the class of students for whom my 'Elements of Statics and Dynamics' was written, and may be regarded as a continuation of that book."

BY THE SAME AUTHOR.

**Mechanics and Hydrostatics for Beginners.** Fifth Edition. Extra Fcap. 8vo. 4s. 6d.

**Elements of Statics and Dynamics.** Sixth Edition. Extra Fcap. 8vo. 7s. 6d. Or in two parts: ELEMENTS OF STATICS, 4s. 6d.; ELEMENTS OF DYNAMICS, 3s. 6d. SOLUTIONS OF THE EXAMPLES. Second Edition. 7s. 6d.

**A Treatise on Elementary Dynamics.** Crown 8vo. Fifth Edition. 7s. 6d. SOLUTIONS OF THE EXAMPLES. 7s. 6d.

**Plane Trigonometry.** Crown 8vo. Fourth Edition, stereotyped. 7s. 6d. Also in two parts:—PART I. UP TO AND INCLUDING THE SOLUTION AND PROPERTIES OF TRIANGLES. 5s.—PART II. DE MOIVRE'S THEOREM AND THE HIGHER PORTIONS. 3s. 6d. SOLUTIONS OF THE EXAMPLES. 10s. 6d.

## PITT PRESS SERIES.—NEW VOLUMES.

A NEW FRENCH VERSE READER.

**A Primer of French Verse for Upper Forms.** Edited by FREDERIC SPENCER, Professor of the French Language and Literature in the University College of North Wales; formerly Chief Master on the Modern Side in the Leys School, Cambridge. 3s.

*School World.*—"Teachers owe a debt of gratitude to Prof. Spencer for this attractive volume. . . It is a very good book."

*Educational Times.*—"A pupil who has read this book with care will acquire an insight into French prosody such as no other 'Primer' would give him, and will feel that this is a book to which he can always turn again with pleasure."

**Hauff.—Der Scheik von Alessandria und seine Sklaven.** Edited, with Notes and Vocabulary, by W. RIPPMMANN, M.A., Professor of German at Queen's College, London. 2s. 6d.

*Educational Times.*—" . . . A welcome addition to the elementary reading-books available for schools . . . and Mr. Rippmann's name is sufficient guarantee for good editing."

**Scott.—Old Mortality.** Edited, with Introduction, Notes, and Glossary, by J. A. NICKLIN, late Scholar of St. John's College, Cambridge, Members' Prizeman for English Essay. 2s. 6d.

*School World.*—"A very good attempt to edit Scott's celebrated novel as a school-book. The hand of a scholar is traceable everywhere. The Introduction is especially admirable—not too long, yet sufficiently clear. The notes and glossary will be found extremely serviceable. The more of Scott's novels we have in this form the better for literary taste; they supply the right kind of material for a real appreciation of Scott's genius, and ought to assist in clearing the field of numerous inefficient attempts to do this very useful kind of work."

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.

Edited, with Introduction, Notes, Glossary, and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College.

*Practical Teacher.*—"Of the many school editions of Shakespeare's plays this is certainly one of the very best."

*Public School Magazine.*—"Of all editions of Shakespeare I have yet seen it seems to me to be the one most suited for the schoolboy."

**King Henry V.** [Shortly.]

**As You Like It.** Second Edition. 1s. 6d.

**King Richard II.** Third Edition. 1s. 6d.

**Merchant of Venice.** Third Edition. 1s. 6d.

**King Lear.** Second Edition. 1s. 6d.

Now Ready. Crown 8vo. 3s. 6d. net.

**Fifteen Studies in Book-keeping.** By WALTER W. SNAILUM, P.A.S.I.

This book has been written to combine a thorough explanation of the principles of double-entry book-keeping with a course of work suitable for preparation for the examinations held by the Society of Arts, Civil Service, Lancashire and Cheshire Union of Institutes, and kindred examining bodies.

Part I., comprising the fifteen studies or lessons, examines thoroughly the principles of book-keeping and the form and use of the books and accounts kept by a merchant or trader. A series of exercises are given upon each study. The studies on Bills and Cheques are believed to give all the information thereon that it is necessary for a trader to possess in the ordinary conduct of business.

The book may be used by young students, and an elementary course is marked out for that purpose.

Part II. is devoted to examination work. It contains *seven examination papers* (including those set by the Society of Arts in the years 1900, 1899, and 1898) *fully worked as models*. A selection of examination papers is also given for solution by the student.

The work is eminently adapted for use in the winter evening classes that are held to prepare for the spring examinations.

**Elementary Commercial Geography.** A Sketch of the Commodities and the Countries of the World. By H. R. MILL, Sc.D., F.R.S.E., F.R.S.G.S., Oxford University Extension Staff Lecturer and Librarian to the Royal Geographical Society. Sixth Edition. 1s. 6d.

**An Atlas of Commercial Geography.** Intended as a Companion to the above. By J. G. BARTHOLOMEW, F.R.G.S. With an Introduction by Dr. H. R. MILL. 4to. 3s.

**Bacon.—The New Atlantis.** Edited, with Introduction and Notes, by G. C. M. SMITH, M.A., St. John's College, Cambridge. [Nearly ready.]

**Sallust.—Catilina.** Edited, with Introduction and Notes, by W. C. SUMMERS, M.A., Fellow of St. John's College. 2s.

**Caesar.—De Bello Civili. Book III.** Edited, with Introduction, Notes, and Maps, by A. G. PESKETT, M.A., President and Tutor of Magdalene College, Cambridge. 2s. 6d.

*School World.*—"This edition, marked alike by genuine scholarship and simplicity, ought to hold the field for all purposes for which the book may be required. We find here . . . everything which should be found in an edition for the use and stimulus of an intelligent mind."

**Cicero.—Pro Lege Manilia.** Edited, with Introduction and Notes, by J. C. NICOL, M.A., Trinity Hall, Master of Portsmouth Grammar School. 1s. 6d.

*Athenæum.*—"This is a satisfactory addition to the 'Pitt Press Series.' Mr. Nico shows in his short, but pertinent, preface that he has had teaching experience. . . . More care than usual is paid to matters of text, and the translations given are good."

**Graduated Passages from Greek and Latin Authors for First-Sight Translation.** Selected and Supplied with short Notes for Beginners by H. BENDALL, M.A., and C. E. LAURENCE, B.A., Assistant-Master of Blackheath Proprietary School. Crown 8vo. PART I. EASY. 1s. 6d. PART II. MODERATELY EASY. 2s. PART III. MODERATELY DIFFICULT. 2s. PART IV. DIFFICULT. 2s.

## THE CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.—NEW VOLUMES.

General Editor—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Professor of Education in Victoria University.

**A Short History of the Expansion of the British Empire, 1500-1870.** By WILLIAM H. WOODWARD. With Maps. Crown 8vo, cloth, 4s.; cloth extra, gilt top, 5s.

*Athenæum.*—"Thoroughly to be recommended."  
*School World.*—"It is full of wisdom applicable to our own day."

**The Making of Character: some Educational Aspects of Ethics.** By JOHN MACCUNN, Balliol College, Oxford; Professor of Philosophy in University College, Liverpool. Crown 8vo, cloth, 2s. 6d.; cloth extra, gilt top, 3s. 6d.  
*Literature.*—"An acute and thoughtful book."

**The Cambridge Bible for Schools and Colleges.—New Volume.** General Editor for the Old Testament and Apocrypha: A. F. KIRKPATRICK, D.D., Regius Professor of Hebrew.

**The Book of Daniel.** Edited by the Rev. S. R. DRIVER, D.D. 2s. 6d. net.

**The Education of the Young in the Republic of Plato.** Translated into English, with Notes and Introduction, by B. BOSANQUET, M.A., LL.D., Author of "A Companion to Plato's Republic." Crown 8vo, 2s. 6d.

*Literature.*—"A scholarly translation, with notes and introductions, sketching well and concisely the history of Greek education."

**Outlines of the History of the English Language.** By T. N. TOLLER, late Fellow of Christ's College, Cambridge, Professor of English in the Owens College, Manchester. [Ready in December.]

## Cambridge Science Primers.

Nearly ready.

**A New Primer of Astronomy.** By Sir ROBERT BALL, F.R.S., Lowndean Professor in the University of Cambridge.

## CONTENTS.

	Page		Page
The New Parliament .....	437	Some Criticisms .....	450 ]
The State and the Public School .....	437	Distribution of Diplomas, Prizes, and Certificates at the College of Preceptors .....	450
Notes .....	438	Reviews .....	452
Summary—The Month .....	439	A Budget of Suggestions; Samuel Richardson Revised; Richelieu; Old Age and Friendship; A Good History; Methodical Vocabulary.	
Universities .....	441	General Notices .....	455
The Teaching of Patriotism. By Dr. J. J. Findlay. Paper read at the Evening Meeting of the College of Preceptors	442	Gift Books and Prizes .....	458
Forecasts and Comments:—Fixtures .....	447	Meeting of the Council of the College of Preceptors .....	460
Education Gossip .....	448	Mathematics .....	461
Appointments and Vacancies .....	449		
Literary Gossip .....	449		

## The Educational Times.

### The New Parliament.

It would be difficult to foretell the kind of treatment which is likely to be meted out to educational subjects in the new Parliament. The *personnel* of the House of Commons is educationally very much as it has been during the past five years. The policy of the Board of Education and the functions of its Consultative Committee are still undefined, but the political constitution of the Department is unaffected by the elections, and the Duke of Devonshire and Sir John Gorst may yet be regarded as oracles in chief. Whether this is or is not a hopeful sign with a view to secondary organization and development, we must leave our readers to judge for themselves. There has been a drag on such development for a good time past, with changes that seem to alter nothing, Bills that are not pushed through, and Acts that are not acted on. Perhaps the pace may now mend a little. The feet of the Government have touched the soil of the constituencies, and, like another Antæus, it may take up the struggle with a new infusion of energy. It will have to be decided—or we presume that it will have to be decided—whether the Secondary Local Authorities are to be set up or not. If they are to be set up, we may further assume that decisions will have to be taken as to their best form and constitution. We sincerely trust that, if another Bill is brought in, it will not be an August-to-February Bill, with no surviving animation in the legislative period. Meanwhile, it will not be forgotten that the Consultative Committee is charged with the formation of a register by the law of the land. This is not a matter of Departmental discretion. Parliament has ordered it; the rest is merely a question of how and when.

The President of the Board of Education, as we mention in our Summary of the Month, opened a new higher-grade Board school at Manchester on October 15. The Duke may be said to have done this without prejudice—and it is to be hoped that nobody and nothing is prejudiced. He may be said to have taken up a detached attitude on the question of School Board limitations, Local Government Board surcharges, and legal decisions. He knew that the Court of Queen's Bench was about to try the legality of spending the ratepayers' money on higher-grade schools; but he said that, if the decision should be unfavourable, it would be a matter for Parliament, not for the Department.

No doubt the President meant that the School Boards which had spent so much money on such schools, for so many years, under continued protest from secondary schoolmasters and continued indifference and washing of hands from the Education Department, would have to be relieved and indemnified by Act of Parliament. We wonder how the secondary schools at Manchester like it. It is true that the Manchester school is started under a scheme of amalgamation which brings together the City Corporation, the Chairman of the Technical Committee, the Principal of Owens College, the High Master of the Grammar School, and Dean Maclure as Chairman of the School Board—but the School Board is the originating and controlling authority. So at Leeds—where, we believe, the higher-grade school is not directly dependent on the rates. It is, nevertheless, a higher-grade Board school, which accommodates some two thousand pupils, and which has damaged the old Grammar School, and ruined several other secondary schools. Not only the question of expenditure, but the more important questions of authority and gradation, are involved in the creation of secondary schools by the elementary Boards. These questions are now on the point of being settled. It would be better in the meantime not to confuse the issue.

### The State and the Public School.

In last month's *Fortnightly Review*, in a paper on "The Public Schools and the Public Services," Mr. J. C. Tarver shows a somewhat too nervous anxiety as to the future relation of the Board of Education towards the public schools. Recognizing the apparent antagonism between the independence and conservatism of the public-school system and a system under departmental control, he foresees nothing but disaster to the public schools if this antagonism becomes active. The power of the purse, wielded by a Government Department, together with the aggressive spirit of Local Authorities, would, he believes, in time, by outside competition and pressure, convert the public schools into mere fashionable lounges for the sons of the rich. To obviate such a calamity, he suggests that the public schools should be formally recognized as training schools for the public services, military and civil, and that a separate Board of Examiners be established to insure the efficiency of all the public schools of the kingdom that desire such recognition. Such a Board could also advise the War Office and other Government Departments on questions relating to examinations and curricula before changes are recommended to the schools.

While there is much that is suggestive in the paper, we cannot agree that the cream of our public schools should be turned into ideal "cramming" establishments, even to save the sons of the rich from *ennui*. Their natural function is that of preparation for the Universities. If the necessary training for the Civil Services is technical in its character, it should be specially provided. There is no need to introduce one more element of confusion into an already sufficiently complicated situation.

### NOTES.

UNDER normal conditions the first election of representatives of Convocation on the Senate of the new University of London would have attracted considerably more attention than it in fact received. It is perhaps well that the overmastering interest of the General Election abated the energy of both the "Union" and "Association" organizations, and allowed the choice of graduates in the several Faculties to be exercised without undue pressure. It would be unfortunate if the University should start on its new career by renewing the controversy as to its policy which it was hoped had been ended by the compromise arrived at during the sitting of the University Commission. Already something has been lost. In the desire to elect representatives of particular views, the claims of languages and *belles lettres* have been overlooked, as well as those of the science of education; unless it is thought that these are safe in the hands of Dr. McClure, of Mill Hill. Rival organizations for influencing the government and policy of a University area novel departure in this country. Moreover, they are not justified by the assumed incompatibility of the "interests of the University" with the "interests of external students." On the other hand, the large measure of power given to the Senate by the Charter of the University to modify its constitution makes it highly undesirable that members of the Senate should be fettered when differences arise which are often best settled by a wise compromise.

THE death of the Marquess of Bute has deprived us of one of the most generous benefactors of the cause of higher education. His want of sympathy, however, with the trend of modern educational policy in its elementary and secondary areas was scarcely disguised; but he seldom turned a deaf ear to an appeal made on behalf of Universities or University Colleges if situated in districts with which he was personally connected. Deeply influenced from his Oxford days by the glamour of mediævalism, his intellectual sympathies chiefly found expression in the study of ecclesiology and archeology, and he contributed many papers on these subjects to Scottish and Welsh societies. Although he recently gave £20,000 towards a Chair of Anatomy at St. Andrews, his interest in the advance of science was not great. Taking into consideration the vast wealth which flowed into his hands as the result of the industrial development of South Wales—some margin of which he would doubtless admit to be an unearned increment—we cannot fail to regret his inability to recognize more fully the need of scientific and technical institutions. Had he done so, his high sense of moral responsibility would surely have led him to do more to satisfy the want.

"EVERY man is a debtor to his profession." This, we think, was a saying of Bacon, and Sir Edward Coke has expressed the

same thought. The degree to which the saying is felt to be true serves the purpose of a test of a man's worth in his own profession; and no profession can be in a healthy state where such a feeling is not general. What the great lawyers of the past felt a great physician of to-day feels likewise. In his recent address to the medical students at Cardiff, Sir John Williams, speaking of his own profession, said: "It will widen your sympathies, whet your wit, increase your resources, and humanize you through and through." Such genuine enthusiasm, we believe, is common in medicine; we wish we could say as much for the profession of teaching. It is not the fault of the teacher. Nature has ordained that physicians should be sought after both by the wise and by fools, while she has no less surely made boys walk very slowly towards their teachers. However, we have ceased to despair, and, before the country has to pass through the ordeal of another General Election, we hope much will be done towards enabling a schoolmaster to say: "Every man is a debtor to his profession."

THE average parent's criticisms in school matters relate, as a rule, to concrete objects, and are for that very reason deserving of attention. In this anything but big gooseberry season a correspondence has been carried on in the *Standard* on the question of school geography books. With the exception of a dignified protest from an Oxonian, all were agreed that the books in general use are disgracefully inaccurate. There is a certain grim humour in the remedies proposed by the lay mind. One, even, went the length of welcoming errors as affording opportunities for stimulating discourse in the class-room. The writer must have been ignorant of the "chapter ahead" condition of most of our teachers of geography. To the professional mind the remedy is clear, if expensive. Competent teachers discover accurate text-books.

THE education of our naval officers is far from satisfactory, if the testimony of naval men is to be relied on. Writers in a recent number of the *United Service Gazette* and in the *Monthly Review* for October are agreed that the training of midshipmen and lieutenants is too specialized and unpractical, and carried on under arrangements which necessitate the far greater part of their time being spent on shore. When we trusted to our wooden walls, broadsides, and boarding parties, the instruction imparted by naval instructors on board no doubt sufficed for the average midshipman. To-day it is strongly urged that the education imparted by naval instructors is a farce, and that the system should be ended. It certainly serves no practical purpose, for under existing regulations a midshipman's technical knowledge is acquired on shore. It is suggested that the general education of midshipmen should be completed before they go to sea, and that much of the present technical work bearing on the construction of ships, guns, and projectiles should be omitted. In fact, naval officers now specialize—some in gunnery, some in torpedoes, and others in navigation—and there is a growing feeling that the "all-round" man is better in war.

WHILE we are on this subject we should like to enter a protest on behalf of the British parent against the exquisite refinements of naval uniform. Indeed, we should counsel a parent who purposes sending his boy into the Navy not to probe

the intricacies of his kit as shown in the twenty-seven closely printed double-columned pages, contained in the current *Navy List*, which deal with uniform. Apparently he must see that his boy is provided with buttons thirteen-twentieths of an inch in diameter for his waistcoat, fifteen-twentieths for his jacket, and eight-tenths for his coat. That way madness lies. It may account for regulation No. 21 affecting Assistant Engineers. To prevent inconvenience and disappointment it is stated that persons suffering from disordered intellect, imbecility, paralysis, or blindness in one or both eyes may be rejected as medically unfit, but that my Lords may modify these regulations "from time to time as may be considered desirable." Have "my Lords" no humour?

THE recent appearance of the Calendar of the Royal Holloway College has caused the *Spectator* to animadvert on the comparative failure of the college to attract students. Our contemporary was indeed very wide of the mark when it asserted that only ten candidates sat last year for ten open scholarships offered; but the college authorities themselves admit that they have some serious difficulties to contend with which hitherto have prevented the college from realizing the founder's anticipations. The fact is that Egham is too remote to attract in large numbers candidates for honours at Oxford and Cambridge; and for those who seek a London degree the necessity of residence of course involves an avoidable expenditure. On the other hand, there is little likelihood at present that parents will give their daughters a University education as a mere luxury. The thing has not become the fashion, and girls themselves do not, as a rule, care to sacrifice the supposed pleasures of society for half the year. But there are now a hundred and thirty students in the college; there is, to be sure, room for plenty more, and the entries this term were upwards of forty. We believe that, when the vastness of the buildings and grounds is taken into account, the endowment, though amounting to some £8,000 a year, is barely sufficient.

IN view of an important correspondence that has lately been carried on in the columns of the *Guardian*, with regard to the decrease in the number and quality of candidates for Holy Orders in the Established Church, it is worthy of notice that the clergy themselves might provide a larger number of recruits to carry on the work of the Church than they do. Thus, for example, St. Edmund's School at Canterbury, the Clergy Orphan Corporation's school, which is doing admirable work, turns out a very small proportion of clergymen. The explanation of this dearth is no doubt in great measure that funds are not forthcoming to continue the education of boys after they leave school. To obtain the necessary qualifications is a luxury which many would-be candidates for Orders cannot afford. What seems to be wanted is a much larger number of scholarships and bursaries for intending candidates.

THE possibilities of museums, from an educational point of view, are practically recognized at the present day, and, from time to time, one hears something of the institutions of this nature in connexion with our public schools. Still, it is not saying too much to state that school museums deserve a great deal more attention, and, it may be added, support, than they

now receive. Much misconception still exists with regard to the amount of time, knowledge, skill, and money which ought to be expended on keeping a museum up to date. As the late Sir William Flower pointed out with regard to local museums, many treasures have been lost to the nation and to science through over-confidence in them on the part of the donors. The ties between an old public-school boy and his school are often stronger than between him and his place of residence, and to the school museum he gives his valuable specimens rather than to the local or a national institution.

ETON COLLEGE has for a long time contained many objects of great interest, but its importance has been increased by the recent acquisition of the collection of Egyptian antiquities got together by the late Major W. J. Myers, who was killed in South Africa last year. Many of the specimens have a world-wide reputation, and the authorities have provided a number of fine cases for their reception. When the scientific arrangement of the objects now proceeding is finished, it is to be hoped that their light will not be hid under a bushel. The important parts of the collection are the series of blue glazed pottery of the New Empire, consisting of beautiful cups, dishes, and vases, as well as of rings, statuettes, and other objects. Then a number of plaster masks from graves belonging to the Roman-Egyptian period call for attention, as well as vases of similar date. Some of the wooden figures are also very remarkable, while one must not forget the prehistoric flint knives, stone jars, and pottery, which Major Myers presented before his death. It was one of this officer's hopes to see in time an anthropological section of the Museum devoted to the works of man in all lands and in all times. In this many other of his gifts would naturally find a place.

HERE is a good instance of a child's anthropomorphism: A little boy's jacket was to be sent to Scotland as a pattern for a new one. He was observed putting into its pockets a pin-cushion, a toy dog, and a penknife. He explained that he had forgotten to take them with him in the summer, and that they had missed their holiday, and he felt sure they were disappointed—the journey to Scotland would make them all right. We fear we cannot cull any scientific lesson from the following, unless it illustrates a deep-seated distinction between the boy and the girl mind:—Overheard on the way home from Sunday school. Boy: "I say, Sis, if you had been Solomon, would you have chosen wisdom?" Girl: "Oh, no; you see I've got wisdom. I should have chosen a doll's perambulator."

## SUMMARY.

### THE MONTH.

THE last meeting of Convocation of the University of London under its old constitution was held at South Kensington on October 9, when the sixteen Convocation members of the new Senate were elected. The graduates in Arts had the right to elect six members, and fourteen were nominated. The chosen six were: Mr. J. Fletcher Moulton, M.A., Q.C., with 1,140 votes; Mr. J. D. McClure, B.A., 1,134; Sir Albert K. Rollit, LL.D., 1,063; Mr. T. D. Napier, LL.D., 910; Mr. J. B. Benson, LL.D., 906; and Mr. T. L. Mears, LL.D., 752. The unsuccessful candidates in the Arts Faculty were Sir Joshua Fitch, Mr. G. Armitage Smith, Mr. T. Ely, Mr. R. W. Hinton, Mr. A. B. Hopkins, Mr. T. S. Osler, Mr. E. J. Routh, and Mr. T. McKinnon Wood. The

graduates in Law had to elect one member, and their choice fell on Mr. Justice Cozens Hardy with 127, his only opponent, Mr. Joseph Walton, Q.C., receiving 106. In Medicine and Surgery two graduates had to be elected, and four were nominated. Mr. Thomas Barlow with 381 votes, and Mr. J. F. Payne with 314, were elected; the unsuccessful candidates being Mr. S. Ringer and Mr. A. R. Silcock. In Science, the six members elected were Sir Philip Magnus, 432 votes; Mrs. S. Bryant, 429; Dr. C. W. Kimmins, 364; Dr. F. Clowes, 333; Dr. Silvanus P. Thompson, 239; Dr. F. S. Macaulay, 226. The unsuccessful candidates were Dr. C. H. Draper, Mr. G. C. Foster, Dr. R. D. Roberts, Dr. S. H. Vines, and Dr. S. R. Wells. The Faculty of Music were entitled to elect one representative, and, as Mr. J. W. Sidebotham, Mus.Bac., was the only nomination, he was declared elected.

THE SENATE has since been completed by the election of the representatives of the Faculties. In Arts, Prof. M. J. M. Hill, Prof. Paton Ker, Prof. Warr, and Miss Emily Penrose have been elected. In Medicine, Dr. Rose Bradford, Physician to University College Hospital and Professor Superintendent of the Brown Institution; Dr. Kingston Fowler, Physician to and Lecturer on Medicine at Middlesex Hospital; and Dr. E. C. Perry, Superintendent of and Physician to Guy's Hospital, have been elected. In the Science Faculty, Sir Michael Foster, K.C.B., F.R.S., the representative of the University in Parliament; Prof. Halliburton, F.R.S., of King's College; Prof. Ramsay, F.R.S., of University College; and Prof. Rücker, who was a member of the late Senate. In the new Faculties of Engineering and Economics, Prof. Unwin, F.R.S., and Prof. Hewins, respectively have been elected; while Sir Hubert Parry returns to the Senate as the representative of the Musical Faculty. As already announced, Lord Davey, Chairman of the late University Commission, has been nominated by the Crown in Law, in default of the constitution of a Law Faculty.

LORD REAY has sent a statement to members of the London School Board in which, amongst other things, he draws attention to the diminished number of children in the metropolitan schools. Three years ago it had risen to 734,777; it is now 724,248. This appears to point to the conclusion that there will not in the future be any serious increase in the number of children between three and thirteen who require school accommodation. As to the cause of the diminution, Lord Reay says:—

The change which has taken place in this respect during the past three years is probably due to the gradual depletion in central London of the population requiring such accommodation. Last year I pointed out how such migrations within our borders affected the question of school provision. But the emigrants are not brought to a standstill by an imaginary boundary-line, and the great increase in artisans' dwellings which has taken place in areas under neighbouring School Boards, such as West Ham, Hornsey, Willeaden, Acton, and Croydon, shows that many of them have swept over the boundary of the metropolitan area. There are still large outlying districts within that area which are not yet covered with buildings. If these districts were occupied by new-comers, and not merely by emigrants, our numbers would again increase. I am inclined to think, however, that the future occupants of these districts will be persons who have been driven out of central London. The Board will be no less bound to provide school places for the children of these persons than if they had been new-comers, and, therefore, we must expect for a time to face the apparent anomaly of an increasing number of schools with a stationary or decreasing number of children to be educated.

ON October 9 the Archbishop of Canterbury opened St. Gabriel's College, Kennington, for the training of schoolmistresses. The building, erected at a cost of £38,000, will accommodate eighty resident and eighty non-resident students. The eighty resident students must be members of the Church of England, but that restriction is not laid upon the non-residents. The Bishop of Rochester, Canon Daniell, Archdeacon Burney, Canon A. Edwards, Canon Brooke, and Mrs. Temple, wife of Archbishop Temple, were among those present. The Archbishop, in the course of a short address, said that the schoolmistress was just as much a minister for Christ as one ordained, and spoke of the necessity of the mistress having a great love for the pupil and a deep interest in the subjects she taught.

THE President of the Board of Education appeared in a somewhat novel character on October 15, when he opened a higher-

grade school for the Manchester School Board. It will be remembered that the legality of expenditure by School Boards on higher-grade schools, in which the maximum age is carried beyond the elementary limit, has been challenged by a public Department, and a case raising the question is now waiting for decision in a court of law. The Duke of Devonshire said on this occasion that

he regarded it as a very great honour to be the guest of the Manchester School Board. On that occasion he felt it especially an honour because he was under the impression that in certain quarters it was thought the present Council on Education was not disposed to be very friendly to the work of School Boards, and not to be altogether in sympathy with them. But he could assure them that, although Sir John Gorst and himself might have thought it necessary on some occasions to check the proceedings of some School Boards whose zeal was tending to outrun their powers, yet they were entirely in sympathy with their object, namely, the organization of a complete system of education in this country.

It may be convenient to quote here one of the surcharges made by the Local Government Board auditor against the London School Board, out of which the case in the Court of Queen's Bench has arisen. The district auditor, in his report dated July 26, 1899, made his first disallowance in the following terms, and for the following reasons:—

In the account for the half-year ended at Michaelmas, 1898, of the School Board for London I disallowed the sum of £5. 10s., entered and charged therein as paid out of the school fund of the said School Board to Mr. C. H. Haslam, a teacher in the employment of the said School Board.

The said payment forms part of an expenditure incurred by the said School Board in the maintenance and instruction in special subjects of an evening science class, registered under the Science and Art Department, South Kensington, as a science class, and held at the Burghley Road Pupil-Teachers' School. The said sum of £5. 10s. was paid to Mr. Haslam, as remuneration for giving eleven lessons at 4s., and eleven lessons at 6s., as special instruction to such class in chemistry. I make such disallowance for the following reasons:—

1. Because the said sum of £5. 10s. was not paid to the said teacher for the performance of duties which the said School Board had power to assign to him within the meaning of Section 35 of the Elementary Education Act, 1870.
2. Because the said sum of £5. 10s. was paid to the said teacher for the instruction of classes registered under the Science and Art Department.
3. Because School Boards have no legal authority to use, expend, or apply any part of the School fund in the instruction of classes registered under the Science and Art Department.
4. Because the said sum of £5. 10s. was paid or expended wholly or partly for services rendered in teaching subjects not allowed, provided for, or recognized by the Education Code.
5. Because the said sum of £5. 10s. was not paid for services rendered as a teacher in an "elementary school" within the meaning of the Education Acts.
6. Because the said teacher, so far as relates to the services in question, was not a "necessary officer" or a teacher required for any school provided by the said School Board within the meaning of Section 35 of the Elementary Education Act, 1870.
7. Because a School Board is not a "Local Authority" within the meaning of the Technical Instruction Acts, 1889 and 1891.
8. Because the said School Board had not any authority in law to pay the said sum of £5. 10s., and to charge the same in their accounts as aforesaid.

And I surcharge the said sum of £5. 10s. upon Thomas Huggett, of 9 Cromwell Crescent, Kensington, and John Archibald Murray Macdonald, of 15 Thurlow Road, Hampstead, Esquires, because they authorized the making of the illegal payment.

THE REV. JAMES PORTER, D.D., Master of Peterhouse, Cambridge, died on October 2. He entered at Peterhouse in 1847, and graduated in 1851 as ninth Wrangler, the Senior Wrangler that year being the present Master of Caius, and others graduating in that Tripos being the Master of Pembroke, the late Bishop Lightfoot, and Sir W. Harcourt. Dr. Porter was absent from the University for a short period, being engaged as a teacher of mathematics at Liverpool College; but, returning to the University, he took private pupils, and became a college lecturer and tutor. In 1876, Dr. Porter was elected Master in succession to Dr. Cookson. Within five years he was elected to the office of Vice-Chancellor. He took a large part in local affairs, and, when the Town Council was reconstructed by the admission of Univer-



sity representatives, he became a member of that body, but declined the office of Mayor. He was an advocate of the admission of women to degrees, and supported the proposal to abolish the order of merit in the Mathematical Tripos.

At University College, London, the following scholarships and exhibitions have been awarded:—Medical entrance scholarships—Bucknill Scholarship, £30 a year for four years, and 55 guineas scholarship (divided, equally), H. T. Mant and W. S. Sweet; 55 guineas scholarship, H. E. Dyson. Medical exhibitions—Each 76 guineas, C. W. Forsyth and A. M. H. Gray; West Scholarship in English, £30, F. H. C. Brock.

At a meeting of the Court of Governors of University College, Liverpool, on October 15, the Earl of Derby presiding, it was announced that Mr. Holbrook Gaskell had given £1,000 towards the building and equipment of a new physics laboratory, and the thanks of the Council, by whom the bestowal of the gift was reported, were tendered to him for this evidence of his continued interest in the welfare of the College. The annual report of the Council was presented and adopted on the motion of Lord Derby, who remarked that the general progress of the college seemed to continue, and, though they might wish that their growth could be even more rapid, they could not complain of the number of benefactions and gifts bestowed on the college during the year. Mr. Robert Gladstone presented the treasurer's statement, which showed an excess of expenditure over income of £1,252, while the total debt under the head of "general fund," now amounted to £11,000. He earnestly appealed for support.

THE following candidates have been successful in the Examinations for the National Diploma in Dairying held recently at Reading and Kilmarnock. At Reading:—Ernest Christopher Brown, Midland Dairy Institute, Kingston Fields, Derby; Ella Evans, Tyn-y-Coed, Sarn, Pwllheli, North Wales; Edith Morton Jackson, Erw Wen, Llangollen, North Wales; Margaret Robertson McDuff, British Dairy Institute, Reading; John Percival, Harper Fold Farm, Radcliffe, near Manchester; Charles Donald Stewart, Yarrow Bridge, Duxbury, Chorley. At Kilmarnock:—Jane Barbour, Redwells, Cardenden, Fifeshire. John Donald, Burrowin, Bogside, Stirling; Agnes Kinross, Wester Balbeggie, Kirkcaldy; Jemima A. Veitch, Backshot, Forth, Lanarkshire; Philippa Wilkinson, Needingworth, St. Ives, Hunts. Each of these competitors will, therefore, receive the National Diploma in the Science and Practice of Dairying. It has been decided by the National Agricultural Examination Board to hold similar examinations in the autumn of next year (1901) under practically the same regulations at the two centres of Reading and Kilmarnock.

## UNIVERSITIES.

(From our Correspondents.)

THE Chichele Professorship has at last been settled Oxford. after nearly half a year's delay; and Mr. C. W. C. Oman, of All Souls, has been elected to it. Mr. Oman has produced original work of value, and no doubt will now produce more; he is, however, perhaps most widely known by his two excellent school books. The election brought out strikingly the strength of the Oxford History School at the moment; for there were at least three other tutors, any one of whom would have held the post worthily.

Mr. Spooner, of New College, has written a valuable article in the *Oxford Magazine* on the subject of "Pass Moderations." The present arrangement is too complex to detail here; and, like everything connected with Passmen, will be hard to change, because energetic people are seldom concerned with Passmen, and the coaches, who are mainly second-rate teachers, depend for their efficiency on their close rule-of-thumb knowledge of the *status quo*. Mr. Spooner brings three main charges against the system: (1) it fails to interest its victims, who are kept for a year stagnating over work done already at school; (2) it is very disconnected, and needlessly isolates its students for purposes of study; (3) it is inconsequent and without any real order. Few people, except Pass coaches, will deny the serious truth of these

charges. The present system is a triple one. After Responsions, an undergraduate who does not take Honours Moderations must take either Pass Moderations, or the Preliminary Examinations in Science, or the Law Preliminary Examination, before he may attempt Honours in a final school. These three examinations are mutually exclusive; each therefore is narrow, while no one of them pretends to be deep. Mr. Spooner's plan proceeds on the lines of amalgamating the three into one systematically tabulated examination, within which a far greater elasticity in the choice and combination of subjects would go hand in hand with a real advance towards any of the final schools. It is a desirable consummation; but I cannot as yet be sure what its chances are.

The death, on October 16, of Sir Henry Acland, sometime Regius Professor of Medicine, removes one of our best known figures; a fellow-undergraduate at Christ Church of Mr. Gladstone, and, later, the most intimate friend of Mr. Ruskin in his Oxford days. His medical work was notable, but his chief achievement was our Museum. He was to be seen in his carriage almost daily till a very short time before his death.

Mr. E. E. Genner, Scholar of Balliol and Fellow of Magdalen, has been elected Derby Scholar. The Rev. E. C. Spicer, New College, has been elected to the Geographical Scholarship for 1900-1901. The Hebrew Scholarships have been awarded: the Junior Kennicott to Mr. A. C. Paterson, Trinity; the Pusey and Ellerton to Messrs. S. L. Brown, Wadham, and R. W. Sutcliffe, St. John's, who were equal.

In the Civil Service Examination this year the proportion of success attained by Oxford men was once more remarkably great.

A slight falling off in the number of freshmen who have come into residence this year, as compared with last, has to be noted. The total is 732, as against 764. New College comes first with 58, or eight more than a year ago, and then, after Christ Church, with 57, the same number as last October, we have the following figures:—Keble, 54; Non-collegiate, 51; Magdalen, 50; Balliol, 50; Exeter, 43; University, 40; Trinity, 39; St. John's, 32; Queen's, 30; Oriel, 27; Brasenose, 26; Merton, 26; Hertford, 26; Wadham, 23; Corpus, 22; Pembroke, 21; Worcester, 16; Lincoln, 15; Jesus, 14; St. Edmund's Hall, 10; Clarke's Hall, 4; All Souls, 1; Marcon's Hall, 1.

THE technical commencement of the University Cambridge. term is October 1; full term is about twelve days later. In years gone by the place was deserted until the actual day for the reassembling of the colleges. Things, however, are rapidly changing here: the October Little-go, beginning as it does on October 1, brings up a large number of junior men, and consequently the college machine has to begin running. So many of our resident teachers are now married men, glad to get back to the comforts of home, that it is safe to say that things are in going order days before the commencement of actual full term. Shortly we may expect to see the new order of things officially recognized, and the first day of full term brought nearer to October 1.

Mr. Chawner, of Emmanuel, the retiring Vice-Chancellor, delivered the usual speech at the end of his year of office. He referred publicly to the fact that all the colleges of Oxford and Cambridge have agreed to hold no examinations for entrance scholarships before December 1 in the years 1900 and 1901. This change will, it is hoped, do away with some of the evils that attend the present system of competition. The Vice-Chancellor also noticed the fact that a movement has recently been growing to promote the study of military science in Cambridge both as regards theory and practice. A large and enthusiastic meeting held in the Lent term authorized a deputation to treat with the War Office on the subject. With regard to the practical side it is fairly certain that the authorities, approving generally of the University as a source for supplying candidates for commissions in both the regular and the auxiliary forces, will encourage the gradual formation at Cambridge of a military school in connexion with the University Volunteers, and will accept the instruction so given as far as it proves to be efficient. Of the total number of commissions offered to the University a fair proportion will be placed at the disposal of the University authorities to be confined to graduates who have been efficient members of the University Volunteer Corps. Cambridge will, in all probability, be made a centre for the military examinations, and the examination in military subjects may be passed previous to graduation. Thus a candidate for a commission (a) might have graduated in Honours; (b) might have passed before

graduation in the military subjects; (c) might have been to a school of instruction; (d) might have obtained the full benefit of a University career, and all this without being many months older, if at all, than the University candidate for the Army of the normal type under the existing regulations.

The new regulations for the Little-go have produced a very considerable change in the nature of the class lists. This October there were only five successful candidates who had commenced residence; so that it is clear the majority of the men now pass either before entering upon their college career, or shortly after doing so. A further step in advance would be taken if the colleges refused to allow any man to reside at all until this examination was successfully negotiated. There is, however, such a greed for numbers in certain quarters that heroic measures of this sort will probably be deferred till the Greek Kalends.

A curious storm in a tea-cup has recently been raging about the form of the class lists in the Historical Tripos. The regulations specify that in each class the names are to be given in one or more divisions. The meaning of such a regulation is fairly obvious; but the examiners, for two years in succession, have chosen to interpret it as giving them a discretion as to whether they shall divide the list into divisions or not. The lists have therefore contained three classes with no attempt at subdivision whatever. The anger of certain persons has been aroused, and fly-sheets have followed. The threatened thunderbolt is in the form of a *non-placet* to the reappointment of any of the present examiners, such a procedure being the only way in which the Senate can show the offenders that when a regulation is passed it has to be observed.

The death of Dr. Porter, Master of Peterhouse, which occurred at the end of the vacation, removes from among us one of the landmarks of the place. He was foremost in the business and social life of the University, and was noted alike for his courtesy and administrative skill. The fact that he was often on the losing side did not detract from the esteem in which he was held by those who had to oppose him. Rumours are rife as to his successor; and those who are acquainted with the electing body imagine that the result of the election will come as a surprise on the University.

The freshmen are not as numerous as usual this year, and the number of residents is also smaller. These facts are undoubtedly due to the war, the number of Cambridge men at the front, in the regular and irregular forces, being very large.

### THE TEACHING OF PATRIOTISM.

ON Wednesday, October 17, at the monthly Evening Meeting of the College of Preceptors, Mr. H. W. EVE in the chair, Mr. J. J. FINDLAY, M.A., read a paper on "The Cultivation of Patriotism in the School."

In introducing his subject, Mr. Findlay observed that the very title of his address was a challenge and denial of certain theories of education. It was often supposed that the school was a place where certain abstract properties were dispensed to all comers—faculties of memory, reason, imagination, quite apart from the political, social, or personal influences of the day. Just as you go to a tailor to purchase your boy's winter outfit, so you go to a school to fit him up with some abstract, marketable commodity called "mental culture."

Now the partial truth underlying this view should not conceal from us its gross error. The school is a product of the time, and it mirrors forth the whole life—political, social, intellectual—of the race and age. We teachers are tools by which modern society works out its ends and seeks to realize its hopes. And, however much the older educational theorists may have ignored this process, it has been for long recognized by statesmen. The churches have understood for many generations what a powerful engine the school may be made; and one of the leading features in the history of education during the nineteenth century will surely be found in the grasp laid on the school by the modern State, sometimes in antipathy to, sometimes in sympathy with, the forces of religion. Now we are not concerned to consider whether this new control is welcome or no. We may lament, if we are inclined, the cloistered seclusion of the academy; but we now live in a world where the social and intellectual environment of school life is seized upon by the ruling forces of the age. We are familiar with the experience of Germany in this matter; we know how, in the last generation, Moltke was willing to allow that the teacher's influence had created a type of soldier who could endure and conquer. "Der Schulmeister" said he once, in the Reichstag, "hat unsere Schlachten gewonnen." And Germany still abides as the chief illustration of the enormous possibilities, for good and evil, in controlling the life of a nation by means of school influence. The German teacher is expressly and definitely employed as a civil servant to safeguard the civil authority of the Government against the attacks of lawless revolutionaries; and he is required, of set purpose, to cultivate in his pupils a sentiment of local provincial patriotism as regards his locality or his State, combined with a still more pronounced sentiment of devotion to the supreme interests of the Empire. The German Empire is an armed camp, standing ready day and night to guard its frontier against its hereditary foes—the Slav on the East, the Celt on the West; and the children of the Empire must be trained to take their share in this perpetual campaign.

The United States exhibits the same influences at work for an opposite cause. There is no fear of an external enemy; but there is an internal disorder—viz., the lack among the people themselves of national consciousness. The common school in the great cities of the States, as well as in many country districts, is attended by children of alien origin, to whom, at first, America means nothing but a workhouse. Hence every public man in America will tell you that the maintenance of the school is the first necessity of the State. "If these immigrant children are not 'Americanized,' they will destroy us."

Now, ten years ago, if we had cited these two nations as examples for Great Britain to imitate, we should certainly have been reminded that the same need does not exist among ourselves. We feel neither the pressure of foreign enemies on our flanks nor the danger of alien elements within our borders: we have, therefore, no need to organize the cultivation of national sentiment among our children, and the problem raised by the title of this address would have been dismissed as an idle waste of time. But to-day no one will consider the discussion as unsuitable; it is being pressed upon our notice by influences which, from many quarters, have combined to make England, and the British Empire, a new world. These influences, for good or evil, are making themselves felt; the school cannot escape them, even if it would, and, if we teachers are to keep our hold upon our schools, we must take our country, our parents, our pupils, our authorities, as we find them, and seek to direct this new spirit of patriotism into channels which will be really helpful to the growth of sane, generous, public spirit in the youth of Great Britain.

"I, for one, do not shrink from this novel task; I rather rejoice to see this day. I believe that our country, in spite of all excesses of Jingoism and militarism, in spite of the degradation of Imperial sentiment to the vulgar ends of wealth and pride—our country is the better for its enlargement of sympathy and of ideal. And, instead of fearing the new burden which a new age lays upon us, I invite you, in the best of spirits, to an analysis of the principles which may help us to a wise fulfilment of our new responsibilities." The efforts which we witness, at home or abroad, for the cultivation of patriotism in the school may be grouped under three heads, corresponding roughly to the three aspects of mental life—intellectual, emotional, volitional.

#### 1. SCHOOL LESSONS.

The school-book literature of the last decade gives sufficient indica-

A MEETING of the Court of Governors of the University College of Wales, Aberystwyth, took place on October 26. In connexion with this meeting, the President of the college (Lord Rendel) held a reception on the evening of October 25, and the Bishop of Hereford delivered an inaugural address on October 26. Similar addresses have been delivered on previous occasions by the late Prof. Henry Sidgwick, the present Master of Balliol, Mr. Leslie Stephen, Sir Michael Foster, M.P., the Master of Trinity, and others.

The next meeting of the Court of the University of Wales will be held at Cardiff on November 23. It will be the Annual Collegiate Meeting for this year; these meetings being held in rotation at Aberystwyth, Bangor, and Cardiff. In connexion with this meeting, the annual degree ceremony will be held. The meeting of the University Court will be held in the newly erected building of the Cardiff Girls' Intermediate School. Among new developments in the Welsh colleges, it is interesting to note the project for forming a school of mines (chiefly for instruction in slate-quarrying) in connexion with the Bangor University College, Cardiff. A school of mining has for some years been one of the departments of the University College, Cardiff. It is gratifying to observe the adaptation of the Welsh University Colleges to meet the needs of the industries of the localities in which they are placed.

In accordance with its policy of encouraging sound education in the county schools of Wales, and of diminishing the feverish anxiety for tangible examination results, the Central Welsh Board has this year issued to each school a list of the certificates gained by its pupils alone, so that the evils of a comparison of the number of certificates gained by different schools will thus be avoided. The next meeting of the Central Board will be held on November 16 at Aberystwyth; and hopes are entertained that much good will result from the deliberations of Welsh educationists at that important centre of Welsh education.

tion of the increasing desire to secure for children a proper equipment of ideas relating to their own country. On the one hand, we have the teaching of civics, studied in a number of books, of which Mr. Arnold-Forster's are the best known. An official recognition of such instruction was first given by Mr. Arthur Acland in his "Code for Evening Continuation Schools," but, since 1894, the advocates of such instruction have carried it much further afield. On the other hand, we have seen our text-books of history and geography infused with a new spirit. Such books as Parkin's "Round the Empire" are spreading in thousands of schools—a conception of Imperial fellowship such as was never contemplated before in books prepared for school use. Perhaps the pioneer in this direction was John Richard Green. His "Short History of the English People" has probably done more to create an intellectual appreciation of England among young Englishmen than all the political agitations and leagues put together.

The teaching of civics has been advocated by great authorities. The advice of James Bryce, Arthur Acland, Arnold-Forster, is not to be lightly set aside, and yet we find the study to be scarcely welcomed in the schools. To a student of education the explanation is simple. All these social sciences, such as politics, economics, civics, and ethics—the crown of them all—are abstract, and, as such, are unsuited to the immature mind, which has no concrete experience on which to build the edifice of systematic thought. Hence, let us confine ourselves during school life to the humanities—history, literature, human geography, which afford the same material in concrete form.

And from what a rich store may we select! The store is far too vast unless we adopt principles of selection which will give us only what is most suitable for each school period. History will tell its own story if we choose such epochs as are adapted to the growth of the pupil's mind, and if we permit sufficient detail to give personal interest to the characters. In this direction the Herbartians seem to have been really successful. They commence at about ten years of age, and introduce the child to the local legends of the neighbourhood, correlating these, on the one hand, with local geography; on the other hand, with local legends and heroic ballads. Then, in succeeding years, they pass through the chief epochs of national history until, about the age of fourteen, the crown of national endeavour is reached in the story of the nineteenth century—from the overthrow of the first Napoleon to the overthrow of the second Napoleon. This course of study can be correlated throughout with the masterpieces of historic literature in poetry and prose. In this last regard we have sumptuous fare provided by modern English writers. "Ivanhoe," "The White Company," "Westward Ho!" and the whole galaxy of Shakespeare's plays cannot be surpassed as material for nourishing the young mind with great thoughts about our country. The supreme value of these books lies in their fidelity to historic realities. They offer the actual words and life of the men and women of the time, and are far removed from the pseudo-historic work of men like Henty and Kingston.

## 2. THE CULTIVATION OF SENTIMENT.

These studies in history, literature, geography mainly serve the purpose of intellectual apprehension. True, they do much at the same time to stir the heart; but young people, after all, are not greatly stirred by the printed word. Something of colour, excitement, movement are necessary to effect broad and deep impressions upon them. Hence the value of what we may call *commemorations*. In America Arbor Day, Independence Day; in Germany the Emperor's birthday, the Duke's birthday (and, unhappily, *Sedan-tag*) provide occasions which, year by year, serve to keep up in the school the memory of great achievements. The members of a school are a society—a fragment of the nation living together day by day, sharing common feelings and common ideals. Should it not, on great and memorable occasions, celebrate and commemorate the days of old? The proceedings may be simple—should be simple—but the effect on young people's imagination extends beyond the influence of many school lessons. The school assembly is, for such an occasion, often joined by friends or parents. One or two songs are sung, a poem recited, an address on some appropriate topic comprises all that is necessary.

An example of what is possible in such a direction in this country may be worth citing. Patriotism is not only an affair of the Empire; it touches still more closely the sphere of local and provincial life. No man is a good patriot if he is a bad citizen. If at this moment we are full of Imperial enthusiasm, we must not forget that this spirit is the sequel to the most remarkable development of county and local interest which has been witnessed since the days of the Norman conquest. That being so, it did not seem inappropriate for a day school situated in the midst of a great town population, full of intense interest in its civic life, to give expression to these feelings by a commemoration. The day chosen was the eve of the new civic year. An honoured citizen was invited to describe the town as it was fifty years before. The description, illustrated by plans and maps, was followed with the keenest attention. The town library and museum provided a number of old maps and charts for exhibition. A speech by the late Earl of Derby on "Local Patriotism" served exactly to remind the audience of the principles underlying civic duty, and it did not come inaptly

from the lips of a schoolboy who would hereafter have to serve his town as a citizen.

Next week comes St. Crispin's Day, when was fought one of the most useless, but most glorious, battles on the roll of British history. If a class of children are studying that story, what can be better than for one of them to tell it before the whole school, with the immortal speech that Shakespeare puts into the mouth of King Henry? Such an exercise, of course, demands that our pupils be trained in recitation, in literary expression and style, which is so much the better, for it is only by such active expression that children can enter into the spirit of heroic literature; they must themselves recite and speak and sing, if they are to feel the glow which inspired the poet and the singer.

## 3. EXERCISE OF CORPORATE ACTIVITIES.

Patriotism consists in deed rather than thought or sentiment; he only is the true patriot who lives the life of a citizen. It, therefore, follows that, since the school pupil is a minor, unfit for the duties of civic life, he must be content while at school with the cultivation of ideas and sentiments which shall bear fruit later. Whatever some parents may do, we teachers are not willing to let young people haunt the polling booths and join in the excitements of a political election. Nevertheless, we are very conscious of the danger of stimulating the mind with impulses for which no outlet is afforded. We know how easy it is for the school to produce a type of man, and of woman, who is content to meditate, to hope, to sigh, but who shrinks from action.

We have, therefore, to ask ourselves whether the school can find any sphere of activity for its pupils analogous to the activities required in later life. Surely this is offered us by the very conditions under which we live as teachers and pupils—members of a common society. The child is a social being, and, as soon as he begins to realize his relations to those about him, he begins to exercise those activities which in later years will make him a useful member of the State. At first he is limited to the home, but when school life begins he finds there a new and wider sphere for the exercise of corporate virtues, for the cultivation of social habits, which will give a decisive direction to his whole career. Nowhere, perhaps, have the evidences for this view been more manifest than in our English public schools, and nowhere is the theory better exhibited than in the teaching of Arnold of Rugby. Indeed, we may fairly say that here is the one lesson which our neighbours across the Channel are accepting from us in England. They see how it becomes possible to direct the corporate life of the school society so as to promote the highest ends of education.

We should not, however, be content merely to copy the Arnold tradition. The broader, wider study of school life, which is characteristic of our time, is leading to many suggestive proposals which go far beyond the special modes in vogue in the great boarding schools. The saving principle throughout is found in cultivating social habits—habits of mutual service, habits of pleasure in the society of one's equals, habits of submission to social laws, and, in due time, habits of authority in the control of inferiors. Not that these habits are to be cultivated, artificially, for the special end of patriotism; they are, rather, the proper modes in which the organized life of school takes shape, if it is to answer adequately the social demands of child-nature; and the further end of creating habits useful hereafter to the patriot and citizen will be achieved at the same time.

This completes an elementary analysis of what can be done, what is being done more or less in many schools, towards the end here proposed. If we are asked whether that end is being achieved, whether we can prove by detailed evidence that cause will produce effect, we may reply with some confidence. It is hard, indeed, to lay one's hand upon individual pupils and say: Here is a specimen, a product, to convince you of the efficacy of the prescription. Results in education are not produced with such rapid effect as we can demand from patent medicines, or from the crammers who put us through examinations. A good patriot is the product of many influences, of which the good school is only one. But when we take a broad survey of what is being done in schools, when we weigh, for example, the influence of the literature to which reference has been made—Green, Seeley, Arnold-Forster, and the like—as a factor in the new Imperial sentiment of our time; when we witness the unquestioned results in Germany, in the United States, in our own large public schools, issuing from organized efforts for the development of patriotic sentiment and corporate activity, we are bound to place some confidence in the theories which underlie these efforts, we have fair ground for supposing that similar principles, if adapted to our time and our need, will lead to similar results. We may believe that it is possible for us, although we stand apart from the open field of political activity, to play our part in the service of our neighbourhood and of our country, by sowing seed which cannot fail of harvest.

The lecture concluded with a discussion of the bilingual problem as it presents itself in various parts of the British Empire—Wales, French Canada, the Transvaal—where a vigorous provincial patriotism claims to be fostered side by side with acceptance of Imperial ideals.

The CHAIRMAN said that the life of the ancient Greeks afforded examples which were worthy of emulation, and, although comparatively few boys studied the Greek language, he agreed with the lecturer that all should have some knowledge of Greek life and patriotism. The idea of commemorations was excellent. It should not be difficult for every school to select for commemoration men whose lives had conferred benefit either on a special locality or on the whole country. Poetry could be made a very effective agent in the cultivation of patriotism, and, perhaps, none more so than certain poems of Tennyson—

"Love thou thy land, with love far brought  
From out the storied Past, and used  
Within the Present, but transfused  
Thro' future time by power of thought."

There were two lines of one of the poems of that group which should never be forgotten—

"The land where, girt with friends or foes,  
A man may speak the thing he will."

Sir JOSHUA FITCH said that all would agree that love of country was one of the first things that should be cherished; and there were legitimate ways of encouraging in school pupils a loyal and affectionate regard for their country. A few special lessons on the privileges we enjoy as citizens, on the sacrifices of our ancestors in securing those privileges for us, conversational lessons in which the elder boys and girls should be encouraged to take a part—*e.g.*, the Courts of Justice, the functions of Parliament, the large number of unpaid services which, in a community like ours, the State expected from its citizens—these would interest boys, increase their love for their country, and arouse a desire to do something which might do credit to it. But he disagreed with the proposition to establish rifle corps in connexion with the great public schools, and to introduce military drill in ordinary schools. That was going beyond the function of the school, which, on the physical side, was to develop the bodily powers in the best possible way; and that way was not necessarily the method of military exercise, for it might easily result in the undue cultivation of the military spirit. It was also undesirable that boys should be led to think that every war in which our country was engaged was necessarily just and patriotic. He thought that the boastful and theatrical patriotism which found its expression in waving the Union Jack about and singing "Rule Britannia" did not deserve encouragement in schools, and he feared that too much of it was in part responsible for the lawlessness and violence which had of late disgraced our streets.

Dr. GLADSTONE was in entire accord with what had been said by the lecturer and by Sir Joshua Fitch. An excellent plan of interesting pupils in social and political life was to start with the history and associations of the immediate locality, and gradually increase the scope of study till they arrived at universal sympathy extending to all mankind. Teachers might do much to promote this sympathy.

Dr. R. P. SCOTT expressed his appreciation of the excellence of the lecture, which was the outcome of Mr. Findlay's personal experience. He felt himself in accord with nearly everything the lecturer had said. It was not always advisable, however, to commemorate the founder of a school, as founders were not in all cases men of worthy lives. He had found it useful to make a commemoration day of All Saints' Day, which formerly had been merely a holiday for the school. The sympathies of the boys were in this way much broadened. He considered the cartoons in *Punch* of real educational value, and he made it a practice to place the current number on the school notice-board. The humour of *Punch* also acted as a corrective of exaggerated sentiment. As examples of literature of value in the school cultivation of patriotism he would like to mention the "Lyra Heroica" and Shakespeare's "Henry V." It was important for teachers to remember that they were training boys who were to become citizens, and they should be careful not to give their pupils a biased notion of patriotism.

Mr. W. C. BROWN thought it was easier to develop local interest in Wales than in London, especially because in suburban districts the population was perpetually shifting. There was, of course, on the other hand, the local interest which was confined to the work of the school, and he had heard of a case in which the boys of a school gave their services for entertainments, and contributed a considerable sum towards the maintenance of a hospital for the use of troops returning from South Africa. If a boy could be got to give his own efforts, to use his own powers, towards the furtherance of public affairs, he was being trained in a form of true patriotism which would never develop into jingoism.

Mr. ORCHARD said that the cultivation of patriotism entered largely into the political, social, and civic life of the country, and should be directed into healthful channels by the teacher. The child was a social being, and there was no reason why *esprit de corps* should not be taught in the school, and after that true patriotism and love of country. The study of the lives of patriots and the teaching of history were of primary importance, and he thought the lecturer's suggestion as to commemoration was very valuable.

Dr. Findlay having replied to the various speakers, a vote of thanks to the lecturer concluded the proceedings.

Part I., Now Ready, Price 6d., of

A NEW, ENLARGED, AND REVISED EDITION OF

SIR ROBERT BALL'S FAMOUS WORK,

# The Story of the Heavens.

The Distinguishing Features of this New Edition are—

1. A Number of New Illustrations.
2. An Entirely New Chapter on the Physical Nature of Stars.
3. Increase in the Number of Pages.
4. Six New Plates.
5. The Work will be brought down to date in every respect.

\*\* A Splendid Star Map is presented with Part I.

TO BE COMPLETED IN 14 PARTS.

CASELL & COMPANY, Limited, London; and all Booksellers.

## A SELECTION FROM

# CASELL'S EDUCATIONAL BOOKS.

**A PRACTICAL METHOD OF TEACHING GEOGRAPHY.** (England and Wales. Part II.) Agricultural Industries. Sports. Sectional Maps, and Continental Connections with the British Isles. By J. H. OVERTON. 6d. (Ready shortly.)

**THE TROUBADOUR.** Selections from English Verse. Edited and Annotated by PHILIP GIBBS, Author of "Founders of the Empire," &c. 1s. 6d. (Ready shortly.)

**OUR GREAT CITY; or, London the Heart of the Empire.** By H. O. ARNOLD-FORSTER, M.A. Profusely Illustrated. 1s. 9d., or handsomely bound in cloth, gilt, 2s. 6d.

**A HISTORY OF ENGLAND.** By H. O. ARNOLD-FORSTER, M.A. Fully Illustrated. Extra crown 8vo. 816 pp. Third Edition, Revised. Price 5s., or bound in cloth, with gilt edges, 6s. 6d.

**FOUNDERS OF THE EMPIRE.** By PHILIP GIBBS. 256 pages, With 4 Coloured Plates and numerous Illustrations. Price 1s. 8d., or handsomely bound in cloth, gilt, 2s. 6d.

**IN DANGER'S HOUR; or, Stout Hearts and Stirring Deeds.** With Introduction by H. O. ARNOLD-FORSTER, M.A. With 4 Coloured Plates and numerous Illustrations. Price 1s. 8d.; or, handsomely bound in cloth, gilt, 2s. 6d.

**A FIRST SKETCH OF ENGLISH LITERATURE.** By Prof. HENRY MORLEY. Thirty-first Thousand. 7s. 6d.

**THE STORY OF ENGLISH LITERATURE.** By ANNA BUCKLAND. Cheap Edition. Cloth boards, 3s. 6d.

## THE BEST AND CHEAPEST DICTIONARIES.

**CASELL'S FRENCH DICTIONARY.** (French-English and English-French.) 575th Thousand. 1,150 pages. Cloth, 3s. 6d.; half-morocco, 5s.

**CASELL'S GERMAN DICTIONARY.** (German-English and English-German.) 237th Thousand. By ELIZABETH WEIR. 1,120 pages, demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 122nd Thousand. Cheap Edition, 3s. 6d.; half-morocco, 5s.

Cassell's Educational Catalogue will be sent, post free, on application.

CASELL & CO., LTD., LUDGATE HILL, LONDON, E.C.

# MESSRS. BELL'S EDUCATIONAL LIST.

EDUCATIONAL CATALOGUE POST FREE ON APPLICATION.

## BELL'S ILLUSTRATED CLASSICS.

Edited by E. C. MARCHANT, M.A., late Classical Master at St. Paul's School.

*Full Illustrated Prospectus of this Series post free on application.*

THE special object of this Series is to make the editions as interesting and helpful as possible to the intelligent learner; and, with this object, numerous Illustrations have been introduced. Though based on authentic sources, these are not mere copies of antiquities, such as are to be found in every Classical Dictionary, but pictures drawn with a view to bringing the reality of Greek and Roman life before the reader.

Views of places, as well as Maps and Plans, are also freely introduced.

The volumes are equipped with Introductions, Notes, Grammatical Appendices, and, in some of the prose authors, Exercises on the Text. Vocabularies are also given, but the volumes may be had without the Vocabularies if preferred.

The volumes are printed at the Oxford University Press, pott 8vo, and are issued in three forms:

1. With Notes and Vocabulary complete, 1s. 6d.
2. Without Vocabulary, 1s. 6d.
3. Text and Vocabulary, without Notes, 1s.

THE FOLLOWING VOLUMES ARE NOW READY UNLESS OTHERWISE STATED:—

**Caesar.**—*De Bello Gallico.* Book I. Edited by A. C. LIDDELL, M.A. With Exercises.

— **Book II.** Edited by A. C. LIDDELL, M.A. With Exercises.

— **Book III.** Edited by F. H. COLSON, M.A., and G. M. GWYTHYR, M.A.

— **Book IV.** Edited by the Rev. A. W. UPCOTT, M.A.

— **Book V.** Edited by A. REYNOLDS, M.A. With Exercises.

— **Book VI.** Edited by J. T. PHILLIPSON, M.A. With Exercises.

**Cicero.**—*Speeches against Catiline I. and II.* Edited by F. HERRING, M.A. With Exercises.

**Selections from Cicero.** Edited by J. F. CHARLES, B.A. With Exercises.

**Cornelius Nepos.**—*Epaminondas, Hannibal, Cato.* Edited by H. L. EARL, M.A.

**Eutropius.**—*Books I. and II.* Edited by J. G. SPENCER, B.A.

**Horace's Odes.**—**Book I.** Edited by C. G. BOTTING, B.A.

— **Book II.** Edited by C. G. BOTTING, B.A. [*Preparing.*]

— **Book III.** Edited by H. LATTER, M.A.

**Livy.**—**Book IX.**, cc. i.-xix. Edited by W. C. FLAMSTEAD WALTERS, M.A.

**Hannibal's First Campaign in Italy.** Selected from Livy, Book XXI., and edited by F. E. A. TRAYES, M.A.

**Ovid's Metamorphoses.**—**Book I.** Edited by G. H. WELLS, M.A.

**Selection from Ovid's Metamorphoses.** Edited, with Introduction and Notes, by J. W. E. PEARCE, M.A.

**Ovid's Tristia.**—**Book III.** Edited by H. R. WOOLRYCH, M.A.

**Phaedrus.**—**A Selection.** Edited by the Rev. R. H. CHAMBERS, M.A.

**Stories of Great Men.** Edited by the Rev. F. CONWAY, M.A.

**Vergil's Aeneid.**—**Book I.** Edited by the Rev. E. H. ESCOTT, M.A.

— **Book II.** Edited by L. D. WAINWRIGHT, M.A.

— **Book III.** Edited by L. D. WAINWRIGHT, M.A.

— **Book IV.** Edited by A. S. WARMAN, B.A.

— **Book VI.** Edited by J. T. PHILLIPSON, M.A.

**Vergil.**—**Selection from Aeneid, Books VII.-XII.** Edited by W. G. COAST, B.A.

**Xenophon's Anabasis.**—**Book I.** Edited by E. C. MARCHANT, M.A.

— **Book II.** Edited by E. C. MARCHANT, M.A.

## BELL'S ILLUSTRATED LATIN READERS.

Uniform with the ILLUSTRATED CLASSICS. Price One Shilling each.

**Scalae Primae.** Simple Stories and Fables for Translation, with Notes and Vocabulary. By J. G. SPENCER, B.A. With 29 Illustrations.

**Scalae Mediae.** Extracts from Eutropius and Caesar. With Notes and Vocabulary. By PERCY A. UNDERHILL, M.A. With 20 Illustrations.

**Scalae Tertiae.** Graduated Extracts in Verse and Prose from Phaedrus, Ovid, Nepos, and Cicero. With Notes and Vocabulary. By E. C. MARCHANT, M.A. [*Shortly.*]

*Specimen Copy sent to Headmasters with a view to Introduction.*

Crown 8vo, 3s. 6d.

**SOPHOCLES.**—**ANTIGONE.** Edited by G. H. WELLS, M.A. With numerous Illustrations. "Of the style in which this volume is printed, bound, and illustrated, it is impossible to speak too highly. . . . A highly meritorious edition, which should certainly make its way into schools."—*Educational Times.*

Crown 8vo, 6s.

**PLATO'S REPUBLIC, BOOK I. AND BOOK II.**, cc. i.-x. **THE PROEM TO THE IDEAL COMMONWEALTH OF PLATO.** (An Introduction to the Language and Substance of the "Socratic" Dialogues.) With Introduction and Critical and Explanatory Notes by T. G. TUCKER, Litt.D. (Camb.), Hon. Litt.D. (Dublin), Professor of Classical Philology in the University of Melbourne.

New Edition, thoroughly Revised, with New Figures throughout.

**THE ELEMENTS OF EUCLID.** (Books I.-VI., and part of Book XI.) Newly translated from the Greek Text, with Supplementary Propositions, Chapters on Modern Geometry, and numerous Exercises. By HORACE DEIGHTON, M.A., formerly Scholar of Queens' College, Cambridge, Headmaster of Harrison College, Barbados. Complete, crown 8vo, 4s. 6d. Or in Parts:—Book I., 1s. Books I. and II., 1s. 6d. Books I., II., and III., 2s. 6d. Books I.-IV., 3s. Books III. and IV., 1s. 6d. Books V., VI., XI., &c., 2s. 6d. Key (for Teachers only), 5s. net.

## BELL'S SCIENCE SERIES.

New Volumes.

Edited by PERCY GROOM, M.A., and Prof. G. M. MINCHIN, M.A., F.R.S.

**AN INTRODUCTION TO THE STUDY OF THE COMPARATIVE ANATOMY OF ANIMALS.** By GILBERT C. BOYRNE, M.A., F.L.S., Fellow and Tutor of New College, Oxford; University Lecturer in Comparative Anatomy.

Vol. I.—**Animal Organization. The Protozoa and Coelenterata.** Crown 8vo, Illustrated, 288 pages, 4s. 6d.

"His book is simply charming, and well worthy his reputation; and, while its literary style should alone ensure for it a wide circulation, it cannot fail to exercise a leavening and humanizing influence on the youthful mind."—*Nature.*

**THE STUDENT'S DYNAMICS.** Comprising Statics and Kinetics. By G. M. MINCHIN, M.A., F.R.S., Professor of Applied Mathematics in the Royal Indian Engineering College, Cooper's Hill. Crown 8vo, 3s. 6d.

## WORKS BY CHARLES PENDLEBURY, M.A.,

Chief Mathematical Master at St. Paul's School.

**ARITHMETIC FOR SCHOOLS.** Thirteenth Edition. Complete with or without Answers, 4s. 6d.; or in Two Parts, 2s. 6d. each. Key to Part II., 7s. 6d. net.

**EXAMPLES IN ARITHMETIC.** 8,000 Examples extracted from the above Arithmetic. Tenth Edition, with or without Answers, 3s.; or in Two Parts, 1s. 6d. and 2s.

**A SHILLING ARITHMETIC.** Second Edition. Small crown 8vo, 192 pages. Cloth, 1s.; or, with Answers, 1s. 4d. The Answers may be had separately, 4d. net.

**ELEMENTARY ARITHMETIC.** Fifth Edition. Crown 8vo, 1s. 6d., with or without Answers.

**COMMERCIAL ARITHMETIC.** Second Edition. Crown 8vo, 250 pages, 2s. 6d.

**COMMERCIAL ARITHMETIC.** Part I. 152 pages. Crown 8vo, with Answers, 1s.

**GRADUATED ARITHMETIC.** For Private and Junior Schools. In cloth. Parts I., II., and III., 3d. each; IV., V., and VI., 4d. each; VII., 6d. Answers to Parts I. and II., 4d.; III., IV., V., VI., and VII., 4d. each.

**LONG TOTS AND CROSS TOTS** (Simple and Compound). Containing 864 Sums for the use of Pupils in Evening Continuation Schools and Day Schools under the Education Department. Price, 2d.; in cloth, 3d. Answers, cloth, 4d.

**EXAMINATION PAPERS IN ARITHMETIC.** Fourth Edition. Crown 8vo, 2s. 6d. Key, 5s. net.

**ELEMENTARY TRIGONOMETRY.** Second Edition, Revised. Crown 8vo, 4s. 6d.

**A SHORT COURSE OF ELEMENTARY PLANE TRIGONOMETRY.** Crown 8vo, 2s. 6d.



# MESSRS. NELSON'S NEW BOOKS

.. COMPLETE LIST POST FREE ON APPLICATION.

## THE NEW CENTURY LIBRARY.

POCKET EDITIONS OF STANDARD WORKS ON ROYAL INDIA PAPER.

SUITABLE ALIKE FOR  
**POCKET, LIBRARY, OR KNAPSACK.**

THE MOST READABLE,  
THE MOST HANDY,  
THE MOST COMPACT  
POCKET VOLUMES  
EVER PUBLISHED.

**Each Novel Complete in One Volume and Unabridged.**

"Marvels of compactness and neatness."—*Queen*.  
"Light, small, and legible."—*Pall Mall Gazette*.  
"Marvellous little volumes."—*Examiner*.  
"The very pattern of a modern edition."—*Morning Post*.

Prices:—Art binding, cloth extra, gilt top, 2s. net; or in limp leather, with Frontispiece, 2s. 6d. net; leather boards, with Frontispiece, 3s. net.

NOW READY.

### THE NEW CENTURY DICKENS.

READY.

1. Pickwick.
2. Nicholas Nickleby.
3. Oliver Twist and Sketches by Boz.
4. Old Curiosity Shop.
5. Martin Chuzzlewit.
6. Barnaby Rudge.
7. Dombey and Son.
8. David Copperfield.

To be followed by—

9. American Notes and a Child's History of England.
10. Bleak House.
11. Hard Times; Pictures from Italy; and Christmas Books.
12. Little Dorrit.

.. COMPLETE PROSPECTUS OF THE THREE SERIES POST FREE ON APPLICATION.

NOW READY.

### THE NEW CENTURY THACKERAY.

N.B.—By arrangement with Messrs. SMITH, ELDER, & Co., the complete works of Thackeray will be issued in the New Century Library, and all will be ready by November.

NOW READY.—1. Vanity Fair. 2. Pendennis. 3. The Newcomes. 4. Esmond. 5. Paris Sketch Book, &c. 6. The Book of Snobs, &c. 7. Burlesques; The Fitzboodle Papers, &c.

To be followed by

8. Men's Wives; Bedford Row, &c. 9. The Virginians. 10. The Adventures of Philip. 11. Catherine; Lovel, &c. 12. Barry Lyndon; The Roundabout Papers, &c. 13. Miscellaneous Essays, &c. 14. Contributions to Punch, &c.

The whole set to be completed by November, 1900.

.. THE COMPLETE SET WILL ALSO BE SUPPLIED IN HANDSOME CASE, IN A VARIETY OF ELEGANT BINDINGS. PRICE FROM 31s. 6d. NET THE SET.

IN PREPARATION.

### THE NEW CENTURY SCOTT.

List of the Series.

1. Waverley. 2. Guy Mannering. 3. The Antiquary. 4. Rob Roy. 5. Old Mortality. 6. Legend of Montrose; The Black Dwarf. 7. The Heart of Midlothian. 8. The Bride of Lammermoor. 9. Ivanhoe. 10. The Monastery. 11. The Abbot. 12. Kenilworth. 13. The Pirate. 14. The Fortunes of Nigel. 15. Peveril of the Peak. 16. Quentin Durward. 17. St. Ronan's Well. 18. Redgauntlet. 19. The Betrothed; Chronicles of the Canongate; Highland Widow. 20. The Talisman. 21. Woodstock. 22. The Fair Maid of Perth. 23. Anne of Geierstein. 24. Count Robert of Paris. 25. The Surgeon's Daughter; Castle Dangerous.

.. THE FIRST VOLUME TO BE PUBLISHED IN DECEMBER, AND THE SERIES TO BE COMPLETED WITHIN A YEAR.

## NELSON'S NEW BOOKS FOR THE SEASON.

At 6s.

**PAUL OF TARSUS.** By ROBERT BIRD, Author of "Jesus the Carpenter of Nazareth," &c. 8vo, cloth elegant, gilt top, 6s.

**YE MARINERS OF ENGLAND.** A Boy's Book of the Navy. By HERBERT HAYENS, Author of "Red, White, and Green," "An Emperor's Doom," &c. Crown 8vo, bevelled boards, cloth extra, gilt top. With numerous Illustrations, 6s.

At 5s.

**RED, WHITE, AND GREEN.** By HERBERT HAYENS, Author of "A Captain of Irregulars," "In the Grip of the Spaniard," &c. Crown 8vo, bevelled boards, cloth extra, gilt top. Illustrated, 5s.

**HEADS OR TAILS.** By HAROLD AVERY, Author of "Mobsley's Mohicans," "The Triple Alliance," "Soldiers of the Queen," &c. Crown 8vo, bevelled boards, cloth extra, gilt top. Illustrated, 5s.

**MY LADY MARCIA.** By ELIZA F. POLLARD, Author of "A Daughter of France," &c. Crown 8vo, cloth extra. Illustrated, 5s.

**AFTER WORCESTER.** By E. EVERETT-GREEN, Author of "The Heir of Hascombe Hall," "French and English," &c. Crown 8vo, bevelled boards, cloth extra, gilt top. Illustrated, 5s.

At 3s. 6d.

**ONE OF BULLER'S HORSE.** A Tale of the Zulu Campaign. By WILLIAM JOHNSTON, Author of "Tom Graham, V.C.," &c. Post 8vo, cloth extra. Illustrated, 3s. 6d.

**SISTER OF THE RED CROSS.** A Tale of the South African War. By Mrs. L. T. MEADE. Post 8vo, cloth extra. Illustrated, 3s. 6d.

At 2s. 6d.

**A GORDON HIGHLANDER.** By E. EVERETT-GREEN, Author of "Tom Tullon's Travels," "Dominique's Vengeance," &c. Post 8vo, cloth extra. Illustrated, 2s. 6d.

**LIFE OF ANDREW CARNEGIE,** the Donor of Public Libraries. By HEW MORRISON. Crown 8vo, cloth extra. Illustrated, 2s. 6d.

**ADVENTURERS ALL.** A Tale of the Philippine Islands in War Time. By K. M. EADY, Author of "A Godly Heritage," &c. Post 8vo, cloth extra. Illustrated, 2s. 6d.

**RHODA.** A Tale for Girls. By E. L. HAVERFIELD, Author of "Our Vow," "Blind Loyalty," &c. Post 8vo, cloth extra. Illustrated, 2s. 6d.

At 2s.

**THE ROMANCE OF THE SOUTH POLE.** Antarctic Voyages and Explorations. By G. BARNETT SMITH. Post 8vo, cloth extra. Illustrated, 2s.

**A BOOK ABOUT LONGFELLOW.** By J. N. McILWRAITH, Uniform with "A Book about Shakespeare." With numerous Illustrations. Post 8vo, cloth extra, 2s.

**GUNPOWDER TREASON AND PLOT,** and Other Stories for Boys. Post 8vo, cloth extra. With numerous Illustrations, 2s.

**A TERRIBLE FEUD,** and Other Stories for Children. Post 8vo, cloth extra. With numerous Illustrations, 2s.

**IVY AND OAK,** and other Stories for Girls. Post 8vo, cloth extra. With numerous Illustrations, 2s.

At 1s. 6d.

**SHIPS AND HAVENS.** A Booklet by Rev. HENRY VAN DYKE, D.D. Post 8vo, cloth antique, printed in red and black. 1s. 6d.

An attractive little volume treating of such subjects as "The Haven of Character," "The Haven of Rest," &c., produced in a style to make it especially suitable as a Gift Book.

**UP THE CREEKS.** A Tale of West Africa. By EDWARD SHIRLEY. Post 8vo, cloth extra. Illustrated, 1s. 6d.

**A TOAST FAG,** and Other Stories. By HAROLD AVERY, Author of "The Dormitory Flag," "Mobsley's Mohicans," &c. Post 8vo, cloth extra. Illustrated, 1s. 6d.

Price 1s. 6d. net.

A Vest-pocket edition of this popular work, printed on Royal India Paper in clear readable type.

**COME YE APART.** By J. R. MILLER, D.D. Miniature Edition, small enough for vest pocket, limp leather, round corners, gilt edges, 1s. 6d. net; and in superior leather bindings.

At 1s.

**THE CHILDREN'S TREASURY OF PICTURES AND STORIES FOR 1901.** Beautifully Illustrated. With choice illuminated Cover, 1s.

**A LITTLE RAY OF SUNSHINE.** By JENNIE CHAPPELL. Post 8vo, cloth extra. Illustrated, 1s.

**THE OVERTONS.** By ELSIE MACGREGOR. Beautifully Illustrated, 1s.

**LIFE OF GEN. CHARLES GORDON.** By M. B. SYNGE, Author of "Life of Gladstone," &c. With Illustrations. Post 8vo, cloth extra, 1s.

.. FULL CATALOGUE POST FREE ON APPLICATION.

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1901.

SUITABLE BOOKS IN THE  
**University Tutorial and Preceptors' Series.**

## Latin and Greek Classics.

- Caesar.—Gallic War, Book II.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- Euripides.—Alcestis.** By J. H. HAYDON, M.A. Lond. and Camb. Text and Notes. **3s. 6d.**
- Horace.—Odes, Book IV.** By A. H. ALLCROFT, M.A. Oxon., and F. G. PLAISTOWE, M.A. Lond. and Camb. Text and Notes. **1s. 6d.** Vocabulary. **1s.**
- Livy.—Book V.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **2s. 6d.** Vocabulary. **1s.**
- Vergil.—Aeneid, Book I.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. **1s. 6d.** Vocabulary. **1s.**

## English.

- ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALLI, M.A. Lond. [*In the Press.*]
- The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. *Fifth Edition.* **3s. 6d.**
- History of England, The Matriculation. (To 1702.)** With Maps, Battle-Plans, and Numerous Chronological and other Tables. By C. S. FEARENSIDE, M.A. Oxon. **3s. 6d.**
- English History, The Intermediate Text-Book of.** By C. S. FEARENSIDE, M.A. Oxon., and A. JOHNSON EVANS, M.A. Camb., B.A. Lond. Vol. IV., 1714-1837. **4s. 6d.**
- Shakespeare.—Henry V.** Edited by Prof. W. J. ROLFE, D.Litt. **2s.**  
(Other Special Subjects will be announced in January, 1901.)

## French.

- FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. *Second Edition.* **2s. 6d.**
- FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. Sc. Sc., Univ. Gall. **1s. 6d.**
- FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. *Second Edition.* **1s. 6d.**

## Latin Grammar, &c.

- LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Lond. and Camb. **2s. 6d.** [*In the Press.*]
- Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. *Fourth Edition.* **3s. 6d.**
- Latin Composition.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. *Fifth Edition.* **2s. 6d.**
- Latin Reader, The Tutorial.** With Complete Vocabulary. **2s. 6d.**
- LATIN READER, THE PRECEPTORS'.** [*In the Press.*]

## Mathematics and Science.

- Algebra, The Tutorial.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. Based on the *Algebra* of RADHAKRISHNAN. Part II.: Advanced Course. **6s. 6d.**
- Algebra, A Middle.** By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. **3s. 6d.**
- Arithmetic, The Tutorial.** By W. P. WORKMAN, M.A. [*In the Press.*]
- BOOK-KEEPING, THE PRECEPTORS'.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. [*In the Press.*]
- Botany, First Stage.** By A. J. EWART, D.Sc. Lond. **2s.**
- Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, LL.D., M.A., F.C.S. Part I.: Non-Metals. **3s. 6d.** Part II.: Metals. **3s. 6d.**
- Euclid. Books I.-IV.** By RUPERT DEAKIN, M.A. Lond. and Oxon., Headmaster of Stourbridge Grammar School. **2s. 6d.** Books I. and II. **1s.**
- Hydrostatics, An Elementary Text-Book of.** By WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. **2s.**
- MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. **2s. 6d.**
- Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. **2s.**
- TRIGONOMETRY, THE PRECEPTORS'.** Edited by WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. **2s. 6d.**

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for London University and other Examinations, free on application.

London: UNIVERSITY TUTORIAL PRESS (University Correspondence College Press),  
W. B. CLIVE: 13 BOOKSELLERS ROW, LONDON, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	" 2 10 0	.....	"	8 0 0
Quarter Page	" 1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 8s. 6d. for 6 lines, or 4s. 6d. the inch.

Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 6d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

November 1, 1900.

At the next Evening Meeting of members of the Fixtures. College of Preceptors, to be held on November 15, the Rev. J. O. Bevan will read a paper on "The Educational Exhibits at the Paris Exposition."

\* \* \*

THE next Certificate Examination of the College of Preceptors will begin on December 4.

\* \* \*

THE remaining Popular Science Lectures for Young People will be given on the undermentioned dates at the Kensington Town Hall:—"How Rocks are Made," by Cecil Carus-Wilson, F.R.S. Edin., November 1; "The Life of the Past," by F. W. Rudler, F.G.S., November 8; "Land and Scenery," by H. R. Mill, D.Sc., LL.D., Librarian to the Royal Geographical Society, November 15; and "Some Electrical Discoveries," by Prof. Ashley Carus-Wilson, M.A., November 22. The course will be illustrated by photographic lantern views, chemical and physical experiments, &c.

\* \* \*

THE first two courses of lectures under the Stopford Brooke Lectureship scheme will be delivered by the Rev. Stopford A. Brooke, M.A., LL.D., in the Botanical Theatre, University College, London. The first course will consist of an inaugural lecture and four lectures on "The Poetry of Robert Browning," on Thursdays, at 8 p.m., beginning on November 1. The second course will take the form of five lectures on poets (other than Browning and Tennyson) between 1840 and 1890 (Clough, Arnold, Rossetti, Morris, &c.), on Thursdays, at 8 p.m., beginning on January 31, 1901. The lectures will be open to the public free by ticket. Applications should be addressed to the Secretary, University College, London, marked on the outside, "Stopford Brooke Lectures," and accompanied by a stamped addressed envelope.

\* \* \*

THE programme of the meetings of the British Child-Study Association, to be held at 8 p.m. in the Ruskin Room of the Sesame Club, is as follows:—On Friday, November 9, Dr. Kimmins will lecture on "The Child as Director of the Parent's Education." Miss Young will treat "The Elementary-School Girl's Notions on Social Economy," and Miss Findlay "The Practical Effect of Recent Child-Study on Education," at the next two meetings, fixed respectively for December 14 and January 11. Education also plays a large part in the lectures and discussions arranged for consecutive Wednesday afternoons. Thus, on the 7th inst., Mrs. Meyerstein discusses the question, "Does the King Alfred School Supply a Want?" The next week Mr. Sonnenschein gives "An Exposition of the only Method of Teaching to Read English," and on December 12 Mrs. Ashton Jonson maintains the proposition "That the Mother is not necessarily the best Trainer of her Children."

\* \* \*

THE combined scholarship examination of seven colleges at Cambridge, as mentioned below, will be held on December 4. Forms should be sent in on or before November 27. Sixty-four scholarships and exhibitions are offered for competition as follows:—Pembroke College, two scholarships of £80, four of £60, and three of £40. Gonville and Caius College, three scholarships of £80, three of £60, and five of £40. King's

College, two open entrance scholarships of £80, three minor scholarships of £60, and three exhibitions of £40 a year, and six Eton entrance scholarships. Jesus College, two scholarships of £80, two of £60, and three of £40. Christ's College, one scholarship of £80, two of £60, and three of £40. St. John's College, three scholarships of £80, five of £60, and three of £40. Emmanuel College, one scholarship of £80, two of £60, and three of £40.

\* \* \*

TO-DAY (November 1) the Rev. T. W. Sharpe, C.B., will give the first lecture of the new session of the Childhood Society, at the Library of the Sanitary Institute, on "The Treatment of Feeble-minded Children in Asylums." Subsequent lectures of the Society will be given on November 15 and 29 and December 13.

\* \* \*

ON November 7 at 8 p.m., Mr. W. J. Addis, M.A., will read a paper on "The Teaching of English Literature," at University College School. This lecture is given under the auspices of the Assistant-Masters' Association, and it is open to all comers.

\* \* \*

MR. CHARLES FRY's costume recital of "As You Like It"—a play selected this year for one or more of the local school examinations—will be given on Saturday, November 17, at 3.30 p.m., at St. George's Hall, Langham Place, W.

\* \* \*

THE London School Board will hold its annual preliminary examination for scholarships on December 4 and 5 next. There will be fifty-eight scholarships and exhibitions—thirty-five for boys and the rest for girls, including six places for boys and three for girls in the Christ's Hospital Schools, and twenty-two places for boys and seventeen for girls whose parents have lived in certain London parishes for at least one year. In addition there is a "Sarah Terry" prize, which will be awarded to a child less as a reward for his school attainments than as a mark of the public appreciation of the merits of poor parents in doing their offspring the justice of prolonging their education in spite of domestic difficulties. Full particulars can be had on application at the School Board Offices, Victoria Embankment, up to November 7.

THE DEAN OF THE COLLEGE OF PRECEPTORS, with the sanction of the Council, will direct the examiners in French at the various examinations of the College to give effect to the decree of the French Minister of Education, of which we printed an English version last month. With regard, however to the rules governing the agreement of the past participles of verbs, the relaxation introduced by the decree will not be allowed until it has been accepted by the Académie Française. The Civil Service Commissioners, the Oxford and Cambridge Local Examinations Syndicates, and the Joint Board Certificate examiners will recognize the concessions specified in the decree.

\* \* \*

THE late Professor Shuttleworth was a man of wide culture and singularly broad views. He was an enthusiastic musician, and his services at St. Nicholas Cole Abbey drew large congregations to that City church. He became chaplain of Christ Church in 1874, and was a minor Canon of St. Paul's from 1876 to 1884, when he was appointed Rector of St. Nicholas. He gained considerable repute as a preacher, whilst essays from his pen appeared in the *Saturday Review* and other journals. He was Lecturer in English Literature in the Ladies' Department, as well as Professor of Pastoral and Liturgical Theology in King's College. He had published various books, notably "The Place of Music in Public Worship."

\* \* \*

THE University College of Bangor is persevering with its plan to establish a department of mining, and the general public in North Wales appears to be ready to back the college. A con-

ference of public bodies, held ten days ago, passed a resolution expressing the opinion that it was desirable in the interest of the miners of North Wales that a school of mines should be established at Bangor University College, and another resolution was also carried pledging the public bodies to help by providing funds, £8,000 capital being required for buildings, &c., and an annual income of £1,100.

\* \* \*

It is, perhaps, worthy of note that, of the sixteen persons elected to represent the Convocation of the University of London on the Senate, seven were supported by the Graduates' Association, four by the Graduates' Union, and five by both bodies. The Association is anxious for the external students, while the Union hopes most from the colleges and other constituent bodies.

\* \* \*

EDUCATION is somewhat more strongly represented in the new Parliament than it was in the old one. All the University members are returned without a contest. Many of the new members have made satisfactory declarations in regard to their interest in secondary and technical schools. Elementary education, in addition to its old spokesmen, Messrs. Gray and Yoxall, will henceforward be able to look to Dr. Macnamara, editor of the *Schoolmaster*, and Mr. Tom O'Donnell, M.P. for West Kerry, who is on the Executive of the Irish Teachers' Association.

\* \* \*

THE Lectures on the Practice of Education, which Prof. Withers is giving at the College of Preceptors on Saturdays, have been attended by a class of between forty and fifty students.

\* \* \*

THE VICE-CHANCELLOR OF CAMBRIDGE, in the usual address delivered at the opening of the new academical year, dwelt on the continued need of the University for better equipment. His appeal was decidedly urgent so far as the teaching staff of the University is concerned:—

Of the teachers whom we have, no Reader receives the full stipend of £400 from the University, and many University Lecturers who hold no fellowship have to be content with the minimum stipend of £50 per annum, which is only a recognition and not in any sense a remuneration of their work. The need of a capital sum for new buildings has been in part met by the subscriptions given by the Chancellor and Lord Rothschild and others to the Benefaction Fund. The total amount paid or promised to this fund (including sums assigned to specific objects) is more than £55,000. Almost the whole of the sum not assigned to such objects has been appropriated for building. Syndicates have been appointed to prepare plans for (1) the Botany School, (2) the Law School and Library, (3) the Medical School, (4) a new Museum of Archaeology and of Ethnology, and (5) buildings for University purposes.

One would have naturally expected the claims of the lecturers to be the first consideration.

\* \* \*

THE treatment of women students in the Austrian capital is worse than that of the English students at Cambridge, when they recently put in their claim for degrees. We are told that when the women students at Vienna made their first appearance in Prof. Bekefy's lecture room the male students, resenting what they regard as an intrusion, bellowed, whistled, stamped their feet, and used opprobrious epithets. Many of the girls burst into tears, and would have left the room if some others, more spirited, had not induced them to stay until the Professor came. When he arrived, and made an appeal on behalf of the ladies, the students became more furious, and the Professor was obliged to abandon all idea of lecturing.

\* \* \*

THE *Manchester Guardian*, commenting on Mrs. Bryant's address at the College of Preceptors on October 3, wrote:—

It is interesting to find, now that the examination of school pupils by the College no longer increases by leaps and bounds, that its real work—the preparation and examination of teachers for professional diplomas—is sensibly advancing. Mrs. Bryant, D.Sc., in distributing diplomas and prizes at the College, drew attention to the exact state of the case. In 1860 there were only 22 men candidates for these

diplomas, and 4 women. In 1870 the figures were 29 and 15. But in 1880 they had risen to 86 and 104 respectively; 1890 exhibited a slight decrease on 1880; but in 1895 the candidates had again risen to 148 and 122, and in 1900 to a total of 494 (347 men and 147 women). The only other body examining teachers for diplomas in numbers at all approaching to these is the University of Cambridge. But that is an examination confined mainly to women, though men teachers so eminent as the late Headmaster of Harrow (Bishop Welldon), the present Headmaster of Haileybury, and Mr. Arthur Berry (Senior Wrangler in 1885) have by their example sought to set another fashion. It is interesting, too, to note that Mrs. Bryant is the first woman that has presided at this half-yearly distribution—just as her predecessor, Miss Buss, was the first woman to serve on the College Council.

**Appointments and Vacancies.** THE WARDEN OF LLANDOVERY COLLEGE, the Rev. Owen Evans, M.A., has announced his intention of resigning his position at the close of the year. Mr. Evans has been Warden for eleven years. During this time Llandoverly boys, in addition to twenty-six minor scholarships and exhibitions, have gained fifty-three scholarships and exhibitions in classics, mathematics, science, and history at various colleges in Oxford and Cambridge, and fourteen First Classes and twenty-five Second Classes in these subjects in the Honours examinations of the two Universities, and the Junior University Mathematical Exhibition and Scholarship at Oxford.

THE VICE-CHANCELLOR OF OXFORD has nominated as temporary Master of Clarke's Hall (the Roman Catholic Hall, of which the Mastership is vacant by the death of the Rev. R. F. Clarke, S.J.) the Rev. John O'Fallow Pope, M.A. of Christ Church.

MR. C. W. C. OMAN has been appointed Chichele Professor of Modern History in the University of Oxford, in succession to Mr. Montagu Burrows.

THE REV. G. WILKINS is the new Professor of Hebrew at Trinity College, Dublin.

THE Chair of Pastoral Theology at King's College, London, is vacant by the death of Mr. Shuttleworth.—At University College there is a vacancy in the Chair of Constitutional Law and History.

DR. SAMSON GEMMELL has been appointed Professor of Clinical Medicine at Glasgow University in succession to Dr. McCall Anderson.

DR. J. B. BAILLIE has been appointed Lecturer in Logic and Moral Philosophy in Aberdeen University.

MR. JOHN ARBUTHNOT NAIRN, Fellow and Tutor of Trinity College, Cambridge, has been elected Headmaster of Merchant Taylors' School. He will enter on his duties in January next. He was educated at Erasmus Smith School, Dublin, and went up to Cambridge in 1893, where he took the Pitt Scholarship in his first year. Mr. Nairn has had no previous experience as a schoolmaster.

THE REV. J. B. LAUNCELOT, headmaster of King's School, Rochester, has been appointed Principal of Liverpool College.

THE Governors of George Heriot's Trust have appointed to the Principalship of the Heriot Watt College, Edinburgh, Mr. A. P. Laurie, M.A., D.Sc. Edinburgh, late Fellow of King's College, Cambridge, Lecturer in Physics and Chemistry at St. Mary's Hospital Medical School, London.

MR. C. R. P. ANDREWS, M.A., late scholar of St. John's College, Oxford, tutor and classical lecturer at St. John's Training College, Battersea, has been appointed first Principal of the new Government Training College, to be opened at Perth, Western Australia.

MR. HERBERT BRACE, B.A. Oxford, has been appointed Assistant-Lecturer in History and in English Language and Literature at Cardiff University College.

AT Reading College the following appointments have been made:—Lecturer in Mathematics, Mr. A. M. Bowley, M.A. Cambridge; Assistant-Lecturer in Chemistry, Dr. J. L. E. Drugman, Ph.D. Bonn; Assistant to the Vice-Principal, Miss M. Bolam, Somerville College, Oxford.

A NEW Headmaster is required for the High School at Newcastle-under-Lyme.

It is no use trying to shirk the question of patriotism and nationalism in education: it is one of the irrepresible elements of the nature that will not be expelled, even with the fork of pure reason. Whilst Dr. Findlay, of Cardiff, was telling us so at the College, the Court of Governors of Cardiff University College were passing a resolution "urgently impressing on the Council the duty of providing adequate and effective instruction in the subject so dear to the heart of the Welsh nation"—to wit, the glorious history of Cambria and the Cymry. We do not quite understand the solicitude of the Welsh. Our English histories always show them up in an excellent light, either thrashing us, or appropriating our infant princes, or providing an ancestor for our most masterful line of monarchs. But nothing will suit them except to write their own history, and get it read in the schools; and we suppose they must have their way.

MR. JOHN RUSSELL, of University College School, who last month translated for us the Decree of the French Minister, has printed his version in a separate form. Every teacher of French ought to make himself familiar with this document, which might be usefully stitched into the grammars now in use by senior students.

A CLEAR and temperate statement of the problem of "Religious Teaching in Secondary Schools" will be found in a little pamphlet published by the Rev. J. O. Bevan. Mr. Bevan writes from the standpoint of those who consider it essential that provision for religious teaching—if possible for Church of England teaching—shall be made in all schemes dealing with secondary schools.

The subject [Mr. Bevan says] is being drawn into the political vortex, so that the question, "Why cannot you leave such a thorny matter alone?" loses its point. Firstly, things of this description are not likely to improve by being let alone; and, secondly, the whole situation is changed by the constitution of a Government Department charged with important administrative duties in relation to the education of the children of the middle and upper classes. This is a revolution bringing in its train results of which we do not dream.

A VALUABLE summary of educational affairs on the other side of the Atlantic is afforded by the series of nineteen monographs, to be had for the asking, in the Education Section of the United States Commission to the Paris Exhibition. The series is produced under the general editorship of Mr. Nicholas Murray Butler, Professor of Education in Columbia University; each monograph is written by a specialist, and no two are from the same pen. Among the most interesting subjects to the English student are "Educational Organization and Administration," "The American College and University," "Summer Schools and University Extension." Two discuss the education of the negro and the Indian. The remaining numbers deal with the more familiar sides of educational interest common to both continents. The series shows careful and appreciative study of English institutions and methods, and, taken as a whole, it forms a noteworthy addition to the pedagogic literature of the day.

des Chartes—the best school of history in the world—includes for the first year palæography, romance, philology, bibliography, and methods of research; for the second, diplomatic, the history of political administration and judicial institutions of France, archives, and the sources of French history. The third year's course covers the history of civil and canon law during the middle ages, the archaeology of the middle ages, and, again, sources of French history. The school, which is situated near the Sorbonne, re-opens on November 3. Foreign students are admitted to the course.

\* \* \*

THE St. Petersburg papers announce that the Minister of Education has "deemed it necessary" to introduce the Russian language in all the Armenian church schools for instruction in all branches of learning except religious teaching. The change is to be made gradually, but is to be completed in two years.

\* \* \*

THE *Oxford Magazine* reminds us that the five leading seats of German learning are combining for the production of the "Thesaurus Linguae Latinae," of which the first part, long promised, is now to appear. The scheme of the new enterprise was sketched as long ago as 1893, and it is guaranteed that the dictionary will be pressed on uninterruptedly to completion—probably in twelve or fifteen years. As there are to be twelve volumes of nearly 2,000 pages each (the price of which is to be £3 to subscribers, and which will be published in parts), it may confidently be pronounced the biggest thing in classical dictionaries which scholarship has yet produced.

\* \* \*

THE Society for the Protection of Birds is offering two prizes, of £10 and £5 respectively, for the best papers on the protection of British birds. The mode of dealing with the subject is left entirely to competitors, but among the points suggested for treatment are the utilization and enforcement of the present Acts and County Council Orders, the modification or improvement of the law, educational methods, and the best means of influencing landowners and gamekeepers, agriculturists and gardeners, collectors, birdcatchers, and birdnesters. Essays are to be sent in by November 30. Particulars may be obtained from the Hon. Secretary, at the Society's offices, 3 Hanover Square, W.

### SOME CRITICISMS.

WELL did Robert Louis Stevenson say that education must always be a work of faith and of charity. He might have added that, unless the teacher be a man with great powers of hope, he had better give up his task altogether. He needs all these three great virtues in a high degree to support him through the trials and perplexities of the work itself, and to keep him in good heart in face of the criticism of the outsider. Of late, wars and rumours of wars, political speeches, and election details have crowded out the peaceful subject of education, but in the lull after the storm we begin to hear once more the whisper of the irrepressible subject. Sir Walter Besant has been protesting against "the teaching of such subjects in Board schools as lead boys and girls to think that the pen of the clerk is a superior implement to the drill and the plane." He specially objects to the teaching of shorthand, modern languages, orchestral music, dramatic literature, and commercial law, but adds, "these are only a few of the subjects which, according to my view, ought not to be taught, while everything that belongs to crafts and handwork ought to be diligently and carefully taught." This is not cheerful reading for those who think that the Board-school boy or girl ought to have, at least, the chance of a liberal education. It sounds like the old call of keeping people in that station to which Providence has called them, which presupposed a surprisingly intimate acquaintance with the purposes and plans of Providence.

The truth seems to be, not that we ought to keep any given class of society to do any special work, but rather that those who are best fitted to do any special kind of work should have the opportunity of proper equipment for it. The way to effect this is not to cripple and discourage good schools, and cut down the curriculum to the needs of an industrial career. It would, surely, be far better if we could have a more careful system of graded

schools such as there are in France, for example, so that a boy might be sent to that particular kind of school for which his abilities fit him. There should be no lack of suitable training for the craftsman; but every boy who can benefit by a literary and classical education ought to be able to get it, no matter what his position in life or the social status and occupation of his parents. At the same time, this may be said: that the ideal education is one which combines the skill of the manual worker with the scholarship of the student; and a better state of society will be reached when the division which now exists between the two has ceased to exist. Why should not the student have the practical training given by some useful craft, and why should the industrial classes be shut out from the uplifting pleasure and intellectual culture to be gained from a knowledge of orchestral music and dramatic literature?

Another criticism of the schools is that they tend to crush out originality and to discourage individual development. Speaking at the annual meeting of the Lancashire and Cheshire Union of Institutes the other day, Mr. George Harwood, M.P., drew a very doleful picture of the present condition of society, its lamentable barrenness and want of originality in every sphere. His topic was "The Play of Individuality in Education," and his address was an indictment of our whole system of education. The epoch through which we are passing, he said, is remarkable for a distinct and marked absence of originality in every walk of life. "There never was such an arid, dark, stupid, and unprolific age as the present. Everybody whose opinion is worth having is agreed upon it. At a time unprecedented for the number of lectures, classes, and aids to literary productiveness, literary excellence has never been at a lower ebb. It is difficult to find a book worth reading, more difficult to find one worth buying and keeping." Art and music are in no better case. "There never were so many students of art as to-day, and yet nobody can paint a picture that anybody cares about. There never was a time when there was less real culture than to-day, and there never was a time when there was less reading done for the pure love of reading." This is but a sorry outlook, every one will admit, if it is true. Our present educational system, Mr. Harwood thinks, is calculated to crush out individuality because it was a system built up, like everything else, on a machine-made plan. Here Mr. Harwood speaks mainly of the elementary schools, but he seems to be no better satisfied with other parts of our educational system. Scholastic attainments alone are insufficient. "A man may go through a University training, and come out a sensible fellow, but the chances are rather against him. There is no more pitiful figure in the world than a University don; for the man who drives a hansom cab has more knowledge of humanity. A free, fresh individuality is more telling than scholastic knowledge."

Mr. Harwood's picture is overdrawn, but there is a good deal to be laid to heart by teachers in his plea for a greater originality and elasticity of teaching methods. Nevertheless, there are hopeful signs, if critics would look for them. The teaching of to-day in all our schools is far less mechanical, and much more scientific, human, and vital, than it was fifty years ago. The fresh and increasing interest in psychology and child-study, and the enthusiasm of those who are responsible for the training of teachers, are evidences of the life which is stirring at the root of the educational tree, and which is surely, if slowly, spreading through the branches.

M. S.

### COLLEGE OF PRECEPTORS.

#### DISTRIBUTION OF DIPLOMAS, PRIZES, AND CERTIFICATES.

THE Public Distribution of Diplomas, Prizes, and Certificates to the successful candidates at the last Midsummer Examinations took place at the College, Bloomsbury Square, on Wednesday, October 3. The Chair was occupied by Mrs. S. BRYANT, D.Sc., F.C.P., who was supported on the platform by Dr. Wormell, Vice-President; Mr. H. W. Eve, Dean; Mr. E. Pinches, Treasurer; Mr. Atkinson, Rev. F. C. Besant, Rev. J. O. Bevan, Mr. Bidlake, Mr. Butler, Mr. Charles, Mr. Dupuis, Mr. Easterbrook, Mr. Hagreen, Mr. Langler, Dr. Lawrence, Mr. Millar-Inglis, Mr. Musson, Mr. Nicholson, Dr. R. P. Scott, Prof. Spiers, Dr. Turpin, Mr. Wilson, and others.

Mrs. BRYANT, in opening the proceedings, said: Ladies and gentlemen,—I have so often spoken at teachers' and business meetings in this room that I feel it a special pleasure to have come here to-day on a more festive occasion—for the very



pleasant purpose of distributing prizes and certificates to those who have gained distinction in the recent examinations. My connexion with the College dates from a very long time ago, and, looking back through the years, I cannot but be specially interested in the very remarkable development that has taken place in the number of candidates presenting themselves for the Diploma Examination. I know that but a small number of those candidates have been able to come up to-day; but I know that many here will be interested in the figures that the Secretary has been kind enough to give me showing what progress has been made, and made largely through the influence and efforts of this College, in bringing home to teachers the importance of having a definite preparation for the work they undertake to do, and of obtaining a certificate or diploma to certify that fact. Now, in the year ending July, 1860, there were only 26 candidates who entered for the Diploma Examination. Of those 22 were men and 4 were women. You will notice that, in the course of the year 1860, women had not begun to go forward at the accelerated rate which has, I think I may say, distinguished them during the last thirty or forty years. In 1870 the number of men had increased slightly, but only slightly, to 29, and that of the women had increased to 15, making a total of 44. In 1880 the women were more numerous—namely, 104, as against 86 men, the total being 190. The figures for 1890 do not show any increase on those of 1880; but in 1895 the number had risen to 270, being 148 men against 122 women. In 1900 the number had risen to 494—namely, 347 men and 147 women. The increase of men over women is undoubtedly a good sign, because it shows that the particular view of the value of professional education which was taken up rather more eagerly by the women is taken up with greater emphasis now by the men than in earlier days. We should, of course, take these numbers in conjunction with the number of those who go up to the Universities of Oxford, Cambridge, and London to obtain certificates of the same kind there, and, if those numbers were added, I have no doubt they would increase very largely the number of the women, as but few men have taken those examinations. The main fact is that in 1860 there were, in relation to secondary education, only 26 persons who thought it worth while to get a certificate of this kind; whereas now there are just upon 500 within the precincts of this College alone, not counting those who obtain certificates from the Universities. That shows great progress; but it is only one sign out of many, and I may congratulate the College that it has helped so much in enabling teachers to realize the value of a professional certificate showing that they have some knowledge of the theory of their profession. I have no doubt whatever that those numbers will largely increase, and I hope we are not very far distant from the time when it will become, not legally obligatory, but practically obligatory, upon every young teacher—not, of course, those who are already established—to give some evidence of having a knowledge of his or her profession.

Now, a large number of those in whom we are interested to-day are not teachers, but learners; and, having said so much as regards the teachers, I should like to say a word to the learners, and, first, to caution them, and the teachers also, against believing too much in teaching, and too little in learning. Colleges, after all, only exist for the sake of the advancement of learning; and, for my part, I am sometimes a little afraid that in the twentieth century—I do not know whether it should be called the twentieth century or not, but I have always called it such since the beginning of the year; though I know that is an unfashionable doctrine—some of us have a little fear that learners will get to depend too much on teaching, and not only too much on examinations, but too much on the efforts made for them by other people. Indeed, one of the advantages of examination is that it goes to the learner himself. I am sure that many successful candidates in these examinations, and in others, must themselves be aware of the fact that the work they do on their own responsibility is infinitely more important than the work which any one does for them. Teachers, after all, are only guides; and, as we used to be taught, many of us, years ago, in the old college building, by Prof. Payne, the Professor of Education, whose lectures I had the privilege of attending, there is no real education which is not self-education. One of the great truths which learners ought to take home to themselves in these days, and in days to come, is that all the scientific laboratories, libraries, lectures, and lessons which are provided for them so amply, and will be provided still more amply in the time to come, are of no importance, compared with the importance of their own interest in learning, their own industry, and their own sense of duty in doing the

work they have to do. Perhaps the relative importance of the work which the learner does for himself is more evident in the case of literature than in any other subject. Of course, no reading can be done unless you do it yourself. In the study of literature, I am very much inclined to think that no one can do very much for you. I am somewhat sceptical as to the value of a course of lectures on literature; although such courses of lectures and lessons are, no doubt, necessary, yet, so far as they are necessary, they probably serve their purpose best when they act as a stimulus to the personal study and reading of the readers themselves. I greatly doubt that there can be much method in the study of literature, and I am quite sure that nothing so important can be done as to cultivate a taste for reading good literature, for the sake of the pleasure and the insight which it brings—an insight into the thoughts of others, contact with the mind of humanity as a whole. That contact we must make for ourselves.

Now let me conclude by giving a little advice to learners. It is not my intention to suggest to you a hundred best books, or the best books for boys and girls to read. The hundred best books must change as time goes on. The best hundred for one is not the best for others; but it is not a bad exercise for each one to make up for himself or herself a list of best books. One way to do it is to think what books you would take with you if you had to go to a desert island, if you could only take, say, twenty books with you to read. There is a more important principle to lay down for ourselves with respect to our reading than may be found in the attempt to construct an actual list of books. In these days of abundant cheap literature, when everybody can hold a pen, and most people use it a little, it is more important to know what not to read than what to read. If we can make up our minds as to the kind of books we will not read, then, having a certain amount of time on our hands, and the best literature being largely available to us, I have no doubt we should spend that available time in a much more profitable way. One simple rule which I would suggest is that one should not read, except with rare exceptions, any book unless it is positively worth reading. You sometimes hear of books that have a bad influence—harmful books, silly books, and so on. It is not necessary that a book should be a silly book or a harmful book in any other way in order to condemn it. To my mind a book is condemned if it is not so well worth reading as other books which you have not read. Do not spend too much time in reading the *Boy's* or *Girl's Own Paper*, the *Strand Magazine*, or any of the other innumerable magazines which have stories in them, when you might spend the same time in reading books which would be an everlasting possession to you. For those who are quite young we cannot over-estimate the enormous importance of being careful what they read, because what is read while we are young we remember during the whole of life. For my own part, I would sooner sacrifice a considerable amount of knowledge of mathematics or philosophy than not have made any acquaintance whatever with Shakespeare, Sir Walter Scott, or "Gulliver's Travels," or a number of other books I could mention, before I was twelve years old. Some books will do more good and be of more value to you—the works of literature that are within your compass—before you are twelve years old than they can be afterwards. You may extend that till you are sixteen or twenty years old; but after twenty your mind is not so plastic. So get much reading in good literature done before you are twenty. It is all very well for your elders to read the *Strand Magazine*, as they forget it almost at once; but you read to remember. There is another thing to be said. In those early years we can take advantage of literature, and we cannot gain quite so much from the study of science. Your science may wait a little; it does not matter if your education be neglected in this respect. I do not know whether this is a great heresy; but I should not mind if we did not learn any science until we were twelve years of age, but I should mind if we had not read Sir Walter Scott's books, and made some acquaintance, through translations or in the originals, with the classical authors. Do not throw away your opportunities. Make for yourselves—not because somebody else suggests it—a course of reading, and see that you do not waste the little time you have for reading in work that is useless to you, and gives no permanent pleasure and leaves no permanent mark upon your minds.

The Diplomas, Prizes, and Certificates were then distributed, after which Mr. H. W. EVE, the Dean of the College, in proposing a vote of thanks to Mrs. Bryant, said he believed that the College of Preceptors was the first educational body to place a lady on its Council, in the person of the late Miss Buss; but this was the

first time that a lady had been kind enough to preside at the distribution of prizes. It had been a great pleasure to listen to one of the most distinguished of the ladies now engaged in education, and to hear the very good and sensible advice that she gave. Before saying anything further, he might be permitted to offer a word of congratulation to A. W. Hurst, and the school from which he came. He noticed that last year Hurst obtained the second prize for general proficiency, and the school had for several years taken a distinguished place in the examinations; but this was the first time on which he could congratulate it on being quite at the top of the tree. It had been his privilege to look through the reports that year after year had been drawn up in reference to Market Bosworth School, and it had been a real pleasure, because there had been throughout such evidence of good work. He did not know whether he should be accused of advertising, but he believed it would be a very good thing if more and more schools followed that example—if they would obtain from the College detailed reports of the performance of the pupils in the different branches in which they were examined. The number of schools that applied for these reports was increasing every year, and he was sure that the hints given by the examiners were such as he should have valued himself when he was engaged in teaching. He would now say a word or two on the subject on which Mrs. Bryant had spoken, perhaps a little from the teacher's point of view, as well as the learner's. He certainly thought they had made very great progress in many ways in education, and in one way in particular. It was now the rule, rather than the exception, that careful attention should be paid to all the boys and girls in a school, and that a real effort should be made to bring them up to a certain level, so that they might pass an examination. But it was not quite so certain that proportional progress had been made in the art of stimulating them to love their work, and to read for themselves. He was afraid that it must be confessed that some of the most distinguished headmasters of fifty or sixty years back used habitually to neglect looking over their pupils' compositions. They did it now and then, and did it with admirable effect; but the duty of the systematic looking over of exercises, which was now looked upon as one of the first things incumbent on a schoolmaster, was not always present to their minds. Yet they were men who did wonders in the way of stimulating intellectual interest in their pupils. One of the great problems in education at the present day was this: How shall a teacher, besides doing his ordinary work conscientiously, manage to exercise that subtle influence which made boys and girls do what Mrs. Bryant had so wisely urged them to do—read good literature for themselves. There were a great many counter attractions for boys; he was afraid that the cricket record often took up a great deal of time. A boy could not, of course, know too much about the performance of his own school eleven, but he wished that some boys knew a little less about the performances of Abel or Grace, and he thought it was part of the duty of teachers to stimulate them to bestow their time better. Men had something to learn from the ladies in that respect. He was not going to say that ladies could teach better than men, though he was sure that some ladies taught a great deal better than some men; but there was more generally spread among ladies a desire to stimulate their pupils intellectually. Their thoughts out of school-hours were more habitually on the subjects they were teaching, and therefore their lessons were often more stimulating. He was sure that those who had been taught by Mrs. Bryant would know how stimulating teaching could be made.

Dr. WORMELL, in seconding the vote of thanks, said he had rarely, if ever, risen with greater pleasure to second the resolution than he did on that occasion. This pleasure was increased by the knowledge that Mrs. Bryant was a member of the College, a member of its Council, and also that she was an acknowledged leader of thought and action in the profession. At the last half-yearly gathering he made some remarks on a similar point to the effect that, when there was a burning question before the public, it might be wise to invite a leading politician who could throw light upon it to distribute the prizes. If the Duke of Devonshire wished to make his views public on, say, the registration of schools or of teachers, he knew of no more appropriate place or more attentive audience than he would find at the College of Preceptors, or a more convenient occasion than the distribution of prizes; but while the Duke of Devonshire remained a sphinx, and while there was no one else who could tell them what was coming, he was quite sure it was better that they should have as President for the time being some one

who had a real sympathy for the higher aims and aspirations of teachers and learners. Nevertheless, he did not find his task so easy as he had found it on some other occasions. When they had a bishop in the chair, he found himself perfectly free to say what he thought of bishops in general and of that particular bishop who had honoured them by his presence; but on the present occasion he was not so free. He could not say what was in his mind and heart with regard to their amiable President; but the Dean had hinted at one association, which would occur to many at the present time. They had been celebrating, in the year 1900, a jubilee and a memory; they had celebrated a cause and its pioneer. It was almost impossible for many to see Mrs. Bryant in the chair without thinking of associations connected with that cause and memory. A Scottish poet had drawn many figures from considering the cottager's garden. He had once before in that room made use of one of those figures, and had thought of certain choice flowers which that institution had known—

There grew a bonny brier-bush,  
In our kailyard;  
And pure were the blossoms on it,  
In our kailyard.

Miss Buss attended the Council meetings very regularly; she always took an enthusiastic interest in everything that concerned the welfare of the College, and when she was with them they never thought of the many works she had in hand, or they would have wondered how she got through so much, because when she was with them she threw herself heart and soul into the things which were nearest. When they lost her they felt that they had suffered an irreparable loss. Once on a time the mantle of Elijah fell on Elisha, and there was still a prophet in Israel. History repeated itself. Many of the works which Miss Buss had initiated or carried on had been taken over by Mrs. Bryant, and no more worthy successor to her could be found. He hoped that she would have many years of health and energy in which to carry on those works. He would not say more upon that subject, but he might be permitted to refer for a moment to some of Mrs. Bryant's suggestions. First, with regard to the books which should be read. If any of the boys or girls happened to be going to a desert island, and wanted to know what to take with them, he would recommend them to take plenty of blank paper, pens, and pencils, to develop and mature their own thoughts, and put them on record, because some day they might come back, and persons would want to know what they had been thinking about. He hoped they would not hasten to the conclusion that they were always to read hard books. The old archers knew that they must not always keep the bow fully bent, but that they must relax it at times, so that, when they wanted full power, they could get it. So it was with the mind. Sometimes it required light reading. They need not be afraid to take up occasionally a book that would make them laugh, as it would enable them to do hard reading afterwards. He once tried to read "Mill on Liberty," but failed for lack of application; more recently he had tried again, and succeeded, by reading portions at a time, and devoting the intervals to "Alice in Wonderland."

The vote of thanks having been carried by acclamation, Mrs. BRYANT, in reply, said she thanked them very much for the vote of thanks which had been so kindly accorded her. It had been a great pleasure to be present that day, and to distribute the prizes.

## REVIEWS.

### A BUDGET OF SUGGESTIONS.

*Problems in Education.* By W. H. Winch. (Sonnenschein.)

As an inspector under the London School Board, and a thoughtful student of psychology and philosophy, Mr. Winch is in an excellent position for the task he has set himself. The heading of his first chapter, "On the Hope of Agreement in Educational Theory," sufficiently indicates its nature. "Educational theory," he says, quoting a happy phrase of Mr. Sadler's, "is a meeting point of the moral sciences," and from this point of view he analyses, in a series of essays, some of the principles, or, one might say, the catch words, that are exercising a considerable influence on modern education, especially on its elementary stages. His essays are hard reading, and somewhat encumbered with technical language and allusions and forms of expression scarcely intelligible to the ordinary reader. Take, for example: "The influence of the static environment theory upon educational theory is obvious. You must expose yourself to the

uninterrupted bombardment of the atoms, and so get the uniformities well worked in." The first sentence is perhaps excusable in a writer who appeals to readers with some philosophical knowledge; but the allusion to the higher physics, and the conversational turn at the end, appropriate enough to a discussion among experts, might easily puzzle the uninitiated. Or again: "Such an attitude I hope the educationist will take up with regard to psychology—even to the most statistical and brass-instrumental variety," contains a phrase which, we must confess, is quite beyond us. Nevertheless, the book is suggestive, and shows good sense and balanced judgment.

The introductory chapters deal mainly with the opposite tendencies, realist and scientific on the one side, idealist and humanist on the other, which influence modern views of education, and connect them with cognate movements in other domains of thought. Though the writer holds the scales tolerably even, it is clear that, in his view, the realists are at present too much in the ascendant, at least in the primary schools, and he practically associates himself with an eloquent plea of Mr. Graham Wallas, quoted in the appendix, for the development of the other side of education in the schools under the Board. In the next essays on "Psychology and Education," on "Observation," and on "Imagery, Thought, and Language" he is mainly occupied in working out, in the interests, first of the teacher, and then of the learner, of a single idea, and that a fruitful one. It is practically impossible, he points out, to observe details without some kind of synthesis, without consciously or unconsciously stringing them together in support or refutation of a theory, or at least associating them with some previously acquired ideas. How, then, are the teacher and learner respectively to be trained to observe properly? Obviously the ordinary teacher cannot know much of psychology: he has not the time, nor, as a general rule, the brains, required for the purpose. He is busy, too, in producing immediate results, and what may be interesting from a psychological point of view is not always conducive to marking.

The blunders in a group of drawings or a set of exercises may illustrate an important type of misconception; but the teacher's first object is to get them correct somehow or other—how can he, at the same time, add to his pedagogic stock-in-trade? By doing so, he will correct them more effectively; but we can hardly expect him to work out the problems himself, on first principles. Mr. Winch's suggestion, and it is an excellent one, is that those who train him should bring psychology down to the marketplace, should lay hold of those pedagogic maxims which he knows, at any rate, implicitly, enable him to increase his stock of such maxims, and to work them into his own experience. It is, in fact, the method of Socrates. Somewhat similar principles apply to the learner. The healthy reaction against simply learning about material objects by means of words may easily be pushed too far. Starting from an analysis of percepts and concepts, he points out that the unconscious association of ideas must not be trusted indiscriminately, but needs a good deal of discretion if it is not to lead to vagueness. Thus the "look and say method" needs to be used with much caution. Nor is argument entirely on the side of teaching spelling without learning the names of the letters. Even to grown-up persons, to know the name of a stranger serves as a centre of reference for whatever they may subsequently notice or hear about him. Words, again, cannot be dispensed with in favour of pictorial representations, however valuable these may be. "Words"—Mr. Winch quotes from Hamilton—"are the fortresses of thought"; and that not only in the sense of securing what is already gained, but as a base for fresh excursions. But we have given sufficient to illustrate Mr. Winch's method. The other essays on "Following Nature" and on "The Method of Studying Nature" will repay perusal. The appendix contains a number of memoranda on practical questions of pedagogy, drawn up for the London School Board, or for discussion at meetings of teachers.

SAMUEL RICHARDSON REVISED.

*Samuel Richardson: a Biographical and Critical Study.* By Clara Linklater Thomson. (Horace Marshall & Son.)

The reputation of Richardson has at least this singularity, that it has been the marvel of two centuries. But in different senses; for while the age of Johnson wondered and adored and hailed the stout printer as a literary Columbus, and bracketed him for the highest honours with Moses and Sophocles, the critic of our own day has wondered certainly, but has been bewildered as to what it all meant, and has searched vainly for some probable

solution of the enigma. For, frankly, Richardson is portentously and unutterably dull, and we read him with pains and pangs of weariness and distaste; and yet his fame was cosmopolitan. It was not England only that applauded, but the whole world of lettered men, so that in a sense Richardson entered, during his lifetime, into honours for which Shakespeare had to wait two centuries, and this great enthusiasm was aroused by "Pamela" and "Clarissa Harlowe" and "Sir Charles Grandison." The problem is difficult, and we advise those whom it interests to turn to this admirable critical study which Miss Thomson has devoted to a dead reputation. For here are the materials; without the long and painful explanation of the faded masterpieces we have the evidence on which to form a judgment, and the most excellent comment to guide us by the way.

Miss Thomson is by no means the blind hero-worshipper who sometimes gains the name of critic. Some years ago a well known playwright gave advice to dramatic critics after dinner, and defined their duty in the words: "Praise, praise, praise." Magnificent (especially from the playwright's point of view), but by no means criticism; as wide, indeed, of the true definition as that hinted by the famous *dumnatur judex* motto of another school. Miss Thomson steers clear of either pitfall; she shows us Richardson with absolute impartiality, neither minimizing his defects nor exaggerating his virtues; and we must very warmly congratulate her on the possession of one of the rarest of faculties. Most of us can be good haters and (not so often) enthusiastic lovers; very few of us are critical in the sense in which Miss Thomson is critical.

And yet one doubts whether she quite understands the reason of Richardson's decline. In a sense, alas! every classic is dead. How many men take down Homer on a rainy afternoon? Students and specialists apart, what following has the "Divine Comedy" among intelligent readers? "Gulliver," certainly, is still given to children at Christmas, and perhaps the Dean, in the Elysian Fields, laughs more heartily than ever he laughed on earth to think that his Greek fire and oil of vitriol have taken their place among the emulsions and soothing syrups of the nursery. But are there many, even amongst the decently well read, to whom the perilous parables of Swift are familiar and customary? Nay. To pass to the classics of our own age, to the constant readers of novels: there is doubtless a copy of "Vanity Fair" on most shelves, but in most cases it would be a dusty book to handle. Yes; the classics are dead, since we must read the "success of the season"; but Richardson is not only dead but buried; and, compared with "Sir Charles Grandison," "Roderick Random" and "Tom Jones" are still gay and lively sparks, and the voyage of "Old Ulysses" is fresh and new beside the moral maunderings of "Pamela." And why? Miss Thomson hardly answers the question. It is not by reason of Richardson's lengthiness, since no one who has read "Don Quixote" could wish it shorter by a page, and the "Morte d'Arthur," rambling and episodic though it be, is too short for its lovers—a good book is never too long.

To us the real answer seems to be simply this: that Richardson never painted human nature at all, and that, in other words, his psychology was purely superficial. He has become obsolete because, instead of relying on the eternal humanity of men and women, on the emotions which are to all intents the same to-day as four thousand years ago, he deliberately painted "society," convention, the temporary disguise under which men and women moved at a particular period. "Pamela" is not a story of love: it is a study of social distinctions; in its very essence it depends on the exalted social position of Mr. B. and the lamentably low social position of his servant-maid. Now a story must have some reference to social grades; we cannot posit our hero and heroine *in vacuo*; but Mr. Hardy has shown in his "Two on a Tower" how the true artist treats all social distinctions as accidents, and searches for the true essence of his book amidst immortal things and unchanging passions. In a word, true art is a thing of mysteries and ecstasies; and mystery and ecstasy were to Richardson utterly unknown. And, again, art deals with universals, with types; it transmutes the particular and unimportant Amlethus into the universal and significant Hamlet—not any individual man, but all men; humanity regarded from a particular standpoint.

Of course, one caveat must be entered. Juvenal, it may be said, Jane Austen, Thackeray dealt with the superficialities of society, with the outward vestments and disguises and conventions. True; but these were satirists. They described "clothes," but their chief business was to rend these clothes in pieces, to tear them away, laying bare the peccant parts of man, or else to laugh

at his folly in assuming such queer disguises. Richardson cannot be ranked in this company; for him there is neither the *sæva indignatio* nor the good-humoured laugh: for him the wicker framework and the dresses are the real and intimate man. The rage of Juvenal, the laughter of the better-tempered—these are in a sense ecstasies. But Sir Charles Grandison? An elegant and affecting figure doubtless, in his red-brick mansion of the eighteenth century, but never destined to the mansions which are abiding. Perhaps he tried to be a man; he has only succeeded in being a baronet.

#### RICHIEU.

*Richelieu and the Growth of French Power.* By James Breck Perkins, LL.D. (Putnam's Sons.)

The French monarch's "L'Etat c'est moi" might with much more truth have been said by Richelieu. When on his death-bed he was asked by his confessor whether he forgave his enemies, his answer was: "I have none but those of the State." This appears to be the key-note of his wonderful career. Apply it to all his actions, and it will give the explanation of seemingly contradictory phases of character and action. Richelieu lived only for the glory and exaltation of France, and he felt that the only way to obtain that end was by the glory and exaltation of Cardinal Richelieu. He, and he only, had the force of will and character to put France in the position which he desired her to take.

It must be remembered that when Richelieu began his work as a Minister of France the French kingdom was distracted within by fatal disunion. The Huguenots were an armed, semi-independent body, and the great nobles were more like independent princes than subjects of the French Crown, while abroad its influence was scarcely felt. It had no army and less navy. It had been ruled, or, rather, misruled, by the Queen-Mother, Mary de Medici, for many years; and now the sceptre was in the hands of Louis XIII., an ill-educated lad, of a jealous, capricious character, with much piety, and a considerable admixture of a curious kind of platonic affection which was apt to be very detrimental to the service of the State. It was from this condition of affairs, and with no better instrument to his hand than the King, that Richelieu determined to extricate his country.

His great strength lay in the fact that he never for a moment doubted himself, and he had no illusions. He believed that he was right and that all who differed from him were wrong. "He accomplished much because he set strict limits to what he undertook. In order to obtain the end of making France great and powerful he saw that the first thing which he must do was to secure internal peace and order; a country distracted within its own border could not hope to be a great, still less the paramount, power abroad; therefore it was that he proceeded to the destruction of the military and political power of the Huguenots and the taking of La Rochelle. This action was no mere religious persecution, as people have been wont to describe it. Richelieu, Catholic Bishop and Cardinal as he was, was no friend of religious persecution. It seemed to him that the Huguenots had to be suppressed, not because they were Protestants, but because their political and separate military organization was a constant peril to France. It is a fact that after the fall of La Rochelle and the other Protestant strongholds the Protestants were in no way interfered with in the exercise of their religion. The revocation of the Edict of Nantes by Louis XIV., some years after the Cardinal's death, is in no way to be traced to his policy. He destroyed the power of the Huguenots as a disturbing force without directly interfering with rights of conscience. In exactly the same way, and for the same purpose, he found it necessary to suppress the power of the nobles. Himself a noble, he nevertheless saw that the King could not be great, nor the kingdom stable, as long as the great nobility kept up an almost royal state, and had what was at that time an impregnable base in their feudal castles. Hence we find him dismantling many a fortress, and when the nobles, relying on the privileges and immunities, attempted to upset the State (*i.e.*, the Cardinal), no rank, no interest which they could bring to bear, could save them. The Duc de Montmorenci stood first and foremost among French nobility—Royalty itself was proud to be allied with the family—but when the Duke took up arms against the King, not all the prayers of princes and nobles, not the crowds who cried in the street for mercy—nay, the services held in the churches could not save him—he was condemned and beheaded the same afternoon. It was (politically) a grim necessity. Had Montmorenci escaped the penalty, there would have been plenty of other conspirators. But in proportion to the Cardinal's severity on the nobles was

his leniency to the commonalty, who might be regarded as having been led away by their natural leaders.

By this means tranquillity in France was restored, and the Minister was at liberty to make her power felt abroad. This he did by supporting Gustavus Adolphus and the Protestant German States against the Emperor, and by foiling the ambitions of Spain. Some have expressed great surprise that the Minister of "the eldest daughter of the Church," a Roman Cardinal, too, should be found in strong opposition to the two great Catholic Powers; but Richelieu saw beyond this. He was the first, perhaps, to realize that great principle of all modern diplomacy, "the necessity of keeping the balance of power," and he held that the strengthening of the hands of "the eldest daughter of the Church" was more important to the Church and to France than the mere suppression of some small German principedoms.

Richelieu did not live to see all his plans carried out, but his work lived after him and was brought to fruition by Mazarin, his own pupil. His enemies have laid every conceivable charge against him. He was called cruel. True, those who were the enemies of the State fell, whether they were Conceni, Montmorenci, or the unfortunate boy-favourite, Cinq-Mars; but in all these cases, no doubt, the execution was entirely political in its motives. "I have been severe to some in order to be good to others, and have loved justice and not vengeance," he says. He was a man of a thousand parts; nothing was too great, nothing too small, for him. In the midst of all the offices of State he had time to settle quarrels between the King and his favourites, to encourage literature and art. He founded the French Academy, which alone of French institutions has lived through all the changes of France. He organized the first post-office; he created a respectable navy and an army of 150,000 men, at that time regarded as a prodigious army. At the Revolution Richelieu's remains were violated. They are said to have been all duly returned; but, as our author says: "It does not matter; wherever his ashes may lie, his fame will endure so long as the history of France is studied by mankind."

The author has written of his hero with judgment and knowledge, and has produced a very attractive book.

#### OLD AGE AND FRIENDSHIP.

"Golden Treasury Series."—*Two Essays on Old Age and Friendship.* Translated from the Latin of Cicero by E. S. Shuckburgh. (Macmillan.)

The two pamphlets that Tully composed in his sixty-third year to be in after ages the special bugbear of Britain's youth are now in this charming volume transformed into a solace for the elderly and aged by a skilful alchemist whom his years, that creep, alas! towards the twelfth lustre, and his reading, that has ranged over broad and pleasant pastures, have brought into complete sympathy with his task. For ourselves we have never met a healthy boy who did not execrate "De Senectute"; out of "De Amicitia" the creature is in the habit of manufacturing a mild "ouss word" by a simple process of *synizesis* which we need not more particularly indicate. It is pleasant to think that, after the lapse of half a century, when, likely enough, he will only be able to read "the classics" as Colonel Newcome used to read them, he will open Mr. Shuckburgh's little book, and find that in the interval the two homely essays have caught the colour of his mind.

Mr. Shuckburgh's introduction, all too short, is an admirable piece of work. He discourses on friendship and age as one who knows; just as Tully did himself. And Mr. Shuckburgh sees that Tully's definition of friendship is quite wrong. What is the use of telling us that friendship "is a complete accord on all subjects human and divine," when those of us who have friends *know* that the warmest friendship can subsist between two persons whose opinions on some of the most important matters are widely sundered? And, as Mr. Shuckburgh rightly points out, it is by no means certain that identity of opinions is provocative of friendship. No; Tully did not know so much about friendship as Montaigne knew; and we refuse to believe that he and Atticus ever got beyond a rather humdrum form of *camaraderie*.

In the essay on "Old Age" there is much that is likely to gratify those who have succeeded as Cato had succeeded. But Tully does not attempt to face the real problem, which is this: What consolation is there for those who have failed? Can friends, gardens, intellectual activity—where there can be any—compensate for the loss of hope and strength? Must not a large part of mankind be thrown back in old age wholly on the support to be derived from the hope of a life to come? Mr. Shuckburgh says

that the inconveniences of old age are often the result of folly. But surely there are plenty of sorely tried old men who have lived all their lives well. The descent from Epsom to the cab-rank has its parallel in the life of man; and many who have lived soberly and toiled honestly come to an old age of rheumatism or other disease that cuts them off from the enjoyments on which Cicero dwells. The fact is that the dark side of the picture is carefully turned to the wall. The instances are all chosen from among successful men, who have passed through a happy life to an honoured and endurable old age. It is of little use to tell the disappointed man at the end of his life what old age might have been, and what it has been to some. It is far more to the purpose to exhort men while there is yet time so to live that they may attain to the joy of a happy old age. But, even so, it is idle to ignore the fact that in this matter too the best-laid schemes may go awry. Yet Tully's old age had been of more service to the world if it had been devoted to the writing of an exhortation to the young.

Of the translation we cannot speak too highly. We append a brief extract as a sample of Mr. Shuckburgh's style. It may fitly close this short notice.

O glorious day, when I shall set out to join that heavenly conclave and company of souls, and depart from the turmoil and impurities of this world! For I shall not go to join only those whom I have before mentioned, but also my son Cato, thou whom no better man was ever born, nor one more conspicuous for piety. His body was burnt by me, though mine ought, on the contrary, to have been burnt by him; but his spirit, not abandoning, but ever looking back upon me, has certainly gone whither he saw that I, too, must come. I was thought to bear that loss heroically, not that I really bore it without distress, but I found my own consolation in the thought that the parting and separation between us was not to be for long.

#### A GOOD HISTORY.

*History of England.* By Prof. F. York Powell, M.A., and Prof. T. F. Tout, M.A. (Longmans.)

This volume collects in the compass of eleven hundred closely printed pages the three separate "parts" of English history which we noticed successively at the time of their appearance. The whole text has been revised throughout for the present edition, which may be regarded as a complete student's history of British origins and the British Empire—for the name of England on the title-page must be understood in its widest sense. Prof. Powell is specially responsible for the first Part, which carries us from the earliest times to the death of Henry VII. The second Part, from the accession of Henry VIII. to the Revolution of 1689, and the third Part, which comes down to 1887, are the work of Prof. Tout. The common plan and design of the authors may be described as a combination of a connected story of the main facts of political and constitutional history, in chronological order, with a sketch of the development of the language, literature, and social life of the people. Wherever it was possible, the Cambridge and Victoria Professors of History have availed themselves of the actual words of contemporary authorities, with a view to preserving dramatic and pathetic incidents in their original colour of time and place. A manifest effort has been made to tell the connected story in simple style, and the usefulness of the volume for young readers is increased by a brief glossary, with good maps, plans, tables, and pedigrees of important persons. For school use the print is rather small, and the paper somewhat too transparent; but the very detailed history could not have been brought into a single and handy volume without having recourse to small type and thin paper.

Prof. Powell has not only a firm grasp of the early institutions and life of the English people, but also a clear idea as to the best way of describing them for young readers. He shows a lucid, if sometimes a rather startling, distinctness in tracing out the main lines of national evolution; but there is, on the whole, little to quarrel with in his method. The brief retrospect with which he concludes his share of the work, though it scarcely exceeds three pages, is a model of comprehension:—

We have now reached [he begins] a line of real division in English history, the line at which the middle ages, with their forms of life and thought, and their systems of Church and State, land and labour, close; and the age of the New Learning and the New Faith, which are known as the Renaissance and the Reformation, is coming in to reshape and recast the life and thoughts of men. So deep is this dividing line that it is certain there was more in common between Alfred and Edward I., or Dunstan and William of Wickham, though severed by centuries, than between Edward IV. and Henry VIII., or Warwick and Wolsey, who are only a generation apart.

On the whole, this is an excellent historical reading-book, though it rather falls between the two stools of a student's manual and a schoolboy's introduction.

#### METHODICAL VOCABULARY.

*The Facts of Life.* Part I. A Text-Book for the Methodical Study of the German Vocabulary. By V. Bétis and H. Swan. (Philip & Son.)

Messrs. Bétis and Swan are well known exponents of the Gouin method, which they have done much to popularize and to improve. Gouin, in common with other reformers of modern language teaching, looked upon the acquisition of vocabulary as the first object, and set to work to facilitate it on the principle of the association of ideas. He differed, however, from other reformers in basing his system rather on the association of ideas with each other in the mind (what he calls "mental visualization") than on the association of words with the objects or pictures of the objects they represent. Hence his "Series," in which his disciples think he went too far in carrying out each train of thought to the bitter end. They are entirely in accord with their master's principle of mental visualization, but prefer to treat his Series rather as the groundwork or setting for groups of words and phrases connected with ordinary life than as an end in themselves. Their book claims to be a "Dictionary of the Facts of Life," arranged under obvious headings, and kept clear of what is not strictly necessary. The volume before us deals with four of the groups to be included in the complete work—viz., Home Life, The School, Travelling, and Plants. Each of these chapters consist of a series of brief narratives of the ordinary incidents of life—getting up, dressing, making the bed, and so on, divided into short sentences. The more important parts are printed in black type, and are ingeniously contrived so as to form a simple continuous narrative in themselves. Thus the description of a school-day occupies about a page and a half, and is split up into twenty-seven sentences; the black type forms about a fourth of the whole, and can be read through without any break in the sense. The narratives are carefully worked out, and seem well adapted to their aim. It is beyond the scope of a brief notice to discuss how far that aim, excluding as it does, or at any rate postponing, grammatical discipline, the cultivation of literary taste, and the concurrent training in the accurate use of the mother-tongue, is altogether a satisfactory one.

## GENERAL NOTICES.

#### CLASSICS.

*A Short History of Ancient Greece*, by Henry Johnstone (Nelson), is, on the whole, a successful attempt to produce a little history of Greece for the young. Mr. Johnstone has contrived to make the imperishable story simple and interesting. The book is copiously illustrated, and the price is very low. We wish to draw the attention of teachers to the volume, believing as we do that they will find in it a more suitable elementary history than has hitherto appeared. Our recommendation must, however, be qualified, for we are decidedly of opinion that Mr. Johnstone has devoted too much space to constitutional matters, and in some other directions has attempted too much. The little ones will find Lycurgus and Cleisthenes dull, and they are likely to get mixed over oligarchy and democracy. Surely the utmost that is to be desired for a child beginning history is that he should learn first about the battles and the great men, good and bad. In the teaching of history to the young the teacher must give absolute precedence to the concrete over the abstract, and to the deeds of men over the movements of thought and political changes. We see no reason why Greek history should not be taught at first as mothers teach the Bible. Bad Cain and good Abel edify when Leviticus and Deuteronomy are as yet without power to help.

*Livy, Book VI.*, edited by W. C. Laming, and *The Georgics of Virgil, Book I.*, by S. E. Winbolt (Blackie), are recent additions to the series of "Illustrated Classics for Middle and Upper Forms." The illustrations in both volumes vary widely in merit—a few are good; some might well have been omitted. Mr. Winbolt's introduction is a good piece of work, though somewhat overloaded. Why does Mr. Winbolt write: "Xenophon's *Oeconomica*"? The notes are commendably brief, and to the point. Mr. Laming's introduction contains sections on the sources from which Livy drew, and on the credibility of early Roman history. There are also appendices containing hints on translating, and exercises for retranslation. The editing is scholarly and careful, and the book will prove of real service to candidates for examinations. The exercises strike us as rather elementary in character as compared with the rest of the book. A student who can profit-



ably read the section on the credibility of Roman history will surely not require such helps as "give-quarter-to (*parcere*)," or "from-the-fact-that (*eo . . . quod*)." The editors of these books—as, indeed, Mr. Winbolt expressly says—write for "fifth, and even sixth, forms"; and, that being so, we are inclined to wonder that the publishers offer an edition with vocabulary. Do "fifth, and even sixth, forms" really use vocabularies?

*The Fourth Form Latin Prose Book*, by E. C. Cumberbatch (Longmans), is a collection of seventy-five miscellaneous exercises. Mr. Cumberbatch makes a thoroughly vicious suggestion when he proposes that pupils should be allowed to write the indicative for a time in relative clauses that occur in *oratio obliqua*. We hoped that the shoddy old method of teaching the wrong thing with a view to correcting it later on had everywhere been discarded before now. This suggestion, contained in the preface, almost prevented us from examining the book further. However, we found better things on the next page. The compiler rightly insists on the value of the "miscellaneous exercise" as a means of teaching boys to think, and he understands his fourth-form boy. The exercises make three terms' work; and, after going through this book, the learner should be ready for continuous prose. The English of the sentences is often faulty. Would any one write: "I warn you the road is not safe," or "He ordered no one to follow," or "The forces were so many that we dare not attack them"?

#### MODERN LANGUAGES.

*Pierre Cœur's L'Âme de Beethoven*. Edited by de V. Payen-Payne. With Key to Appendices. (Macmillan.)

We have here a novelette by Madame des Voisins, a well known journalist and novelist. It tells the sad story of a gifted musician, who eventually fell a victim to a monomania, believing that the soul of Beethoven was incarnated in him. One is disposed to doubt whether the selection is a very good one—the tale fulfils neither the condition of conveying useful information, historical or otherwise, nor that of possessing exceptional literary merit. The notes are carefully done, and suggest the work of a practical teacher; many are put in the form of questions for the pupil to answer. There is a full table of the tenses of irregular verbs occurring in the next, an unnecessary addition, as they can be found in any grammar. The volume has a vocabulary, and the appendices common to all the books of the series edited by Dr. Siepmann, containing phrases and continuous pieces for translation into French, based on the text. The key is in a separate volume.

*C. Nodier, Trésor des Fèves et Fleur des Pois*. Edited by E. B. Le François. (Nelson & Son.)

We hesitate to recommend this fairy tale as a reader for junior classes, mainly on account of the archaic language in which it is written. Just as the fairy tales of Perrault—far superior to this one, owing to their popular character—have to be modernized before they can be read with advantage by children, so this story should have been rewritten in simpler French. No doubt, it would lose much of its charm to the literary student, but the beginner would be grateful. Such words as *meshuy* and *trésir* are surely no gain to his vocabulary; and such touches as "elle le fixait des traits acérés de ses yeux, le liait des petits plis de son sourire," common as they are in French fairy tales, are not the kind of thing we like to translate in class. The notes give a good deal of help, but are not always well expressed: e.g., "the article is generally omitted after the preposition *en*." The vocabulary is not complete.

*Prosper Mérimée, Le Coup de Pistolet*. Edited by J. E. Mitchell. (Blackie.)

This story is well known, and has already appeared in a selection of tales from Mérimée, with brief notes. Mr. Mitchell's notes are very full, and useful on the whole. A little more care should, however, have been given to them; particularly in a book for beginners there should be no slips. In the note to page 10, line 4, it is stated that "*pas* is omitted after *savoir*, when followed by an infinitive." A few lines after this *savoir* again occurs without *pas*, but no infinitive follows. This must confuse a child. To talk about the "ablative absolute" in French is incorrect, and is quite pointless in the case of children who know nothing of Latin. In the note on page 11, line 11, we find *si l'on lui demandait*; in that on page 27, line 5, *nous croyez*; in that on page 28, line 5, *je agis*. There is no German word *manc*; *platt* is an adjective, and should have no capital. The term "to adverbialize" is no gain to our grammatical phraseology. The vocabulary also appears to have been compiled without sufficient care.

*Asinette*. By Mrs. J. G. Frazer. (Dent.)

The author of this children's book is favourably known by her "Scenes of Child Life" and "Scenes of Familiar Life." The scenes contained in this volume centre round a little girl, whom her brother unkindly calls *Asinette*. They are full of life and fun, and written in excellent colloquial French. The book gains immensely by being illustrated by that clever young artist Mr. H. M. Brock, whose eight full-page pictures are capitally reproduced in colour. In addition to these, there are some two hundred pictures in black and white scattered over the margins, and serving to elucidate the text. These will be particularly welcome to teachers on the Reform lines. It is to be hoped

that a cheap school edition will soon appear. We can hardly expect the publisher to issue it in so elegant a binding or with coloured pictures, but we should like to see the vocabulary overhauled, as it is not quite complete; or, better still, there should be a glossary, with explanations of the words in French.

*E. de Pressensé, Une Joyeuse Niché*. Edited by S. Alge. (Dent.)

Mr. Alge is well known as one of the pioneers of the Reform movement in the teaching of modern languages, and, in editing a text, he, of course, follows the principles in which he believes. The story is one likely to interest children; there is nothing mawkish about it, and there is plenty of incident. It is divided into forty sections, and the editor has supplied a set of grammar questions and exercises to each of these, which teachers will find very useful. There is also a *grammaire* to the book, which is not intended to be exhaustive, but to serve purposes of reference on points arising from the text. Finally, there is a carefully compiled glossary, with explanations of the words in French. Teachers who have not yet tried the experiment, and do not realize how much the vocabulary of the beginner is improved by the use of such a glossary in place of a French-English dictionary, may be recommended to read this book with a class of pupils who are in their third year.

*Cours de Grammaire Française Élémentaire*. By W. G. Hartog. (A. & C. Black.)

This little grammar of sixty-four pages is written entirely in French, and is, therefore, intended for use in classes where importance is attached to the almost exclusive use of the foreign tongue. It may be held that it is really best for the pupils to "make their own grammar" by gradual deductions from their reading, and it is hardly advisable to let them have a book giving rules and exceptions, like the one before us, until they have had about a year's teaching. Then it should prove useful mainly for purposes of reference. The rules are well expressed in almost every case. Exception might be taken to the wording of the rule for the use of *mil*. To say "*On ne se sert jamais de de le, à le*" is contrary to the sound principle not to draw the attention of children to possible wrong forms; and, besides, it is not correct (*je viens de le voir*, where *le* is, of course, not the article—but still *de le* is used). There are few slips in the printing; *chaque* occurs on page 27.

*Practical Rules on the Use of the Infinitive in French*. By L. Le Bris. (To be obtained of the Author, 3 Park Row, Greenwich.)

These rules are well expressed, and the table of verbs is full and trustworthy. Most French grammars do not deal adequately with this difficult subject; and M. Le Bris deserves the gratitude of teachers for printing these convenient rules for their use. They are sent, post free, for fivepence.

*Cunuder's Eclectic Oral Method for the Practical Study of the French Language*. (Bristol: Burleigh.)

There is much sound sense in Mr. Cunuder's preface, though it might have been expressed in language a little less high flown. Thus, when he says: "Does Nature induce the mother to repeat to her child disjointed and absurd sentences such as are to be found in the exercises in question, and to crush his bewildered mind under the weight of their trampling legions?" we feel ourselves in full agreement with his protest; but we cannot repress a smile. And we can imagine an earnest teacher being a little impatient when he reads in the "General Hints" a sentence like the following: "If, after the explanation of a lesson, after the hearing or the reading of a passage, its contents do not become the prey of thoughts, its effect will be but transient, only a rippling of the water caused by a cast stone, and as quickly and as irrevocably will it disappear in the stillness of oblivion." It would, however, be a great mistake to allow oneself to be prejudiced by such flowers of speech; for a perusal of Mr. Cunuder's book will bring the conviction that he is a good teacher, who has given serious thought to his subject, and to good purpose. The continuous passages of French have been chosen skilfully, the grammar questions based upon them are well put, and are expressed in French from Lesson 41 onward; indeed, our only regret is that the grammatical part at the end of the book is not in French also. We warmly recommend teachers to read the book; they are sure to learn from it much that they can utilize in their classes, even if they should not see their way to putting it into the hands of their pupils.

*The New Method for the Study of the German Language*. By J. G. Moelwyn-Hughes and F. A. A. Struve. (W. H. Roberts.)

The only novelty claimed by the authors is one of which they certainly have not the monopoly, the study of the verb first and the substantive last. Their preface is an excellent illustration of the well known story of the layman, sent out to discharge judicial functions in the colonies, whose legal friends advised him, by all means, to give his decision, which would probably be right, but to abstain from giving his reasons, which would certainly be wrong. "We deem," they say, "the substantive to be the outward manifestation of the inward I (*ego*), the very self-hidden, but gradually revealed by the various motives working, until it takes an outward form. It is, therefore, necessary to perfect these before they disclose themselves." The practical part of the book consists of a number of exercises, conversations, and extracts, which have probably worked well in the hands of the authors, but which do

not seem very suggestive for other teachers, especially as "the method does not allow any superficial preparation and no deviation from it." The printing is careless: in the first two pages we notice "qualifying" and "thoroughly."

*A German Commercial Reader.* By S. E. Bally. (Methuen.)

The demand for commercial education is likely to produce a considerable crop of special books. The one before us is ingeniously arranged and is likely to be useful. Each lesson contains one extract of about a page and a half, generally, but not always, on some subject connected with trade, manufactures, or means of communication, and a shorter anecdote in newspaper style. To these are added a few idiomatic sentences, groups of business phrases, proverbs, and, in some cases, an arithmetical problem. Specimens of the working out in detail of questions in the first four rules of arithmetic are given. It might have been worth while to include some of the more advanced rules. Perhaps some of the extracts not directly bearing on commercial subjects might with advantage be replaced by extracts bearing on commercial history; by an account, for example, of the South Sea Bubble, of the foundation of the Bank of England, or of some great commercial crisis. The general training of the schoolboy intended for business is, on the whole, more effectively promoted by studying some masterpiece of literature concurrently with his strictly commercial reading than by studying scraps of German "journalisee."

*Exercises in German Composition.* By R. Kaiser. (Arnold.)

This is a useful selection of continuous passages for translation, preceded by a few pages of detached sentences, some of which include commercial expressions, and followed by a vocabulary and a selection of idiomatic phrases, the latter not having much relation to the exercises. What we miss is a set of hints on writing German, such as is prefixed to the best Latin prose books. A good German *Stylistik*, with carefully adapted exercises, like Meissner's excellent "Introduction to French Prose Composition," is much wanted.

*German without Tears. Book II.* By H. H. Hutchinson and S. Bostock (Arnold.)

This is a little reading-book for the nursery, translated from the second volume of Mrs. Hugh Bell's "French without Tears." It has a vocabulary, pictures, and a few notes calling attention to points of grammar. The stories, of course, are excellent; but it is rather difficult to see how the book can be fitted into a systematic course of German. Perhaps it is hardly intended for that.

*Das Wirthshaus zu Cransac.* By H. Zschokke. Edited by E. S. Joynes. (Heath.)

This is a pretty little love story by Zschokke, who, both as politician and as journalist, played so important a part in Switzerland in the first half of the century, and who, in his stories of country life, was one of the first to strike the rich vein of popular fiction worked by Immermann and Auerbach. The notes are careful and adequate, considering the simple style of the story, which does not lend itself to elaborate annotation. The book has a vocabulary and paraphrases for retranslation.

#### MISCELLANEOUS.

*Elements of Rhetoric and English Composition.* By G. R. Carpenter. (Macmillan.)

There is doubtless a great deal of useful matter in this handbook, treating of essay-writing, letters, narration, exposition, persuasion, and composition in verse. But a glance at its contents is sufficient to show that it attempts too much in its 140 pages. Sad to say, no small proportion of this is taken up with examples of what should be avoided, whereby a sound pedagogical law is broken. Again, there seems to be excessive detail of instruction, in some cases amounting to little more than rules of etiquette, or negligible trifles. For instance, the order of pages in a private letter is discussed, and even the size of the paper to be used. The book will strike the English teacher as dealing with matters that boys and girls generally have to pick up for themselves. This is all the more reason why it should be welcome, and with its abundance of exercises it may provide fresh ground in our composition lessons, which often consist entirely of setting and correcting essays.

*Sounding the Ocean of Air.* By A. Lawrence Rotch, S.B., A.M. (S.P.C.K.)

This is a course of lectures delivered in Boston, and it appears to be suited to the average audience of our University Extension type. It deals with the atmosphere generally, and its accidents—clouds and currents—while the author's experience as director of the Blue Hill Meteorological Observatory enables him to speak with detail of the latest balloons and kites for the purpose of scientific research. It is clearly and simply written, without much attempt at originality of treatment. There are several illustrations and diagrams, some of them of a rough blackboard description. The lectures might, perhaps, have been made more interesting, but they contain much up-to-date information which a teacher of physiography will find useful.

*Asia.* By Lionel W. Lyde. (Black.)

M. Lyde's volume on "Asia" is another addition to the author's valuable series of school geographies. There is the same freshness of treatment and continual appeal to the intelligence of the pupil that

marked its predecessors. The term "Asia" is of large significance, and we could wish that the preface had stated the precise aspects to be treated. Apparently it is entirely a "physical" geography, with indications of the main lines of industry and commerce. But here and there we find smatterings of political information, and the chapters are based on the political divisions. It would be more satisfactory if the political aspect were treated more fully, or entirely ignored. There are traces of haste, and consequent lack of clearness in several places, but these are comparatively trifling blemishes on an otherwise excellent text-book.

*Object-Lessons in Botany, from Forest, Field, Wayside, and Garden.*

*Book III.* By E. Snelgrove, B.A. (Jarrold & Sons.)

Boys and girls who have learned to observe plants under Mr. Snelgrove's earlier guidance are now initiated by him into the mysteries of the microscope. We like the method he adopts. He does not present, with cross-sections of plants as a set of curious patterns, to be learned by heart, but, in their proper form, as aids to the understanding of the way the plant is built up, and with the uses of all parts and of their particular arrangement kept in view. Nor are the human uses of plants forgotten. Altogether, a successful work; though the "get-up" is not as good as one could wish.

"The Temple Primers."—*The Human Frame and the Laws of Health.*

By Drs. Rebmann and Seiler. Translated from the German by F. W. Keeble, M.A. (Dent.)

A good general introduction to the principles of hygiene, touching on all the main departments of the subject, as well as the essentials of human physiology. Though the treatment is necessarily brief, any well educated person will find the book readable.

*Technical Instruction Handbook.* Revised to May, 1900.

(Wakefield: Milnes.)

The County Council of the West Riding of Yorkshire publishes a detailed handbook of its schemes, regulations, and syllabuses, showing the general provision made by it for aiding technical and manual instruction in the West Riding, with many suggestions as to the organization and management of technical schools and classes. To this useful information is appended a scheme of work assisted by the Joint Agricultural Council of the East and West Ridings, in conjunction with the Yorkshire College, Leeds.

*A Picture-Map of the World.* By Ada B. Dugan. (Philip & Son.)

This is a novelty in the way of pictorial geography devised by the mistress of an infant model school at Londonderry. It will cover thirty-three square feet of wall, and is well calculated, by its hundreds of coloured pictures, to impress on the mind of a child a great number of useful notions concerning the natural products and industries of the world. It may awaken many intelligences which mere words would not be likely to reach, at any rate, in the same time.

*The Royal Observatory, Greenwich: a Glance at its History and Work.*

By E. Walter Maunder, F.R.A.S. (Religious Tract Society.)

Mr. Maunder, who is one of the Assistants at the Greenwich Observatory, gives us in this volume a full account of the famous meridian Observatory. Its history is recounted in connexion with the lives of the eight Astronomers-Royal—Flamsteed, Halley, Bradley, Bliss, Nevil Maskelyne, Pond, G. B. Airy, and Mr. W. H. M. Christie—of whom we have characteristic portraits. There are also pictures of the chief buildings and astronomical instruments, and photographs of the principal nebulae. The book has a special interest from the fact that few outside people ever see the Royal Observatory. From the nature and importance of the work there carried on day and night, it is possible for visitors to enter it only once in the year, and then under very stringent regulations. Mr. Maunder describes the highly important work done in connexion with navigation, the fixing of time, and the various highly developed scientific departments connected with the constant study of the heavens, which is carried on ceaselessly day and night.

*The Goldsmith Anthology, 1745-1774.* Edited by Prof. Edward Arber. (Frowde.)

With the publication of the Dunbar and Cowper Anthologies—the first and last of the promised ten—Prof. Arber's series of poetical selections, covering the fifth to the eighth centuries, will be complete. Goldsmith is the centre of a numerous group of British and Irish poets, who are represented in these three hundred pages by many delightful pieces. Oliver himself—"magnanimous Goldsmith, a gooseberry fool," according to his own description—occupies thirty pages, and occupies them well, with "The Hermit," the mud dog elegy, "The Deserted Village," and "Retaliation." There are some fine anonymous pieces, and the middle eighteenth century is admirably epitomized.

*The People of China: their Country, History, Life, Ideas, and Relations with the Foreigner.* By J. W. Robertson-Scott. (Methuen.)

This is a book for the hour. It is professedly a made book, compiled from printed sources; but as such it is well put together, and very useful. Indeed, the ordinary English reader could not wish for a better handbook of general information on a country which baffles even those who have known it and lived in it as long as Sir Robert Hart, who recently confessed: "If you asked me to write even three or four

pages about China, I should be puzzled to do so." Mr. Robertson-Scott describes not so much China as the puzzle of China.

*The Junior Temple Reader.* Edited by Clara Linklater Thomson and E. E. Speight, B.A. (Horace Marshall & Son.)

This is an excellent book in every way. It is a collection of folk and fairy tales, children's poetry, play-rhymes, and animal stories, for school and home reading. The choice has been made in a thoroughly literary spirit, and the illustrations, old and new, make the volume as artistic as it is literary. Nothing could be better calculated to nurse children into a love of the best kind of reading, and to cultivate in them the discriminating taste and sense of beauty which are generally to be found in an unspoiled child, but which are often unaroused and often overlaid. This Reader is a great improvement on many of the existing collections of English extracts for schools, and we should say that it is certain to come into high favour.

*Philips' County Readers.*—*Kent Past and Present.* By George F. Bosworth, F.R.G.S. (Philip & Son.)

This handy little book on Kent is a good example of the method of treating geography and history combined in reference to a comparatively small section of the student's native country—the county in which he happens to reside. The Kent Reader is an interesting book, well illustrated, and rendered more useful and attractive by the inclusion of a number of poems germane in subject. Kentish boys and girls certainly ought to use this handbook.

*"The Tweeddale Geographies."*—I. *The British Isles.* II. *Europe and Australasia.* (Oliver & Boyd.)

These are good little introductions in the old style—mainly enumerations, but not overlaid with details. The type and most of the maps are clear.

*A Brief Introduction to Commercial Geography, being a Handbook of the Commercial Relationships of Great Britain, the Colonies, and the United States.* By the Rev. F. Smith. (Blackie.)

Mr. Smith has written a small book for so very comprehensive a title, and our heart misgives us when we find him beginning it with lessons on "a town market," "wind and rain," "ocean currents," and "the seasons." But we are bound to say that this is a very good introduction for boys to a knowledge of British commerce, its subject-matter, methods, extent, and value. It is not a "handbook," but a serviceable reading-book, and as such we can commend it.

*The Preparatory English Grammar.* By W. Benson, B.A. (Bell & Sons.)

A well intentioned restatement of elementary notions of English grammar. Mr. Benson begins: "Grammar is the science of language. English grammar consists mainly of a classification or arrangement of words into groups. . . . Rules are also explained . . ." We cannot honestly say that there is room for this book.

(1) *A Text-Book of Bookkeeping.* By Frank Ireson, B.A. (Macmillan.)

(2) *Fifteen Studies in Bookkeeping.* By Walter W. Snaillum. (Cambridge University Press.)

Mr. Ireson's introduction is very detailed and clear in its explanations, so that it may be used by intelligent beginners at school or at home. There is a large number of exercises and expositions, including many taken from the Society of Arts examination papers. Mr. Snaillum is not so elaborate in his explanations; but he is very clear, and his manner of unfolding his subject is interesting. He provides, in addition to his "studies," seven worked papers and seventeen test exercises.

*Handy-Volume Atlas of the World.* By E. G. Ravenstein, F.R.G.S. (Philip & Son.)

The amount of revision which one is wont to look for, or to find, in a new edition of a book is a very variable quantity, running up from next to nothing in some cases to almost everything in others. No doubt, many of our readers know the "Handy-Volume Atlas" as published by Messrs. Philip some years ago. The book before us has the same title and the same leading features and appearance, but the whole of the seventy-two maps have been redrawn and re-engraved, and the statistical notes and other letterpress have been rewritten. The book thus amounts to a new work, with a close imitation and appropriation of all that was good in the old one. It is an extremely serviceable pocket volume and handy companion.

*Object-Lessons in Elementary Science.* Standards I.-III. By A. H. Garlick and T. F. G. Dexter, B.A., B.Sc. (Longmans.)

This is a new edition of Messrs. Garlick and Dexter's series of object-lessons in Nature-observation. Lists of apparatus, and of objects and localities for outdoor work, have been added; and the value of the lessons for practical purposes has been made more manifest than ever.

*English History Note-Book.* By Margaret Anne Rolleston. With Introduction by the Rev. T. W. Sharpe, C.B. (Birmingham: Davies & Moughton.)

Miss Rolleston has brought together some useful and interesting notes from her careful reading of English history. The book is well arranged, and calculated to be very serviceable to an industrious student.

*"Bell's Handbooks to Continental Churches."*—*The City of Chartres, its Cathedrals and Churches.* By H. J. L. J. Massé, M.A. (Bell & Sons.)

An admirable little handbook to an interesting French city, full of historical relics and ecclesiastical associations. There is some magnificent architecture and sculpture in Chartres Cathedral, and Mr. Massé has done much to enable us to realize it.

*The Gentleman in the Next House* (Dent) is a farcical comedy, in three scenes, adapted from "Nicholas Nickleby" by Isabelle M. Pagan, and dealing with Mrs. Nickleby's elderly suitor.

Of texts with notes, we have, in Messrs. Longmans' "British Classics," Macaulay's *Essay on Clive*, with a general introduction to the study of Macaulay, and an essay on literary characteristics, by A. M. Williams, M.A.; in Messrs. Blackwood's "English Classics," Carlyle's *Essay on Burns*, edited by John Downie, M.A.; in Moffatt's "School Classics," Macaulay's *Essay on Milton* and Gray's *Poems*, Part I, both edited by Thomas Page. Macaulay's *Essay on Milton*, edited by A. P. Walker, M.A., is published by Messrs. Isbister.

From Messrs. Philip & Son we have specimens of their *Semi-Upright Copy Books*—a new systematic course of penmanship well worthy of consideration by teachers who are free agents, and who are on the look-out for a good copy book.

Messrs. Macmillan send us their large *Register of Admission, Progress, and Withdrawal*, and their *Summaries of Attendances for Five Years*, arranged (1) for boys and girls, (2) for infants. They are calculated for the requirements of Elementary Code schools, but might be made more generally available.

Amongst new maps and charts we have two of Messrs. Gill's Cartographic Maps—*Ireland and India*. These excellent wall maps are on a scale of four miles to an inch, and they are so clearly printed and arranged that every detail can be easily made out by children sitting at desks within twelve or fifteen feet of them. The chief towns and other features are named in large type, and the colouring in no way confuses them.—Messrs. W. & A. K. Johnston send us *Pictures for Object Lessons*—rolled sheets on "Ironfoundry," "Mahogany," "Birch," &c. The designs and printing are English in their origin, which is certainly an additional recommendation. From Messrs. Stanford we have a capital new *Orographical Map of Europe*, very carefully and systematically designed and explained. It is compiled under the direction of Mr. Mackinder, M.A., Reader in Geography in the University of Oxford.—Messrs. Blackie & Son publish a set of fourteen *Standard Class Maps of England and Wales*, cycled at the corners, in a strong leather-board box.—"Nelson's Royal Portfolio" (Nelson & Sons) is reinforced by a geographical series of coloured maps, including *Pictures of the Empire*, suitable for the decoration of schools. They are 28 by 21 in. in size, and the sheets can be had variously mounted. The designs and workmanship are very good.—*Blackie's South Kensington Drawing Sheets* are based on Sir E. Poynter's "Drawing Books." The full series, in flat tints on good cartridge paper, 28 by 20 in., includes six sets of twenty sheets each.—*Philips' Typical Object-Lesson Pictures* (Philip & Son), selected by Prof. R. A. Gregory, consist of three series, each of them being a set of six diagrams, 23 by 30 in., printed in colours on stout Manilla paper. They are well drawn and produced, and will make a good basis for object lessons on animal and plant life and on various industries.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*City and Guilds of London Institute: Programme of Technological Examinations, &c., for the Session 1900-1901.* (Whittaker & Co.)

*London University Guide and University Correspondence College Calendar, 1900-1901.* (Clive.)

*The Tutorial French Accidence*, by Ernest Weekley, M.A. Lond. (Clive)—a third edition of this well approved French grammar and exercise book.

*Meldola's Chemistry*, revised to date by J. Castell-Evans (Murby)—a fifth edition.

*Skertchly's Elements of Geology*, revised by James Monekman, D.Sc. (Murby)—a tenth edition.

*The Principles of Chess in Theory and Practice*, by James Mason (Horace Cox)—a second edition, revised and enlarged.

## GIFT-BOOKS AND PRIZES.

### I.

#### HISTORICAL TALES.

THE evergreen Mr. Henty is quite up to date in his story of *With Buller in Natal* (Blackie & Son), which may be classed with the historical tales, though its "history" is very recent. The hero is Chris King, an English lad in Johannesburg, who, on the outbreak of the Transvaal War, collects a little corps of youngsters, makes his

way into Natal, and offers their services as a band of scouts to General Penn Symons. They are attached to a cavalry regiment, and do good work in all the fighting, from Glencoe to the relief of Ladysmith. They go through many perilous and exciting incidents, and are always successful; for, if they had not been, why should Mr. Henty bother to write their story?—*In the Irish Brigade* (same author and publishers) is more strictly historical, being a story of war in Flanders and Spain. The hero is a young officer in the Irish Brigade which entered the service of France after the Battle of Limerick. In those days Irishmen were not able to enlist in the British Army, and, if they came of a fighting stock, as many Irishmen did, their only chance of a military career was to seek it in foreign countries. The heroic deeds of this particular hero included the saving of a large French force at Oudenarde and the kidnapping of an English Premier. This is a very exciting and pleasant story.—*Out with Garibaldi* (same author and publisher) is a tale of the liberation of Italy, and especially of the Sicilian expedition of "The Thousand" against 120,000 disciplined troops. The hero is a young Englishman who takes a large sum of money to the Italian Lion, and is placed on his staff as lieutenant. He also does wonderful deeds, and ends by releasing his relatives from Neapolitan prisons. All these books are fully illustrated.

Mr. Manville Fenn, like Mr. Henty, has drawn on the records of the South African War. *Charge!* (W. & R. Chambers) is a story of Briton and Boer. It opens with a splendid domestic scene under a *kopje* at the Cape, which is in Mr. Fenn's best way, and fixes the interest of the reader from the very beginning. He tells a stirring tale of Val Moray, who was commandeered by an Irish Boer, and has to see a good deal of fighting on the wrong side. There is a freshness and a human feeling about Mr. Fenn's story which will commend it to most young readers.—Yet another tale of the Boer War is Captain Brereton's *With Rifle and Bayonet* (Blackie & Son). Captain Brereton has this advantage over others who have taken the war for their theme—that he has actually served in it, and has produced his romance in the intervals of fighting. His hero is a despatch rider between Kimberley and Mafeking, who is captured and sent to Pretoria. He contrives to escape, and is lucky enough to return to the Transvaal capital under the auspices of Lord Roberts. Oom Paul is one of the characters of this story, and the author puts him in a favourable light.

#### TALES OF ADVENTURE.

Mr. Louis Becke's *Tom Wallis: a Tale of the South Seas* (Religious Tract Society) is an account of the rough and strange adventures of a lad who was smitten with love of the sea, though he made his first voyage under compulsion rather than choice. The incidents follow each other rapidly in this lively story of the Pacific, and, perhaps, they are a little too exciting for some tastes. But there is nothing that a Religious Tract Society need not have published—unless it is the bloodthirsty scene on Bully Hayes's "blackbirding" ship, in which Tom shoots at the blackbirds in a somewhat unnecessary fashion.

*An Ocean Adventurer*. By Walter P. Wright. (Blackie.)—Although a boy's appetite for adventure is generally considered insatiable, we think that this book cannot fail to give him mental indigestion. The rapidity with which thrilling incidents occur to dazzle the reader is almost grotesque. There is no time to realize the sequence of events, even if such sequence existed, and we fear that, owing to its blood-curdling and gruesome details, this is a somewhat unwholesome type of story, unredeemed by grace of style or by immaculate English. The time is to-day—we might almost say to-morrow—so modern are the accessories, a time in which buried treasure and chained skeletons are a little difficult. Mr. Wright has some of the atmosphere of Jules Verne, but lacks that author's consummate power of giving plausibility to the adventures described. As to the illustrations, they contain skeletons enough to satisfy a Traddles.

*Up the Creeks*, by Edward Shirley (Nelson & Sons), is, as its subtitle indicates, a "Tale of Adventure in West Africa," and a very well told, exciting little tale it is. The only thing one finds to grumble at is that there is a slight straining of the probabilities in putting so very young a person as Mr. Richard Trentham—he is only seventeen—in such a very responsible position as the sole Englishman in charge of the company's agency at Bugama.

*The Romance of the South Pole*, by G. Barnett Smith (same publishers), is a substantial volume, and will be found of considerable interest to young readers who prefer fact to fiction.

#### GIRLS' STORIES.

*A Newnham Friendship*, by Alice Stronach (Blackie & Son), will arouse at least the eager interest of would-be girl collegians. In such glowing colours has she painted her picture of Newnham that there will be chafing under the necessary delay before they also may enter this kingdom of delight. We can recommend the book as well written, and of wholesome tone. The social atmosphere of life at a women's college, almost a little world in itself, is excellently realized. The reader is initiated into the mysteries of the famous "cocoas," hockey-matches, debating societies, and lectures. The characters of different students

are cleverly sketched in, noticeably those of Carol Martin, the heroine, and Elspeth Macleod. But both the lights and the shadows are too thickly laid on. There is, indeed, an Adelphi touch about the "villains," male and female. In fact, the plot is the weak point of the story, and the writer would have been better advised to confine herself to her lifelike description of academic acts and scenes. In the closing chapters we are transferred from Cambridge to East London, where some of the girls have started a social settlement, and we have a glimpse of their work in the slums. The book is creditably illustrated.

*Gold in the Furnace* (Religious Tract Society) is a very pathetic story by M. H. Cornwall Legh, author of "An Incurable Girl." The heroine is a servant-maid, and, if that strikes any one as a little unpromising and unromantic, we must hasten to say that the misgiving is quite unnecessary. Mary Copeland is a lovable girl, a good deal better than gold, and she is tried in a very fierce fire. We doubt if a girl of excellent character would be sentenced to three months' hard labour on the sole ground that a missing bracelet was discovered in her box; but that was Mary's "furnace," and she served her term to the bitter end.

*The House that Grew* (Macmillan) is one of Mrs. Molesworth's excellent stories for young girls. The name of Mrs. Molesworth is one to conjure with in nursery and schoolroom, and any work of hers is sure of a warm welcome. There will be no disappointment in this latest of her many charming, fresh, and fanciful tales, for her pen has lost none of its magic. The story, put into the mouth of one of its little heroines, is simply, yet prettily, told. Morals which are indirectly pointed will raise no alarm. What the house was, and how it grew, and the life led by its band of bright inhabitants, we will leave young readers to discover for themselves. The book is daintily got up, with illustrations by Alice Woodward.

*Miss Nonentity*, by L. T. Meade (Chambers), is a capital story for young girls—every chapter full of life and interest. The humour and the pathos are both of a nature that can be easily understood; while the moral tone is wholesome in the main. The tale turns on the eagerness of a high-school girl to save her father's life by getting a specialist to attend him in his illness. For this purpose she hopes to be able to spend her hard-earned scholarship money; but, finding that this is consecrated to strictly educational ends, she is sorely puzzled to find the money to pay the doctor's fee. Fortune favours her at last in a somewhat fantastic way; but the happy style of the story well cloaks its improbabilities. The title rôle belongs to a little sister, who acts as a *deus ex machina* to set matters straight at the end. If the book were not already somewhat lengthy, we could wish to hear more of the subsidiary characters, who are more interesting than the chief ones. The illustrations by W. Rainey deserve special commendation.

*School Days and Holidays*. By Adelaide M. Cameron. (Oliphant, Anderson, & Ferrier.)—All children who like to hear what their grown-up friends did when they were young will enjoy this story of five little girls, who led very ordinary, uneventful lives, but who had the usual feasts in the nursery, dramatic entertainments, struggles with the governors, and moral revivals. The story is not distinguished by anything original or exciting; but there is plenty of pleasant reading of an easy and homely kind suitable to a little girl not yet in her teens. A particularly amusing description of the making of a plum-pudding in the nursery, the boiling of it in a piece of purple cloth for an inadequate length of time, and the eating of it with dire consequences, forms one incident, and is a fair sample of the whole. The book is well got up, but the illustrations are by no means an additional attraction.

*Cynthia's Bonnet-Shop*, by Rosa Mulholland (Lady Gilbert) (Blackie & Son), is a brightly written story for girls, with numerous illustrations. It tells how a beautiful young Irish girl sets up a bonnet-shop in London, on capital advanced by an unknown friend, and is not only successful as a milliner, but so wins the esteem and admiration of one of her customers that she is invited to a ball, where she and her sister create quite a sensation. The sisters married, and were happy ever after, but their pretty heads were not turned, and they remained simple and lovable throughout.

*Jonathan Toms*, by A. V. Dulton (National Society), is an unaffected, well written story. It has just the faintest suggestion of a "Beauty and the Beast" plot, interspersed with graphic descriptions of Continental travel, which will certainly inspire all girl readers with a desire to take a similar tour.

*In Bab's Baby and Other Stories*, by Katherine E. Vernham (same publishers), we have ten short stories of varied interest—some pathetic, others cheerful—dealing largely with humble life, and well suited to be a gift-book for children who are not above taking a moral lesson in the guise of a simple story.

*Rhoda: a Tale for Girls*, by E. L. Haverfield (Nelson & Sons), narrates the experiences of a family of five girls who become orphans, and are cast down from affluence with £8,000 a year to what seems, even to the author, the terrible poverty of £350, in a tiny house in a London suburb. It cannot be said that the Vinning family, with the exception of the unselfish Rhoda, come out well under the ordeal; but the story

is bright and amusing. The author has possibly held up "the faults of others" in order that her readers may "learn to shun" them.

*The Fortunes of Peggy Treherne*, by Annette Lyster (National Society), also deals with a reverse of fortune. But this time we have to do with a child of humble parentage, who spends a couple of years in a workhouse, and becomes a maid-of-all-work in her eleventh year. She is then lifted, by a turn of Fortune's wheel, to comfort and affluence, and is not spoiled by it.

*A Little Ray of Sunshine*. By Jennie Chappell. (Nelson & Sons.)—The child who figures in this little tale is a nice and unselfish one, and her good deeds meet with the reward they merit. The deeds, it is true, are not great, but the motives prompting her actions are excellent. There is a more strongly religious tone about this book than in some others we have mentioned—or, perhaps one should say, religion is a little more in evidence in the conversation of the characters.

#### FOR THE CHILDREN.

A very funny picture-book for the children, on an ample scale, happily designed and cheerfully coloured, is *Drill Doings*, illustrated by Harry B. Neilson, with verses by The Cockiolly Bird (Blackie & Son). It is very humorous in conception and execution, and is sure to please its little patrons.

From Messrs. Nelson & Sons we have a batch of brightly coloured picture-books, at the uniform price of 1s. *The Baby's Picture Book* and *The Baby's Picture Gallery* are both very good for the very little ones. *The Farmer's Friend* and *The Iron Horse* would be more suitable for young boys. They are all "designed and printed in Great Britain," and for those who desire to help home industries this will, no doubt, be greatly in their favour.

*The Tale of the Little Twin Dragons*, by S. Rosamond Praeger (Macmillan), is a picture-book of another kind, and by those who like the grotesque and comic a fund of amusement will be found in these clever and original drawings. The colour-printing is very good.

*Ships and Havens*. By Henry Van Dyke. (Nelson & Sons.)—A little book of quite a different kind from any in our present list. It is rather in the nature of a moral essay or sermon, and is written simply and with good taste. Judging from the evident preference given to American writers in the numerous quotations, Mr. Van Dyke is an American.

*The Three Witches*. By Mrs. Molesworth. (Chambers.)—The capacity children seem to possess for finding out all about their neighbours' business provides the groundwork for this pleasant little tale. The three witches are merely three people in the street about whom a little boy and girl weave their fancies. It is a little thin and spun out, but Mrs. Molesworth is an adept in the art of heaping up mystery for the closing chapters to clear up, and we expect many a young reader will enjoy unravelling the somewhat complicated relation of these "witches." The illustrations by Lewis Baumer are light and pretty, but somewhat lacking in point and variety.

*Brownie*. By Amy le Feuvre. (Hodder & Stoughton.)—A short and simple sketch, full of religious feeling, of two little children living in the country with a widowed mother, who supports them by her pen. There is a beautiful description of the effect of the Gospel story on their neighbour, a little boy who had never heard it before, his acquisition of a Bible forming one of the chief incidents of the book. In spite of a slight tendency to morbidness, we can heartily recommend it for Sunday afternoon reading, and would call special attention to the pretty parable of the "Little Stupid Servant" at the close.

*Our Darling's First Book*. (Blackie.)—In spite of all that can be, and is, said for phonetics and analytical methods of learning to read, it is pleasant to come across a really old-fashioned A B C book, in which A is not ashamed to stand for Archer. This one, founded on Miss Jennett Humphrey's "Laugh and Learn," will prove a fund of joy to little ones struggling with their letters and their first attempts at reading and writing. It is profusely illustrated, with great variety; none of the drawings are poor, and many of them are exceedingly clever, while all appeal to children by being simple and direct; the "Apple-pie A B C" and the illustrations to "The Three Bears" being specially commendable. Several alphabets and spelling exercises are included, as well as some good old nursery rhymes and two tales.

*The Child's Picture Grammar*. By Rosamund Praeger. (George Allen.)—This is one of those delicious bits of nonsense and excellent fooling which appeal so much more to grown-up people than to children. Those of us who have been through the terrors of old-fashioned grammar lessons must bear in mind that our present rising generation will not understand why Bobby stamped upon his grammar-book and wept over it so bitterly. It must be borne in mind, too, that the book is a bit of pure fun, not intended to convey serious instruction, as the title might suggest; for instance, that delightful sheet-anchor of our youth is given: "When a word seems to be no part of speech that you ever heard of, you may safely set it down as an adverb." We can hardly speak too highly of the pictures; somewhat in the style of Caldecott, they have a character of their own, and display unusual

humour of conception and power of line. It is a book that many a parent will buy for his child and keep for himself.

#### FAIRY TALES.

*The Grey Fairy Book*, edited by Andrew Lang (Longmans), is in no way inferior to its predecessors—"The Blue," "The Red," and "The Green Fairy Books"—which have long been deservedly popular with young and old. The illustrations in "The Grey Fairy Book" are delightful; and the stories themselves, translated or adapted by skilled hands, are wonderfully fresh and varied. The writers have put under contribution the fairy stories of many lands, and the result cannot be better described than in the words of the preface: "A certain number of incidents are shaken into many varying combinations, like the fragments of coloured glass in the kaleidoscope." Into this kaleidoscope we can safely predict that a large number of interested eyes will look, and find fascination.

#### ANNUAL VOLUMES.

Probably no gift-book is more welcome to a boy or girl at the end of a year than a handsomely bound volume of a well written and illustrated magazine. Certainly we cannot imagine a more comprehensive, diverting, and richly stored book of this kind than either the *Boy's Own Annual* or the companion *Girl's Own Annual*. The former, which is the twenty-second annual volume of *The Boy's Own Paper*, contains 840 pages of good adventure and other stories, with many illustrated articles on sports and pastimes, and pictures of those who have distinguished themselves in the year's play, fine coloured plates, papers on scientific experiments and natural history, anecdotes, jokes, chess, and the like. The *Girl's Own* is again an excellent volume—just as varied as the other, with girls' stories, pursuits, and interests in place of the masculine counterparts, with puzzles and poetry, and perhaps a trifle more of reserve and refinement in pictures and letterpress. Both volumes are very acceptable.

From the Religious Tract Society we have *Journeys to Jerusalem*: "A Sunday Afternoon Occupation for Young People, with a Key to the Journeys, and Instructions for their Right Performance," by M. and I. Moule.—All who have to do with children on Sunday know the utility of anything which combines amusement with Biblical teaching. These Journeys will be found to combine with sufficient amusement to arouse and keep the children's interest a good deal of useful Biblical knowledge.

### MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held on October 13. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Barlet, Rev. J. O. Bevan, Mr. Butler, Mr. Charles, Mr. Chettle, Miss Crookshank, Miss Dawes, Mr. Eve, Mr. Harris, Miss Jebb, Mr. Ladell, Mr. Millar Inglis, Mr. Pinches, Mr. Sergeant, and Rev. T. W. Sharpe.

The minutes of the last meeting were read and confirmed.

It was resolved that the simplifications in French syntax and spelling scheduled in the recent decree of the French Minister of Public Instruction should be tolerated in the College examinations in that subject, except with regard to the ordinary concords of the past participles of transitive and reflexive verbs, pending the approval or otherwise by the French Academy of the alternatives allowed by the decree.

The Report of the Finance Committee was adopted.

The Report of the Examination Committee was adopted.

Mr. G. Bowker, Waiorāgomai, Featherston, New Zealand, was elected a member of the College.

The following books had been presented to the Library since the last meeting of the Council:—

By the AUTHOR.—Bevan's Religious Teaching in Secondary Schools.

By the AGENT-GENERAL FOR NEW SOUTH WALES.—Coghlan's *Wealth and Progress of New South Wales*, 1898-9.

By E. ARNOLD.—Arnold's King Alfred Readers, Introductory Book; Arnold's Language Lessons, Books I., II., and III.; Bell's German without Tears, Book II.; Kaiser's Exercises in German Composition; Shenstone's Inorganic Chemistry.

By G. BELL & SONS.—Benson's Preparatory English Grammar.

By A. & C. BLACK.—Laudate: a Hymn and Tune-Book for Schools; Lyde's Geography of Asia; Varley's Progressive Chemistry.

By BLACKIE & SON.—Brockhurst's "Key-Word" Tests in Composition and Dictation; Laming's *Livy*, Book VI.; Michell's *Mérimée's Le Coup de Pistolet*; Scott's *Marmion*, Cantos IV. and V.; Smith's Brief Introduction to Commercial Geography; Winbolt's *Virgil's Georgics*, Book I.

By HACHETTE & CO.—Berthon's *Erickmann-Chatrion's Histoire d'un Conserit de 1813*, and Vocabulary to the same; Huguenet's *Decision of the Minister of Public Instruction and Fine Arts, simplifying the Teaching of French Syntax*; Lazare's *Unseen Passages from Modern French Authors*; Lazare and Marshall's *Vade-Mecum of French Composition*; Peschier's *Causeries Parisiennes*; Sundar's *Illustrated German Primer*; Weiss's *Selections in Prose and Verse from German Authors of the Day*, Parts I. and II.

By MACMILLAN & CO.—Emsage's *Elementary Mechanics of Solids*; Hallward and Hill's *Lamb's Essays of Elia* (Second Series); Nall's *Sallust's Catiline*; Rowe and Webb's *Tennyson's Lotus-Eaters*, &c.

Calendars of Royal Holloway College, King's College, London, and Queen's College, Cork.

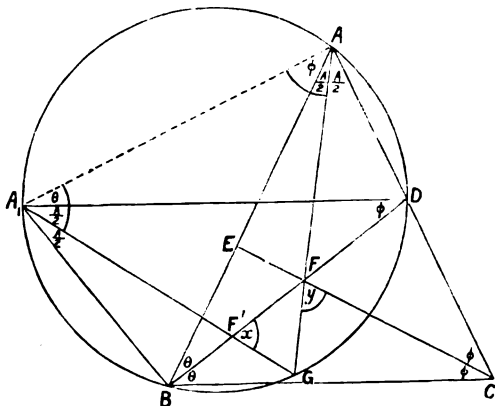


**MATHEMATICS.**

Further Note on Quests. 14620 and 14670 (triangle isosceles if bisectors of base angles equal).

Dr. J. S. MACKAY observes: "A direct proof of this Question, by F. G. HESSE, will be found in the *London, Edinburgh, and Dublin Philosophical Magazine* (Fourth Series), Vol. XLVII., pp. 354-7 (1874), and another by MOSSBRUGGER in GRUNERT'S *Archiv*, Vol. IV., pp. 330-1, 1844. "The Question seems to have been proposed for the first time by Prof. LEHMUS, of Berlin, to JACOB STEINER in the year 1840. A proof, with extensions of the Question, was given by STEINER in CRELLE'S *Journal*, Vol. XXVIII., p. 375-379, and many other proofs will be found scattered through the volumes of GRUNERT'S *Archiv*. See, for example, Vols. XI., XIII., XV., XVI., XVIII., XX., XXI., XLII., &c. The proof given in TODHUNTER'S *Euclid* is STEINER'S."

Mr. R. CHANTRES sends the following further direct proof, which seems quite satisfactory:—Place the triangle AEC in the position A<sub>1</sub>BD; then a circle will circumscribe BDAA<sub>1</sub>, and the bisectors of BAD, BA<sub>1</sub>D will

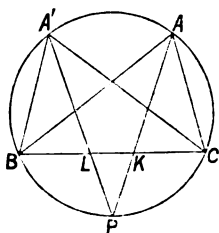


meet at G, the middle of the arc BGD, by a well known rider. Since  $x \equiv y = \frac{1}{2}A + \phi$ , and therefore  $\angle GAA_1$ , therefore a circle circumscribes F'FAA<sub>1</sub>; and, since the chords of it FA, F'A<sub>1</sub> are identical, therefore (Eucl. III. 14)  $\angle GA = \angle GA_1$ , or  $\phi + \frac{1}{2}A = \theta + \frac{1}{2}A$ ; therefore  $\theta = \phi$ , or ABC is isosceles.

COR. I.—If the external bisectors be equal, the triangle will be isosceles, *pace* Mr. GREENSTREET (see p. 422 in *Ed. Times*).

COR. II.—If the base angles be divided in a given ratio, then, if the dividing lines terminated by the opposite sides be equal and intersect on the bisector of the vertical angle, the triangle will be isosceles.

Mr. TUCKER sends the following:—The above Question reduces to this: Construct a triangle on a given base, with a given vertical angle and given bisector of that angle. Let BC be the base; on it describe a segment containing the given angle, and let P be the mid-point of the arc remote from A. PKA is drawn so that AK = given bisector of angle. Now, by Euclid III., from P there can be drawn only one other line = PLA' (= PKA); hence there can be only two congruent triangles, fulfilling the data of the problem; hence, &c.



14541. (JOHN C. MALET, F.R.S.)—If the roots  $x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8$  of the equation  $x^8 - p_1x^7 + p_2x^6 - p_3x^5 + p_4x^4 - p_5x^3 + p_6x^2 - p_7x + p_8 = 0$  are connected by the relations

$x_1 + x_2 + x_3 + x_4 = x_5 + x_6 + x_7 + x_8$  and  $x_1x_2x_3x_4 = x_5x_6x_7x_8$ ,  
 (a) prove  $p_7 = \sqrt{p_8} (p_3 - \frac{1}{2}p_1p_2 + \frac{1}{4}p_1^2)$ ,  
 $(Q_2p_7 - 2p_5\sqrt{p_8} + 2p_1p_8)^2 = (Q_2^2 - 4Q_4)(p_7^2 - 4p_8Q_6)$ ,  
 where  $Q_2 \equiv p_3 - \frac{1}{2}p_1^2$ ,  $Q_4 \equiv p_4 - p_1p_7/(2\sqrt{p_8}) - 2\sqrt{p_8}$ ,  $Q_6 \equiv p_6 - Q_2\sqrt{p_8}$ ;  
 (b) solve the equation.

Solution by the PROPOSER and H. W. CURJEL, M.A.

We have  $\Sigma x_1 = \Sigma x_5 = \frac{1}{2}p_1$ ;  $x_1x_2x_3x_4 = x_5x_6x_7x_8 = \sqrt{p_8}$ .  
 Let now  $\Sigma x_1x_2 = u_1$ ,  $\Sigma x_5x_6 = u_2$ ,  $\Sigma x_1x_2x_3 = v_1$ ,  $\Sigma x_5x_6x_7 = v_2$ ,  
 and we find  $u_1 + u_2 = Q_2$  ..... (1),  
 $\frac{1}{2}p_1(u_1 + u_2) + v_1 + v_2 = p_3$ ;  
 therefore  $v_1 + v_2 = p_3 - \frac{1}{2}p_1p_2 + \frac{1}{4}p_1^2$  ..... (2),  
 $u_1u_2 + \frac{1}{2}p_1(v_1 + v_2) + 2\sqrt{p_8} = p_4$ ,  $u_1v_2 + u_2v_1 = p_5 - p_1\sqrt{p_8}$  ..... (3, 4),  
 $(u_1 + u_2)\sqrt{p_8} + v_1v_2 = p_6$ ; therefore  $v_1v_2 = Q_6$  ..... (5);  
 $(v_1 + v_2)\sqrt{p_8} = p_7$  ..... (6).

From (6) and (2) we find

$p_7 = \sqrt{p_8} \{p_3 - \frac{1}{2}p_1p_2 + \frac{1}{4}p_1^2\}$ ,  
 one of the required conditions. We have from (3) and (6)  
 $u_1u_2 = Q_4$  ..... (7).

Hence, from (1) and (7),  
 $2u_1 = Q_2 + \sqrt{(Q_2^2 - 4Q_4)}$ ,  $2u_2 = Q_2 - \sqrt{(Q_2^2 - 4Q_4)}$ ;  
 and from (5) and (6)

$2v_1 = p_7/\sqrt{p_8} + \sqrt{(p_7^2/p_8 - 4Q_6)}$ ,  $2v_2 = p_7/\sqrt{p_8} - \sqrt{(p_7^2/p_8 - 4Q_6)}$ ,  
 Substituting in (4) for  $u_1, u_2, v_1, v_2$ , and rationalizing, we find the second required condition and the roots of the given equation are the roots of the quartics  
 $2x^4 - p_1x^3 + \{Q_2 \pm \sqrt{(Q_2^2 - 4Q_4)}\}x^2 - \{p_7/\sqrt{p_8} \pm \sqrt{(p_7^2/p_8 - 4Q_6)}\}x + 2\sqrt{p_8} = 0$ .

14538. (SALUTATION.)—Arrange in one plane two triangles of given dimensions in such manner that two specified vertices may coincide, and the other four be concyclic.

Solution by the PROPOSER and H. W. CURJEL, M.A., jointly.

Analysis.—Let ABC, ADE (Fig. 1) be two triangles fulfilling the conditions, A being the common vertex, and B, C, D, E being on the

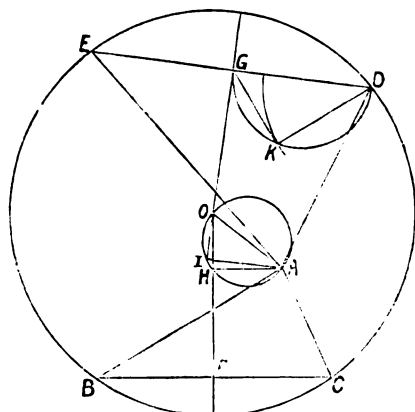


Fig. 1.

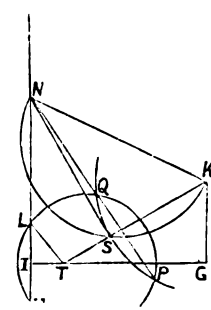


Fig. 2.

circumference of a single circle, of centre O. Let BC = 2a<sub>1</sub>, DE = 2a<sub>2</sub>; FH = h<sub>1</sub>, GI = h<sub>2</sub>; HA = d<sub>1</sub>; IA = d<sub>2</sub>; OF = x<sub>1</sub>, OG = x<sub>2</sub>. Then we clearly have  
 $x_1^2 + a_1^2 = x_2^2 + a_2^2$  ..... (a),  
 and  $(x_1 - h_1)^2 + d_1^2 = (x_2 - h_2)^2 + d_2^2$  ..... (b).

[The rest in Volume.]

14543. (PROFESSOR MORLEY.)—The greatest number of regions into which n spheres can divide space is  $2n + \frac{1}{3}n(n-1)(n-2)$ .

Solution by H. W. CURJEL, M.A.

The corresponding theorem for space of m dimensions is easily proved. If in space of m dimensions we call the hypersphere of highest possible dimensions a sphere, and a space of (m-1) dimensions a plane, the theorem may be stated: The greatest number of regions into which n spheres can divide a space of m dimensions is

$\{2(n-1)(n-2) \dots (n-m)\}/m!$   
 $+ 2 [1 + (n-1) + \{(n-1)(n-2)\}/2! + \dots \text{to } m \text{ terms}] = 2v_{m,n} + u_{m,n}$

(using the notation of Quest. 13395, Vol. LXVIII., p. 39).

The greatest number of regions into which m planes can divide space of m dimensions is shown in Quest. 13395 to be  $v_{m,n} + u_{m,n}$ ; if we invert with respect to a point in none of the planes, we see that the same is true of n spheres passing through a point. But the number of regions that are made to vanish by making the n spheres pass through a point is easily seen to be  $v_{m,n}$ ; therefore the greatest number of regions

$= 2v_{m,n} + u_{m,n}$ .

If we put m = 3, we get the result stated in the Question.

14547. PROFESSOR LANGHORNE ORCHARD, M.A., B.Sc.—Show that, if n be any positive integer greater than unity,

$\frac{1^3 + 2^3 + 3^3 + \dots + n^3 - (1^5 + 2^5 + 3^5 + \dots + n^5)}{(1 + 2 + 3 + \dots + n)^2 - (1^3 + 2^3 + 3^3 + \dots + n^3)} = 4$ .

Solution by H. W. CURJEL, M.A.; Lt.-Col. ALLAN CUNNINGHAM, R.E. and many others.

If  $s_r = \sum_{n=1}^{n-1} n^r$ ,  $s_2 = s_1^2$ , and  $s_3 = \frac{1}{2}(2n^2 + 2n - 1)s_2$ ,  
 therefore  $\frac{s_3 - s_2}{s_3 - s_1^2} = \frac{\frac{1}{2}(2n^2 + 2n - 1)s_2 - s_2}{\frac{1}{2}(2n^2 + 2n - 1)s_2 - \frac{1}{2}n(n+1)s_2} = 4$ .

**14546.** (PROFESSOR NEUBERG.)—Si les angles des triangles ABC, A'B'C' vérifient les égalités  $A + A' = \pi$ ,  $B = B'$ , les côtés sont liés par la relation  $aa' = bb' + cc'$ .

*Solution by R. P. PARANJPEE, B.A.; Professor IGNACIO BRYENS, Lt.-Col. du Génie à Cadix; and many others.*

With centre C describe a circle, radius CA, cutting AB in D.

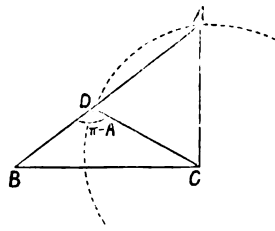
Then, obviously, DBC is similar to the triangle A'B'C' of the enunciation.

Since the relation to be proved is homogeneous in  $a, b, c$  as well as  $a', b', c'$ , we may prove

$$BC^2 = AC^2 + BA \cdot BD,$$

which is a well-known proposition (see CASEY'S *Sequel*).

Hence the required relation.



**14536.** (I. ARNOLD.)—In any triangle the radius of the circumscribed circle is to the radius of the circle which is the locus of the vertex, when the base and the ratio of the sides are given, as the difference of the squares of those sides is to four times the area.

*Solution by F. H. PEACHELL, B.A.; RAGUNATH RAU, B.A.; and W. J. GREENSTREET, M.A.*

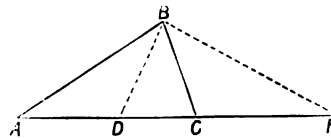
The locus of vertex, when the ratio of the sides is given, is the semicircle on DF, where D, F divide AC internally and externally in ratio of the sides. Therefore

$$CD : DA = a : c,$$

or  $CD : AC = a : c + a$ ;

therefore  $CD = ab/(c + a)$ , and similarly  $CF = ab/(c - a)$ ; therefore radius of locus =  $abc/(c^2 - a^2)$ .

$$\text{Radius of locus : circum-radius} = abc/(c^2 - a^2) : abc/4\Delta = 4\Delta : c^2 - a^2.$$



**14467.** (G. H. HARDY, B.A.)—Prove that

$$\int_{-\infty}^{\infty} \{ \phi(x-a) - \phi(x-b) \} dx = (b-a) \{ \phi(\infty) - \phi(-\infty) \},$$

provided each side of the equation represents a determinate quantity. Deduce the values of

$$\int_{-\infty}^{\infty} \frac{dx}{\cosh(x-a) \cosh(x-b)}, \quad P \int_{-\infty}^{\infty} \frac{dx}{\sinh(x-a) \sinh(x-b)}.$$

*Solution by the PROPOSER.*

$$\begin{aligned} \int_{-\infty}^{\infty} \{ \phi(x-a) - \phi(x-b) \} dx &= \lim_{H \rightarrow \infty} \int_{-H}^H \{ \phi(x-a) - \phi(x-b) \} dx \\ &= \lim_{H \rightarrow \infty} \left[ \int_{-H-a}^{-H-a} \phi(u) du - \int_{-H-b}^{-H-b} \phi(u) du \right] \\ &= \lim_{H \rightarrow \infty} \left[ \int_{H-a}^{H-a} \phi(u) du - \int_{H-b}^{H-b} \phi(u) du \right] \\ &= (b-a) \{ \phi(\infty) - \phi(-\infty) \}, \end{aligned}$$

if both sides of the equation be determinate.

If  $\phi(u) = \tanh u$ ,

$$\phi(x-a) - \phi(x-b) = \frac{\sinh(b-a)}{\cosh(x-a) \cosh(x-b)},$$

and  $\int_{-\infty}^{\infty} \frac{dx}{\cosh(x-a) \cosh(x-b)} = \frac{b-a}{\sinh(b-a)}$ .

If  $\phi(u) = \coth u$ , we find

$$P \int_{-\infty}^{\infty} \frac{dx}{\sinh(x-a) \sinh(x-b)} = -\frac{b-a}{\sinh(b-a)}.$$

It is easy to see that the proof remains valid, although in the latter case only the principal value of the integral is determinate.

*Note on Quest. 6144 (Reprint, Vol. LXXIII., p. 113). By Rev. CHARLES TAYLOR, D.D., Master of St. John's College, Cambridge.*

For "circumscribed" read "circum-inscribed." This term is used in the *Ancient and Modern Geometry of Conics* (pp. 139, 140) in the sense circumscribed to one curve and inscribed to another.

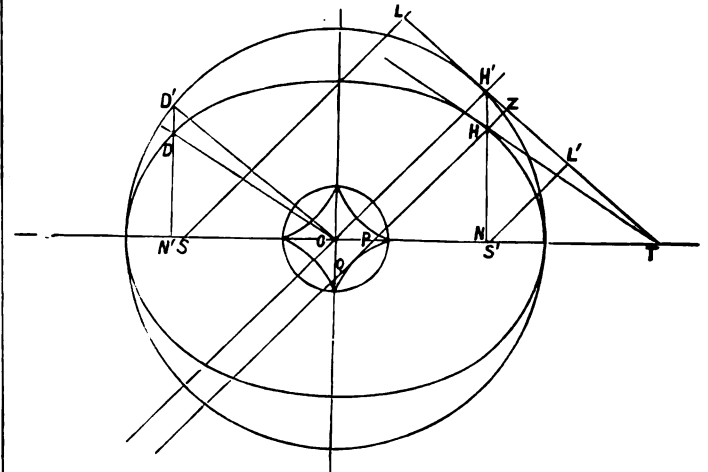
**14312.** (PROFESSOR N. L. BHATTACHARYYA.)—A parabola slides between the two foci of an ellipse, such that the focus of the parabola always lies on the ellipse. Find the envelope of (1) the directrix, (2) the axis, of the parabola.

*Solution by A. F. VAN DER HUYDEN, B.A.; H. W. CURJEL, M.A.; and Rev. J. CULLEN.*

Let SL, S'L', CH' be perpendiculars to the directrix of the parabola, in any position, from the foci and centre of the ellipse. Then  $SL + S'L' = 2CH'$ .

But  $SL + S'L' = SH + S'H$  [if H is the focus of the parabola] =  $2CA$ ; therefore  $CH' = CA$ ;

therefore the envelope of the directrix is the auxiliary circle of the ellipse .....(1).



Let H, H' be corresponding points; HT, H'T tangents. Then  $SH : S'H = ST : S'T = SL : S'L'$ .

[The rest in Vol.]

*Euclidean Proof of PASCAL'S Theorem. By R. F. DAVIS, M.A.*

Let ABCDEF be a cyclic hexagon. Produce AB, DE to meet in G, and AF, CD in K. Let BC and the circumcircle of DFK intersect GK in H, P respectively.

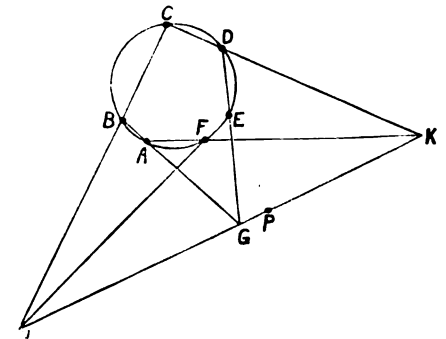
Then (1) P, D, B, G are concyclic, for  
 $180^\circ - DPG$   
 $= DPK = DFK$   
 $= 180^\circ - DFA$   
 $= DBG$ .

Also (2) P, F, B, H are concyclic, for  
 $FPH = 180^\circ - FPK$   
 $= FDK = FBC$   
 $= 180^\circ - FBH$ .

From (2)  
 $BFH = BPH$   
 $= BPG$   
 $= BDE$

from (1) =  $180^\circ - BFE$ ;  
 therefore EF passes through H.

[In most geometrical conics PASCAL'S theorem for the conic is derived from the theorem for the circle by conical projection. The above proof is strictly Euclidean: it neither involves anharmonic ratios (CASEY'S *Sequel*, NIXON'S *Geometry Revised*, &c.) nor MENELAUS' *Transversal Theorem*, which is employed by CATALAN.]



**QUESTIONS FOR SOLUTION.**

**14704.** (PROFESSOR G. B. MATHEWS, F.R.S.)—If  $x, y$  independently assume the values  $0, \pm 1, \pm 2, \pm 3, \dots$ , prove that 
$$x e^{-x(x^2+y^2)} = \frac{\sqrt{4+2\sqrt{2}}}{\pi} \int_0^1 \frac{dx}{\sqrt{1-x^4}}$$

**14705.** (PROFESSOR NEUBERG.)—Etant donné un triangle ABC, appelons  $a', b', c'$  les distances B'C', C'A', A'B' des projections A', B', C' d'un point M sur les côtés BC, CA, AB. Trouver le lieu des points M lorsque  $a', b', c'$  vérifient la relation donnée  $ka'^2 + lb'^2 + nc'^2 = p$ . Trouver également le lieu décrit par le centre de gravité du triangle A'B'C'.

**14706.** (PROFESSOR E. J. NANSON.)—The sides of two triangles touch the parabola  $l/r = 1 + \cos \theta$  at the points whose vectorial angles are  $2\alpha, 2\beta, 2\gamma; 2\alpha', 2\beta', 2\gamma'$ . Show that their vertices lie on the conic 
$$\sin(\alpha' + \beta' + \gamma' - \alpha - \beta - \gamma) \{l/r - \cos \theta\}^2 - \{ \sin(\beta' + \gamma' - \beta - \gamma) \cos(\theta - \alpha - \alpha') + \dots \} \{l/r - \cos \theta\} + \sin(\alpha' - \alpha) \cos(\theta - \beta - \beta') \cos(\theta - \gamma - \gamma') + \dots + \sin(\alpha' - \alpha) \sin(\beta' - \beta) \sin(\gamma' - \gamma) = 0.$$

**14707.** (PROFESSOR JAN DE VRIES.)—Solve the equation 
$$x(\partial^2 z / \partial x^2) - x(\partial^2 z / \partial y^2) = 2(\partial z / \partial x).$$

**14708.** (J. A. THIRD, M.A., D.Sc.)—P is any point on the circum-circle of a triangle ABC, of which H is the orthocentre. Q is the image of P with respect to BC. The perpendicular to QH at Q meets BC in X, and the perpendicular to QH from A meets BC in Y. Show that BX = CY.

**14709.** (Professor COCHEZ.)—Construire un triangle, connaissant l'angle A, le rayon r du cercle inscrit et le produit AB.AC = K<sup>2</sup>.

**14710.** (Professor N. BHATTACHARYA.)—From the centre of curvature at any point on the ellipse (x<sup>2</sup>/a<sup>2</sup>) + (y<sup>2</sup>/b<sup>2</sup>) = 1 two other normals are drawn. Show that the envelope of the line joining their feet is the curve (x/a)<sup>2</sup> + (y/b)<sup>2</sup> = 1.

**14711.** (Professor UMES CHANDRA GHOSH.)—Show that in areal coordinates

$$\alpha \cos A \sin(B-C) + \beta \cos B \sin(C-A) + \gamma \cos C \sin(A-B) = 0$$

is the equation of the line passing through the centres of the polar circle, nine-point circle, and circumcircle of a triangle ABC and its centroid.

**14712.** (Professor K. J. SANJANA, M.A.)—If the centre of a conic circumscribed to the triangle of reference be at the point (fgh), prove that its equation is  $\Sigma f(bg+ch-af) + a = 0$ . Hence or otherwise show that one point of intersection of the conics  $\beta\gamma/a + \gamma\alpha/b + \alpha\beta/c = \Delta^2/abc$  and  $a^2x^2 + b^2y^2 + c^2z^2 = 2\Delta^2$  lies on the line

$$\alpha\{\sin(B-C)\} + \beta\{\sin(C-A)\} + \gamma\{\sin(A-B)\} = 0.$$

**14713.** (Prince C. DE POLIGNAC.)—If t<sub>1</sub>, u<sub>1</sub> are the smallest integer solutions of the PELLIAN equation t<sup>2</sup> - Du<sup>2</sup> = 1 (D a positive integer, not a square), t<sub>n</sub>, u<sub>n</sub> any other two solutions, show that there exists a linear substitution x<sub>1</sub> = (Q<sub>1</sub>x + S<sub>1</sub>)/(P<sub>1</sub>x + R<sub>1</sub>) such that, if we write its nth power as x<sub>n</sub> = (Q<sub>n</sub>x + S<sub>n</sub>)/(P<sub>n</sub>x + R<sub>n</sub>), Q<sub>n</sub> and P<sub>n</sub>/u<sub>1</sub> will give the solutions t<sub>n</sub>, u<sub>n</sub> of the above equation.

**14714.** (D. BIDDLE.)—S is the sum of 2n+1 consecutive integers, the first of which is a. Prove that S-a and 2(S+n)+1 have a factor in common, and give its value.

**14715.** (R. TUCKER, M.A.)—The sides of a triangle are produced to A', B', C' respectively, so that CA' = n.BC, AB' = n.CA, BC' = n.AB. Prove that ABC, A'B'C' have the same BROCARD angle and are concentric.

**14716.** (W. H. BLYTHE, M.A.)—Let a parabola be described with focus S and directrix XX', and let a point Y be taken on the tangent at the vertex A. Take also a fixed point C on the axis of the parabola. Describe a circle with centre Y and distance YC to cut the focal chord YS, produced both ways, in P and P'. Let the second tangent from Y to the parabola meet it in Q.

Considering Y as a variable point, it will be found that P and P' trace out a circular cubic curve. The curve consists of two parts—an oval passing through S, and an infinite branch to which the directrix is an asymptote. The normals at P and P' intersect at Q, and SP.SP' is constant; so that the oval and infinite branch reciprocate one into the other.

Prove, geometrically, (1) that the fourth proportional to SQ, SP, SP' is also the harmonic mean between the subtangents of the cubic at the points P and P'

(2) SN.SN' : SP.SP' = SA : SQ where PN, P'N' are perpendiculars to the axis.

(3) If the normal at P cuts the axis in G, then

$$SG : SA = SP.SP' : SN^2.$$

(4) Can any simple relations be found between SP, SP' and the focal chord of the circle of curvature at P?

(5) Is there any simple method of finding the points of inflexion?

(6) If P, P' be the extremities of the focal chord PSP' and PN, P'N' be perpendicular to the axis, and the normal at P meet the axis in G, then, if PG<sup>2</sup> : PN<sup>2</sup> = 2SG : SN', P is a point of inflexion.

(7) If SN' = SQ, the tangent at P is parallel to the axis.

(8) Let the tangent at P meet the curve again in T and the asymptote in E, and let SD be perpendicular to PT. Let the normal at P meet the axis in G, and let PT meet the parallel to the asymptote through S in Z. Let TQ, perpendicular to the axis, meet the curve again in Q, and let QP meet the curve again in R. Prove that 2DP = TE; that the circle of curvature at P passes through R; and that a parallel to TG through Z meets PG in the centre of the circle of curvature at P.

[NOTE.—The third problem may be stated thus:—SG varies inversely as the square on SN'.]

**14717.** (R. F. DAVIS, M.A.)—If the numbers of the form 7m, 7m+1, ..., 7m+6 denote Sunday, Monday, ..., Saturday respectively, prove that January 1st in the year 1801+x falls upon the {x+4+[x/4]-[x/100]}th day of the week, where [x/4] is the integral part of x/4.

**14718.** (Rev. Prebendary WHITWORTH, M.A.)—A. has £m and B. has £n. They play for pound points until one of them has lost all his money. If a and β be the respective chances that A. and B. win any point, the expectation of the number of points played will be

$$\{na^n(a^m - \beta^m) - m\beta^n(a^n - \beta^n)\} / \{(a - \beta)(a^{m+n} - \beta^{m+n})\}.$$

**14719.** (G. H. HARDY, B.A.)—Prove that

$$\int_0^\infty \frac{x^\mu dx}{1+x^\nu(\sin x)^\nu} \quad (\mu > -1)$$

is convergent if  $\nu > (p+1)(\mu+1)$ ; and obtain precise criteria for convergence or divergence in the cases  $p = 0, 1, 2$ .

**14720.** (R. P. PARANJPE, B.A.)—Without using any properties of projection, anharmonic ratios, poles and polars, &c., prove the fundamental property of the FÉREGUE-point: Chords of a conic subtending a right angle at a fixed point P on it pass through a definite point on the normal at P.

**14721.** (H. MACCOLL, B.A.)—Two equal intersecting circles X and Y touch a given circle A internally so that the area common to X and Y is always equal to the area (in A) excluded from X and Y. Construct the circle which is the locus of the centres of X and Y.

**14722.** (Lt.-Col. ALLAN CUNNINGHAM, R.E.)—Solve in integers in a general manner, with numerical examples—

$$\frac{N_1 \cdot N_2 \cdot N_3 \dots N_{2r+1}}{N_1 \cdot N_2 \cdot N_4 \dots N_{2r}} = \frac{N_n}{N_0},$$

where  $N_r = x_r^4 + 4y_r^4$ .

**14723.** (Rev. J. CULLEN.)—If the triangles homothetic with the DEF triangles of a TUCKER-circle T<sub>μ</sub> (Ω and Ω' being the homothetic centres) have a common B.-circle, show that (1) this circle cuts the B.-circle of ABC at an angle θ and passes through Ω and Ω'; (2) points in the homothetic triangles corresponding to a point P on the B.-circle of ABC are the intersections of PΩ and PΩ' with the common B.-circle; (3) if the homothetic triangles of T<sub>μ</sub> have a common T<sub>μ</sub>-circle (μ being the modulus of similarity with reference to DEF), then for the same value of μ the triangles of T<sub>μ</sub> have a common T<sub>μ</sub>-circle.

**14724.** (R. F. MUIRHEAD.)—Through a given point E draw a line QEP meeting AB produced in Q and BC produced in P so that BQ = CP, A, B, C being given points.

**14725.** (ROBERT W. D. CHRISTIE.)—Prove the following theorems on circulators. P = any prime having an even period; H<sub>1</sub> = the number formed by the figures of the first half; H<sub>2</sub> = the number formed by the figures of the second half. Then

$$P-1 = (H_2+1)/(H_1+1), \quad H_2(P-1) = (P-2)10^{1/2}P + H_1 \quad (1, 2)$$

$$(H_2+1)/(H_1+1) = (10^{1/2}P - H_1)/(10^{1/2}P - H_2), \quad 10^{1/2}P - H_1 = 0 \text{ mod } P \quad (3, 4)$$

$$H_1 + H_2 + 2 = 0 \text{ mod } P = 10^{1/2}P + 1, \quad (H_1 + H_2 + 2)/(H_2 - H_1) = p/(p-2) \quad (5, 6)$$

$$P(H_1+1) = 10^{1/2}P + 1 \dots\dots\dots (7)$$

and various others by combination.

Example of (1)— P = 7,  $\frac{1}{2} = 142857$ ;

therefore 7-1 = (857+1)/(142+1) = 6.

**14726.** (R. CHARTRES.)—If the perimeter of a variable triangle ABC be constant, find the mean value of the maximum value of the minimum  $\Sigma(FA)$ , F being FERMAT'S point.

**14727.** (H. A. WEBB.)—If a cubic surface and a quadric surface intersect in three conics, the three straight lines in which the planes of the conics cut the cubic again lie in a plane. In general, if a surface of the nth degree intersect a surface of the pth degree (n > p) in n plane curves of the pth degree, the n plane curves of the (n-p)th degree in which the planes cut the given surface of the nth degree again lie on a surface of the (n-p)th degree.

**14728.** (R. KNOWLES.)—PC is the chord of curvature at the point P of a rectangular hyperbola; O is the mid-point of PC; the diameter of the hyperbola through O meets the circle on PC as diameter in T, T'; tangents to the circle at TT' meet the hyperbola in XX', YY' respectively; M, M' are their mid-points. Prove that (1) TP, T'P and OM, OM' are parallel to the asymptotes; (2) the poles of XX', YY' with respect to the hyperbola are on the diameter of the hyperbola through P.

**14729.** (V. DANIEL.)—If the focus of the parabola y<sup>2</sup> = 4ax is the symmedian point of the triangle formed by a pair of tangents and their chord of contact, show that the locus of the pole of the chord is the parabola y<sup>2</sup> + 2a(x+3a) = 0; the locus of the centre of gravity of the triangle is y<sup>2</sup> - 2a(x-a) = 0; and the envelope of the chord is y<sup>2</sup> + 8a(x-3a) = 0.

**14730.** (Professor FRANZ ROGEL.)—Prove that

$$(a) \binom{6n+3}{6} B_3 - \binom{6n+3}{12} B_6 + \binom{6n+3}{18} B_9 - \dots + (-1)^{n+1} \binom{6n+3}{6n} B_{3n} = 2n;$$

$$(b) \binom{6n+5}{2} B_1 - \binom{6n+5}{8} B_4 + \binom{6n+5}{14} B_7 - \dots + (-1)^n \binom{6n+5}{6n+2} B_{3n+1} = 2n + \frac{1}{2};$$

$$(c) \binom{6n+1}{4} B_2 - \binom{6n+1}{10} B_5 + \binom{6n+1}{16} B_8 - \dots + (-1)^n \binom{6n+1}{6n-2} B_{2n-1} = n + \frac{1}{2};$$

n integer, B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, ... Bernoullian numbers.

**14731.** (I. ARNOLD.)—ABCD is a square whose base AB is 12 inches. Four forces, proportional to 8, 10, 12, 16, act in the plane of the square at the angular points A, B, C, D, making with the direction AB the angles 30°, 45°, 60°, and 150° respectively. Required the magnitude and direction of a force which, acting on AB, shall keep the square in equilibrium.

**14732.** (W. J. JOHNSTON.)—If a rigid body rotates round an axis, through the origin whose direction cosines are  $l, m, n$ , through an angle  $\phi$ , prove that the new coordinates of the point originally at  $(x, y, z)$  are  
 $X = x \cos \phi + l(x + my + nz)(1 - \cos \phi) + (mz - ny) \sin \phi$ ,  
 $Y = \dots, Z = \dots$

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6721.** (J. YOUNG, B.A.)—Through a point in the base of a triangle produced, draw a straight line cutting the sides so that the rectangle contained by the segment of one side towards the base and the segment of the other towards the vertex of the triangle shall be a maximum.

**6723.** (C. LEUDESORF, M.A.)—A pair of tangents to a given conic form an harmonic pencil with two straight lines whose directions are given and which include a right angle. Show that the locus of the point of intersection of the tangents is a rectangular hyperbola, except in the case where the given conic is a parabola, when the locus is a straight line.

**6724.** (E. B. ELLIOTT, M.A.)—If  $a_1, a_2, \dots, a_{2r}$  be the  $2r$  imaginary  $(2r+1)$ th root of unity, and if

$$c_n = \frac{a_1^{n+2r-1}}{(a_1-a_2)(a_1-a_3)\dots(a_1-a_{2r})} + \frac{a_2^{n+2r-1}}{(a_2-a_1)(a_2-a_3)\dots(a_2-a_{2r})} + \dots$$

prove that  $c_n = 2 \{c_0 c_{2n} - c_1 c_{2n-1} + c_2 c_{2n-2} - \dots + (-1)^n c_n^2\}$ ,  $n$  being any positive integer.

**6726.** (J. HAMMOND, M.A.)—If

$$S = \Gamma(r+1) + \frac{\Gamma(r+2)}{2!} + \frac{\Gamma(r+3)}{2!3!} + \frac{\Gamma(r+4)}{3!4!} + \dots \text{ to } \infty,$$

prove that  $S = \frac{\Gamma(r) \sin r\pi}{\pi} \int_0^1 \left(\frac{x}{1-x}\right)^r dx$ .

**6727.** (W. H. BLYTHE, B.A.)—If a conic with centre O be self-conjugate to the triangle ABC, and if OA', OB', OC' be perpendicular to the sides, then, if R = radius of circle circumscribing ABC,  $\Delta$  = area of ABC,  $\Delta'$  of A'B'C', prove that  $4R^2/\Delta = r^2/\Delta'$ .

NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

THE LONDON MATHEMATICAL SOCIETY.

The Annual General Meeting of the Society will be held in its rooms at 22 Albemarle Street, on the evening of Thursday, November 8, at 5.30 o'clock.

The following is the list of members who have been recommended by the present Council for election as the Council and officers for the ensuing session:—*President*, Dr. Hobson, F.R.S.; *Vice-Presidents*, Lord Kelvin, G.C.V.O., Prof. W. Burnside, F.R.S., and Major MacMahon, R.A., F.R.S.; *Treasurer*, Dr. J. Larmor, F.R.S.; *Hon. Secs.*, R. Tucker, M.A., and Prof. A. E. H. Love, F.R.S.; *other members*, J. E. Campbell, M.A., Lieut.-Col. Cunningham, R.E., Prof. Elliott, F.R.S., Dr. Glaisher, F.R.S., Prof. M. J. M. Hill, F.R.S., A. B. Kempe, F.R.S., H. M. Macdonald, M.A., A. E. Western, M.A., and E. T. Whittaker, M.A.

Lord Kelvin will make a short valedictory communication, the title of which is, "On the Transmission of Force through a Solid."

In addition to the papers announced in last month's issue, a further paper by Dr. Glaisher is promised, with the title, "On the Residues of Bernoullian Functions for a Prime Modulus, including as special cases the Residues of the Eulerian Numbers and the I-numbers."

CUSACK'S SERIES OF TEXT-BOOKS

FOR THE ELEMENTARY DRAWING CERTIFICATE.

**CUSACK'S FREEHAND**, Part I. Conventional Forms, 3s. 6d. net; post free, 3s. 10d.

**CUSACK'S FREEHAND**, Part II. Natural Forms (Animals, Plants) and Common Objects. 3s. 6d.; post free, 3s. 10d.

**CUSACK'S MODEL DRAWING**. 3s. 6d. net; post free, 3s. 10d.

**CUSACK'S HOW TO DRAW THE GEOMETRIC MODELS AND VASES**. 9d. net; post free, 10d.

**CUSACK'S SHADING**. 3s. 6d. net; post free, 3s. 10d.

**CUSACK'S PLANE GEOMETRY**. 3s. 6d. net; post free, 3s. 10d.

**CUSACK'S SOLID GEOMETRY**. For Science Subject I, or Art Geometry. 3s. 6d. net; post free, 3s. 10d.

**CUSACK'S PATENT GEOMETRIKON**. (Box of Apparatus for simplifying the study of Solid Geometry.) 3s. 6d. net; post free, 3s. 10d.

CITY OF LONDON BOOK DEPOT,  
 WHITE STREET, MOORFIELDS, LONDON, E.C.

SEELEY & CO.'S BOOKS.

**THE CELESTIAL COUNTRY.** Hymns and Poems, chiefly Medieval, on the Joys and Glories of Paradise. With Ten Copper Plates after the early Italian Painters. Super Royal 8vo., cloth gilt, 12s. 6d.

**CAMEOS.** By CYRIL DAVENPORT, F.S.A., of the British Museum, Author of "Royal English Bookbindings," &c., &c. With over Fifty Illustrations, including several in colour. Super Royal 8vo., cloth, gilt top, 7s. net. [Immediately.]

**MADAME.** A Life of Henrietta, Daughter of Charles I. and Duchess of Orleans. By Mrs. HENRY ADY, Author of "Sacharissa," "Beatrice d'Este," &c., &c. Revised and Cheaper Edition. With Five Portraits. Demy 8vo., 7s. 6d.

"The Merry Monarch's illspelt and ungrammatical, but on the whole lively and entertaining, epistles to his sister, as a contribution to our knowledge of the social life of the seventeenth century, are probably unsurpassed save by Pepys's wonderful Diary."—*Daily News*.

**EMMA MARSHALL.** A Biographical Sketch. By BEATRICE MARSHALL. With Portraits and other Illustrations. 6s.

"Miss Marshall is to be congratulated on the charming way in which she has given us a sketch of her mother's life."—*Bristol Times*.

**THE WIND FAIRIES, and other Stories.** By MARY DE MORGAN, Author of "On a Pincushion," "The Necklace of Princess Fiorimonde," &c. With many Illustrations by Olive Cockerell. 8vo., cloth, gilt edges, 5s.

**SYLVIA IN FLOWER LAND.** By LINDA GARDINER. With 16 Illustrations by HERBERT E. BUTLER. 3s. 6d.

"A charming fantasy. . . . We have never observed a more dexterous administration of the facts of science in the guise of romance."—*World*.

PROF. CHURCH'S NEW BOOK.

**HELMET AND SPEAR.** Stories from the Wars of the Greeks and Romans. By the Rev. A. J. CHURCH. With Eight Illustrations by G. Morrow. 5s.

"Capitally illustrated, and forms an exceptionally strong book for boys."—*Scotsman*.

BY THE SAME AUTHOR.

**Stories from Homer.** With Illustrations. 24th Thousand. 5s.

**Stories from Virgil.** With Illustrations. 17th Thousand. 5s.

**Stories from the Greek Tragedians.** With Illustrations. 5s.

**Stories from the Greek Comedians.** With Illustrations. 5s.

**Stories of the East, from Herodotus.** With Illustrations. 5s.

**The Story of the Persian War, from Herodotus.** With Illustrations. 5s.

**Stories from Livy.** With Illustrations. 5s.

**Roman Life in the Days of Cicero.** With Illustrations. 5s.

**The Story of the Iliad.** With Illustrations. 5s.

**The Story of the Odyssey.** With Illustrations. 5s.

**The Burning of Rome: A Story of Nero's Days.** With Illustrations. 5s.

**A Young Macedonian, in the Army of Alexander the Great.** With Illustrations. 5s.

**Heroes of Chivalry and Romance.** Beowulf, Arthur, and Siegfried. With Illustrations in colour by G. Morrow. 5s.

**The Count of the Saxon Shore.** With Illustrations. 5s.

**The Fall of Athens: A Story of the Peloponnesian War.** With Illustrations. 5s.

**Stories from English History.** With many Illustrations. 5s.

**With the King at Oxford: A Story of the Great Rebellion.** With Illustrations. 5s.

**The Hammer: A Story of Maccabean Times.** By Rev. A. J. CHURCH and RICHMOND SEELEY. With Illustrations. 5s.

**To the Lions: A Tale of the Early Christians.** 3s. 6d.

**The Story of the Last Days of Jerusalem, from Josephus.** With Illustrations. 3s. 6d.

**The Traveller's True Tale, from Lucian.** With Illustrations. 3s. 6d.

**Three Greek Children: A Story of Home in Old Time.** With Illustrations. 3s. 6d.

BY THE REV. E. GILLIAT.

**WOLF'S HEAD: A Story of the Prince of Outlaws.** By the Rev. E. GILLIAT, Assistant Master in Harrow School, &c. With 8 Illustrations. 5s.

"Will give a fund of enjoyment to any boys and girls who know even slightly about the days of John."—*Educational Times*.

**In Lincoln Green: A Merrie Tale of Robin Hood.** With Illustrations. 5s. | **The King's Reeve, and How he Supped with his Master.** 5s.

BY MRS. MARSHALL.

**THE PARSON'S DAUGHTER, AND HOW SHE WAS PAINTED BY MR. ROMNEY.** A Story by EMMA MARSHALL, Author of "Under the Dome of St. Paul's," "In Westminster Choir," &c. With 8 Illustrations after Romney and Gainsborough. 5s.

"Written with that charm and feeling for the perfume of a period which the author has so frequently brought to bear on similar themes."—*Outlook*.

LONDON:

SEELEY & CO., LIMITED, 38 GREAT RUSSELL STREET.

# Blackie's Illustrated Latin Series

**General Editor—Professor R. Y. TYRRELL, Litt.D.**

Examiner to the Universities of London and Glasgow, &c.

With full-page **COLOURED** Plates; full-page photographs of Bas-reliefs, Statues, &c., beautifully printed on superfine art paper; numerous black and white Illustrations specially drawn for this Series.

*The Volumes are issued with or without Vocabularies.*

- CÆSAR'S GALLIC WAR, BOOK I.** Edited by Professor JOHN BROWN, M.A., University of New Zealand. With six full-page plates, twenty-four illustrations, five maps and plans, and a coloured map of Gaul. 1s. 6d.
- VIRGIL'S GEORGICS, BOOK I.** Edited by S. E. WINBOLT, M.A., Assistant Master in Christ's Hospital. 1s. 6d.
- LIVY, BOOK VI.** Edited by W. CECIL LAMING, M.A., Classical Master in Edinburgh Academy. 2s. 6d.
- SALLUST'S CATILINE.** Edited by the Rev. W. A. STONE, M.A., Assistant Master in Bristol Grammar School. 1s. 6d.
- CICERO'S CATILINE ORATIONS.** Edited by Professor C. HAINES KEENE, M.A. **Second Edition.** 2s. 6d. This second edition contains **three** full-page plates, as well as many illustrations.
- CICERO — THE FIRST CATILINE ORATION.** Edited by Professor C. H. KEENE, M.A. 1s. 6d.
- EUTROPIUS, BOOKS I. AND II.** Edited by W. CECIL LAMING, M.A. 1s. 6d.
- LIVY, BOOK V.** Edited by W. CECIL LAMING, M.A. 2s. 6d.
- HORACE—THE ODES, BOOKS I., II., III., AND IV.** Edited by STEPHEN GWYNN, B.A. 1s. 6d. each.
- TACITUS—AGRICOLA.** Edited by W. C. FLAMSTEAD WALTERS, M.A. 1s. 6d.
- VIRGIL—ÆNEID III.** Edited by Professor SANDFORD, M.A. 1s. 6d.

## Blackie & Son's New Books.

- KEY TO BAUMANN'S FIRST GERMAN COURSE.** 2s. 6d. net.  
Mr. Baumann's First German Course, a companion volume to Beuzemaker's First French Course, is provided with a Key for teachers only.
- A FIRST COURSE OF GERMAN COMMERCIAL CORRESPONDENCE.** By A. OSWALD, Lecturer in the Athenæum Commercial College, Glasgow. 2s.
- FRENCH COMMERCIAL CORRESPONDENCE.** By ALFRED STARK. 1s. 6d.
- LE COUP DE PISTOLET.** (Prosper Mérimée's well-known popular story.) Edited by J. E. MICHELL, M.A., Ph.D., Assistant-Master in Westminster School. 1s.
- FABLIAUX FRANÇAIS.** A Selection of French Fables. Edited by EMILE B. LE FRANÇOIS, French Master in Bristol Higher-Grade School, &c. 1s.  
These books are each suited for a single term's work in French.
- A BRIEF COMMERCIAL GEOGRAPHY OF THE WORLD.** By the Rev. FREDERICK SMITH, formerly Science Master in Dollar Academy. 1s. 9d.
- DRYDEN'S ESSAY ON DRAMATIC POESY.** Edited by D. NICHOL SMITH, M.A., Editor of "Henry VIII." (The Warwick Shakespeare) and Boileau's "Art Poétique." 2s.  
This is the most fully equipped edition of Dryden's famous Essay yet published. The Introduction discusses the circumstances which gave rise to the Essay, and ably summarizes it; the Notes are explanatory and critical; and an Appendix gives Sir Robert Howard's criticism of the Essay and Dryden's rejoinder.
- GOLDSMITH'S RETALIATION.** Edited by G. H. BLAKENEY, M.A.
- COWPER'S EXPOSTULATION.** Edited by A. A. BRAYLEY, B.A. (Blackie's "Junior School English Classics.") Paper, 2d.; cloth, 3d.
- GREEK UNSEENS. INTERMEDIATE SECTION.** Paper cover, 4d.

NEW ILLUSTRATED SCHOOL SHAKESPEARE.

## Blackie's Picture Shakespeare.

Under the above title Messrs. Blackie and Son are about to issue an illustrated edition of Shakespeare's Plays, in single volumes, suitable for Schools and the home circle. Each volume will be provided with a brief introduction and explanatory notes, and will contain a coloured frontispiece and numerous black and white illustrations. The Plays are issued in prettily-designed cloth covers, at a uniform price of 1s. 6d. per volume. The Series is adapted for the University Local and College of Preceptors' Examinations. The first volumes are—

**AS YOU LIKE IT** (November 15).

**JULIUS CÆSAR** (In December).



# BLACKIE & SON'S NEW ILLUSTRATED BOOKS

## FOR SCHOOL PRIZES, REWARDS, &C.

By **G. A. HENTY.**

- With Buller in Natal; or, A Born Leader.** With 10 Page Illustrations by W. RAINY, R.I., and a Map. 6s.
- Out with Garibaldi: A Story of the Liberation of Italy.** With 8 Page Illustrations by W. RAINY, R.I., and 2 Maps. 5s.
- In the Irish Brigade: A Tale of War in Flanders and Spain.** With 12 Illustrations by CHARLES M. SHELDON, and 2 Maps. 6s.
- For Name and Fame; or, To Cabul with Roberts.** With 8 Page Illustrations by GORDON BROWNE. *New Edition.* 5s.

### MR. HENTY'S PREVIOUS BOOKS.

*Price 6s. each.*

Won by the Sword.  
A Roving Commission.  
Under Wellington's Command.  
Both Sides the Border.  
With Frederick the Great.  
With Moore at Corunna.  
At Agincourt.  
With Cochrane the Dauntless.  
A Knight of the White Cross.  
The Tiger of Mysore.  
Wulf the Saxon.  
St. Bartholomew's Eve.  
Through the Sikh War.  
Berio the Briton.  
In Greek Waters.  
The Dash for Khartoum.  
Redskin and Cowboy.  
By Right of Conquest.  
By England's Aid.  
With Lee in Virginia.

*Price 6s. each.*

By Pike and Dyke.  
The Lion of St. Mark.  
Captain Bayley's Heir.  
Bonnie Prince Charlie.  
For the Temple.  
The Young Carthaginian.  
With Wolfe in Canada.  
When London Burned.  
The Lion of the North.  
With Clive in India.  
In Freedom's Cause.  
Through the Fray.  
Under Drake's Flag.  
True to the Old Flag.

*Price 5s. each.*

No Surrender.  
At Aboukir and Acre.  
A March on London.  
On the Irrawaddy.

*Price 5s. each.*

Through Russian Snows.  
In the Heart of the Rockies.  
A Jacobite Exile.  
Condemned as a Nihilist.  
Held Fast for England.  
Maori and Settler.  
One of the 28th.  
In the Reign of Terror.  
Orange and Green.  
Bravest of the Brave.  
A Final Beckoning.  
The Cat of Bubastes.  
Dragon and the Raven.  
St. George for England.  
By Sheer Pluck.  
Facing Death.

*Price 3s. 6d. each.*

The Young Colonists.  
A Chapter of Adventures.

By *Katharine Tynan.*

**Three Fair Maids; or, The Burkes of Derrymore.** With 12 Page Illustrations by G. DEMAIN HAMMOND, R.I. 6s.

By *Rosa Mulholland (Lady Gilbert).*

**Cynthia's Bonnet Shop.** With 8 Page Illustrations by G. DEMAIN HAMMOND, R.I. 5s.

By *Captain F. S. Brereton.*

**With Rifle and Bayonet: A Story of the Boer War.** With 8 Illustrations by W. AL PAGER. 5s.

By *Captain F. S. Brereton.*

**In the King's Service: A Tale of Cromwell's Invasion of Ireland.** With 8 Page Illustrations by STANLEY L. WOOD. 5s.

*New Book by Judge Parry, Illustrated by Walter Crane.*

**THE STORY OF DON QUIXOTE.** Retold by His Honour Judge PARRY. Illustrated by WALTER CRANE. With 11 Coloured Full-Page Plates, 19 Half-Page Plates, a Title-Page, and Cover. Royal 8vo, cloth. 6s.

*New Picture Book of Humour by Harry B. Neilson.*

**DRILL DOINGS.** Illustrated by HARRY B. NEILSON, with Verses by THE COCKIOLLY BIRD. 23 Full-Pages and 18 Vignettes in Full Colour. Royal 4to, picture boards, cloth back. 6s.

### NEW BOOKS OF THE HALF-CROWN SERIES.

By *Walter P. Wright.*

**An Ocean Adventurer; or, The Cruise of the "Orb."** With 4 Illustrations by PAUL HARDY.

By *Jane H. Spettigue.*

**A Trek and a Laager: A Borderland Story.** With 4 Illustrations by PAUL HARDY.

By *Edith King Hall.*

**Adventures in Toyland.** Profusely Illustrated. *New Edition.*

By *Bessie Marchant.*

**Held at Ransom: A Story of Colonial Life.** With 4 Illustrations by SYDNEY COWELL.

By *W. O'Byrne.*

**Kings and Vikings: Stories of Irish History.** With 6 Page Illustrations.

By *Michael Macmillan.*

**Tales of Indian Chivalry.** With 6 Page Illustrations.

### NEW CHILDREN'S PICTURE BOOKS.

**My Very Best Book.** With Coloured Illustrations. 4to. 1s.

**Our Darling's First Book.** Bright Pictures and Easy Lessons for Little Folk. 4to. 10½ inches by 7½ inches, picture boards, 1s.; cloth, gilt edges, 2s.

**Arm-Chair Stories.** With Coloured Illustrations. 4to. 1s.

**Story-Book Time.** With 38 Colour Pages, over 40 Full-Page Black and White Illustrations, and a large number of Vignettes. Picture boards, 2s. 6d.; cloth, gilt edges, 3s. 6d.

### New Volumes of the Three Shilling Series.

- The Golden Magnet.** By G. MANVILLE FENN. *New Edition.*
- Twixt School and College.** By GORDON STABLES. *New Edition.*
- Giannetta.** By ROSA MULHOLLAND. *New Edition.*

### New Volumes of the Two Shilling Series.

- Jones the Mysterious.** By CHARLES EDWARDS.
- The Adventures of Roly.** By H. ELBRINGTON.
- Queen Charlotte's Maidens.** By SARAH TITTLER.
- Arthur's Inheritance.** By EMMA LESLIE.
- Gutta-Percha Willie.** By GEORGE MACDONALD. *New Edition.*

### New Volumes of the Eighteenpenny Series.

- Tony Maxwell's Pluck.** By GERALDINE MOCKLER.
- A Cruise in Cloudland.** By HENRY FRITH. *New Edition.*
- Dulcie King.** By M. CORBET-SEYMOUR. *New Edition.*

### New Volumes of the Shilling Series.

- Do Your Duty.** By G. A. HENTY. *New Edition.*
- Betty the Bold.** By E. DAVENPORT ADAMS.
- Jack of Both Sides.** By FLORENCE COOMBE.
- Tony's Pains and Gains.** By W. L. ROOPER.
- Terry.** By ROSA MULHOLLAND (LADY GILBERT).

### New Volumes of the Ninepenny Series.

- Three Troublesome Monkeys.** By A. B. ROMNEY.
- That Boy Jim.** By Mrs. HENRY CLARKE.
- The Adventures of Carlo.** By KATHARINE TYNAN.
- The Shoeblack's Cat.** By W. L. ROOPER.
- The Little Red Purse.** By JENNIE CHAPPELL.

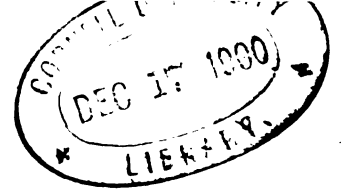
### New Volumes of the Sixpenny Series.

- Bravest of All.** By MABEL MACKNESS.
- Winnie's White Frock.** By JENNIE CHAPPELL.
- Lost Toby.** By M. S. HAYCRAFT.
- A Boy Cousin.** By GERALDINE MOCKLER.
- Travels of Fuss and Buss.** By GERALDINE MOCKLER.
- Teddy's Adventures.** By Mrs. HENRY CLARKE.

**Blackie & Son's New Illustrated Catalogue of Books suitable for Presentation, School Prizes, Rewards, &c., sent post free on application.**

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.

London: Printed by C. F. HODGSON & SON, 2 Newton Street, High Holborn, W.C.; and Published by FRANCIS HODGSON, 89 FARRINGTON STREET, E.C.



# THE EDUCATIONAL TIMES,

AND  
Journal of the College of Preceptors.

Vol. LIII.] New Series, No. 476.

DECEMBER 1, 1900.

{Price to Non-Members, 6d.  
By Post, 7d.

## COLLEGE OF PRECEPTORS.— EXAMINATIONS FOR 1900.

1. **DIPLOMAS.**—The next Examination of Teachers for the Diplomas of the College will commence on the 1st of January, 1901.—At the Midsummer Examination, persons who have previously passed in Theory and Practice of Education at the Diploma Examination may be examined practically for Certificates of Ability to Teach.

2. **CERTIFICATE EXAMINATIONS.**—The Christmas Examination for Certificates will commence on the 4th of December, 1900.

3. **JUNIOR FORMS EXAMINATIONS.**—The Christmas Examination will commence on the 4th of December, 1900.

4. **PROFESSIONAL PRELIMINARY EXAMINATIONS.**—These Examinations are held in March and September. The next Examination will commence on the 5th of March, 1901.

5. **INSPECTION AND EXAMINATION OF SCHOOLS.**—Visiting Examiners are appointed by the College for the Inspection and Examination of Public and Private Schools.

### PRIZES.

**Diploma Examination.**—The following Prizes will be offered for competition:—Theory and Practice of Education, £10; Classics (Greek and Latin), £5; Mathematics, £5; Natural Science, £5. The Doreck Scholarship of £20 will be awarded on the results of the Christmas Examination.

**Certificate Examination.**—The "Isbister Prize" will be awarded to the Candidate who stands First, and the "Pinches Memorial Prize" to the Candidate who stands Second, in General Proficiency. Prizes will also be awarded to the Third and Fourth in General Proficiency, and to the First and Second in the following subjects:—Classics, Mathematics, Modern Languages, Natural Science, English Subjects. The "Taylor-Jones Memorial Prize" will be awarded to the best Candidate in Scripture History. Two Medals will be awarded to the best Candidates in Shorthand.

The Regulations for the above Examinations can be obtained on application to the Secretary at the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

**PRELIMINARY EXAMINATION of MEDICAL STUDENTS.**—The COLLEGE OF PRECEPTORS will hold an Examination for Certificates recognized by the Education Department, the Incorporated Law Society, the General Medical Council, the Royal College of Veterinary Surgeons, the Pharmaceutical Society of Great Britain, and other bodies, on the 5th, 6th, and 7th of March, 1901.

The Examination will take place in London, and at the following Local Centres:—Birmingham, Bristol, Leeds, Liverpool.

Examination Fee, 25s.

Regulations and Entry Forms may be obtained on application to the Secretary of the College of Preceptors, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— EXTRACT FROM THE BY-LAWS.

Section II., clause 5.—"The Council may grant the privileges of Membership, without payment, to holders of Diplomas of the College, as long as such persons are engaged in teaching in Secondary Schools."

Holders of the College Diplomas who are not Members of the College are requested to send their Addresses to the Secretary of the College, Bloomsbury Square, W.C.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS.— CERTIFICATE EXAMINATION, DECEMBER, 1900.

Notice is hereby given that at the above Examination the following additional (alternative) subjects will be set:—Latin, Class I., *Cæsar, Gallic War*, Book VI., *Virgil, Æneid*, Book II.; Scripture, Classes I. and II., the *First Book of Samuel*.

C. R. HODGSON, B.A., Secretary.

## WINTER MEETING FOR TEACHERS (JANUARY, 1901).

Conducted by the

### COLLEGE OF PRECEPTORS. (Bloomsbury Square, London, W.C.)

The Third Winter Meeting for Teachers will take place at the College of Preceptors in the first fortnight in January, 1901.

The Meeting will extend over two weeks, and the Programme will include Lectures on general principles of education and on methods of teaching various school subjects, with exhibits of apparatus, and visits to educational institutions in London.

The Fee for the whole Meeting is 15s. Tickets may be obtained from the Secretary of the College of Preceptors, and should be applied for on or before December 22.

Tickets (not transferable) will also be issued at HALF FEES (i.e., 7s. 6d. for the whole Meeting) to members of the following Teachers' Societies:—The Teachers' Guild (Central Guild and Branches), The Birmingham Teachers' Association, The Liverpool Teachers' Guild, The Training College Association, The Headmasters' Conference, The Incorporated Association of Headmasters, The Private Schools' Association, The Assistant-Masters' Association, The Association of Assistant-Mistresses, The Froebel Society, The National Union of Teachers.

Tickets at half fees will also be issued to candidates at the Diploma Examination of the College of Preceptors (January 15).

Members of the College of Preceptors will receive a ticket (not transferable) without charge, on applying for it to the Secretary of the College on or before December 20.

Tickets, price 1s., for any single Lecture may also be had at the College on the day of the Lecture, if the available seats are not already occupied.

For detailed information, see Programme enclosed with the December number of the *Educational Times*.

C. R. HODGSON, B.A., Secretary.

## COLLEGE OF PRECEPTORS. (Bloomsbury Square, W.C.)

### LECTURES FOR TEACHERS ON THE SCIENCE AND ART OF EDUCATION.

To be delivered by H. L. WITHERS, Esq., M.A., Professor of Education at Owens College, Manchester, late Principal of the "Borough Road" Training College, Isleworth.

The Second Course of Lectures (Twenty-sixth Annual Series) began on Saturday, October 6, at 5 p.m.

The Fee for the Course is Half-a-guinea.

The Lectures are delivered on Saturday Afternoons at 5 o'clock, at the College, Bloomsbury Square, W.C.

Members of the College have Free Admission to this Course.

C. R. HODGSON, B.A., Secretary.

### UNIVERSITY DIPLOMA FOR WOMEN.

THE UNIVERSITY OF ST. ANDREWS grants Diploma and Title of L.L.A. to WOMEN.

60 Examination Centres in Great Britain and abroad. For Prospectus, apply to the SECRETARY, L.L.A. Scheme, The University, St. Andrews, N.B.

## LONDON MATRICULATION and

B.A. Course, College of Preceptors Examinations. Cambridge Local and Higher, Royal Irish, &c.—Mr. J. LOCKEY, M.A. Lond. (Branches I. and IV.), F.C.P., 106 St. Paul's Road, Camden Town, N.W., prepares for above in Classics, Mathematics, Anglo-Saxon, Mental Science, Education, &c., Orally and by post. Numerous successes every year. Terms moderate.

## LONDON COLLEGE OF MUSIC. (Incorporated.)

GREAT MARLBOROUGH STREET, LONDON, W.

### FORMUSICALEDUCATION,ANDEXAMINATIONS.

Patron: HIS GRACE THE DUKE OF LEEDS.

Dr. F. J. KARN, Mus. Bac. Cantab., Principal.

G. AUGUSTUS HOLMES, Esq., Director of Examinations.

### LOCAL AND HIGHER EXAMINATIONS, 1901.

EXAMINATIONS in PIANOFORTE PLAYING, SINGING, THEORY, and all branches of Music will be held in London and 350 Provincial Centres in April, when certificates will be granted to all successful candidates. Last day for entry, March 15.

The Higher Examinations for Diplomas of Associate (A.L.C.M.), Associate in Music (A.Mus.L.C.M.), Licentiate (L.L.C.M.), Licentiate in Music (L.Mus.L.C.M.), and Fellowship take place in June, July, and December.

SYLLABUS for the year 1901 is now ready, and may be had on application.

In the Educational Department students are received and thoroughly trained under the best professors at moderate fees. Day and Evening Classes are held.

A VACATION COURSE of Instruction in Special Subjects for Teachers and others is held at Easter, August, and Christmas.

T. WEEKES HOLMES, Secretary.

## CORRESPONDENCE TUITION,

Classes, or Private Lessons in all Subjects for all Examinations, &c., at moderate fees. Correspondence courses arranged to suit needs of individual pupils. Many recent successes.—F. J. BORLAND, L.C.P. (Science and Math. Prizeman), Victoria College, 87 Buckingham Palace Road, S.W., and Stalheim, Brunswick Road, Sutton, Surrey. Schools visited and Examinations conducted.

## LONDON UNIVERSITY EXAMS.

### Free Guide

TO

### MATRICULATION.

No. XXVIII., 80 pp., containing the Examination Papers of July, 1900, and Articles on the Special Subjects for January and June, 1901 and 1902.

### INTERMEDIATE ARTS.

No. XV., 68 pp., containing the Examination Papers of July, 1900, full Solutions to the Papers in Mathematics, and Articles on the Special Subjects for 1901 and 1902.

### BACHELOR OF ARTS.

No. XIV., October, 1900, 90 pp., containing Examination Papers of October, 1900, and Articles on the Special Subjects for 1901 and 1902.

### INTERMEDIATE SCIENCE.

No. XII., containing the Examination Papers of July, 1900, with full Solutions to the Papers in Pure Mathematics.

### INTERMEDIATE LAWS.

Containing London University Regulations and Advice on the Choice of Text-Books.

Any one of the above Guides, Prospectus, and full particulars of Classes for all London Exams., post free on application to

THE SECRETARY,  
(University Correspondence College London Office),  
32 Red Lion Square, Holborn, W.C.

## UNIVERSITY COLLEGE OF NORTH WALES, BANGOR.

(A Constituent College of the University of Wales.)  
Principal—H. R. BRICHEL, M.A.

The Session began October 2nd, 1900. The College Courses are arranged with reference to the degrees of the University of Wales and include most of the Subjects for the B.A. and B.Sc. degrees of the London University. Students may pursue their first year of medical study at the College. There are special departments for Agriculture and Electrical Engineering, a Day Training Department for men and women, and a Department for the Training of Teachers in Secondary Schools.

Sessional Fee for ordinary Arts student, £11. 1s.; ditto for Intermediate Science or Medical student, £15. 15s. The cost of living in lodgings in Bangor averages from £20 to £30 for the Session. The new Hall of Residence for Women Students in Upper Bangor—fee £31. 10s. for the session—is now open.

At the Entrance Scholarship Examination (held in September), more than twenty Scholarships and Exhibitions, ranging in value from £40 to £10, will be open for competition. One half the total amount offered is reserved for Welsh candidates.

For further information and copies of the Prospectus, apply to  
JOHN EDWARD LLOYD, M.A.,  
Secretary and Registrar.

## UNIVERSITY COLLEGE OF NORTH WALES.

(A Constituent College of the University of Wales.)

### DEPARTMENT FOR THE TRAINING OF SECONDARY TEACHERS.

(Recognized by the Cambridge Syndicate.)

Professor of Education—J. A. GREEN, B.A. Lond., assisted by Miss C. GRAYSON, B.A. Lond., and an Assistant-Lecturer to be appointed.

Preparation is offered for the Cambridge Diploma (Theoretical and Practical) and for the Teachers' Diploma of the University of London.

Full particulars of the Course (which is open to both men and women students), Fees, Scholarships, &c., may be had on application to the REGISTRAR.

### UNIVERSITY OF LONDON.

**NOTICE IS HEREBY GIVEN**, that the next Half-yearly Examination for MATRICULATION in this University will commence on Monday, the 14th of January, 1901.—In addition to the Examination at the University, Provincial Examinations will be held at Mason University College, Birmingham; The Merchant Venturers' Technical College, Bristol; College and Technical Buildings, Dumfries Place (for University College), Cardiff; The Technical College, 204 George Street, Glasgow; The Yorkshire College, Leeds; Rutherford College, Newcastle-on-Tyne; The High School, Nottingham; The Technical Schools, Plymouth; and The Grammar School, Portsmouth.

Every Candidate is required to apply to the REGISTRAR (University of London, South Kensington, London, S.W.) for a Form of Entry on or before November 25th.

F. V. DICKINS, M.B., B.Sc.,  
Registrar.

November 12th, 1900.

## OXFORD LOCAL EXAMINATIONS. LONDON COMMITTEE (BOYS).

The Regulations for the Senior, Junior, and Preliminary Examinations for 1901 can be obtained from the Secretary,

E. LAYMAN, Esq.,

1 Garden Court, Temple, E.C.

**A GERMAN LADY** (High School Teacher) desires to receive an English Lady as guest in her house, whom she would prepare for Examinations. Terms very moderate. Highest references. Address—Fräulein HERBKLOTSCH, Magdeburger Strasse, Cöthen in Anhalt (near Leipzig), Germany.

### Diploma Correspondence College.

FOR

# A.C.P.,

## L.C.P., AND F.C.P.

SUCCESSES: 311 at A.C.P.; 20 at L.C.P.

Full particulars on application to the Principal—

Dr. KNIFE, Dip. Corr. Coll., Fishponds, Bristol.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

Principal—Miss ETHEL HURLBATT.

The Lent Term will begin on Thursday, January 17. The College prepares for the University of London Examinations in Arts and Science.

Students may also enter for College Courses, the Training Department, the Hygiene Department, and the Art School. Six Laboratories are open to Students for Practical Work.

Further information on application to the PRINCIPAL.

## BEDFORD COLLEGE, LONDON (FOR WOMEN).

YORK PLACE, BAKER STREET, W.

DEPARTMENT FOR PROFESSIONAL TRAINING IN TEACHING.

Head of the Department—Miss HANNAH ROBERTSON, B.A.

The Session for 1901 opens on Thursday, January 17. The Course includes full preparation for the Examinations for the Teaching Diplomas granted by the Universities of London and Cambridge, held annually in December.

## THE CAMBRIDGE TRAINING COLLEGE FOR WOMEN TEACHERS.

Principal—Miss M. PUNNETT, B.A. (Lond.).

A residential College providing a year's professional training for Teachers.

The course includes preparation for the Cambridge Teachers' Certificate (Theory and Practice), and for the Teachers' Diploma of the London University. The Students attend the Cambridge University Lectures on Teaching, in addition to those of the Resident and Visiting Lecturers. Ample opportunity is given for practice in teaching science, languages, mathematics, and other subjects in various schools in Cambridge.

Students are admitted in January and in September. Full particulars as to qualifications for admission, scholarships, and bursaries may be obtained on application to the PRINCIPAL, Wollaston Road, Cambridge.

## HOME AND COLONIAL SCHOOL SOCIETY.

(Incorporated for Examination and Certificate purposes with the National Froebel Union.)

### TRAINING COLLEGE FOR SECONDARY TEACHERS.

HIGHBURY HILL HOUSE, LONDON, N.

Principal—The Rev. DAVID J. THOMAS, M.A.

Vice-Principal—Miss PENSTONE.

Students (Resident and Non-resident) trained for the Examinations of the National Froebel Union, and for the Teachers' Diploma of the College of Preceptors.

A High School for Girls, Transition Class, and Kindergarten are attached to the College for purposes of Demonstration and Practice.

THE

### FROEBEL EDUCATIONAL INSTITUTE,

TALGARH ROAD, WEST KENSINGTON, LONDON, W.

Chairman of the Committee—Mr. W. MATHER.

Treasurer—Mr. C. G. MONTEPIORE.

Secretary—Mr. ARTHUR G. SYMONDS, M.A.

### TRAINING COLLEGE FOR TEACHERS.

Principal—Madame MICHAELIS.

Mistress of Method—Miss E. E. LAWRENCE.

### KINDERGARTEN AND SCHOOL.

Headmistress—Miss M. BOYS SMITH.

Further particulars may be obtained on application to the PRINCIPAL.

## WESTFIELD COLLEGE,

FINCHLEY ROAD, HAMPSTEAD, N.W.—Two

ENTRANCE SCHOLARSHIPS, of the value of from £40 to £50 a year for two years, will be offered for competition among women students at an Examination to be held on July 9 and 10. Candidates must have passed the Matriculation Examination of London University, and the successful competitors will be required to enter into residence in October next, and to read for the B.A. or B.Sc. degree of London University. Further particulars and entrance forms may be obtained from the Secretary, Miss S. M. SMEE.

## ST. GEORGE'S TRAINING COLLEGE FOR WOMEN TEACHERS IN SECONDARY SCHOOLS AND IN FAMILIES.

Principal—Miss M. R. WALKER.

This College provides a complete Course of Professional Training for Women Teachers, in preparation for the Cambridge Teachers' Certificate. The Course includes attendance at the University Lectures on Education, in addition to Lectures delivered by the College Staff, and the Students have ample opportunities of gaining experience in Class-Teaching in Schools. Five Henriot Bursaries of £30 are offered in October. Apply to the PRINCIPAL, 5 Melville Street, Edinburgh.

## JOINT AGENCY FOR WOMEN TEACHERS.

(Under the management of a Committee appointed by the Teachers' Guild, College of Preceptors, Headmistresses' Association, Association of Assistant Mistresses, and Private Schools' Association.)

Address—74 GOWER STREET, LONDON, W.C.

Registrar—Miss AGNES G. COOPER.

This Agency has been established for the purpose of enabling Teachers to find work without unnecessary cost. All fees have therefore been calculated on the lowest basis to cover the working expenses.

Headmistresses of Public and Private Schools, and Parents requiring Teachers, or Teachers seeking appointments, are invited to apply to this Agency.

Many Graduates and Trained Teachers for Schools and Private Families; Visiting Teachers for Music, Art, and other special subjects; Foreign Teachers of various nationalities; Kindergartens and other Teachers are on the Register, and every endeavour is made to supply suitable candidates for any vacancy.

School Partnerships and Transfers are arranged. Office hours—9.30 a.m. to 6 p.m. Miss Cooper's hours for interviews are from 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5 p.m.; Wednesdays to 1.30 p.m. only.

## JOINT AGENCY FOR ASSISTANT-MASTERS.

23 SOUTHAMPTON STREET, BLOOMSBURY SQUARE, LONDON, W.C.

Registrar—Rev. F. TAYLOR, M.A. Cantab.

The Joint Agency for Assistant-Masters and Tutors is under the management of a Joint Committee composed of representatives of the following Bodies:—

Headmasters' Conference.

Incorporated Association of Headmasters.

College of Preceptors.

Teachers' Guild.

Welsh County Schools' Association.

Private Schools' Association.

Association of Headmasters of Preparatory Schools.

Association of Headmasters of Roman Catholic Schools.

Assistant-Masters' Association.

Association of Technical Institutions.

&c. &c.

As the Agency is not working with a view to profit, but to benefit Assistant-Masters, the rates of commission are fixed as low as possible, and it is hoped that all branches of the profession will support an Agency managed by so widely representative a Committee.

Headmasters having vacancies on their staffs, and Assistant-Masters seeking appointments, are asked to communicate with the REGISTRAR.

Office Hours—10 a.m. to 5 p.m., Saturdays, 10 a.m. to 1 p.m. Interviews generally between these hours or by special appointment.

## RELIGIOUS TEACHING IN SECONDARY SCHOOLS.

A Problem of To-day.

BY THE

Rev. J. O. BEVAN, M.A., F.S.A.,

Fellow of the College of Preceptors, and Examiner.

Price 6d., post free.

55 Gunterstone Road, West Kensington, W.

## ENGINEERING INSTRUCTOR.—

Gentleman of great experience in all branches of Engineering is open to take charge of this Department in a Public School. Theory, Drawing, Workshop Practice, &c. Strict Disciplinarian. Can advise as to starting such Department. Address, by letter, ENGINEER, c/o Street's Agency, 5 Serle Street, W.C.

## A FIRM engaged in Commerce opening

a Branch Office in a Yorkshire Health Resort (for the convenience of the Principal) have an opening for a GENTLEMAN'S SON, just leaving School, to reside with the family. This is an exceptionally good opportunity for a young man, with rapid advancement. Premium required. Apply by letter—E., Educational Times Office, 89 Farringdon Street, London, E.C.

## FOREIGN LADY TEACHER

(French and German) offers to teach these languages at a Private School or Family in exchange for Board and Residence, with opportunity to learn English. Address—73 Worple Road, Wimbledon.

## REQUIRED AT CHRISTMAS,

Non-Resident Post as ASSISTANT-MISTRESS in a Secondary School. Good experience and qualifications. Preparation for Locals and University Examinations.—A. B., Educational Times Office, 89 Farringdon Street, London, E.C.

## TUITION.—B.A., B.Sc. London,

VISITS or RECEIVES STUDENTS or CLASSES for all Preliminaries, Matriculation, and the Degree Examinations; highest references; 20 years' experience.—BUTLER SMITH, 14 Heinstal Road, West Hampstead.

LONDON UNIVERSITY EXAMINATIONS.



Day and Evening Classes,

Covering the whole of the Theoretical and Practical Work for the Examinations of London University, are held at University Tutorial College, Red Lion Square, Holborn.

Recapitulation Classes

Are held during the Christmas Vacation.

For Matriculation, January, 1901, commencing Monday, December 17th, 1900; and for Prelim. Sci. (M.B.), January, 1901, commencing Thursday, December 27th.

Vacation Classes,

Covering the Practical Work for Inter. Sc. and B.Sc., commence Tuesday, December 18th.

All communications regarding Oral work in London should be addressed to

THE VICE-PRINCIPAL,

University Tutorial College,

32 Red Lion Square, Holborn, W.C.

THE BURLINGTON CLASSES.

27 Chancery Lane, London.

Principal: Mr. J. CHARLESTON, B.A. (Honours, Oxon.; and Lond.).

TUTORS.

The Staff includes a number of Graduates of London, Oxford, Cambridge, and Royal Universities, Science Medallists, and Specialists.

Preparation by Correspondence

FOR

MATRICULATION, B.A., & B.SC.,

(London Univ., Royal Univ., Dublin Univ.),

L.L.A.

(Degree for Ladies—St Andrews),

A.C.P., L.C.P., F.C.P.

On a thoroughly individual system, which ensures the closest attention to the needs of each candidate. Full corrections of papers, with time-saving notes, criticisms, summaries, model answers, and solutions.

Single subjects may be taken—Latin, Greek, French, German, Italian, Mathematics, Mechanics, Physics, Chemistry, Logic, Psychology, Political Economy, &c.

FOR TERMS, TESTIMONIALS, &c.,

Address—Mr. J. CHARLESTON, B.A.,

BURLINGTON CLASSES,

27 CHANCERY LANE, LONDON.

CARLYON COLLEGE.

55 AND 56 CHANCERY LANE.

LONDON UNIVERSITY EXAMINATIONS.

LONDON MATRICULATION, INTER. ARTS and SCIENCE, B.A., and B.Sc. Classes. Day and Evening Classes (small). Private tuition.

Classes and Tuition for all Preliminaries, Scholarship Examinations, Oxford and Cambridge, E.U.I., &c.

Papers Corrected for Schools.

Private tuition for all Examinations.

Prospectus and full details on application to R. C. B. KERIN, B.A. Lond., First of First Class Classical Honours, Editor of "Phædo," "Pro Plancio," &c.

SUCCESSSES.

1892-1900.—London Matric. 74; Inter. Arts, Sc., and Prel. Sci., 88, 6 in Hons.; B.Sc., 1896-1899, 11; B.A., 1891-1898, 35, 7 in Hons.; many other Successes. Scholarships, R.U.I., Indian Civil, Oxford and Cambridge, &c.

B.A. LONDON, 1899, 12 successful.

M.A., 2 (1898 and 1899).

FOR immediate disposal, an old-established PRIVATE SCHOOL. Good connection. Girls' and Boys' Departments. Address—J., c.o. Mr. Drury Freeman, Solicitor, 124 Chancery Lane, London.

THE MOST NUTRITIOUS.

E P P S'S

GRATEFUL—COMFORTING.

C O C O A

BREAKFAST—SUPPER.

FREE GUIDE TO THE CAMBRIDGE HIGHER LOCAL EXAMINATION,

BY THE

TUTORS OF THE UNIVERSITY EXAMINATION POSTAL INSTITUTION.

NEW EDITION (76 pages), containing advice as to books to read for the June 1901 Examination, and the mode of Study, and statistical tables (not obtainable elsewhere). A copy of the Guide will be sent gratis and post free to any candidate on application to the Manager of the Institution, Mr. E. S. Weymouth, M.A., 27 Southampton Street, Strand, London, W.C.

332 U.E.P.I. candidates passed the Cambridge Higher Local from 1895 to 1900, 60 with distinction.

The Institution prepares through the post for various University Examinations and for the A.C.P., L.C.P., and F.C.P.

JOSEPH GILLOTT'S Gold Medals, Paris, 1878, 1889.

Numbers for Use in Schools—351, 352, 382, 404, 728, 303, 170, 166, 5, 6, 292, 293, 291 (Mapping), 659 (Drawing); and (for Vertical Writing) 1045, 1046.

STEEL PENS.

EXAMINATION PAPER

AS USED BY THE

COLLEGE OF PRECEPTORS.

In strict accordance with the College requirements, and each Sheet bears their Watermark.

Packed in Reams of 480 Sheets ... per Ream, 2s. 6d.

" " 960 " " " " 5s. 0d.

Bookkeeping Paper, ruled for Ledger, Cash Book, and Journal, 1s. per 100 Sheets.

Remittance should accompany Order.

HEWARD & SHELBOURNE, Wholesale and Retail Stationers,

63 HIGH HOLBORN, LONDON, W.C.

Seventh Edition. With an Appendix of Easier Exercises. Fcap. 8vo, cloth, price One Shilling.

HINTS ON FRENCH SYNTAX.

By F. STORR,

Chief Master of Modern Subjects in Merchant Taylors' School.

"The merit of the book is its simplicity and brevity, and we have no hesitation in saying that these Hints would prove a valuable supplement to any grammar that might be in use. . . Neatly printed in clear, bold type, and interleaved throughout, this book is one we can confidently recommend not only to teachers for class use, but as an invaluable aid to students preparing for the Scholarship, Certificate, and London Matriculation Examinations."—The Practical Teacher, January, 1900.

LONDON: WILLIAM RICE, 3 BROADWAY, LUDGATE HILL, E.C.

CUSACK'S

SET OF FOURTEEN DRAWING MODELS.

Perfect in shape, strongly made in wood, and Painted.

In two sizes, large and small. The large is the size for Schools of Art and Art Classes—the size prescribed by the Board of Education for the May Examinations. The small size (cube 6½ in., and other models in proportion) is for Students' Private Study.

Prices—Large size, 56s. net; small size, 28s. net.

Carriage Paid. Packing Case and Packing Free.

CUSACK'S

PHOTOGRAPHIC REPRESENTATIONS OF CASTS.

CONTAINING 30 PLATES,

WITH ANALYSIS OF EACH, AND INSTRUCTIONS.

Printed on Art Paper. 1s. 6d. net; post free, 1s. 8½d.

CITY OF LONDON BOOK DEPOT,

White Street and Finsbury Street, Moorfields, London, E.C.

**IMPORTANT NOTICE.****A NEW SERIES OF  
TEXT-BOOKS FOR HIGHER SCHOOLS.**

Edited by the Rev. C. S. DAWE, late Lecturer on Education at St. Mark's College, Chelsea.

These books are specially prepared, and provide all that is necessary, for pupils studying for the Oxford and Cambridge Preliminary and Junior Local Examinations and Candidates for Minor Scholarships, also for the corresponding Examinations of the College of Preceptors.

*The Series consists of the following Books:—*

**ARITHMETIC. GEOGRAPHY. GRAMMAR. HISTORY.**

**PUBLISHED AT ONE SHILLING EACH.**

*The leading FEATURES of the Books are the following:—*

**ARITHMETIC.**

Small amount of Theory, large amount of Practice.  
Worked-out Examples for each step.  
Prominence given to the Metric System.  
Laboratory Exercises in a Special Section.

**GEOGRAPHY.**

Physical Facts made the basis of Political.  
Commercial Aspects kept constantly in view.  
British Empire fully treated.  
Many Coloured Maps and Diagrams.

**ENGLISH GRAMMAR.**

Examples made the basis of instruction.  
Analysis introduced early.  
Aids to Correct Speaking a prominent feature.  
Plenty of scope given for "practice."

**ENGLISH HISTORY.**

Contains landmarks of our national history.  
More than usual attention given to last three centuries.  
The Growth and Greatness of the Empire specially considered.

*Specimens will be sent, on application, by the Publishers,*

**THE EDUCATIONAL SUPPLY ASSOCIATION, LIMITED,  
42 HOLBORN VIADUCT, LONDON.**

**FRENCH AND ENGLISH, ENGLISH AND FRENCH  
DICTIONARY FOR THE POCKET.**

By JOHN BELLOWS.

Both Divisions on same Page; Masculine and Feminine Words shown by distinguishing Types; Conjugations of all the Verbs; *liaison* marked in French Part; and Hints to Aid Pronunciation, together with Tables and Maps.

Revised by A. BELJAME.

32mo, roan, with flap, 10s. 6d.; morocco, with flap, 12s. 6d.

"As complete a dictionary of the French and English languages as has ever been published."—*Times*.

"A pocket dictionary without a rival."—*Spectator*.

London: Kegan Paul, Trench, Trübner & Co.,  
Charing Cross Road, W.C.

**CUNUDER'S ECLECTIC ORAL METHOD**

*For the Practical Study of the French Language.*

With State Simplification of the Syntax, 3s. 6d. net.

"We warmly recommend this book to teachers."—*Educational Times*.

"Mr. Cunuder's book is admirably planned."—*Pitman's Phonetic Journal*.

Order to—

J. F. Cunuder, 1 Upper Camden Place, Bath.

NOW READY. SUITABLE FOR CHRISTMAS GIFTS AND PRIZES.

**FRANCES MARY BUSS JUBILEE RECORD.**

This handsome quarto volume of 172 pages, with 52 Illustrations, contains, besides articles on the History of the Schools, their tradition and ideals, and the record of the Jubilee celebrations connected with them, a series of nine articles giving the History of the Women's Education Movement in each of its aspects during the half century. Price 7s. 6d. net, post free.

LONDON: SWAN SONNENSCHN & CO., LTD.

**CASEY'S EUCLID.****THE ELEMENTS OF EUCLID.**

BOOKS I.—VI., and PROPOSITIONS I.—XXI. of BOOK XI.  
Together with Appendix on the CYLINDER, SPHERE, CONE, &c., with Copious Annotations and Numerous Exercises.  
By JOHN CASEY, LL.D., F.R.S., Fellow of the Royal University of Ireland, Vice-President, Royal Irish Academy, &c., &c.  
*Tenth Edition, price 4s. 6d., post free; or in Two Parts, each Half-a-Crown.*

**A KEY TO THE EXERCISES**

IN THE SIX BOOKS OF CASEY'S "ELEMENTS OF EUCLID."  
By JOSEPH B. CASEY, Tutor, University College, Dublin.  
Second Edition. Small 8vo, price 6s.

**A SEQUEL TO THE**

FIRST SIX BOOKS OF THE "ELEMENTS OF EUCLID."  
Sixth Edition, Revised and greatly Enlarged, price 3s. 6d., cloth. Now ready.

Now Ready, Second Edition, Revised and Enlarged, 564 pp., price 12s.

**A TREATISE ON THE****ANALYTICAL GEOMETRY**

OF THE POINT, LINE, CIRCLE, AND THE CONIC SECTIONS.  
Containing an account of its most recent Extensions, with numerous Examples.  
New Edition. Crown 8vo.

**A TREATISE ON****ELEMENTARY TRIGONOMETRY.**

With numerous Examples and Questions for Examination.  
Third Edition. Small 8vo, 148 pp., price 3s.

**KEY TO THE EXERCISES**

IN THE TREATISE ON ELEMENTARY TRIGONOMETRY.  
With numerous Examples and Questions. Second Edition. Price 3s.

**A TREATISE ON****PLANE TRIGONOMETRY.**

Containing an account of Hyperbolic Functions, with numerous Examples.  
Crown 8vo. Second Edition.

Crown 8vo, price 5s.

**A TREATISE ON**

**SPHERICAL TRIGONOMETRY,**  
AND ITS APPLICATION TO GEODESY AND ASTRONOMY.  
With numerous Examples.

HODGES, FIGGIS, & CO., LIMITED, 104 GRAFTON STREET, DUBLIN.  
LONDON: LONGMANS & CO.



# GEORGE GILL & SONS' LIST OF SPECIAL TEXT-BOOKS FOR THE College of Preceptors Examinations, July & December, 1901.

ENGLISH.		s. d.	RELIGIOUS KNOWLEDGE.		s. d.
Shakespeare's Henry V. Edited by STANLEY WOOD, M.A., author of the Dinglewood Shakespeare Series, and the Rev. F. MARSHALL, M.A. ...	Containing— <i>Introduction.</i> —Source, Editions, Date, Scene of the Play; the Unities, Anachronisms, Characters of the Play; Biographical, Historical, Geographical Notes. Text with marginal and foot notes, and paraphrase of difficult passages. <i>Appendix.</i> —Full Supplementary Notes, Play on Words, Versification, Grammatical Notes, Classical and other Allusions, Language of the Play, Quotations from other Plays, Glossary, Forty-minute Examination Papers on each Scene.	1 6	Marshall's St. Matthew. Edited by the Rev. F. MARSHALL, M.A. Cantab. Crown 8vo, cloth ...	Containing— 1. <i>Introduction.</i> —Author, Life and Purpose of Writer; For what Readers, Date, Place, Language, and Characteristics of the Gospel; Kings and Governors; Biographical Notices; Geographical Notes; The Synagogue, Sanhedrin, Jewish Festivals; Sects and Orders of Men; The Nazirite Vow, &c. &c. 2. <i>Text of the Gospel</i> , with marginal and foot notes. 3. <i>Comments on the Revised Version.</i> 4. <i>Glossary, and Chapters on Our Lord's Teachings.</i> 5. <i>Appropriately Coloured Sketch Maps.</i> 6. <i>Critical Notes.</i>	1 6
The O. and C. Grammar. Re-written and Enlarged by the Rev. CHARLES BROOKE, M.A. ...		1 0	Marshall's Acts of the Apostles. Part II.: Chapters XIII.—end. Edited by the Rev. F. MARSHALL, M.A. ...		1 6
The O. and C. Spelling ...		1 0	Marshall's Church Catechism. By the same Author ...		1 6
Preparation Papers in English Grammar. Per packet ...		0 8	The Prayer Book. Edited by the Rev. F. MARSHALL, M.A. ( <i>In the press.</i> )		2 6
Normal Copy Books. In 12 numbers each ...		0 2	Preparation Papers on St. Matthew. Per packet ...		0 8
			Preparation Papers on Acts of the Apostles. Per packet ...		0 8
HISTORY.			BOOK-KEEPING.		
The Imperial History of England. By ROSCOE MORGAN, B.A. ...		2 6	Sarll's Practical Book-keeping. 128 pp., cloth ...		1 0
The O. and C. History of England ...		1 0	Sarll's Double-Entry Book-keeping. 256 pp., cloth ...		2 0
Outlines and Dates of English History. By A. A. GUNNIS ...		1 0	Sarll's Exercises in Double-Entry Book-keeping. 128 pp., cloth ...		1 0
This edition will be found suitable for the various set periods. Containing constitutional summaries, coloured maps, &c.			The above with all introductory matter, full explanations, outline keys, &c.		
History Notes. By GEORGE GILL, F.R.G.S. With Maps ...		0 6	Manuscript Books published to accompany the above.		
Europe in the Eighteenth Century. By T. J. WALKER, M.A. Oxon. With Maps, &c. ...		0 9	For Practical:—Cash Book ... 5d. Ledger ... 0 7		
			Ledger (100 Accounts) ... 7d.		
GEOGRAPHY.			For Double Entry:—Journal ... 5d. Ledger ... 0 7		
The Student's Geography. By GEORGE GILL, F.R.G.S., Member of the Chamber of Commerce, &c. Cloth, containing 1,000 pages. Fourth Edition Physical, Descriptive, Political, Industrial, Commercial, Social. Also published in Sections as follows:—		4 6	Short and Introductory Exercises ... 7d.		
Section I. Europe, including British Isles, and Physical and Commercial Introduction. 2s. 6d.—Section I.a. British Isles. 1s. 6d.—Section II. Asia, Africa, America, and Australasia. 2s. 6d.—Section III. Asia. 1s.—Section IV. Africa. 1s.—Section V. America. 1s. 6d.—Section VI. Australasia. 9d.			Key to Double-Entry Book-keeping ... 3 0		
The Imperial Geography. 464 pages, crown 8vo, cloth, with numerous Maps. For Senior Classes. New Edition ( <i>ready September, 1900</i> ) ...		2 6	Key to Practical Book-keeping ... 2 0		
The O. and C. Geography (Revised Edition). By GEORGE GILL ...		1 0	MATHEMATICS AND ARITHMETIC.		
A New Junior Geography. By GEORGE GILL. With Coloured Maps and Illustrations. (Expressly written for Preparatory Forms, and particularly useful for the Junior Forms Examination.)		1 0	Marshall's Student's Euclid, complete. By the Rev. F. MARSHALL, M.A. ...		2 6
The Geography of the British Colonies. By GEORGE GILL. With Coloured Maps of all the Colonies ...		2 6	Marshall's Examination Euclid. Books I.—IV. ...		1 0
The Victoria Atlas. By GEORGE GILL, F.R.G.S. Containing 101 Maps ...		1 0	The O. and C. Algebra ...		1 6
LATIN AND FRENCH. s. d.			Preparation Papers in Algebra. By A. CUDWORTH, M.A. ...		0 8
The O. and C. Latin, Part I. ...		1 0	The O. and C. "Practical Arithmetic." 176 pp., crown 8vo (New Edition), cloth, enlarged. (With Answers, 1s. 6d.) ...		1 0
The O. and C. Latin, Part II. ...		1 0	The O. and C. Tests in Arithmetic. (With Answers, 1s. 6d.) ...		1 0
The O. and C. Latin, Part III. ...		1 0	A Graduated Examination Arithmetic. 160 pp., cloth ...		1 0
Commercial French Correspondence ...		1 0	The Metric Chart (60 by 40). In Four Tints, mounted and varnished ...		10 6
			The Long Tot Book. By the Rev. CHARLES BROOKE, M.A. ...		0 3
MUSIC.			The Cross Tot Book. By the Rev. CHARLES BROOKE, M.A. ...		0 3
Theory of Music, Part I. ...		1 0	Cambridge Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per pkt. ...		0 8
Theory of Music, Part II. ...		1 0	Oxford Local Papers in Arithmetic. By C. CUDWORTH, M.A. Per packet ...		0 8
Imperial Theory of Music ...		2 6	DRAWING (Freehand, &c.).		
NATURAL SCIENCE.			The New Government Drawing Copies. 32 Subjects, upon stout card in case ...		1 4
Physical Measurements ...		2 6	South Kensington Demonstration Sheets. For Class Teaching (in Colour). On Mahogany Guards, per set, 24 Subjects to each set ...		7 6
or in Three Parts ... each ...		0 9	Also Mounted and Varnished on Boards, in Box, each set ...		15 0
Elementary Physics ...		2 6	No. 1. Freehand.   No. 3. Freehand.   No. 6. Freehand and Model.		
Applied Mechanics ...		2 6	No. 2. Freehand.   No. 5. Freehand.   No. 8. Freehand and Geom.		
Mechanics of Solids ...		2 0	No. 9. Casts and Vases, shaded ...		6 6
Mechanics of Fluids ...		2 0	New School of Art Geometry, 192 pp., by T. W. GOOD, D.D. ...		1 0
Magnetism and Electricity ...		2 6	Exactly meeting the requirements of the College of Preceptors Examinations.		
Physiological Charts, Set of Three ...		21 0	Science and Art Geometry, in Two Parts, each ...		1 4
Elementary Chemistry ...		2 6			
Chemical Laws and Problems ...		2 6			
Chemistry of Common Objects ...		2 6			
Chemistry Notes ...		1 0			

## New. GILL'S WALL MAPS New.

### "CARTOGRAPHIC"

Edited by GEORGE GILL, F.R.G.S.

WALL MAPS WITH NEW AND DISTINCTIVE FEATURES:

New Method of "Coast" production. New Method of "Hill" Work. New Treatment throughout.

MOUNTED ON STOUT LINEN, ROLLERS, AND VARNISHED.

Compiled from the latest statistics, artistically coloured, and thoroughly reliable.

Size,  
80 x 60 in.

Price 16s.

- \*ENGLAND AND WALES.      \*IRELAND.      INDIA.      ASIA.
- \*SCOTLAND.                \*EUROPE.      \*AFRICA.      \*N. AMERICA.      WORLD (MERCATOR).

\* The Set Geography for the Examinations.

## 2/6 GILL'S MILITARY DRILL. 2/6

Specimen Copies of the above Publications will be sent post free to Head Teachers in most cases.—Specimens only of Class Text-Books will be sent.

LONDON: GEORGE GILL & SONS, LIMITED, 13 WARWICK LANE, E.C.

# MESSRS. LONGMANS & CO.'S LIST.

## Science and Mathematics.

### Just Published.

With 564 Illustrations. Crown 8vo. Price 10s. 6d.

## A TEXT-BOOK OF PHYSICS.

By W. WATSON, A.R.C.S., B.Sc. (LONDON),

ASSISTANT-PROFESSOR OF PHYSICS AT THE ROYAL COLLEGE OF SCIENCE, LONDON.

By the Rev. J. L. ROBINSON, B.A.,

Chaplain and Naval Instructor at the Royal Naval College, Greenwich.

**A First Book in Statics and Dynamics.** With numerous Examples and Answers. Crown 8vo, 3s. 6d.

Sold separately: Statics, 2s.; Dynamics, 2s.

By J. HAMBLIN SMITH, M.A.

**A Treatise on Arithmetic.** With an Appendix on Approximation, in which a New Method of Decimalisation of Money is given with a view to Shortening and Simplifying much of the Work in Commercial Arithmetic. Crown 8vo, 3s. 6d. (Copies may be had without the Answers.) A KEY, 9s.

**Exercises in Arithmetic.** Arranged and Adapted to the Sections in Hamblin Smith's "Treatise on Arithmetic." Crown 8vo, 1s. 6d.; with Answers, 2s. A KEY, 6s. 6d.

**A Shilling Arithmetic.** For the use of Elementary Classes and Preparatory Schools. Cr. 8vo, 1s.; with Answers, 1s. 6d.

**Elementary Algebra.** New Edition, with a large number of Additional Exercises. With or without Answers, crown 8vo, 3s. 6d. Answers separately, 6d. A KEY, 9s.

\* \* \* The Old Edition can still be had.

**Exercises on Algebra.** Small 8vo, 2s. 6d. (Copies may be had without the Answers.)

**Elementary Trigonometry.** Sm. 8vo, 4s. 6d.

A KEY, 7s. 6d.

**Elementary Statics.** Crown 8vo, 3s.

**Elementary Hydrostatics.** Cr. 8vo, 3s.

A KEY to Statics and Hydrostatics, 6s.

**Geometrical Conic Sections.** Crown 8vo, 3s. 6d.

**Elements of Geometry.** Containing Books I. to VI., and Portions of Books XI. and XII., of Euclid, with Exercises and Notes, arranged with the Abbreviations admitted in the Cambridge University and Local Examinations. Crown 8vo, 3s. 6d.

Books I. and II. may be had separately, limp cloth, 1s. 6d. A KEY, 8s. 6d.

## History.

By CYRIL RANSOME, M.A.

**Short History of England.** From the Earliest times to the Present Day. For the use of Middle Forms of Schools. With Tables, Plans, Maps, Index, &c. Crown 8vo, 3s. 6d.

Or, in Two Parts, 2s. each. Part I.: To the Death of Elizabeth, A.D. 1603. Part II.: 1603 to 1895.

**A Summary of Ransome's Short History of England.** With 22 Maps and Plans, and 34 Genealogical Tables. Price 1s.

By SAMUEL RAWSON GARDINER, M.A., LL.D.

**A Student's History of England.** From the Earliest Times to 1885. Vol. I.: B.C. 55-A.D. 1509. With 173 Illustrations. Crown 8vo, 4s. Vol. II.: 1509-1689. With 96 Illustrations. Crown 8vo, 4s. Vol. III.: 1689-1885. With 109 Illustrations. Crown 8vo, 4s.

COMPLETE IN ONE VOLUME, with 378 Illustrations, crown 8vo, 12s.

**Preparatory Questions** on the above. By R. SOMERVELL, M.A., Assistant Master at Harrow School. Crown 8vo, 1s.

**A School Atlas of English History.** With 66 Maps and 22 Plans of Battles, &c. Fcap. 4to, 5s.

**Outline of English History,** B.C. 55 to A.D. 1895. With 96 Woodcuts and Maps. Fcap. 8vo, 2s. 6d.

By F. YORK POWELL, M.A., and T. F. TOUT, M.A.

**History of England.** NEW EDITION, in One Volume. Thoroughly Revised, with New Matter, bringing the narrative to June, 1900, and Index. With 38 Maps and Plans. Crown 8vo, 7s. 6d.

## History—continued.

By the Rev. J. FRANCK BRIGHT, D.D.,  
Master of University College, Oxford.

### A History of England.

Period I.—**Medieval Monarchy:** The Departure of the Romans to Richard III. From A.D. 449 to 1485. Crown 8vo, 4s. 6d.

Period II.—**Personal Monarchy:** Henry VII. to James II. From 1485 to 1688. Crown 8vo, 5s.

Period III.—**Constitutional Monarchy:** William and Mary to William IV. From 1689 to 1837. Crown 8vo, 7s. 6d.

Period IV.—**The Growth of Democracy:** Victoria. From 1837 to 1880. Crown 8vo, 6s.

### EPOCHS OF ENGLISH HISTORY.

YORK POWELL'S EARLY ENGLAND to the NORMAN CONQUEST. 1s.

CREIGHTON'S (Mrs.) ENGLAND A CONTINENTAL POWER, 1066-1216. 9d.

ROWLEY'S RISE of the PEOPLE and the GROWTH of PARLIAMENT, 1214-1485. 9d.

CREIGHTON'S (Bishop) TUDORS and the REFORMATION, 1485-1603. 9d.

GARDINER'S (Mrs.) STRUGGLE against ABSOLUTE MONARCHY, 1603-1688. 9d.

ROWLEY'S SETTLEMENT of the CONSTITUTION, 1689-1784. 9d.

TANCOCK'S ENGLAND during the AMERICAN and EUROPEAN WARS, from 1765-1820. 9d.

BROWNING'S MODERN ENGLAND from 1820-1897. 9d.

**Epochs of English History.** Complete in One Volume, with 27 Tables and Pedigrees and 23 Maps. Fcap. 8vo, 5s.

### EPOCHS OF ANCIENT HISTORY.

10 Vols., with Maps, 2s. 6d. each.

BESLEY'S GRACCHI, MARIUS, and SULLA.

CAPE'S EARLY ROMAN EMPIRE. CAPE'S ROMAN EMPIRE of the SECOND CENTURY.

COX'S GREEKS AND THE PERSIANS.

COX'S ATHENIAN EMPIRE.

CURTEIUS'S RISE of the MACEDONIAN EMPIRE.

IHNE'S ROME to its CAPTURE by the GAULS.

MERIVALE'S ROMAN TRIUMVIRATES.

SANKEY'S SPARTAN AND THEBAN SUPREMACIES.

SMITH'S (BOSWORTH) ROME AND CARTHAGE.

### EPOCHS OF MODERN HISTORY.

19 Vols., with Maps, 2s. 6d. each.

AIRY'S ENGLISH RESTORATION and LOUIS XIV., 1648-1678.

CHURCH'S BEGINNING of the MIDDLE AGES.

COX'S CRUSADES.

CREIGHTON'S AGE OF ELIZABETH.

GAIRDNER'S HOUSES OF LANCASTER AND YORK.

GARDINER'S THIRTY YEARS' WAR.

GARDINER'S FIRST TWO STUARTS.

GARDINER'S (Mrs.) FRENCH REVOLUTION, 1789-1795.

HALE'S FALL of the STUARTS, and WESTERN EUROPE, from 1678 to 1697.

JOHNSON'S NORMANS in EUROPE.

LONGMANS' FREDERICK the GREAT and the SEVEN YEARS' WAR.

LUDLOW'S WAR of AMERICAN INDEPENDENCE, 1775-1783.

MCCARTHY'S EPOCH of REFORM, 1830-1850.

MOBERLY'S THE EARLY TUDORS.

MORRIS'S AGE of ANNE.

MORRIS'S THE EARLY HANOVERIANS.

SEEHOHM'S PROTESTANT REVOLUTION.

STUBBS' THE EARLY PLANTAGENETS.

WARBURTON'S EDWARD THE THIRD.

## Principles of Teaching, &c.

By JAMES SULLY, M.A.

**Outlines of Psychology.** Crown 8vo, 9s.

**The Teacher's Handbook of Psychology.** Crown 8vo, 6s. 6d.

**Studies of Childhood.** 8vo, 10s. 6d.

**Children's Ways:** being Selections from the Author's "Studies of Childhood," with some additional Matter. With 25 Figures in the Text. Crown 8vo, 4s. 6d.

By Rev. the Hon. E. LYTTTELTON.

**Training of the Young in Laws of Sex.** FOURTH IMPRESSION. Crown 8vo, 2s. 6d. net.

# MESSRS. LONGMANS & CO.'S LIST.

## Classics.

By Dr. B. H. KENNEDY.

**The Revised Latin Primer.** Crown 8vo, 2s. 6d.

**The Shorter Latin Primer.** Crown 8vo, 1s.

**Exercises on the Shorter Latin Primer.** By M. G. and J. E. KENNEDY, and H. WILKINSON, M.A. Crown 8vo, 1s. 6d.

A KEY, for the use of Masters only. 2s. 9d. net, post free.

By ARTHUR SIDGWICK, M.A.

**A First Greek Writer.** Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Introduction to Greek Prose Composition.**

With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

**Scenes from Greek Plays.** Rugby Edition. Abridged and Adapted for the use of Schools. Fcap. 8vo, 1s. 6d. each.

**Aristophanes.**—The Clouds. The Frogs. The Knights. Plutus.

**Euripides.**—Iphigenia in Tauris. The Cyclops. Ion. Electra. Alcesteis. Bacchae. Hecuba. Medea.

**An Introduction to Greek Verse Composition.** By ARTHUR SIDGWICK, M.A., and F. D. MORICE, M.A. With Exercises. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By G. G. BRADLEY, D.D., Dean of Westminster.

**Aids to Writing Latin Prose.** Containing 144 Exercises. With an Introduction comprising Preliminary Hints, Directions, Explanatory Matter, &c. Edited and Arranged by T. L. PAPILLON, M.A. Crown 8vo, 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. G. LIDDELL, D.D., and ROBERT SCOTT, D.D.

**Greek-English Lexicon.** 4to, 36s.

**Greek-English Lexicon.** Abridged from the above. Revised throughout. Square 12mo, 7s. 6d.

By H. R. HEATLEY, M.A.

**Graecula.** A First Book of Greek Translation. With Rules, Short Sentences, Stories for Translation, and a Vocabulary. Fcap. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

By H. R. HEATLEY, M.A., and H. N. KINGDOM, M.A.

**Gradatim.** An Easy Latin Translation Book for Beginners. With Vocabulary. Fcap. 8vo, 1s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Excerpta Facilia.** A Second Latin Translation Book. Containing a Collection of Stories from various Latin Authors. With Notes at end, and a Vocabulary. Crown 8vo, 2s. 6d.

A KEY, for the use of Masters only. 5s. 3d. net, post free.

By H. R. HEATLEY, M.A., and A. SLOMAN, M.A.

**Exercises on Gradatim.** Small 8vo, 1s. 6d.

By T. K. ARNOLD, M.A.

**Arnold's Practical Introduction to Latin Prose Composition.** By G. GRANVILLE BRADLEY, D.D., Dean of Westminster. 5s.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Arnold's Practical Introduction to Greek Prose Composition.** By EVELYN ABBOTT, M.A., LL.D. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 3s. 8d. net, post free.

## Classics—continued.

By FRANCIS DAVID MORICE, M.A.

**Stories in Attic Greek.** With Notes and Vocabulary. Crown 8vo, 3s. 6d.

By F. RITCHIE, M.A.

**First Steps in Greek.** Crown 8vo, 2s.

**A Practical Greek Method for Beginners.**

By F. RITCHIE, M.A., and E. H. MOORE, M.A. Crown 8vo, 3s. 6d.

A KEY, for the use of Masters only. 5s. 2½d. net, post free.

**Easy Greek Grammar Papers.** Fcap. 8vo, 1s. 6d.

**First Steps in Latin.** Crown 8vo, 1s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Fabulae Faciles.** A First Latin Reader. Containing Detached Sentences and Consecutive Stories. With Notes and Vocabulary. Crown 8vo, 2s. 6d.

**Imitative Exercises in Easy Latin Prose.** Based on "Fabulae Faciles." Crown 8vo, 1s. 6d.

**Exercises in Latin Prose Composition.** Crown 8vo, 2s. 6d.

A KEY, for the use of Masters only. 3s. 8½d. net, post free.

**Easy Continuous Latin Prose.** Crown 8vo, 3s. 6d.

**First Latin Verse Book.** Crown 8vo, 2s.

**Easy Latin Passages for Translation.** Sm. 8vo, 2s.

**Latin Grammar Papers.** Fcap. 8vo, 1s.

## English Grammar and Literature.

By ALEXANDER BAIN, LL.D.

**A First or Introductory English Grammar.** 18mo, 1s. 4d.

KEY, with additional Exercises. 18mo, 1s. 9d.

**A Higher English Grammar.** Fcap. 8vo, 2s. 6d.

**A Companion to the Higher English Grammar.** Being intended as a help to the thorough mastery of English. Crown 8vo, 3s. 6d.

**English Composition and Rhetoric.** Original Edition. Crown 8vo, 4s.

**English Composition and Rhetoric.** Enlarged Edition. (Two Parts.) Part I.: The Intellectual Elements of Style. Crown 8vo, 3s. 6d. Part II.: The Emotional Qualities of Style. Crown 8vo, 3s. 6d.

**On Teaching English,** with Detailed Examples and the Definition of Poetry. Crown 8vo, 2s. 6d.

By THOMAS ARNOLD, M.A.

**A Manual of English Literature,** Historical and Critical. Seventh Edition, Revised. Crown 8vo, 7s. 6d.

## French.

By LÉON CONTANSEAU, M.A.

**A Practical Dictionary of the French and English Languages.** Post 8vo, 3s. 6d.

**A Pocket Dictionary of the French and English Languages.** Being a careful Abridgment of the Author's "Practical French and English Dictionary," preserving all the most useful features of the Original, condensed in a much smaller Volume. Square 18mo, 1s. 6d.

By A. A. SOMERVILLE, M.A.

**A First French Writer.** For the use of Lower and Middle Forms of Schools. Crown 8vo, 3s. 6d.

# SAMPSON LOW, MARSTON & CO.'S PUBLICATIONS.

## PRESENTATION AND SCHOOL PRIZES.

### STANDARD BOOKS FOR BOYS.

Written by some of the best-known Authors of Boys' Books, including:—W. H. G. KINGSTON, G. MANVILLE FENN, G. A. HENTY, HENRY M. STANLEY, PAUL DU CHAILLU, W. CLARK RUSSELL, Col. Sir WM. BUTLER, K.C.B., and many others of note.

*The largest, best, and cheapest Two-and-Sixpenny Books for Boys ever published.*

Fully Illustrated. In very handsome cloth binding. Crown 8vo. 2s. 6d.

### RECENT ADDITIONS TO THE SERIES.

**THE SHEIK'S WHITE SLAVE.** Being an Account of the Unravelling of the Mysteries of the Temple of Djaramos, the City of the Desert. By RAYMOND RAIFE.

**FOUNDLING KICK.** By JULES VERNE. Fully Illustrated.

**CLAUDIUS BOMBARNAC.** By JULES VERNE. Fully Illustrated.

**THE MARBLE CITY.** Being the Strange Adventures of Three Boys. By R. D. CHETWODE. With numerous Illustrations.

**THE HUNTING OF THE AUK.** By FRANK COWPER, M.A. Illustrated by F. C. PATTERSON and the Author.

**THE NEW HOUSE MASTER.** A School Story. By CHARLES EDWARDES. With numerous Illustrations.

**FLOATING ISLAND; or, The Pearl of the Pacific.** By JULES VERNE.

**THE LONGSHOREMAN.** By HERBERT RUSSELL, Author of "The Haunted Ship," &c. With Illustrations by S. ADAMSON.

**A BOY ALL OVER.** By HAROLD AVERY, Author of "An Old Boy's Yarn," &c.

**THE WALKS ABOARD OF TWO YOUNG NATURALISTS.** By DAVID SHARP.

**CAPTAIN ANTIFER.** By JULES VERNE.

**THE EXPLOITS OF MYLES STANDISE.** By H. JOHNSON.

**FOR THE FLAG.** By JULES VERNE.

**CLOVIS DARDENTOR.** By JULES VERNE.

**THE GOLD SHIP.** A Nineteenth Century Yarn of the Sea. By F. M. HOLMES, Author of "Ralf's Rancho," "Hugh Melville's Quest," &c.

\*.\* Full Special List of Boys' Books, including Jules Verne's, post free on application.

Now ready, Crown 4to, 3s. 6d. net.

### MODEL AND BLACKBOARD DRAWING.

By F. F. LYDON.

Designed to cover the new requirements of the Board of Education in both the subjects of which it treats.

The book consists of forty-four plates, which divide themselves into three classes, dealing respectively with the geometric models proper, common objects based on them, and blackboard exercises, treated boldly, and reproduced white on black. There are fifty-two pages of descriptive letterpress, in which the usual difficulties of the student are fully dealt with.

Nearly Ready. Crown 4to, 5s.

### AMBIDEXTROUS AND FREE-ARM BLACKBOARD DRAWING AND DESIGN.

By F. F. LYDON.

*Art Master, Parmiter's School, People's Palace School of Art, and Tottenham Training College.*

This work, in addition to a fully illustrated description of the forty-eight graduated plates, which are designed as a progressive course in free-arm drawing and design, gives numerous photographic blocks and diagrams illustrative of the method of work described, and of the best ways to fit up the classroom for the study of this subject. The letterpress shows how the subject may be inexpensively introduced into any school, and made a accessory to the ordinary drawing lesson. The forty-eight exercises, which begin with the simplest curves and work up to examples of floral design, are also issued as four packets of drawing cards suitable for class teaching. All the copies, as belts the subject, are effectively reproduced white on a black background to represent actual blackboard drawing.

Now ready. Second Edition. 8vo, 325 pp. Price 8s. 6d. net.

### SAILING ALONE AROUND THE WORLD.

By CAPTAIN JOSHUA SLOCUM.

With 63 Illustrations by THOMAS FOGARTY and GEORGE VARIAN.

In the *Daily Telegraph*, September 8, Sir Edwin Arnold writes:—"... this wonderful story of resolute adventure. I do not hesitate to call it the most extraordinary book, in its way, ever published."

\*.\* A Sixteen-Page List of Messrs. S. L. M. and Co.'s Announcements can be had post free.

### LOW'S POPULAR TWO SHILLING SERIES.

These books by Miss L. M. ALCOTT, Mrs. HARRIET BEECHER STOWE, Mrs. A. WHITNEY, MAUD JEANNE FRANC, AMELIA E. BARR, and others, are well adapted for Girls for School Prizes, etc.

Crown 8vo, cloth gilt. Price 2s.

### RECENT ADDITIONS TO THE SERIES.

**COMIC TRAGEDIES**, written by "Jo" and "Meg." (Miss L. M. ALCOTT.)  
**MARIAN; or, The Light of Some One's Home.** By MAUD JEANNE FRANC.

**BERNIOIA.** By AMELIA E. BARR.

**BEATRICE MELTON'S DISCIPLINE.** By MAUD JEANNE FRANC.

**EMILY'S CHOICE.** An Australian Tale. By MAUD JEANNE FRANC.

**BBN KUB.** A Tale of the Christ. By LEW WALLACE.

**HALL'S VINEYARD.** By MAUD JEANNE FRANC.

**JOHN'S WIFE.** By MAUD JEANNE FRANC.

**THE PREACHER'S DAUGHTER.** By AMELIA E. BARR.

**GOLDEN GIFTS.** By MAUD JEANNE FRANC.

**MINNIE'S MISSION.** An Australian Tale. By MAUD JEANNE FRANC.

**THE FLOWER OF GALA WATER.** By AMELIA E. BARR.

**INTO THE LIGHT.** By MAUD JEANNE FRANC.

**THE MASTER OF BALSTON.** By MAUD JEANNE FRANC.

**NO LONGER A CHILD.** By MAUD JEANNE FRANC.

**SILKEN CORDS AND IRON FETTERS.** By MAUD JEANNE FRANC.

**VERMONT VALE.** By MAUD JEANNE FRANC.

**LITTLE MERCY: For better, for worse.** By MAUD JEANNE FRANC.

**TWO SIDES TO EVERY QUESTION.** By MAUD JEANNE FRANC.

**A LITTLE SISTER IN THE WILDERNESS.** By LILIAN BELL.

**THE LOVE AFFAIRS OF AN OLD MAID.** By LILIAN BELL.

**'MID GREEN PASTURES.** By E. RENTOUL ESLER.

### NEW METHODS IN EDUCATION.

*Art—Real Manual Training—Nature Study.*

Explaining processes whereby Hand, Eye, and Mind are educated by means that conserve vitality and develop a union of thought and action.

By J. LIBERTY TADD.

With 478 Pictures and 44 Full-Page Plates, showing children and teachers practising these new methods or their work. A revelation to all interested in developing the wonderful capabilities of young or old. The pictures instantly fascinate every child, imbuing it with a desire to do likewise. Teachers and parents at once become enthusiastic and delighted over the Tadd methods which the book enables them to put into practice. Size 7½ by 10½ inches, 456 pages, fine plate paper, bound in cloth boards.

One Volume, imp. 8vo, 14s. net. Prospectus free.

NEW WORK BY JULES VERNE.

Crown 8vo, very fully illustrated, cloth extra, 6s.

### THE WILL OF AN ECCENTRIC.

By JULES VERNE.

"An extraordinary story. . . arouses the liveliest interest."—*Leeds Mercury*.  
"Actually surpasses in ingenuity all former fiction from the same pen."—*Dundee Advertiser*.

Third Edition Now Ready. Crown 8vo, cloth extra, 3s. 6d.

### THE RISE OF WELLINGTON.

By Field-Marshal LORD ROBERTS, V.C.

"This attractive little book. . . a very readable and inspiring piece of work."—*Spectator*.

NOW READY. PRICE ONE SHILLING.

### SCRIBNER'S MAGAZINE, CHRISTMAS 1900 NUMBER.

In this number of *Scribner's Magazine* its readers will find a remarkable collection of eight short stories, attractively illustrated, some beautiful examples of colour printing, and a number of articles of special interest and value.

# Blackie & Son's New Books.

**CAESAR'S GALLIC WAR, Book I.** Edited by Prof. JOHN BROWN, B.A. With Maps, Illustrations, and with or without Vocabulary. 1s. 6d.

This is a revised edition, reset in new type, with many new illustrations, of Professor Brown's well-known 'Caesar,' of which many thousands of copies have been sold. The new illustrations include six full-page plates, giving copies of Gérôme's painting of the Assassination of Caesar, Charles Gleyre's painting of Divico's Victory, busts of Caesar and Pompey, and representations of a general triumphing and a consul sacrificing, together with many text illustrations throughout the book.

*Literature says:—*"It is really delightful to see and handle school books so nice as Messrs. Blackie's Latin Series, edited by Prof. Tyrrell. . . Print and general appearance are excellent. In these important respects Blackie's Series holds the first place among school books."

**SALLUST'S CATILINE.** Edited by the Rev. W. A. STONE, M.A. With Map and Illustrations. With or without Vocabulary. 1s. 6d.

**VIRGIL'S GEORGICS—BOOK I.** Edited by S. E. WINBOLT, M.A. With Illustrations. With or without Vocabulary. 1s. 6d.

**VIRGIL'S AENEID—BOOKS II. & III.** Edited by Professor PHILIP SANDFORD, M.A. With Illustrations. With or without Vocabulary. 1s. 6d. each.

**LIVY—BOOK XXI.** Edited by G. G. LOANE, M.A. With Map and Illustrations. With or without Vocabulary. [Ready in December.]

**LIVY—BOOK I.** Edited by Professor JOHN BROWN, B.A. With Illustrations. [Ready in December.]

**LE COUP DE PISTOLET AND TAMANGO.** By PROSPER MÉRIMÉE. Edited by J. MICHELL, Ph.D., Assistant-Master in Westminster School. Cloth, each 1s.

**FRENCH COMMERCIAL CORRESPONDENCE.** By Easy Stages. By ALFRED STARCK, formerly Modern Language Master, Honiton Grammar School, Devon. 1s. 6d.

**GERMAN COMMERCIAL CORRESPONDENCE.** For Initiatory and Intermediate Classes or Private Use. By ALFRED OSWALD, Lecturer in German at the Athenaeum Commercial College, Glasgow. 2s.

**KEY TO LECHNER'S FIRST GERMAN COURSE.** Supplied to Teachers only on direct application to the Publishers. 2s. 6d. post free, net.

**A BRIEF INTRODUCTION TO THE COMMERCIAL GEOGRAPHY OF THE WORLD.** By the Rev. FREDERICK SMITH. With Coloured Maps. 1s. 9d.

This is an exceedingly bright and interesting introduction to Commercial Geography, a subject of increasing importance in present-day education. It is by no means a dry text-book, but a book that may be read with pleasure.

**MACAULAY'S ESSAY ON WARREN HASTINGS.** Edited by JOHN DOWNIE, M.A., Editor of Macaulay's Essays on Milton, Wulpole, and Clive. 2s.

**MACAULAY'S ESSAY ON PITT.** Edited by C. J. BATTERSBY, M.A. 2s.

**COWPER'S EXPOSTULATION.** Edited by A. A. BRAYLEY, B.A. Paper, 2d., cloth, 3d.

**GOLDSMITH'S RETALIATION.** Edited by E. H. BLAKENEY, M.A. Paper, 2d., cloth, 3d.

**SCOTT'S MARMION, CANTOS IV. AND V.** Edited by W. KEITH LEASK, M.A. Each, paper, 2d., cloth, 3d.

**LAYNG'S EXERCISES IN ELEMENTARY ALGEBRA.** By A. E. LAYNG, M.A., Editor of Layng's Arithmetic, Layng's Euclid, &c. Cloth, 1s.

## Blackie's Picture Shakespeare.

Under the above title Messrs. Blackie & Son are about to issue an Illustrated Edition of Shakespeare's Plays in single volumes suitable mainly for Schools and the home circle. Each volume will be provided with a brief Introduction and explanatory Notes, and will contain a Coloured Frontispiece and numerous Black-and-white Illustrations. The Plays are issued in a prettily designed cloth cover at the uniform price of 1s. 6d. per volume.

The Series is adapted for University Local and College of Preceptors' Examinations. The first volumes are—

**As You Like It.** In December. | **Julius Caesar.** In December.

LONDON: BLACKIE & SON, Limited, 50 Old Bailey.

# BLACKIE & SON'S NEW ILLUSTRATED BOOKS FOR SCHOOL PRIZES, REWARDS, &C.

By G. A. HENTY.

**With Buller in Natal; or, A Born Leader.** With 10 Page Illustrations by W. RAINEY, R.L., and a Map. 6s.

**In the Irish Brigade: A Tale of War in Flanders and Spain.** With 12 Illustrations by CHARLES M. SHELDON, and 2 Maps. 6s.

**Out with Garibaldi: A Story of the Liberation of Italy.** With 8 Page Illustrations by W. RAINEY, R.L., and 2 Maps. 5s.

**For Name and Fame; or, To Cabul with Roberts.** With 8 Page Illustrations by GORDON BROWNE. New Edition. 5s.

### MR. HENTY'S PREVIOUS BOOKS.

Price 6s. each.

Won by the Sword.  
A Roving Commission.  
Under Wellington's Command.  
Both Sides the Border.  
With Frederick the Great.  
With Moore at Corunna.  
At Agincourt.  
With Cochrane the Dauntless.  
A Knight of the White Cross.  
The Tiger of Mysore.  
Wulf the Saxon.  
St. Bartholomew's Eve.  
Through the Sikh War.  
Beric the Briton.  
In Greek Waters.  
The Dash for Khartoum.  
Redskin and Cowboy.  
By Right of Conquest.  
By England's Aid.  
With Lee in Virginia.

Price 6s. each.

By Pike and Dyke.  
The Lion of St. Mark.  
Captain Bayley's Heir.  
Bonnie Prince Charlie.  
For the Temple.  
The Young Carthaginian.  
With Wolfe in Canada.  
When London Burned.  
The Lion of the North.  
With Clive in India.  
In Freedom's Cause.  
Through the Fray.  
Under Drake's Flag.  
True to the Old Flag.

Price 5s. each.

No Surrender.  
At Aboukir and Acre.  
A March on London.  
On the Irrawaddy.

Price 5s. each.

Through Russian Snows.  
In the Heart of the Rockies.  
A Jacobite Exile.  
Condemned as a Nihilist.  
Held Fast for England.  
Maori and Settler.  
One of the 28th.  
In the Reign of Terror.  
Orange and Green.  
Bravest of the Brave.  
A Final Beckoning.  
The Cat of Bubastes.  
Dragon and the Raven.  
St. George for England.  
By Sheer Pluck.  
Facing Death.

Price 3s. 6d. each.

The Young Colonists.  
A Chapter of Adventures.

By Katharine Tynan.

**Three Fair Maids; or, The Burkes of Derrymore.** With 12 Page Illustrations by G. DEMAIN HAMMOND, R.L. 6s.

By Rosa Mulholland (Lady Gilbert).  
**Cynthia's Bonnet Shop.** With 8 Page Illustrations by G. DEMAIN HAMMOND, R.L. 5s.

By Captain F. S. Brereton.

**With Rifle and Bayonet: A Story of the Boer War.** With 8 Illustrations by WAL PAGE. 5s.

By Captain F. S. Brereton.

**In the King's Service: A Tale of Cromwell's Invasion of Ireland.** With 8 Page Illustrations by STANLEY L. WOOD. 5s.

By Alice Stronach.

**A Newnham Friendship.** With 6 Page Illustrations by HAROLD COPPING. 3s. 6d.

By Gordon Stables.

**In Far Bolivia: A Story of a Strange Wild Land.** With 6 Illustrations by J. FINNEMORE, R.L. 3s. 6d.

By Léon Golschmann.

**Boy Crusoes: A Story of the Siberian Forest.** Adapted from the Russian. With 6 Page Illustrations by J. FINNEMORE, R.L. 3s. 6d.

By Meredith Fletcher.

**Every Inch a Briton: A School Story.** With 6 Illustrations by SYDNEY COWELL. 3s. 6d.

New Book by Judge Parry, Illustrated by Walter Crane.

**THE STORY OF DON QUIXOTE.** Retold by His Honour Judge PARRY. Illustrated by WALTER CRANE. With 11 Coloured Full-Page Plates, 19 Half-Page Plates, a Title-Page, and Cover. Royal 8vo, cloth. 6s.

New Picture Book of Humour by Harry B. Neilson.

**DEOLL DOINGS.** Illustrated by HARRY B. NEILSON, with Verses by THE COCKIOLLY BIRD. 23 Full-Pages and 18 Vignettes in Full Colour. Royal 4to, picture boards, cloth back. 6s.

New Illustrated Catalogue post free on application.

LONDON: BLACKIE & SON, LIMITED, 50 OLD BAILEY.



# CAMBRIDGE UNIVERSITY PRESS.

## THE CAMBRIDGE SERIES FOR SCHOOLS AND TRAINING COLLEGES.

*General Editor*—W. H. WOODWARD, of Christ Church, Oxford; Principal of University (Day) Training College, Liverpool; and Professor of Education in Victoria University.

### NEW VOLUME.

**Outlines of the History of the English Language.** By T. N. TOLLER, late Fellow of Christ's College, Cambridge, Professor of English in the Owens College, Manchester. Crown 8vo, 4s. [Ready December 5th.]

## THE PITT PRESS SHAKESPEARE FOR SCHOOLS.—NEW VOLUME.

*Oxford Magazine*—"Mr. Verity is issuing apace his volumes of the Pitt Press Shakespeare for Schools, and we congratulate the Syndics on having secured so competent an editor. He knows what is wanted by school-children, omits pedantic comments, and provides in lucid and readable paragraphs all the necessary information."

*Practical Teacher*—"Of the many school editions of Shakespeare's plays this is certainly one of the very best."

**King Henry V.** With Introduction, Notes, Glossary and Index, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge. [Nearly ready.]

## PITT PRESS SERIES.—NEW VOLUMES.

*Subject for Cambridge Higher Local Examinations, 1901.*

**Bacon.—The New Atlantis.** Edited, with Introduction and Notes, by G. C. M. SMITH, M.A., St. John's College, Cambridge. [Nearly ready.]

*Subject for London Matriculation, June, 1901.*

**Sallust.—Catinus.** Edited, with Introduction and Notes, by W. C. SUMMERS, M.A., Fellow of St. John's College. 2s.

## THE CAMBRIDGE BIBLE FOR SCHOOLS AND COLLEGES.

*General Editor for the Old Testament and Apocrypha*—A. F. KIRKPATRICK, D.D., Regius Professor of Hebrew in the University of Cambridge.

### NEW VOLUME.

**The Book of Daniel.** Edited by the Rev. S. R. DRIVER, D.D., Regius Professor of Hebrew in the University of Oxford. 2s. 6d. net.

## SUBJECTS FOR QUEEN'S SCHOLARSHIP EXAMINATION, 1901.

**Cornelius Nepos.—Miltiades, Epaminondas.** With Notes and Complete Vocabulary for Beginners, by E. S. STUCKBURGH, M.A., late Fellow of Emmanuel College, Cambridge. 1s. 6d.

**Xenophon.—Anabasis, Book II.** With Notes and Complete Vocabulary, by G. M. EDWARDS, M.A., Fellow and Classical Lecturer of Sidney Sussex College, Cambridge. 1s. 6d.

**Shakespeare.—Julius Cæsar.** With Introduction, Notes, and Glossary, by A. W. VERITY, M.A., sometime Scholar of Trinity College, Cambridge. Fifth Edition, with additions and corrections. 1s. 6d.

Now Ready. Third Edition of Jebb's "Antigone."

**Sophocles.—The Plays and Fragments,** with Critical Notes, Commentary, and Translation in English prose, by Sir RICHARD JEBB, Litt.D., M.P., Regius Professor of Greek in the University of Cambridge. Demy 8vo.

*Journal of Education*.—"The greatest English work of this generation in Greek scholarship."

PART III. **Antigone.** Third Edition. 12s. 6d.

## GREEK AND LATIN TRANSLATION.

**Graduated Passages from Greek and Latin Authors for First-Sight Translation.** Selected and Supplied with short Notes for Beginners by H. BENDALL, M.A., and C. E. LAURENCE, B.A., Assistant-Master of Blackheath Proprietary School. Crown 8vo.

PART I. EASY. 1s. 6d.

PART II. MODERATELY EASY. 2s.

PART III. MODERATELY DIFFICULT. 2s. PART IV. DIFFICULT. 2s.

**Demonstrations in Greek Iambic Verse.** By W. H. D. ROUSE, M.A., formerly Fellow of Christ's College, Cambridge, Master at Rugby School. Crown 8vo, 6s.

*Educational Times*.—"It is but a few months since we noticed Mr. Rouse's cleverly devised lessons in Latin Elegiacs. The volume now before us is a companion treatise on Greek verse, and, like its predecessor, is remarkably fresh and stimulating. In an introduction extending over 75 pages, the author has set down a large collection of useful hints on the structure and usage of Greek tragic verse, and has given some valuable tables of classical examples. . . . We can only hope that Mr. Rouse's book will find its way into the hands of many teachers, to the certain benefit both of themselves and of their pupils."

**Cambridge Compositions, Greek and Latin.** Edited, for the Syndics of the Press, by R. D. ARCHER-HIND, M.A., and R. D. HICKS, M.A., Fellows and Classical Lecturers of Trinity College, Cambridge. Crown 8vo, 10s.

*Classical Review*.—"The book before us quite surpasses its predecessors in our judgment. . . . We heartily welcome Cambridge Compositions as being in itself an admirable piece of work, and also as affording a very favourable augury for the future of English scholarship."

Now Ready, crown 8vo, 3s. 6d. net.

## FIFTEEN STUDIES

IN

## BOOK-KEEPING.

With a Selection of Worked and Unworked Examination Papers.

By WALTER W. SNAILUM, Professional Associate of the Surveyors' Institution.

This book has been written to combine a thorough explanation of the principles of double-entry book-keeping with a course of work suitable for preparation for the examinations held by the Society of Arts, Civil Service, Lancashire and Cheshire Union of Institutes, and kindred examining bodies.

*Bookman*.—"A book which seems to supply admirably a long felt want. It teaches its subject from the start, and does not presuppose the possession of knowledge which it professes to impart."

*Commerce*.—"This volume is written so that the veriest tyro may understand."

*Educational Times*.—"Mr. Snailum is very clear, and his manner of unfolding his subject is interesting."

*Schoolmaster*.—"The fifteen studies present in gradation form a very complete account of the principles of book-keeping. We have spent considerable time over this portion of the book, and can testify to the excellence of the style and the skill with which the facts are marshalled."

## PITT PRESS MATHEMATICAL SERIES.—NEW VOLUME.

**The Elements of Hydrostatics.** By S. L. LONEY, M.A., Professor of Mathematics at the Royal Holloway College, sometime Fellow of Sidney Sussex College, Cambridge. Crown 8vo, 4s. 6d.

*Extract from Preface*.—"The present volume is intended to be for the use of the class of students for whom my 'Elements of Statics and Dynamics' was written, and may be regarded as a continuation of that book."

## CAMBRIDGE SCIENCE PRIMERS.

**A New Primer of Astronomy.** By Sir ROBERT BALL, F.R.S., Lowndean Professor in the University of Cambridge. 1s. 6d. net. [Nearly ready.]

## THE CAMBRIDGE HISTORICAL SERIES.

*General Editor*—G. W. PROTHERO, Litt.D., Hon. Fellow of King's College, Cambridge, and formerly Professor of History in the University of Edinburgh.

### NEW VOLUMES.

**An Essay on Western Civilization in its Economic Aspects (Medieval and Modern Times).** By W. CUNNINGHAM, D.D., Fellow of Trinity College, Cambridge. [Nearly ready.]

**The French Monarchy, 1483-1789.** By A. J. GRANT, M.A., Professor of History in the Yorkshire College, Leeds. With 4 Maps. 2 Vols. [Nearly ready.]

**Canada under British Rule, 1760-1900.** By Sir J. G. BOURINOT, LL.D., K.C.M.G. With 8 Maps. [Nearly ready.]

## A NEW FRENCH VERSE READER.

**A Primer of French Verse for Upper Forms.** Edited by FREDERIC SPENCER, Professor of the French Language and Literature in the University College of North Wales; formerly Chief Master on the Modern Side in the Leys School, Cambridge. 3s. [Pitt Press Series.]

*School World*.—"Teachers owe a debt of gratitude to Prof. Spencer for this attractive volume. . . . It is a very good book."

*Educational Times*.—"A pupil who has read this book with care will acquire an insight into French prosody such as no other 'Primer' would give him, and will feel that this is a book to which he can always turn again with pleasure."

*Guardian*.—"Simplicity and freshness characterize the whole of the work, and Mr. Spencer may be congratulated upon having made a really valuable contribution to the list of French school books."

Six or more copies of the two following books for class use can be supplied at half the published prices, and may be ordered through any bookseller.

**Gospel History of our Lord Jesus Christ** in the Language of the Revised Version, arranged in a connected narrative, especially for the use of Teachers and Preachers. By Rev. C. C. JAMES, M.A., Rector of Wortham, Suffolk, and late Fellow of King's College. Crown 8vo, Second Edition, 3s. 6d.

**A Harmony of the Gospels** in the words of the Revised Version, with Copious References, Tables, &c. Arranged by Rev. C. C. JAMES, M.A. Crown 8vo, 5s.

COMPLETE LISTS ON APPLICATION.

London: C. J. CLAY & SONS, Cambridge University Press Warehouse, Ave Maria Lane.

## CONTENTS.

	Page		Page
School Boards and Secondary Education .....	477	Education at the Paris Exhibition. By Rev. J. O. Bevan.	
Notes .....	477	Paper read at the Evening Meeting of the College of	
Summary—The Month .....	479	Preceptors .....	490
Universities .....	481	Reviews .....	493
French Syntax .....	482	Somerset and the Chantry Schools; Homer and Humour; Educa-	
Correspondence .....	483	tion and the Philosophical Ideal; Prof. Raleigh as a Literary	
Meeting of the Council of the College of Preceptors .....	484	Critic; The Elements of Psychology; Eton.	
Forecasts and Comments:—Fixtures .....	487	General Notices .....	496
Education Gossip .....	488	Gift Books and Prizes, II. ....	498
Appointments and Vacancies .....	488	Mathematics .....	500
Literary Gossip .....	489		

## The Educational Times.

### *School Boards and Secondary Education.*

Up to the time of going to press the decision of the judges in the case of *The Queen against Cockerton* has not been pronounced.

The question in dispute affects most seriously the interests of all secondary schools, and until the last moment it was hoped by many that the Board of Education would have found some means of obviating the necessity for a judicial decision on the matter. It is essentially a question of administration and organization, and more fit to be decided on considerations of departmental policy than as a pure question of law. The auditor of the accounts of the London School Board disallowed certain sums in the account charged in respect of the maintenance of classes registered under the Science and Art Department. The position taken up by the auditor, and now supported by the Local Government Board and the Attorney-General, is that the School Board, being a statutory corporation, deriving its powers solely from the Education Acts, cannot legally use the School Board rate or the school fund to support such classes, either in day schools or in evening continuation schools. Owing to the wide range of subjects included in the syllabus of the Science and Art Department of the Board of Education, if the position taken up by the School Board is sound, a most undesirable overlapping of educational work would ensue, to the manifest disadvantage of existing secondary schools.

The difficulty arises from the absence of any definition of the words "elementary education" in the Education Act, 1870. The draftsman—and, after him, "the Legislature"—did not think it necessary to define the term in the definition section, although he defines "elementary school" as "a school or department of a school at which elementary education is the principal part of the education there given." This is a good instance of *lucus a non lucendo*, so frequently met with in statutes, but, as the argument of counsel showed, of little use in determining the meaning of "elementary education"—which, and which only, School Boards are authorized to provide out of the rates. As Mr. Justice Wills pointed out during the hearing, if the ratepayer can be made to pay for teaching the higher branches of mathematics, it is difficult to see where the line can be drawn. Whatever the result of this case, it is highly desirable that Parliament should determine clearly the

limits of the jurisdiction of School Boards. It is undesirable that the ultimate critic of their educational policy and action should be the auditor.

We report in our "Summary of the Month" some of the more noteworthy passages of the three days' argument before Justices Wills and Kennedy. We had certainly expected that more would be made of the spirit, as well as the letter, of the Education Acts—in other words, of the natural and equitable interpretation of the letter. As compared with the strict definition of elementary education, the question of age limit is surely more stringent in its character. Another point on which it seems that scarcely sufficient stress was laid is the essential feature of compulsion, which clearly goes to characterize the rate-aided elementary education of the Board schools. Much of the argument in the Court of Queen's Bench seems to have gone on the assumption that a School Board is a body which may raise a rate for the provision of anything coming under the name of elementary education, and for pupils of any age, and any degree of proficiency. This is not so. The School Board, as set up by Act of Parliament, is a statutory body with a statutory mandate, limited to the work of supplying education according to an imposed code, for children under a statutory age. But we will not multiply comments on a case which we did not hear argued. As the judges reserved judgment, they doubtless desired to go more at leisure into the fair and proper interpretation of the Education Acts. It is probable enough, whatever their decision may be, that the case will be carried to a Court of Appeal.

## NOTES.

THE versatility of Lord Rosebery's mind has never been more pointedly shown than in his recent Rectorial address at Glasgow. That he should have chosen the condition and needs of the Empire as the subject of his discourse is natural; but there are few men who would be able to combine a historical retrospect with an analysis of its essentials and suggestions for its preservation and development in such a well balanced speech. A substantial portion was devoted to a consideration of the true relation of our Universities to the changing requirements of commerce and administration. Without a satisfactory raw material—the product of healthy physical and moral conditions of life—the Universities must fail in supplying even their own natural share in the demands of the Empire. As Lord

Rosebery points out, however, by their neglect of modern languages and subjects useful in commercial life, they are specially unfitted for such a purpose. While the teaching of Latin and Greek is fostered by the expenditure of ample funds, that of science, modern languages, and commercial subjects is starved. There is yet work for a University Commission to do.

FROM the fact that one hundred and eighty-six Unionist members of Parliament have been educated at large public schools, and only twenty-six Liberals, *Truth* has drawn a somewhat far-fetched moral. It advises Liberal parents to shun such educational institutions, on the ground of the baneful political tone which they foster. On similar reasoning, Non-conformist parents should be warned from sending their sons to public schools, because a very large percentage of the occupants of the Episcopal bench are public-school men. It has even been suggested that the lack of discipline in elementary schools is responsible for the existence of the Hooligan tribe. We have, however, only to consult old volumes of *Punch* to satisfy ourselves that street ruffianism of a similar organized type was well known in London before 1870. Unfortunately, the moral influence of education succumbs before the fever of our modern life; but in less exciting times it will again assert itself. It may be, as we heard a shrewd commercial traveller recently maintain, that the English character is becoming more excitable. Being the evidence of a man with exceptional opportunities of observation, this is probably true; but there is certainly no ground for suggesting that the growing excitability of the national character has its origin in our public schools.

THE London School Board election has led to a mild recrudescence of the religious education controversy, which, although not buried, as Mr. Asquith has assumed, fortunately has not been much encouraged by the responsible organs of political opinion. Both sides are apparently agreed that the right of parents to determine the religious views and doctrines which shall be taught their children is to be the first postulate in the discussion. It is also agreed that some religious instruction should be given systematically and as a part of the child's daily work. Here all agreement ceases, and, notwithstanding the wordy warfare of past years, no working scheme has been suggested which can be said to have received substantial support in the country. It would certainly not be an ideal state of things that the bulk of the children in our large towns should depend entirely on the elementary-school masters for their religious education. Teachers are not trained for this work, and the instruction given cannot be supervised so as to satisfy a parent of strong religious feeling. But such a parent can always impart his distinctive views outside of the day school.

THE Government of New Brunswick, Canada, has inaugurated a scheme of agricultural education which ought to satisfy many an English parent troubled by the difficulty of finding a career for his book-tired boys. The training will be carried on at the Government farm some fifty miles from the port of St. John, during a three years' course, the only fee being one of from £30 to £40, payable for the first year only to cover the cost of board. The training farm is intended principally for the class of boy attending our public schools, and has manifest advantages over our home agricultural colleges for boys who

intend to emigrate. The conditions of agricultural life in our Colonies are so diverse, and unlike those which exist here, that for such boys even the best English training is unsatisfactory. It has always been found that a youth who goes out from England, although well trained according to our notions, wastes a considerable part of the capital which he takes with him in merely learning the ordinary farmer's mode of dealing with his farm. Stock and crop raising and the problems of feeding and of transit to market are also essentially different in the Colonies. Mr. Miller, the Agent-General for the province in London, will, doubtless, find many inquirers desiring further particulars about the scheme.

THE accommodating spirit of some theatrical managers leads them occasionally to study the syllabus of the Local Examinations. Indeed, more than one company has been known to tour the provinces for the benefit of the schools. But this was when the set subject was a Shakespearian play. The courageous versatility of the amateur seeks higher planes of difficulty. "Marmion," which is a subject often set for examination, has been dramatized, and the play will be acted on December 1 in the old Lecture Theatre of the University of London, in Burlington Gardens. If masters could be induced to sacrifice their hard-earned holiday, they might seize the opportunity of pointing out, during the shifts, how Scott's narration is changed into the direct form of the dramatic version. Scott's topographical detail is generally so accurate that a copy of the last Ordnance Survey of Scotland would make a most desirable and instructive drop-scene. But surely the boys' Saturday afternoon ought to be held sacred to football, all Local Examinations notwithstanding.

THE endeavour to make girls take an interest in political and social questions at the High School, Tunbridge Wells, has led to some ridiculous results. We can, however, reconcile ourselves to the educational failure when we obtain such gems of information as that Mr. Labouchere is a member of the Conservative Cabinet, and that "Oclaira Hill" was taken from the Boers by the English after a great display of bravery. This reminds us of the pupil-teacher who grew loquacious on the subject of "Kindergarten" as a famous Prussian general in the Franco-German War. With all their brilliancy, girls do not seem able to get at facts with the readiness and grip of boys. This may be due to the process of snubbing which the too-inquiring girl is apt to undergo from the male members of the family; but very little has been or is being done in girls' schools to develop an intelligent interest in political and current events. Does the ordinary woman teacher read her paper?

"LA RÉPUBLIQUE" has been called by a cynical Frenchman "le Papa public." The French Minister of Public Instruction has just addressed to the rectors of all classes of schools throughout the country a circular in which he urges them to renew, with all possible energy, their efforts to spread the anti-alcoholic faith. "I wish," he says, "that it should take an official place on our programmes on the same footing as grammar or arithmetic." Temperance is to become a subject for examination in primary and secondary instruction. "Short lessons and lectures, well supported by facts and figures, should be organized in addition to the regular work in all our public educational

establishments." The official character of the circular—as compared with the earlier and less formal instructions—is intended to serve as a protection to masters and mistresses against the possible resentment which they may incur from mayors and other municipal authorities engaged in the liquor trade. Certainly one would imagine that the protection is necessary.

A VERY thorough system of examination of students seeking to qualify as teachers of commercial subjects has been instituted by the Austrian Department of Worship and Education. The examination is divided into the following stages:—(1) Home-prepared work; (2) examination-room paper work; (3) *viva voce* examination; (4) sample lesson. The candidate must select from the following groups of main subjects:—Group A: (1) book-keeping, correspondence, and counting-house work; (2) commercial and political arithmetic; (3) economics and law. Group B: (1) commercial geography; (2) commodities. Candidates must afford proof of having received higher-school education, and of at least four years' office experience, or of having undergone a curriculum at a polytechnic or University; and this according to the group of main subjects professed. No such minimum of knowledge as in this country is designated "pass work" will suffice. The requirements under the head of economics, in which the candidate must be able to give an independent judgment on important questions, and under geography, in which he must show knowledge of magazine monographs and comparative statistics, are such as would make ordinary English students shudder.

THREE HUNDRED years ago Richard Mulcaster, Master of the Merchant Taylors' School, proposed a teachers' college as a department of a University. The words of wisdom in which he set forth his views may well be recalled at the present moment:—

I conclude [he said] that this trade requireth a particular college for these four causes. First, for the subject, being the mean to make or mar the whole fry of our State. Secondly, for the number, whether of them that are to learn, or of them that are to teach. Thirdly, for the necessity of the profession, which may not be spared. Fourthly, for the matter of their study, which is compatible to the greatest possessions, for language, for judgment, for skill how to train, for variety in all points of learning, wherein the framing of the mind and the exercising of the body craveth exquisite consideration, besides the staidness of the person.

The said Richard Mulcaster, an Old Etonian of brilliant classical attainments, was, it may be noted, the first Headmaster of the Merchant Taylors' School. His great administrative and teaching power, combined with this scholarship, made the school famous. It filled rapidly, and the Company had to reprove him for having considerably exceeded the statutory number of pupils, namely, two hundred and fifty. The Headmaster at that time received £10 per annum for his services; but the sum was regularly doubled by a certain Master of the Company from his own purse.

## SUMMARY.

### THE MONTH.

AFTER many delays, the case of the Queen v. T. B. Cockerton (auditor of the Local Government Board)—a case which raises the question of legality in regard to expenditure by School Boards on their higher-grade schools—has been heard in the Court of Queen's Bench before Justices Wills and Kennedy. A

rule *nisi* had been obtained, calling on the auditor to show cause why a writ should not be issued to quash his disallowances of expenditure by the London School Board for the half-year ending September 29, 1898. The questions for the decision of the Court were:—

(1) Whether it was within the powers of the Board as a statutory corporation to provide science and art schools or classes either in day schools or in evening continuation schools. (2) Whether it was lawful for them to pay the expenses of maintaining these schools or classes out of the School Board rate or School Fund. (3) Whether the said rule *nisi* should be made absolute in regard to any and which of the said disallowances and surcharges.

We printed last month some particulars of Mr. Cockerton's disallowances, which were made, it will be remembered, after complaint had been raised against the School Board by the Camden School of Art and other independent educational bodies.

THE Attorney-General, on behalf of the Local Government Board, showed cause against the rule. He fairly described the origin of the higher-grade schools:—

All scholars in day schools in the seven Code standards were registered at Whitehall, while those in outside standards were registered in South Kensington. In many of the day schools maintained by the Board there were both ex-standard scholars and science and art students. In some cases ex-standard scholars were taught in the same classes with science and art scholars. In other cases scholars in the standards were also taught in the same classes. Grants were obtained by the Board in respect of ex-standard scholars under Article 101 of the Code. In practice the science and art classes were generally carried on in the same buildings as the public elementary school, and the principal teacher had supervision of all the scholars. This practice was alleged to be contrary to the provisions of Article 85 (e) of the Code. The allocation of a teacher to a science and art school or class was also alleged to be illegal. The School Board had charged no fees for instruction in science and art schools and classes provided by them, so far as day schools were concerned, since August, 1891; so far as evening continuation schools were concerned, since September 1, 1898. The expenses incurred by the Board in respect of science and art schools and classes under the Science and Art Department had always considerably exceeded the grants obtained from the Science and Art Department, and the deficiency had always been made good by the Board out of the School Fund and the rates levied under the Public Elementary Education Acts.

MR. ASQUITH, for the School Board, raised the important point of the definition of elementary education. He contended that an elementary school was a school in which the principal part of the education was elementary, but it was nowhere enjoined by law that the whole of it should be elementary. The Attorney-General drew a distinction between education under the Elementary Acts and instruction under the Technical Acts, and urged that the School Board could not use the rates for the latter purpose. On these points the Justices made some noteworthy (if somewhat confused) *obiter dicta*.

MR. Justice Kennedy suggested that the word elementary was loosely applied, and meant all such education as was given in elementary schools. The Attorney-General contended that the science and art instruction complained of went far beyond anything contemplated by the Code. MR. Justice Wills thought the word elementary capable of expansion—in fact, much was included in the Code now which was not admitted years ago. The Attorney-General held that the Code was the outside limit, and that the School Board had gone beyond. MR. Justice Kennedy thought the Attorney-General was trying to put elementary education in a strait-jacket, and was ruling out subjects which had been legally optional for years. The Attorney-General explained that School Boards were not licensed to go to the highest level, and that the Science and Art Department was specially intended to carry education further than the elementary Code contemplated. MR. Justice Wills did not regard much that was in the Code as elementary subjects. He did not see anything in the Code to prevent education such as that given at Eton and Harrow.

MR. ASQUITH's main case was that the powers exercised for so many years by the London School Board had received Parliamentary sanction, and the Board was perfectly within its powers in conducting these science and art classes so long as the principal part of the education given in the schools was elementary education. He ridiculed the contention that School Boards could only conduct schools in which elementary education was taught, either independently of or out of rates.

Parliament created these School Boards, and conferred powers upon them to provide elementary schools, the essence of which was that

they should be schools in which the greater part of the education was elementary. No regulations as to the manner in which a Parliamentary grant was to be obtained could, he submitted, affect their powers, and the questions which had been raised as to the Code had nothing to do with the Act. In addition, the learned counsel argued that these powers had received statutory recognition under the Technical Instruction Act, a great part of which would have no meaning if the Legislature did not look upon the School Boards as capable of receiving, in respect of their schools, grants from the Science and Art Department. The "Directory" itself of the Science and Art Department also received Parliamentary sanction by that Act, as did also the evening continuation schools as carried on now by the London School Board.

THE case extended over three days. On the third day Mr. Justice Wills said that he should give no decision until the questions submitted to the Court were more definitely set out in writing. At present they were asked to assume too much. It was not unusual for Departments to exceed their powers, and he was inclined to think that this was a question for the decision of Parliament rather than the law courts. It was a startling proposition that elementary education could be carried to any length. Mr. Davies, for the School Board, submitted that they were within their rights if the principal part of the education given was elementary, and if the expense was not more than 9d. a head per week. They must take a broad and practical view of this matter. Mr. Justice Wills said the burden of advanced education in all large towns would be enormous if it were paid for out of the rates. Mr. Justice Kennedy did not see why elementary education should be confined to the Code, and not extended to the "Directory," both documents coming from the same Department. The two documents undoubtedly overlapped. Mr. Justice Wills would have no hesitation in judicially deciding that the solution of quadratic equations was not "elementary." He supposed the surcharges would be remitted if the Court upheld the auditor's action? Personal consequences ought not to follow in such a case. Their lordships then went to one of the consulting rooms to see the models prepared by scholars in the advanced classes. Judgment was reserved.

At Glasgow, on November 16, Lord Rosebery gave his address as Lord Rector of the University. He dwelt especially on the need of training men for the responsibilities which must fall on them as members of "a conquering and imperial race." On this subject he had a word of admonition for the schools.

Are we setting ourselves sufficiently to train such men? I doubt it. The most illustrious of our public schools has no modern side. Oxford and Cambridge still exact their dose of Latin and Greek. I cannot believe, from the imperial point of view, having regard to the changed conditions of the world, that this is necessary or adequate or wise. I concede Latin as a training instrument and a universal language. But how about Greek? To learned men it is a necessity. But must it be a part of the necessary equipment of the ordinary youth of the nineteenth century, who has so much to learn in order to be equal to his age? I think that when our national ignorance of foreign languages has become not merely a byword, but almost a commercial disaster, we might reconsider part of our educational apparatus. For the purposes of the present age—especially for the merchant and the politician—there is required a more modern education, more especially as regards languages.

THE Board of Education have published their first Report, together with supplementary volumes on secondary and elementary education. After referring to the organization of the new office, to the transfer of powers, and to the constitution of the Consultative Committee, the report states that up to the present time the Board have received but few applications for the inspection of schools supplying secondary education, which is, no doubt, owing to the fact that the schools have been awaiting the completion of the necessary arrangements by the Board. The draft Orders in Council which will in due course be submitted to Her Majesty will, if approved, the Board say, strengthen their powers in undertaking such inspections; and the advice of the Consultative Committee will be taken as to the employment of any University or other organization for the purpose of inspecting secondary schools. Special reports have been prepared on the educational systems of the self-governing colonies, on various aspects of American, Swiss, German, Hungarian, and Norwegian education, on the work of preparatory schools in England, and on other educational subjects, and these will be published at an early date.

THE Report further states that, during the period under

review, the work of the organizations recognized under Clause VII. of the "Science and Art Directory" has been consolidated. In the case of most of the larger administrative counties and many of the county boroughs in England, the Local Authorities have been recognized as organizations under that clause, the actual figures being 28 out of 49 administrative counties and 21 out of 61 county boroughs. Under the head of the Science Division of Secondary Education a table is given which shows, with regard to elementary scientific instruction, a considerable increase in the number of classes and pupils for the decennial period from 1890 to 1900 in England, Wales, and Ireland. In the Art Division also increases are recorded. The facilities hitherto possessed by the colonies for obtaining specimens of art works have been extended, and cases of works have been despatched to the Cape, Natal, New Zealand, and Malta, the cost of the works and carriage being borne in each case by the colonial Governments. Much information may be found in the Report relating to various other matters connected with instruction in science and art under the secondary education branch of the Board, the expenditure on which during the financial year of 1899-1900 is set down at £590,386.

THE Board hope that the new Code will make it possible to secure a higher level of general education without imposing any additional burden on teachers and children, and it is their desire to allow to managers and teachers the greatest possible freedom in planning and carrying out courses of instruction comprising the subjects specified, and to encourage them to adapt the teaching given in their schools to local requirements. As to higher elementary schools, the Report notes the issue of the minute enabling the Board to establish "a new class of elementary school termed 'higher elementary schools,'" in which will be given "elementary instruction of a more advanced kind than has hitherto been possible under the Code, and their curriculum will be such as to embrace in the higher classes the work of the elementary course prescribed for science schools."

AN explanation of the recent Order in Council, transferring certain powers of the Charity Commission to the Board of Education, has been issued by the Department. The Board contemplate that the powers in question will be exercised by them in connexion with (a) inspections of endowed schools under Section 3 of the Board of Education Act; (b) local inquiries held with a view to prevent undesirable competition between schools in the same locality, or otherwise to promote the better local organization of secondary education. Communications on matters falling under either of these heads should be addressed to the Board of Education, South Kensington. Communications on matters connected with the establishment of new schemes, or the amendment of existing schemes, and on matters relating to the interpretation of schemes and the administration of endowments, should be addressed to the Charity Commissioners, as heretofore. Where any doubt exists as to the office to which application should be made, the Charity Commissioners should be addressed in the first instance, and the question will then be determined by communications between the two Departments. The above explanation refers to England. In Wales and Monmouthshire the Board of Education takes the place of the Charity Commission (with the exceptions mentioned in the Order) for the transaction of all business connected with educational endowments regulated by scheme made under the Endowed Schools Acts. Educational endowments in Wales and Monmouthshire not regulated by scheme under those Acts will be affected by the Order to the same extent as educational endowments in England.

THE Blackburn Chamber of Commerce has addressed a memorial to the President of the Board of Education, in reference to certain remarks which he made at Manchester on October 15, when opening a new higher-grade school. The Duke said that Parliament did not take a very keen interest in education, and that the leaders of industry and commerce should do more to create an opinion that "a thoroughly organized system of national education is indispensable." The memorial says:

We have taken steps to bring these views prominently before the members of the House of Commons who represent the area covered by our Chamber of Commerce. We wish now most respectfully and earnestly to request your Grace to urge upon your colleagues in the Ministry the necessity of treating the present educational deadlock as a matter of first-rate importance. Our attention as a Chamber of Commerce has been specially called to the very great assistance rendered by



the State to education in Germany, Belgium, Denmark, and the United States, as evidenced by the consular reports, and we are deeply conscious of the inadequate mental equipment with which we are furnishing our own people. In particular, we would suggest that those communities that are conscious of their educational disadvantages, and take steps to put themselves in a condition of readiness by forming Local Authorities for Secondary Education, may be allowed to help themselves by devoting a sum not exceeding a penny rate towards the promotion of secondary education, in addition to any rate already available for technical instruction. It would, no doubt, be desirable to have a fully developed scheme for the whole country, but we feel such an advantage would be purchased too dearly at the cost of any further delay. Such concession would be in accordance with the general principles of local autonomy set forth in the Education Bill introduced by the Government in the last Session of Parliament, and would seem peculiarly consistent with the procedure by tentative stages which has marked educational progress in our country.

THE new School Board for London was elected on November 29, too late to enable us to chronicle the result, or to comment on any modification which it may have introduced in the character of the Board.

THE Technical Instruction Committee of the Manchester City Council has secured from the United States Commission, for display in Manchester, the comprehensive exhibit of the educational resources, methods, and aims of the States which has formed so striking a feature of the Department of Education at the French Exhibition. The exhibit includes within its scope every variety of public educational effort throughout the vast area of the Union. The kindergarten, the primary, grammar, and high-school grades of elementary and secondary education, the technical, agricultural, commercial, art, normal, and professional schools and colleges, the Universities, the schools for negroes and Indians, the institutions for defectives of all kinds, the associations for University Extension, and the promotion of summer schools, all find exemplification in this remarkable display, to which photography has lent its effective and invaluable aid. It is hoped that the exhibit may be ready for public inspection by the end of the year, and that it may remain on view for several weeks.

MISS TUCKER, who gained a first class in the History Tripos, Part I., 1899, and a first in Part II., 1900, has been elected to the Kennedy Studentship at Newnham College. Miss Tucker will reside at Newnham, and carry on advanced historical work. Bathurst Studentships have been awarded to Miss S. O. Ford and Miss G. L. Matthæi, of Newnham College, and Miss Clark, a graduate of Glasgow, all of whom are carrying on advanced work in botany and vegetable physiology. Miss Winifred Hudson, who was declared equal to the eighth Wrangler in the Mathematical Tripos, has been elected to the Arthur Hugh Clough Scholarship. On the results of examinations held at the college the classical scholarship has been awarded to Miss A. E. Skelton, Norwich High School; and the Mathilde Blind Scholarship to Miss M. Rowntree, of Scarborough.

IN connexion with the London Branch of the British Child Study Association, Dr. Francis Warner recently gave a demonstration of the methods employed to determine the physical and mental capacity of children, at the Home and Colonial College. Eighty children had been assembled. These were admitted to the room in four parties, each of which was ranged in line along the floor. They were then asked to watch the movements of a bright object. Those who in so doing moved their heads rather than their eyes were put on one side. The remainder were then asked to show their hands, and some were excluded for the manner in which they did so. Dr. Warner then placed his hand on the head of each of the rest, and put aside any showing abnormal development. The children thus selected were individually examined by the lecturer, and their deficiencies noted on cards prepared for the purpose, the results being afterwards compared with the teachers' opinions. At the close Dr. Warner insisted on the importance of training children to move their eyes, and of noting the signs of fatigue and nervous exhaustion in children.

MR. THOMAS ARNOLD, Fellow of the Royal University of Ireland, who recently died in Dublin, was the second son of Dr. Arnold, of Rugby. After leaving Oxford he accepted a clerkship in the Colonial Office; but after a few months emigrated to Tasmania, where he was appointed inspector of schools. He

remained in the colony until 1856, having in the meantime married the grand-daughter of Governor Sorell and become a Roman Catholic. Returning home, he was appointed by Newman a professor in his Roman Catholic college on St. Stephen's Green; and afterwards he followed Newman to Birmingham to the Oratory School. It was in the intervals of his work in these places that he compiled his well known "Manual of English Literature." In 1877 he was appointed one of the first Fellows of the newly established Royal University in Dublin, where he resided during the last ten or twelve years of his life, examining, teaching, and writing. Mrs. Humphry Ward is his eldest daughter.

ON November 13 Lord Avebury delivered, in Jermyn Street, the first Huxley Memorial Lecture, on the foundation of the Anthropological Institute. Lord Avebury said that Huxley's work fell into three principal divisions—natural science, education, and metaphysics. The chief of Huxley's contributions to anthropological science was "Man's Place in Nature," a book which at the time required great courage to publish, but the main conclusions of which might now be said to have been confirmed by subsequent research. The book had stood the test of time, and might still be studied with advantage. Lord Avebury dwelt on Huxley's services to education. As a member of the first London School Board he maintained that "no boy or girl should leave school without possessing a grasp of the general character of science, and without having been disciplined more or less in the methods of all sciences." As regards higher education, Huxley did not undervalue classics, but claimed for science its fair share of time. He advocated the system adopted by the founders of the University of London, and maintained that no one should be given a degree who did not show some acquaintance with science, and with at least one modern language.

## UNIVERSITIES.

(From our Correspondents.)

VERY soon after my last letter was written we lost Oxford. Prof. Max Müller. He had long ceased to lecture, but he and his dachshunds were, till quite lately, a not unfamiliar Oxford sight. Few men, if any, in Oxford were more widely known; though celebrity is rather a poor gauge of merit in a *savant*.

Convocation has been concerned with many trifles; especially in the line of drapery and millinery. The proper garb for a D.Sc. and a D.Litt. has only been settled after long exercising several great minds and exciting several small controversies. Also the preamble to a statute, "De Pileo Rotundo," has been carried. This is to enable Doctors of Law and Medicine to wear round caps instead of square—a precious privilege, which the D.Sc. and the D. Litt. are to be sternly denied.

At the instance of the Hebdomadal Council, a sensible alteration has been made in the statute respecting the Professorship of Poetry. The Professor of Poetry is, in theory, a distinguished *littérateur*, without other official connexion with the University, from whom the University extracts interesting lectures in return for a Professorship. Obviously it is well to vary such a professor fairly often, if we are to sample *littérateurs* in at all adequate number or variety. Hitherto the professor has held office for ten years, which are now reduced to five. Further, a silly restriction has been removed, whereby it was forbidden to elect two successive professors from one college. This prohibition had really no justification in theory, while, in practice, it would almost certainly operate against the election of the best men; through the tendency these men have to come from one or two colleges. Thus, for the next election, the whole "field" come from Balliol.

A matter which has been debated with no little heat is the new regulation as to the University sermons. The afternoon sermons, which no one went to but a handful of officials, have been abolished, and all University preachers are to preach in the morning. The opposition to this, led by Canon Ince and other leading theologians, compared the sermon to a professor's lecture, and urged that the audience do not matter: "a professor must care only for himself and his subject," and does not need to be listened to. The doctrine must be a comforting one for some professors; but Convocation would not subscribe to it.

A new Private Hall is being started in connexion with Manchester College. This is a further example of the method which the late Father Clarke originated. His Jesuit Hall has been a considerable success (though it remains to be seen how

far it will get over his recent death); and there is no reason why a Unitarian Hall should not be equally successful. Only, the tendency to sectarianize the University in this way may go very far if once started, and would become an evil if it did. In the meantime, the relation of these Halls to the University is something of an anomaly. A private Hall is essentially personal, not permanent; whereas these are meant to be permanent, and really depend, not on their Heads, but on outside bodies who nominate these Heads in succession.

The Reports on University Institutions reveal once more the poverty of the central power here. Thus in 1899 the Bodleian spent less than £2,000 on MSS., books, and coins. Everything published in England it, of course, gets gratis; but its supply of American and Continental books is entirely dependent on purchase. How elementarily deficient it is, a very short study of the catalogue will make painfully apparent—e.g., of Paul Bourget's novels it contains, in the original, not one; only the few English translations. And most standard foreign writers are about equally ill-represented.

A CONSIDERABLE change has been proposed in Cambridge. The regulations for the Local Examinations. Hitherto candidates for Honours must be below the age of sixteen. Candidates between sixteen and eighteen years of age may be granted a pass certificate; while in the case of those who desire exemption from the entrance examination for any business or profession the Syndicate are authorized to admit them to the examination, but not to award successful candidates the ordinary certificate. It seems that the Incorporated Law Society, while recognizing the Examination for Junior Students, as affording exemption from the Solicitors' Preliminary Examination, will only accept the ordinary form of certificate. As there is no limit of age at which the Local Preliminary and Senior Examinations can be taken, it is proposed to level up in the case of the Junior Examination, so that persons of any age whatever may go in for any one of the three examinations.

There has been a merry debate in the Senate on the subject of a new regulation for the Historical Tripos. It will be remembered that the present regulations order the arrangement of classes in one or more divisions—an ordinance which the examiners have construed as giving them an option whether they make subdivisions or not, invariably publishing a list with undivided classes. This evoked the anger of Dr. Cunningham and others, who maintain that the orders of the Senate have been violated. The Council came to the rescue of the examiners, by proposing a grace to the effect that there shall be no subdivision, while giving alternative graces to allow the opponents to have a chance of once more emphasizing their views. The Senate finally decided that there should be no subdivisions in any of the classes. The views of the examiners and of the Historical Board have therefore obtained the sanction of the University.

The visit of the Colonial Volunteers to Cambridge was a great success: hospitality was not overdone, and the arrangements were admirable. Each college took charge of a certain number of guests, and it is hoped that the men took away pleasant recollections of their brief stay here. It is quite certain that our guests by their manly bearing and utter absence of any trace of swagger created a very marked impression on the undergraduate mind. The number of Cambridge men at the front was very large, and, as they are returning gradually to revisit their old haunts, they do much to keep alive the zest for soldiering which has taken so strong a hold on University men during the past three years.

In accordance with the intimation given in last month's notes, a Syndicate has been appointed to consider in what way the University can profitably assist in the cause of military education, and in the meanwhile private enterprise has led to courses of lectures in military subjects being given. There is every chance of some definite scheme being promulgated for the systematic instruction of all the Volunteers, and it is hoped that some prominence will be given to military history in the schedules of various examinations in cognate subjects.

The University Benefaction Fund has now reached the respectable amount of £66,000—a result which has been accelerated by the generous gift of £10,000 by Mr. W. W. Astor. The Financial Board are, however, quite alive to the consideration that only a limited proportion of the available funds can be disbursed on bricks and mortar, as maintenance both of buildings and staff are items which do not show signs of diminution in any annual accounts.

The Library Syndicate have been busying themselves with a

plan for roofing in the eastern quadrangle, to give increased book room: at present the whole arrangement of the Library is unnecessarily complex, but there can be no remedy while the present state of congestion exists; though the withdrawal of the Woodwardian Collection to its new home will give temporary relief. It should be noticed, however, that the Syndicate have taken no steps to provide efficient fire alarms in the building; though it is a matter of common knowledge that a comparatively small expenditure would very considerably reduce the chance of a fire remaining undetected if it broke out during the hours the building is shut up.

The annual election of members of the Council passed off very quietly, as there was no burning question before the University. The Conservative and Moderate candidates were successful with one exception—Dr. Taylor and Dr. Ryle as heads of houses; Prof. Sir R. Jebb as professor; Dr. Keynes, Secretary of the Local Examinations, Mr. Scott, Bursar of St. John's, Mr. Mollison, Tutor of Clare, and Mr. Shipley, Tutor of Christ's, as ordinary members of the Senate, were elected by substantial majorities in each case.

The recent outbreak of diphtheria in Cambridge has afforded a useful object-lesson in the modern methods of stamping out disease. The Corporation for once acted with common sense and vigour; no attempt was made to conceal the true facts, but every step was taken to minimize the danger. Dr. Cobbett, of King's, was at once placed in charge of the pathological department in connexion with the Town Council, and every doubtful case was the subject of careful investigation, followed by proper measures for isolation when the disease was diagnosed. There has been no fuss and no fright, with the result that everything has gone on as if the town could present a clean bill of health—a result which is now within measurable distance of attainment.

The triennial production of a Greek play is a recognized fact in Cambridge. This year the "Agamemnon" was selected, and, in spite of the difficulties inherent in such an undertaking, a very great success was achieved. Special credit is due to the impersonators of the female parts, upon whom the burden of the play falls—Mr. F. H. Lucas as Clytemnestra and Mr. F. C. Crace as Cassandra were really excellent. It should not be forgotten that the Cambridge Greek Play Committee has the assistance of Mr. J. W. Clark, whose knowledge both of archaeology and stagecraft is unrivalled; while a host of specialists were ever ready with advice and assistance in regard to the smallest detail. Crowded houses and an overflowing treasury were the natural outcome of so excellent a performance.

### THE RECENT MINUTE ON THE SIMPLIFICATION OF FRENCH SYNTAX.

THE Minute of the French Education Department on the Simplification of French Syntax has excited nearly as much attention in England as in France. Apparently it has been, on the whole, welcomed. Several examining bodies of high repute have accepted it without reserve. One headmaster, at least, lost no time in directing his colleagues to put it in force immediately. Perhaps second thoughts may suggest a less favourable verdict. From the schoolboy's point of view one cannot help thinking:

Alas! regardless of their doom,  
The little victims play.

To take a simple example, there are eighteen possible ways in which, following the light of nature alone, it is possible to write the plural of *chou-fleur*, nearly as many, in fact, as the ways of turning *the* in German according to Mark Twain. Of these the Academy recognizes one as correct; the new Minute recognizes three. For the schoolboy, who mentally puts all possible plurals in a hat and draws out one at haphazard, this is an obvious gain; the odds against his being right are reduced from 17 to 1 to 5 to 1. But even the idlest candidate for a bare pass has got a step further, and, when he comes to think out the question, he will not unreasonably resent having to learn three right plurals instead of one. It is essential to bear in mind that the difficulties of an English schoolboy are quite different from those of his French cousin. Even when French is taught according to the principles of the most advanced reformers, the eye plays a more important part in the process of learning in the case of a foreigner than it can in the case of a native.

But, while deprecating hasty action in England, especially so long as the final court of appeal, the French Academy, reserves its judgment, a thoughtful critic is bound to look carefully into the reasons that have guided a distinguished body of French

scholars to conclusions at first sight so startling. If we read between the lines of the Minute, we recognize that they have been influenced, first, by the real difficulties presented by French spelling to children in the early stages of education, and, next, by the pedantic tendency of examiners to lay undue stress on exceptional forms—a tendency not confined to France. The general direction to examiners to avoid penalizing severely such mistakes as do not betray lack of thought or general intelligence seems to be the keynote. Hence, for example, the licence allowed as to the gender of words like *manœuvre*, *amour*, *Pâques*, &c., in different senses. Such distinctions are not necessary for a native till he meets the word in his general reading, which he may never do. If he belongs to the educated classes, he will pick them up unconsciously. The case of a foreigner is somewhat different. No educated Frenchman would confuse *un manœuvre* and *une manœuvre*. An Englishman, to whom French genders are a standing difficulty, needs to have the difference pointed out, though not at an early stage. His probable source of error is ignorance of the gender of the abstract noun *une manœuvre*.

Another principle running through the Minute is the elimination of certain differences of spelling not corresponding to differences of pronunciation. Carried to an extreme, this would land us in phonetic spelling; as M. Brunetière points out in the *Revue des deux Mondes* of September 1, *sin* would represent *sain*, *sein*, *saint*, *seing*, &c.—an inconceivably horrible conclusion. At present only a very thin edge of the wedge is inserted. The licence allowed as to the addition or omission of *s* in *cent* and *vingt* (not, of course, in *quatre-vingts hommes*, where *liaison* takes place) is, to a certain extent, justified, because, except in examinations, large numbers are almost always represented by figures. Another illustration is afforded by the variations allowed in forming the plural of borrowed and compound nouns. In these we recognize also the influence of a third principle, the desire to accelerate a natural process already at work in the language. It is well known that there are three stages in the treatment of foreign words that have found their way into French. Some, like *redingote*, *bifteck*, have put on a French dress; others, like *ticket* (familiar to visitors to the Exhibition), *wagon*, *tramway*, have retained the English spelling, but are completely naturalized, and, of course, take the plural ending. There is a third class, containing many Latin words, like *exéat*, and it is to this class that the new rules apply. It is not unreasonable to suppose that the hospitality extended to foreign residents will be more and more freely granted to foreign words, and that usage will consecrate the addition of *s* permitted by the Commission. The case of compound nouns is somewhat similar, but the rules are necessarily still somewhat complicated; and, as is pointed out above, it is doubtful how far an Englishman will gain by availing himself of the alternatives allowed. Already several words like *portemanteau*, *garderobe*, have lost their hyphens, and form their plural as if they were simple nouns. It is, then, not inconsistent with the spirit of the modern language to extend the same treatment to *abat-jour*, *timbre-poste*, *coffre-fort*, &c.; but at present the process of transformation has gone on but slowly, and we may well have to wait a considerable time before the innovations have secured *droit de cité*. The indiscriminate addition of *s* to proper names is a reversion to an earlier usage, surviving in certain cases, and may possibly find favour.

When we come to syntax proper, we are on more delicate ground. Naturally space permits, as in the case of the accidence, the selection of only a few typical examples. The licences allowed in the application of the first concord do not seem always to tend to precision of thought, and might not commend themselves to scholarly teachers. For example, the sentence *Le chat ainsi que le tigre est un carnivore* suggests a particular order of thought. We have mentally classified the tiger as a carnivorous animal; we now put the cat in the same class. The alternative allowed by the Minute, *Le chat ainsi que le tigre sont des carnivores*, is a different proposition, implying a different mental standpoint. It would be a serious loss if the distinction were ignored in the higher classes of a school. Again, the delicate distinction between *sirop de groseille* (currant syrup) and *sirop de groseilles de Bar* (syrup made from Bar currants), to which M. Brunetière calls attention, may not in itself be of grave importance, but the principle could hardly be extended to *une forêt de chênes* and *une table de chêne*. Nor, as the same writer points out, is the difference between *avoir l'air doux* and *avoir l'air douce* an idle one—to ignore it entails some loss of precision.

The most important concession made in syntax, the permission to neglect the concord of the past participle of transitive

and pronominal verbs—a concession which formed the subject of long debates in the Commission—seems, if it is not presumptuous for a foreigner to say so, as unnecessary as it is revolutionary. No doubt some of the more delicate applications of the rule, such as those affecting the inflexion of *valu*, are “caviare to the general”; but the main principle is simple in the extreme, and—as for example, in phrases like *La lettre que j'ai écrite*—affects the spoken as well as the written language. Even more startling is one of the reasons given for this licence. It will facilitate, it is said, the learning of French by foreigners. Surely a very poor compliment to the intelligence of the rest of Europe! One wonders whether, considering that the first principle of international reciprocity is *do ut des*, it is a delicate hint to Englishmen to make some concession in return. Shall we, for example, sacrifice the initial *h* in accordance with the usages of one section of society or the final *g* in deference to the affectations of another?

It is devoutly to be wished that the recommendations of the Commission may be somewhat restricted in their influence, that the Academy may put down its foot on any attempt to trifle with a great work of art like the French language, and that the effect of the Minute may be confined to the praiseworthy object of checking pedantry on the part of the examiners of elementary schools and the lower classes of secondary schools. H. W. EVE.

## CORRESPONDENCE.

### PUBLIC-SCHOOL TRAINING.

To the Editor of the Educational Times.

SIR,—With the advance of the times, and the altered conditions existing in connexion with the struggle prevailing amongst the sons of the upper-middle class to provide themselves with employment, it is perhaps as well that our public schools should amend and alter their curriculum; for, as it now stands, and has stood for years past, the training vouchsafed unto the sons of “gentlefolk” does not eminently fit them to make their way in the world successfully. And it is not only the scholastic side of the question which counts, but also the social side.

At Marlborough, Fettes, and other public schools it has been for some years past recognized in a practical manner that, however great may be the veneration of the headmaster and classical masters for the dead languages, their acquirement is not a matter of necessity—unless, indeed, a boy intends to compete for a scholarship, or to take orders or his degree.

But to those who propose entering the Army, or the more lucrative paths of commerce, the classics are—especially in the latter case—unnecessary, as I can say from personal experience. Encouragement of the study of modern languages is readily given in the Army. Young officers of linguistic promise are afforded every facility for perfecting their knowledge of French, German, Italian, Persian, and Russian; for, on passing a preliminary examination, leave of absence (technically known in the Service as “language leave”) is allowed to officers who may wish to proceed to any country to make themselves perfect in the language selected. In India, the study of the frontier dialects, such as Pushtu and other hill languages, is taken up by many Staff Corps officers. And, as a handsome reward is given by the authorities, the successful student, after paying his professor's fees, has a substantial balance left to his credit.

It will, doubtless, be urged by the scholar who follows somewhat obsolete methods that a study of the dead languages is necessary as a groundwork. There can be no difficulty in upsetting this theory. In fact, the shortest answer is that the time spent in acquiring this groundwork would be better employed by the pupil in tackling the languages which he desires eventually to acquire. It is satisfactory to find the modern side, or modern school, so greatly in evidence at the majority of our public schools. But why should not the modern-side system be more general throughout the curriculum of our schools? Why not, at the outset of a boy's school career, let him eschew such subjects as Latin, Greek, and Divinity, until it is settled that he is to embrace one of the callings to which those subjects apply? To a boy who is destined to become an officer in the Army, or to a youth who has it in his mind to be “something in the City,” of what use is a knowledge of Homer and Virgil? And, again, to those who propose making the intricate and varied paths of commerce their future aim, of what avail is the study of Divinity or Xenophon?

There is also a word to be said about the way in which languages are taught. The method employed is not precisely practical. Would it not be possible for the French and German forms at our schools to have intercourse with German and French boys? Though national proclivities might lead to boyish disputes and bickerings, the acquirement of a foreign tongue need not be interrupted even by disputes. As regards mathematics, they, fortunately, have always received due consideration.

Again, the general tone and morale of a boy, his reliance and sense

of adaptability, should be serious items in the curriculum. A lad takes his tone as much from the masters as from the elder boys. I would advocate more social mixing, of a discreet nature, between the boys and their masters. Judiciously carried out, and provided the masters themselves are of the requisite stamp, such a course would, I imagine, prove distinctly beneficial. Many boys, on joining their militia battalion, or on going to the University, are most unpleasant young cubs. They are a source of discomfort to themselves and to their friends and mentors. But, if, whilst at school, they have had the awkwardness, uppishness, and rough angles of extreme youth rubbed off, they would start the world free from the drawbacks of hobbled-hoyhood.

GEORGE CECIL.

#### EXAMINATION DATES.

To the Editor of the Educational Times.

SIR.—I have often thought, and so have other teachers whom I have consulted, that the College of Preceptors would be studying the interests of many schools, without detriment to its own interests, if it held a Certificate Examination at the end of the Lent Term, either instead of or in addition to the present summer examination. With an examination at the end of each term, the requirements of all schools would be adequately met, and the Easter examination would, I believe, prove a special boon to many schools. The two winter terms could be devoted to regular work for the examination, and the summer term could be utilized for various special purposes. The Lent term, when football has become "stale," would be admirably adapted to preparing for examination. Easter is a far better time for examination than the short days of Christmas or the hot days of midsummer, and the results would be ready for the midsummer Prize Day. At Christmas the examination is so arranged as not to clash with the Cambridge Locals, and hence there is a comparatively short time for work after the long midsummer vacation, and an awkward interval between the examination and the Christmas vacation. The examination might either commence on the Tuesday nearest to March 11, so as to precede the earliest possible date of Holy Week, or—better still—be varied so as always to precede Holy Week, and yet never be later than the twelfth week of the Lent term. Such an arrangement would suit us here "down to the ground," and from the unanimous opinion of the many teachers whom I have consulted I am led to believe that it would be equally acceptable to many other schools. At least, the question is well worth ventilating, and I shall be greatly obliged if you will kindly insert this letter.—Yours faithfully,

WM. IRELAND.

Lucton School, April 13, 1900.

#### MEETING OF THE COUNCIL OF THE COLLEGE OF PRECEPTORS.

A MEETING of the Council was held on November 14. Present: Dr. Wormell, Vice-President, in the Chair; Mr. Barlet, Miss Crookshank, Mr. Bidlake, Mr. Charles, Miss Day, Mr. Eve, Rev. Dr. Hiron, Miss Jebb, Mr. Ladell, Rev. R. Lee, Mr. Montgomery, Mr. Pinches, Rev. Dr. Robson, Dr. R. P. Scott, Rev. J. Stewart, Rev. J. E. Symns, and Rev. J. Twentyman.

The minutes of the last meeting were read and confirmed.

The Secretary reported the state of the preparations for the forthcoming Winter Meeting for Teachers to be held at the College in the first fortnight in January.

The Report of the Examination Committee was adopted, and the following were appointed Examiners in Physiology:—Dr. A. News-holme, M.A., and Professor R. H. Ainsworth Davis, M.A.

The following persons were elected members of the College:—

- Mr. R. Cooke, A.C.P., Archbishop Abbot's School, Guildford.
- Mr. F. T. Leighton, A.C.P., 4 Cambridge Crescent, Edgbaston, Birmingham.
- Mr. A. Snape, A.C.P., Collegiate School, Lapford, N. Devon.
- Miss K. Stevens, Carlisle House, Dartmouth Park Hill, N.W.
- Mr. M. F. Walker, A.C.P., 20 Pemberton Road, Harringay, N.

The following books had been presented to the Library since the last meeting of the Council:—

- By Mr. E. E. SPEIGHT.—Thomson and Speight's Junior Temple Reader.
- By E. ARNOLD.—Arnold's Continuous Story Readers, Grades I., II., III., and IV.
- By G. BELL & SONS.—Pendlebury and Beard's Commercial Arithmetic, Part I.
- By A. & C. BLACK.—Woodstock ("Sir Walter Scott" Continuous Readers).
- By BLACKIE & SON.—The Conversational Readers (Primers I and II, and Infant Readers, I and II); Oswald's German Commercial Correspondence; Starck's French Commercial Correspondence.
- By C. J. CLAY & SONS.—Snailum's Bookkeeping
- By W. B. CLIVE.—London University Guide and University Correspondence College Calendar, 1900-1.
- By HACHETTE & Co.—Berthon's Hugo's La Chute; Lazare's Premières Lectures.
- By MACMILLAN & Co.—Evans' Botany for Beginners; Payen-Payne's Cour's L'Amé de Beethoven, and Word- and Phrase-Book to the same; Poiré's First Year's French Course; Siepmann's Daudet's Tartarin de Tarascon.
- By G. PHILIP & SON.—Phillips' Elementary Atlas of Comparative Geography. Calendars of Trinity College, London, City of London College, and Royal College of Surgeons of England.

## MACMILLAN & CO.'S NEW EDUCATIONAL BOOKS.

### HISTORY.

SECOND IMPRESSION NOW READY.

**A History of Greece to the Death of Alexander the Great.** By J. B. BURY, M.A., Hon. Litt.D. Durham. With Illustrations, Maps, and Plans. Crown 8vo, 8s. 6d.

*Spectator*.—"Told with such clearness, fulness, and sense of proportion that the book will stand as a model of a one-volume history, rivalled only by J. R. Green's similar work on the English people. . . . Has all the qualities of accuracy, lucidity, and art in arrangement which are the special merits of a short history." The book also contains numerous excellent illustrations."

**Source-Book of English History.** For the Use of Schools and Readers. Edited by ELIZABETH K. KENDALL, M.A. Crown 8vo, 3s. 6d. net.

### GERMAN.

**Macmillan's German Idioms.** A Selection of German Idioms prepared and translated by MYRA TAKER, under the direction of F. F. ROGER, late Lecturer in the University of St. Andrews. Globe 8vo, 3s. 6d.

### FRENCH.

**French Course for Evening Classes. First Year.** By A. C. POIRÉ, Principal of the Northern Institute of Languages, Leeds and Bradford. Globe 8vo, 1s.

*Educational News*.—"Under adequate teachers and with diligent pupils the method promises fair and speedy results, and many good hints and examples give value to a method which inculcates, little by little, a practical method of popular education in French."

### DIVINITY.

**An Introduction to the New Testament.** By Prof. BENJAMIN W. BACON, D.D. Crown 8vo, 3s. 6d. [*New Testament Handbooks*].

### MATHEMATICS AND SCIENCE.

**A Text-Book of Book-keeping.** By FRANK IRESON, B.A. 8vo, 4s. 6d.  
*Commerce*.—"A book we can thoroughly recommend as being up-to-date, and containing every information necessary to the student of this branch of commercial education."

**Workshop Mathematics.** In 2 Parts. By FRANK CASTLE, M.I.M.E. Globe 8vo, 1s. 6d. each.

*Board Teacher*.—"Well arranged, and containing numerous practical examples."

**Elementary Mechanics of Solids.** By W. T. EMTAGE, M.A. (Oxon.) Globe 8vo, 2s. 6d.

**The Principles of Mechanics.** An Elementary Exposition for Students of Physics. By FREDERICK SLATE, Professor of Physics in the University of California. Part I. Crown 8vo, 7s. 6d. net.

**A Treatise on Elementary Dynamics.** Dealing with Relative Motion mainly in two Dimensions. By H. A. ROBERTS, M.A. Crown 8vo, 4s. 6d.

**A School Chemistry.** Intended for use in High Schools and in Elementary Classes in Colleges. By JOHN WADDELL, B.A., B.Sc., Ph.D., D.Sc. Crown 8vo, 4s. net.

DECEMBER NUMBER NOW READY.

## THE SCHOOL WORLD.

A Monthly Magazine of Educational Work and Progress. Price 6d. Annual Subscription, including Postage, 8s. net.

### LEADING CONTENTS.

**Common Examination Errors. I.: Mathematics. II.: Manchester Grammar School.—A Teacher's Library of Classics.** By W. H. D. ROUS, M.A.—**Some Impressions of Rational Methods.** By HAROLD PICTON, B.Sc.—**The Supply of Pupil Teachers.—Observational Astronomy.** A Series of Notes upon the Positions and Apparent Motions of Celestial Bodies. (Illustrated.) **V. The Moon and Eclipses.** By Prof. R. A. GREGORY, F.R.A.S.—**The Teaching of Practical Physics on an Outlay of Fifty Pounds.** (Illustrated.) By A. E. MUNBY, M.A.—**The Aims of Education.** An Address by Sir HENRY CRAIK, K.C.B.—**Teachers' Notes on English History, 1399-1603. II. Lancaster and York, 1399-1609.** By C. S. FEARENSIDE, M.A., and L. J. MCNAIR, B.A.

\* \* Volume II, now ready, containing Nos. 13-24, January to December, 1900. Demy 4to, 480 pp., Index. Price 15s. 6d. net. Cloth cases for binding Volume II, are also ready. Price 1s. net.

MACMILLAN & CO., LIMITED, ST. MARTIN'S STREET,  
LONDON, E.C.

**WORKS BY**

**H. O. ARNOLD-FORSTER, M.P., M.A.**

**OUR GREAT CITY; or, London the Heart of the Empire.** Cloth, 1s. 9d.; or handsomely bound, with gilt edges, 2s. 6d.

**THE CITIZEN READER.** 335th Thousand. Cloth, 1s. 6d. A SCOTTISH EDITION of this work is also issued, cloth, 1s. 6d.

**THE LAWS OF EVERY-DAY LIFE.** 58th Thousand. Cloth, 1s. 6d.

**THIS WORLD OF OURS.** Being Introductory Lessons to the Study of Geography. Fourth Edition. Fully Illustrated. 2s. 6d.

**A HISTORY OF ENGLAND.** Fully Illustrated. Third Edition. Revised. 5s.

**THINGS NEW AND OLD; or, Stories from English History.** Illustrated. Cloth. Seven Books, from 9d. to 1s. 8d. each.

**THE COMING OF THE KILOGRAM; or, The Battle of the Standards.** An Explanation of, and Plea for, the Metric System. Cloth, 2s. 6d.; paper covers, 6d.

**THE LONDON SCHOOL ATLAS.** With 48 pages of Maps (including 130 Maps). Edited by H. O. ARNOLD-FORSTER, M.A. With an Introduction and Notes on the Construction and Reading of Maps by Dr. A. J. HERBERTSON. Stiff paper covers, 2s.; limp cloth, 3s.; cloth boards, bevelled, 3s. 6d. Particulars on application.

CASSELL & CO., Ltd., Ludgate Hill, London, E.C.

JUST PUBLISHED. PRICE 1s. 6d.

**THE TROUBADOUR.**

SELECTIONS FROM ENGLISH VERSE.

EDITED AND ANNOTATED BY PHILIP GIBBS.

Author of "Founders of the Empire," &c.

"In keeping with its name, 'The Troubadour' touches the minstrelsy of ancient and modern times, and no better selection from our standard poets could be made. It is a pleasure to handle the volume—a delight to peruse it."—J. HORSFALL TURNER, F.R.H.S., *Thorpe Board School, Bradford.*

CASSELL & CO., Ltd., Ludgate Hill, London, E.C.

**The Best and Cheapest Dictionaries.**

**CASSELL'S FRENCH DICTIONARY.** (French-English and English-French.) 575th Thousand. 1,150 pages. Cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S GERMAN DICTIONARY.** (German-English and English-German.) 237th Thousand. By ELIZABETH WEIR. 1,120 pages. Demy 8vo. Cheap Edition, cloth, 3s. 6d.; half-morocco, 5s.

**CASSELL'S LATIN DICTIONARY.** (Latin-English and English-Latin.) 122nd Thousand. Cheap Edition, 3s. 6d., half-morocco, 5s.

Cassell's Educational Catalogue will be sent, post free, on application.

CASSELL & CO., Ltd., Ludgate Hill, London, E.C.

A FEW OF THE PUBLICATIONS OF  
**MOFFATT & PAIGE, Ltd.**  
**ENGLISH CLASSICS.**

Edited by THOMAS PAGE.

In these Editions, Notes are Classified and Arranged.

Other Works in preparation.

**THE PLAYS OF SHAKESPEARE.**

CONTENTS:—Chief Events in the Life of Shakespeare—Shakespeare's Works—Introduction—Date and Early Editions—Source of the Plot—Sketch of the Plot—Sketches of the Principal Characters—Literary Notes—Notable Passages—Proverbial Expressions and Familiar Quotations—The Text—Miscellaneous Notes—Notes on the Language of the Play—Etymological Notes—Proper Names—Examples of Paraphrasing—Examples of Analysis of Sentences—Anachronisms and a few Typical Questions selected from various Examinations.

**REVIEWS I—**

*Saturday Review.*—"Mr. Page has edited 'English Classics' in a manner to command approval."

Sir HENRY IRVING.—"A most faithful and scholarly edition."

*Daily Telegraph.*—(Julius Caesar) "... is invaluable as an aid to the study of the play."

*South Africa.*—"What a handy 'book of the play' they form!"

*Student's Friend, Bombay.*—"Decidedly the very best for students, be they Indian or English."

*Athenaeum.*—"Essentially books for students."

*Educational News.*—"It would be difficult to imagine anything more perfect than this edition of 'Macbeth.'"

	s.	d.
*AS YOU LIKE IT ... ..	2	0
*CORIOLANUS ... ..	2	6
*HAMLET ... ..	2	6
*HENRY V. ... ..	2	6
*JULIUS CAESAR ... ..	2	0
*KING JOHN ... ..	2	0
*KING LEAR ... ..	2	0
*MACBETH ... ..	1	6
*MERCHANT OF VENICE ... ..	1	6
*MIDSUMMER NIGHT'S DREAM ... ..	2	0
*RICHARD THE SECOND ... ..	1	6
*TEMPEST ... ..	2	0
*TWELFTH NIGHT ... ..	1	6

\* For Current Examinations.

**BACON.**

*Schoolmaster.*—"The edition will stand as an exemplar." s. d.

BACON'S ESSAYS. Part 1 ... .. 2 6

Essays I.-XXVI., with Life, Introduction, Notes arranged and classified, Analysing, Paraphrasing, Indexes, &c.

**MILTON.**

*Practical Teacher.*—"Marked by those features of almost exhaustive annotation." s. d.

\*PARADISE LOST. Books 1 and 2. (Just published.) 2 0

\*SAMSON AGONISTES ... .. 2 0

\*COMUS ... .. 1 6

\*LYCIDAS, L'ALLEGRO, and IL PENNIBROSO 1 4

\* For Current Examinations.

**SCRIPTURE.**

Edited by R. J. WOOD, B.A.

*Educational Times.*—"One of the fullest and most conveniently arranged hand-books on the Gospel." s. d.

\*MOFFATT'S GOSPEL OF ST. MATTHEW ... 1 6

\*MOFFATT'S GOSPEL OF ST. MARK ... 1 6

CONTENTS:—(1) Life of Author, Notices of Gospel, Date, Place, Language, Design, and Characteristics. \* For Current Examinations.

**FRENCH.**

FRENCH COURSE. By G. H. WILLIAMS, M.A. ... 2 6

**GERMAN.**

GERMAN COURSE. By G. H. WILLIAMS, M.A. ... 2 6

*Educational Times.*—"A rational course, which will prepare pupils better than most books of the kind."

New and Illustrated Catalogue of all Publications, &c., for 1900, now ready. Post free on application.

MOFFATT & PAIGE, Ltd.,

28 WARWICK LANE, PATERNOSTER ROW, E.C.

ERNEST A. PAIGE, Managing Director. Works: Johnson's Court, Fleet Street.



# MESSRS. METHUEN'S LIST

## WORKS BY A. M. M. STEDMAN, M.A.

- Initia Latina:** Elementary Lessons in Latin Accidence. Fourth Edition. Fcap. 8vo, 1s.
- First Latin Lessons.** Sixth Edition. Enlarged. Crown 8vo, 2s.
- First Latin Reader.** With Notes adapted to the Shorter Latin Primer and Vocabulary. Fifth Edition. Revised. 18mo, 1s. 6d.
- Caesar.—The Helvetic War.** With Notes and Vocabulary. Second Edition. 18mo, 1s.
- Livy.—The Kings of Rome.** With Notes and Vocabulary. Second Edition. Illustrated. 18mo, 1s. 6d.
- Easy Latin Passages for Unseen Translation.** Seventh Edition. Fcap. 8vo, 1s. 6d.
- Exempla Latina: First Exercises on Latin Accidence.** With Vocabulary. Crown 8vo, 1s.
- Easy Latin Exercises on the Syntax of the Shorter and Revised Latin Primer.** With Vocabulary. Eighth and Cheaper Edition, Revised. Crown 8vo, 1s. 6d. Issued with the consent of Dr. KENNEDY. Key, 3s. net.
- The Latin Compound Sentence:** Rules and Exercises. Second Edit. Cr. 8vo, 1s. 6d. With Vocabulary, 2s.
- A Vocabulary of Latin Idioms and Phrases.** Second Edition. 18mo, 1s.

- Notanda Quaedam: Miscellaneous Latin Exercises on Common Rules and Idioms.** Fourth Edition. Fcap. 8vo, 1s. 6d. With Vocabulary, 2s. Key, 3s. net.
- Latin Vocabulary for Repetition:** Arranged according to Subjects. Ninth Edition. Fcap. 8vo, 1s. 6d.
- Steps to Greek.** Second Edition Revised. 18mo, 1s.
- A Shorter Greek Primer.** Crown 8vo, 1s. 6d.
- Easy Greek Passages for Unseen Translation.** Third Edition. Fcap. 8vo, 1s. 6d.
- Greek Vocabulary for Repetition.** Second Edition. Fcap. 8vo, 1s. 6d.
- Greek Testament Selections.** With Introduction, Notes, and Vocabulary. Third Edition. Fcap. 8vo, 2s. 6d.
- Steps to French.** Fifth Edition. 18mo, 8d.
- First French Lessons.** Fourth Edition. Crown 8vo, 1s.
- Easy French Passages for Unseen Translation.** Fourth Edition. Fcap. 8vo, 1s. 6d.
- Easy French Exercises on Elementary Syntax.** With Vocabulary. Second Edition. Crown 8vo, 2s. 6d. Key, 3s. net.
- French Vocabulary for Repetition.** Ninth Edition. Fcap. 8vo, 1s.

## SCHOOL EXAMINATION SERIES

- EDITED BY A. M. M. STEDMAN, M.A. Crown 8vo, 2s. 6d.
- French Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Eleventh Edition.
- A Key,** issued to Tutors and Private Students only, to be had on application to the Publishers. Fourth Edition. Crown 8vo, 6s. net.
- Latin Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Tenth Edition.
- Key,** Fourth Edition (issued as above), 6s. net.
- Greek Examination Papers in Miscellaneous Grammar and Idioms.** By A. M. M. STEDMAN, M.A. Sixth Edition.
- Key,** Second Edition (issued as above), 6s. net.
- Examination Papers in English History.** By J. TAIT WARDLAW, B.A., King's College, Cambridge.
- German Examination Papers in Miscellaneous Grammar and Idioms.** By E. J. MORICH, Clifton College, Sixth Edition.
- Key,** Second Edition (issued as above), 6s. net.
- History and Geography Examination Papers.** By C. H. SPENCE, M.A., Clifton College. Second Edition.
- Science Examination Papers.** By R. E. STEEL, M.A., F.C.S., Principal, Technical School, Northampton. In Two Vols. Part I., Chemistry. Part II., Physics.
- General Knowledge Examination Papers.** By A. M. M. STEDMAN, M.A. Third Edition. Key, Second Edition (issued as above), 7s. net.

## CLASSICAL TRANSLATIONS

- EDITED BY H. F. FOX, M.A., Fellow and Tutor of Brasenose College, Oxford.
- Cicero.—De Natura Deorum.** F. BROOKS, M.A., late Scholar of Balliol College. Crown 8vo, 3s. 6d.
- Cicero.—De Oratore I.** E. N. P. MOOR, M.A., late Assistant-Master at Clifton. Crown 8vo, 3s. 6d.
- Cicero.—Pro Milone, Pro Murena, Philippic II. in Catilinam.** H. D. BLAKISTON, Fellow and Tutor of Trinity College, Oxford. Crown 8vo, 5s.
- Horace.—Odes and Epodes.** A. D. GODLEY, M.A. Crown 8vo, 2s.
- Sophocles.—Electra and Ajax.** E. D. A. MORSEHEAD, M.A., Assistant-Master at Winchester. Crown 8vo, 2s. 6d.
- Aeschylus.—Agamemnon, Choe-phore, Eumenides.** LEWIS CAMPBELL, M.A., LL.D., late Professor of Greek at St. Andrews. Crown 8vo, 5s.
- Lucian.—Six Dialogues (Nigrinus, Icaro-Menippus, Cook, Ship, Parasite, Lover of Falsehood).** S. T. IRWIN, M.A., Assistant-Master at Clifton. Crown 8vo, 3s. 6d.
- Tacitus.—Agricola and Germania.** R. B. TOWNSEND, M.A., late Scholar of Trinity College, Oxford. Crown 8vo, 2s. 6d.

## METHUEN'S COMMERCIAL SERIES

- EDITED BY H. DE B. GIBBINS, D.Litt., M.A. Crown 8vo.
- British Commerce and Colonies from Elizabeth to Victoria.** By H. DE B. GIBBINS, D.Litt., M.A., Author of "The Industrial History of England," &c. Third Edition. 2s.
- Commercial Examination Papers.** By H. DE B. GIBBINS, D.Litt., M.A. 1s. 6d.
- The Economics of Commerce.** By H. DE B. GIBBINS, D.Litt., M.A. 1s. 6d.
- A Primer of Business.** By S. JACKSON, M.A. Third Edit. 1s. 6d.
- German Commercial Correspondence.** By S. E. BALLY. Crown 8vo, 2s. 6d.
- French Commercial Correspondence.** By S. E. BALLY. Second Edition. 2s.
- A French Commercial Reader.** By S. E. BALLY. 2s.
- Commercial Geography,** with special reference to the British Empire. By L. W. LYDE, M.A. Second Edition. 2s.
- Commercial Arithmetic.** By F. G. TAYLOR, M.A. Third Edit. 1s. 6d.
- Precis Writing and Office Correspondence.** By E. E. WHITFIELD, M.A. 2s.
- Guide to Professions and Business.** By HENRY JONES. 1s. 6d.
- The Principles of Book-keeping by Double Entry.** By J. E. B. M'ALLEN, M.A. 2s.
- Commercial Law.** By W. DOUGLAS EDWARDS. 2s.
- A German Commercial Reader.** By S. E. BALLY, M.A. 2s.

## TEXT-BOOKS OF TECHNOLOGY.

- Carpentry and Joinery.** By F. C. WEBBER. With numerous Illustrations. Second Edition. Crown 8vo, 3s. 6d.
- "It has the marks of practical knowledge set forth by a practical teacher."—*Guardian*.
- Practical Mechanics.** By SIDNEY H. WELLS. Illustrated. Crown 8vo, 3s. 6d.
- Practical Physics.** By H. STROUD, D.Sc., M.A., Professor of Physics in the Durham College of Science, Newcastle-on-Tyne. Fully Illustrated. Crown 8vo, 3s. 6d.
- Practical Chemistry.** By W. FRENCH, M.A. Part I. With numerous Diagrams. Crown 8vo, 1s. 6d.
- The Theory and Practice of Millinery.** By CLARE HILL. With numerous Diagrams. Crown 8vo, 2s.
- Educational Reform. The Task of the Board of Education** By FABIAN WARE. Crown 8vo, 2s. 6d.
- General Elementary Science.** By J. T. DUNN, D.Sc., and V. A. MUNDELLA. With many Illustrations. Crown 8vo, 3s. 6d.
- The Scientific Study of Scenery.** By J. E. MARR, Fellow of St. John's College, Cambridge. Illustrated. Crown 8vo, 6s.
- The Metric System.** By LÉON DELBOS. Crown 8vo, 2s.
- A theoretical and practical guide for use in elementary schools and by the general reader.
- A Class Book of Dictation Passages for the Use of Middle and Higher Forms.** By the Rev. W. WILLIAMSON. Third Edition. Crown 8vo, 1s. 6d.

The passages are selected from recognized authors, and a few newspaper passages are included. The lists of appended words are drawn up mainly on the principle of comparison and contrast, and will form a *répertoire* of over 2,000 words, embracing practically all the difficulties felt by the pupil.

- A Short Story of English Literature.** By EMMA S. MELLOWS. Crown 8vo, 3s. 6d.

The history of English literature told in a simple style for young students. It is particularly rich in biographical detail and contains a considerable number of illustrative extracts.

- A History of Egypt, from the Earliest Times to the Present Day.** Edited by W. M. FLINDERS PETRIE, D.C.L., LL.D., Professor of Egyptology at University College. Fully Illustrated. In Six Volumes. Crown 8vo, 6s. each.

- Vol. VI. Egypt under the Saracens.** By STANLEY LANE POOLE. [Shortly.]

- A Short History of Rome.** By J. WELLS, M.A., Fellow and Tutor of Wadham College, Oxford. With 3 Maps. Second Edition. Crown 8vo, 3s. 6d.

"An original work, written on an original plan and with uncommon freshness and vigour."—*Speaker*.

- A Constitutional and Political History of Rome.** By T. M. TAYLOR, M.A., Fellow of Gonville and Caius College, Cambridge, Senior Chancellor's Medallist for Classics, Porson University Scholar, &c., &c. Crown 8vo, 7s. 6d.

An account of the origin and growth of the Roman institutions, and a discussion of the various political movements in Rome from the earliest times to the death of Augustus.

- Passages for Unseen Translation.** By E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and A. M. COOK, M.A., late Scholar of Wadham College, Oxford; Assistant-Master at St. Paul's School. Crown 8vo, 3s. 6d.

"A capital selection, and of more variety and value than such books usually are."—*Athenaeum*.

- Exercises in Latin Accidence.** By S. E. WINBOLT, Assistant-Master in Christ's Hospital. Crown 8vo, 1s. 6d.

"Accurate and well arranged."—*Athenaeum*.

- Notes on Greek and Latin Syntax.** By C. BUCKLAND GREEN, M.A., Assistant-Master at the Edinburgh Academy, late Fellow of St. John's College, Oxon. Crown 8vo, 3s. 6d.

"Well arranged, clear, and extremely useful."—*School Guardian*.

- New Testament Greek. A Course for Beginners.** By G. RODWELL, B.A. With a Preface by WALTER LOCK, D.D., Warden of Keble College. Crown 8vo, 3s. 6d.

- A Greek Anthology.** Selected by E. C. MARCHANT, M.A., Fellow of Peterhouse, Cambridge, and late Assistant-Master at St. Paul's School. Crown 8vo, 3s. 6d.

- The Nicomachean Ethics of Aristotle.** Edited by JOHN BURNET, M.A., Professor of Greek at St. Andrews. Demy 8vo, 15s. net.

- The Captivi of Plautus.** Edited by W. M. LINDSAT, M.A., Fellow of Jesus College, Oxford. Demy 8vo, 10s. 6d. net.

- Taciti Agricola.** With Introduction, Notes, Maps, &c. By R. F. DAVIS, M.A., Assistant-Master at Weymouth College. Crown 8vo, 2s.

- Taciti Germania.** By the same Editor. Crown 8vo, 2s.

- The Frogs of Aristophanes.** Translated by E. W. HUNTINGFORD, M.A., Professor of Classics in Trinity College, Toronto. Crown 8vo, 2s. 6d.

University Tutorial Press.

# COLLEGE OF PRECEPTORS' EXAMINATIONS, 1901.

## Latin and Greek Classics.

**Caesar.—Gallic War, Book II.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.

**Euripides.—Alcestis.** By J. H. HAYDON, M.A. Camb. and Lond. Text and Notes. 3s. 6d.

**Horace.—Odes, Book IV.** By A. H. ALLCROFT, M.A. Oxon., and F. G. PLAISTOWE, M.A. Camb. and Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.

**Livy.—Book V.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 2s. 6d. Vocabulary. 1s.

**Vergil.—Aeneid, Book I.** By A. H. ALLCROFT, M.A. Oxon., and W. F. MASOM, M.A. Lond. Text and Notes. 1s. 6d. Vocabulary. 1s.

(Other Special Subjects will be announced in January, 1901.)

## English and French.

**ENGLISH GRAMMAR, THE PRECEPTORS'.** By W. H. LOW, M.A. Lond., and ARNOLD WALL, M.A. Lond. [In the Press.]

**The English Language: Its History and Structure.** By W. H. LOW, M.A. Lond. With 320 Test Questions. Fifth Edition. 3s. 6d.

**History of England, The Matriculation. (To 1702.)** By C. S. FEARENSIDE, M.A. Oxon. 3s. 6d.

**Shakespeare.—Henry V.** Edited, with Introduction and Notes, by Prof. W. J. ROFFE, D.Litt. 2s.

**FRENCH COURSE, THE PRECEPTORS'.** By E. WEEKLEY, M.A. Lond. With Passages for Translation into French. 2s. 6d.

**FRENCH COURSE, BARLET'S PRECEPTORS' JUNIOR.** By STÉPHANE BARLET, B. es Sc., Univ. Gall. 1s. 6d.

**FRENCH READER, THE PRECEPTORS'.** With Notes and Vocabulary. By ERNEST WEEKLEY, M.A. Lond. Second Edition. 1s. 6d.

## Latin Grammar, &c.

**LATIN COURSE, THE PRECEPTORS'.** By B. J. HAYES, M.A. Camb. and Lond. 2s. 6d. [Ready this month.]

**Latin Grammar, The Tutorial.** By B. J. HAYES, M.A., and W. F. MASOM, M.A. Fourth Edition. 3s. 6d. Exercises and Test Questions on. 1s. 6d.

**Latin Composition.** With Exercises. By A. H. ALLCROFT, M.A., and J. H. HAYDON, M.A. Fifth Edition. 2s. 6d.

**Latin Reader, The Tutorial.** With Complete Vocabulary. 2s. 6d.

**LATIN READER, THE PRECEPTORS'.** By Rev. E. J. G. FORSER, M.A. Lond. 1s. 6d. [Ready this month.]

## Mathematics and Science.

**Algebra, The Tutorial.** Part I.: Elementary Course. By RUPERT DEAKIN, M.A. Oxon. [In the Press.]

**Algebra, The Tutorial.** Part II.: Advanced Course. By WM. BRIGGS, LL.D., M.A., F.R.A.S., and G. H. BRYAN, Sc.D., M.A., F.R.S. 6s. 6d.

**BOOK-KEEPING, THE PRECEPTORS'.** By THOMAS CHALICE JACKSON, B.A., LL.B. Lond. Exercise Books, ruled Ledger, Journal, or Cash. 3d. [In the press.]

**Botany, First Stage.** By A. J. EWART, D.Sc. Lond. 2s.

**Chemistry, The Tutorial.** By G. H. BAILEY, D.Sc. Lond., Ph.D. Edited by WM. BRIGGS, LL.D., M.A., F.C.S. Part I.: Non-Metals. 3s. 6d. Part II.: Metals. 3s. 6d.

**Euclid. Books I-IV.** By RUPERT DEAKIN, M.A. Oxon. and Lond., Headmaster of Stourbridge Grammar School. 2s. 6d. Books I. and II. 1s.

**Magnetism and Electricity, First Stage.** By R. H. JUDE, M.A., D.Sc., 2s.

**MECHANICS, THE PRECEPTORS'.** By F. ROSENBERG, M.A., B.Sc. 2s. 6d.

**Sound, Light, and Heat, First Stage.** By JOHN DON, M.A., B.Sc. Lond. 2s.

**TRIGONOMETRY, THE PRECEPTORS'.** Edited by WM. BRIGGS, LL.D., M.A., F.C.S., F.R.A.S. 2s. 6d.

COMPLETE CATALOGUE of the University Tutorial Series, and List of Books classified for COLLEGE OF PRECEPTORS', London University, Science and Art (Board of Education), and other Examinations, free on application.

London: UNIVERSITY TUTORIAL PRESS (University Correspondence College Press).  
W. B. CLIVE: 13 BOOKSELLERS ROW, STRAND, W.C.

## ADVERTISEMENT SCALE.

Whole Page—Ordinary	£4 10 0	.....	Position	£5 10 0
Half Page	2 10 0	.....	"	8 0 0
Quarter Page	1 10 0	.....	"	1 15 0
Per inch in broad column (half width of page)	.....			0 7 0
Narrow Column (one-third page)	.....			2 0 0
Half Column (one-sixth page)	.....			1 2 6

General Scholastic Advertisements (Colleges, Schools, Classes, Tuition, &c.), 2s. 6d. for 6 lines, or 4s. 6d. the inch.

Situations Vacant and Wanted—30 words or under, 2s.; each additional 10 words, 3d. (For 1s. extra, Replies may be addressed to the Publishing Office, and will be forwarded post free.)

## FORECASTS AND COMMENTS.

December 1, 1900.

THE Certificate Examination of the College of Fixtures. Preceptors, and the Junior Forms Examination, will begin on Tuesday next, December 4.

\* \* \*

THE Third of the Winter Meetings for Teachers, conducted by the College of Preceptors, will take place at the College, Bloomsbury Square, from the 1st to the 9th of January. The programme will include short series of Lectures on "Principles and Practice of Education," by Mr. P. A. Barnett; on "The Teaching of Mathematics," by Prof. Hudson, with supplementary lectures by Mr. A. Sonnenschein and Miss Findlay; and on "The Teaching of Modern Foreign Languages," by Mr. H. W. Eve, Prof. Strong, Mr. S. Barlet, and Mr. W. C. Brown. There will also be single lectures on "Discipline and Form Management," by Professor Withers; on "The Development of the Moral Nature of Children," by Professor Earl Barnes; on "The Choice of Studies," by Dr. J. J. Findlay; on "Observation of Children," by Dr. Francis Warner; on "The Teaching of Reading," by Principal Burrell; on "The Teaching of History," by Mr. W. M. Childs; on "The Teaching of Geography," by Mr. E. Barkby; on "Ruskin and Education," by Mr. E. L. Paton; on "A Recent Educational Reformer," by Mr. J. Russell; and on Tennyson's "In Memoriam," by Mr. H. W. Eve.

\* \* \*

THERE will be in all twenty-two lectures, which will occupy the mornings and the early evening hours of each day; the afternoons being taken up with visits to important educational institutions in easily accessible parts of the metropolis.

\* \* \*

THE plan of the programme, following that adopted at the previous Winter Meetings, is to deal in a general way with the principles underlying the practice of education; and, while covering a considerable range of school subjects, to concentrate attention on two main departments of study. The treatment of physical science is provided for in a two days' Conference at the South-West London Polytechnic (in connexion with the Technical Education Board of the London County Council) to which the teachers attending the Meeting are admitted.

\* \* \*

ON December 4 and 5 the London School Board will hold its annual preliminary examination for scholarships. Fifty-eight scholarships and exhibitions, as well as a Sarah Terry Prize, will be awarded as a result of this examination.

\* \* \*

AN examination will take place at Marlborough on December 5 and 6 for fifteen foundation scholarships of the annual value of £30, confined to the sons of clergymen. Applications for particulars should be made to the Bursar.

\* \* \*

AN "Occasional Lecture" will be given at Bedford College, London, on December 6, by the Dean of Ely, at 5 p.m. The subject will be "Alan de Walsingham, Prior and Master of Ely Minster." The lecture will be illustrated by lantern views.

\* \* \*

ON Friday, December 7, the Hon. E. Lyulph Stanley, Vice-Chairman of the late London School Board, will give an address to the metropolitan Section B of the Teachers' Guild on "The

Government Secondary Education Act." The lecture will take place at the North London Collegiate School for Girls, and will be open to all.

\* \* \*

A GENERAL CONFERENCE of the Teachers' Guild will be held at Brighton on January 9 to 12.

\* \* \*

THE next meeting of the British Child-Study Association will be held on December 14, when Miss Young will read a paper (followed by discussion) on "The Elementary-School Girls' Notions on Social Economy."

\* \* \*

ARRANGEMENTS have been made for a Holiday Course for English Teachers to be held at Marburg, beginning on January 3, 1901. Prof. Kühnemann, of Marburg University, will lecture three times a week on "Die Blütezeit der deutschen Litteratur"; and Herr A. Cocker will hold classes in German conversation (based on phonetics) four times a week for beginners, and four times a week for more advanced students.

\* \* \*

LECTURES will also be given at the Marburg meeting for English students from half-past four to half-past seven on every Wednesday from January 9 to March 27. The lecturers will be Profs. Dr. Below, Dr. Schröder, and Dr. Natorp. These lectures are so arranged that those delivered on the first three Wednesdays, *i.e.*, in the month of January, will form a complete course in themselves. Applications for these courses can only be received up to December 14. All communications should be addressed to Herr A. Cocker, Villa Cranston, Marburg a.d. Lahn.

\* \* \*

THERE is talk of memorials to Sir Thomas Dyke Education Acland and Max Müller, of Oxford, and to Henry Gossip. Sidgwick, of Cambridge; whilst the lists are still open for Sir Archibald Geikie and one or two more. The honourable dead, like the living poor, are always with us: it is a saving clause in the contract of life.

\* \* \*

THERE is talk of yet another English University. On November 6 Lord Barnard formally opened the new science buildings, costing over £4,000, attached to the North Eastern County School, Barnard Castle. The Bishop of Durham and others were present. Lord Barnard, in the course of his speech, advocated the endowment of a University for the North of England similar to the Birmingham scheme.

\* \* \*

IN memory of the late Prof. Thomas Jones, of Manchester, who died at Springfontein while acting as chief surgeon to the Welsh Hospital in South Africa, Mrs. Jones has founded a scholarship at the Owens College, Manchester, of the value of £100. Candidates must be graduates in medicine and surgery of the Victoria University, or have passed the Final Conjoint Examination of the Royal Colleges of Physicians and Surgeons, and must have spent at least three years of their course of medical and surgical study at the Owens College. The scholarship will be awarded triennially.

\* \* \*

ONE of our daily contemporaries has been nursing a correspondence on the question as to which is the oldest of our public schools. If it were asked where were schools first established in England—the Druids being barred—one might answer at once: Canterbury and York. As a matter of documentary evidence in regard to our existing schools, the order of precedence is, perhaps, as follows:—Warwick School, 1066; St. Peter's School, York, 1090; St. Albans Grammar School, 1117; Wells Grammar School, 1236; Winchester, 1387; Wantage, King Alfred's School, reign of Henry V.; Eton, 1441; City of London, 1442; Magdalen College School, Brackley, 1447; Reading School, 1485; St. Paul's, 1509; Nottingham High School, 1513; Manchester Grammar School, 1515; King's School, Canterbury, 1542; Bedford Grammar School, 1552; Christ's Hospital, 1552; Tonbridge, 1553; Tideswell, 1560; Merchant Taylors', 1561; Bedford Modern School, 1566.

£7,000 has been subscribed in augmentation of the £5,000 presented to Aberdeen University by Mrs. Fletcher, of Hampstead, for the purpose of founding a Chair of History in the University. A further sum of £4,000 is needed in order to make up the total which a Scottish University regards as necessary for the endowment of a professorship.

\* \* \*

NEXT year, the year of Glasgow's International Exhibition, Glasgow University will celebrate the ninth jubilee of its existence. After St. Andrews, Glasgow is the oldest University in the North. The proceedings, which begin on July 24, will last three days, and a feature will be the delivery of speeches on three famous sons of the University—William Hunter, M.D., the great anatomist, Adam Smith, and James Watt; Dr. Hunter being dealt with by Prof. Young, Adam Smith by Mr. A. J. Balfour, and Watt by Lord Kelvin. In all £3,000 will be spent on the celebrations.

\* \* \*

A NEW County School has been opened at Pontywan, near Risca, Monmouthshire. This is the last of the schools to be founded in Wales and Monmouthshire under the Intermediate Education Act. The Welsh revolution in higher and secondary education is now practically accomplished.

\* \* \*

VICTORIA UNIVERSITY has now decided to examine students presenting themselves from recognized theological colleges, with a view to graduation. This is practically the same policy which has already been adopted by the University of Wales. During the discussion on this subject by the University Court, Dr. Hopkinson, the Vice-Chancellor, ridiculed the notion that the proposed course would necessitate the application of religious tests.

\* \* \*

THE women students of Paris who registered themselves at the various faculties last month are thus distributed:—in the Faculty of Medicine 104, of whom 21 are French and 83 foreigners; in the Faculty of Letters, 86 Frenchwomen and 70 foreigners, chiefly Russians and Americans; in the Faculty of Sciences 12, of whom 6 are French, 4 Russians, 1 German, and 1 Norwegian; in the Faculty of Law 2 only, both Russian. At the School of Physical Sciences (where a year's preliminary work is done before the students pass on to the Faculty of Medicine) there were 8 entries, 6 Frenchwomen and 2 foreigners. The total number is 282.

\* \* \*

LORD ROSEBERY will doubtless be glad to hear that a company of one hundred cadets, selected from some hundred and fifty candidates, has just been formed at the Merchant Taylors' School and attached to the London Rifle Brigade. The playground is used for special military drill on Wednesday afternoons, and an armoury has been fitted up in the basement. Besides making a grant for preliminary expenses, the Merchant Taylors' Company have given the uniforms, and the boys are called on for small subscriptions—an entrance fee of ten shillings and a terminal subscription of five shillings. The rejected candidates have, for the most part, been placed in a "reserve."

\* \* \*

UNDER the will of the late Dr. D. J. Leech, of Manchester, £10,000 is to be given to the authorities of the Owens College for the endowment of a Chair of Materia Medica and Therapeutics.

\* \* \*

At the end of October the Fellows of Peterhouse, Cambridge, elected as their Master, in place of the late Dr. Porter, Dr. Adolphus William Ward, Litt.D., formerly Fellow of the College. In 1866 Dr. Ward became Professor of History and English Literature at Owens College, Manchester, and in 1870 was elected Principal of the College, which appointment he held until 1897. On his resignation he received the freedom of the City of Manchester. He was Vice-Chancellor of Victoria University from 1886 to 1890, and again from 1894 to 1896.

Appointments  
and  
Vacancies.

Dr. Ward translated Curtius's "History of Greece," which was published in five volumes, and edited the "Globe Edition" of Pope's poetical works. He is the author of a history of English dramatic literature to the death of Queen Anne, published in 1875, and he wrote for the "English Men of Letters Series" lives of Chaucer and of Dickens. He also was a contributor to the "Dictionary of National Biography" and the "Encyclopædia Britannica."

\* \* \*  
THE RIGHT HON. F. MAX MÜLLER, Corpus Professor of Comparative Philology at Oxford, died on October 28. The Chair was virtually created for him, and his name appeared in the deed of foundation. After he had lectured for a quarter of a century at Oxford, Max Müller resigned his Professorship, with the intention of returning to Germany and devoting his remaining years to literary work. Invitations reached him from several German Universities, and even from Florence; but he returned to Oxford after less than two years' absence, the authorities offering to appoint a deputy and charging him at the same time with the editorship of a large literary undertaking, a translation of the "Sacred Books of the East." Of this work fifty volumes have been issued.

\* \* \*  
THE Principalship of Liverpool College has been vacated by the Rev. F. Dyson (formerly Headmaster of the Godolphin School, Hammersmith), who has been appointed Junior Dean and Fellow of St. John's College, Cambridge.

\* \* \*  
MR. OLIVER ELTON, Lecturer in English Literature at Owens College, has been selected for the Professorship of Modern Literature at University College, Liverpool, in succession to Mr. Walter Raleigh, who was recently appointed Regius Professor of English Language and Literature at Glasgow.

\* \* \*  
MR. A. W. HUGHES, F.R.C.S., Professor of Anatomy at King's College, London, who directed the Welsh Hospital at Springfontein and Pretoria, must be added to the long list of victims of the South African War. He went out last June, having volunteered at a moment's notice to supply the place of Prof. T. Jones, the previous director of the hospital, who also died at the post of duty. For a time he was Professor of Anatomy at Cardiff, and on leaving for London he collected for University College Hospital there a sum of £300 towards the provision of a collection of anatomical specimens to take the place of his private collection, now at King's College Hospital.

\* \* \*  
MR. R. C. GILSON, M.A., late Fellow of Trinity College, Cambridge, assistant-master at Harrow, has been appointed Headmaster of King Edward's School, Birmingham, in succession to the late Rev. A. R. Vardy.

\* \* \*  
MR. C. E. BROWNRIGG, M.A., has been appointed Headmaster of Magdalen College School, Oxford. Like Mr. Gilson, he was educated at Haileybury, under Dr. Bradby. He held for a short time a temporary post as assistant-master at Eton, and was then appointed second master or usher at Magdalen College School, which post he has retained till the present time. Mr. Brownrigg is the author of a book of selections entitled "Latin Prose of the Silver Age," and of other educational works. He edited for some time the *Oxford Magazine*, and he has been a not infrequent contributor to our own columns.

\* \* \*  
MR. B. D. TURNER, M.A., Rector of Kelvinside Academy, formerly assistant-master at Marlborough, has been appointed Headmaster of Loughborough Endowed Schools, in the place of Mr. C. W. Kaye, now Headmaster of Bedford Grammar School.

Two valuable contributions to English history in the current number of the *English Historical Review*—with parallels for the present time, as all true history has—are "Colchester and the Commonwealth," by Mr. J. H. Round, and "The Foreign Policy of

England under Cromwell," by Mr. Basil Williams. Mr. Round distinguishes very clearly amongst the "royalists" who fought for Charles in 1642 the "loyalists" who crossed over to them in 1647, in the interests of public liberty, and the "moderate Parliamentarians" who fell away from Cromwell later on.

\* \* \*  
WE note once more with pleasure the contributions of trained historical women students in the "Notes and Documents" section of the same *Review*. Miss Bateson gives us the third part of her "Laws of Breteuil," and Miss Eva Scott makes an interesting contribution on "The Marriage of Prince Rupert."

\* \* \*  
A NOTEWORTHY new publication is the "Histoire de France" (Hachette), by Ernest Lavisse, assisted by thirteen competent authors. We have the first of sixty-four *fascicules*, containing ninety-six pages, from which it is possible to infer the contemplated scale of the entire work.

\* \* \*  
MESSRS. LONGMANS are publishing a new edition of Max Müller's "Ramakrishna: His Life and Sayings," the first edition of which appeared in the beginning of last year. It is a book of material for the study of the evolution of religion.

\* \* \*  
ON New Year's Day the Cambridge University Press will publish the first number of a new quarterly to be called the *Journal of Hygiene*. It will be edited by Dr. Nuttall, Lecturer on Bacteriology and Preventive Medicine in the Cambridge University; Dr. Haldane, Lecturer in Physiology at Oxford, and Dr. Newsholme, Examiner in State Medicine in the Universities of London and Oxford, will give their assistance.

\* \* \*  
MESSRS. A. J. EVANS and D. G. Hogarth, Directors of the British School of Archæology at Athens, report the discovery of extraordinary prehistoric treasures in Crete in connexion with the work of the Cretan Exploration Fund. Their discoveries at Knossos throw into the shade all the other explorations of last season in the Eastern Mediterranean. A magnificent palace has been unearthed which is claimed to be the dwelling-place of Homeric kings and the sanctuary of the Cretan god of the Double Axe. There is ground for the belief that this building was, in fact, the Labyrinth of the Minotaur. All the palace archives have come to light, which, when deciphered, should contain a mine of wealth for archæologists. Various frescoes, vases, and statuettes have been found.

\* \* \*  
THE British School at Rome is to begin work this month. The Director, Mr. G. M. Rushforth, is already in Rome, and may be addressed at the British Embassy. Intending students are requested to apply to Prof. Pelham, Trinity College, Oxford, from whom all particulars as to admission, &c. can be obtained. The school is intended to promote the study, not only of classical history and archæology, but of mediæval history, art, and literature. The Director will be happy to explain the principal recent discoveries relating to ancient and mediæval Rome to any University graduates and members of the teaching staff of public schools who may be visiting Rome during the Christmas or Easter vacation. Those who wish to avail themselves of this offer are requested to communicate with the Director as soon as possible.

\* \* \*  
THE Oxford University Press announce the following amongst their forthcoming publications:—"Homer, *Odyssey*, Vol. II., Books XIII.-XXIV.," edited, with English notes, by D. B. Monro, M.A.; "Demosthenes, the Speech against Meidias," with introduction and notes by J. R. King, M.A.; "Thucydides, Book III.," edited by H. F. Fox, M.A.; "Euripides, *Hecuba*," by C. B. Heberden, M.A.; "A French Grammar," by A. H. Wall, M.A.; "A Historical Primer of French Phonetics," by Margaret C. Brittain; "The Oxford School History of England"; and "The Junior Euclid, Books III. and IV.," by S. W. Finn, M.A. Mr. Frowde will also publish a cheap edition of "The Treasury of American Sacred Song," selected and edited by W. Garrett Foster.

SIR ISAAC PITMAN & SONS will in future publish the well known "Attractive" Primers, Readers, &c., and other educational books, maps, charts, &c., hitherto issued by Messrs. C. A. Pearson, Limited.

\* \* \*

PROF. WEEKLEY, of University College, Nottingham, has in preparation a work to be entitled "The Revised French Grammar," incorporating the simplifications authorized by the recent decree of the French Minister of Public Instruction. The date of publication may be given approximately as January 15, in time for school use during the coming term.

\* \* \*

For the London University Examinations of 1902 several additions are being made to the "University Tutorial Series": Mr. W. J. Woodhouse, Lecturer in Ancient History and Political Philosophy in the University of St. Andrews, is editing the portion of Herodotus (Book IV., Ch. 1-145) prescribed for the Intermediate Arts Examination (this is the first time that this Book has been edited with English notes of an elementary character); Mr. A. H. Allcroft is engaged on Cicero's "Second Philippic," and Mr. T. R. Mills on Æschylus' "Eumenides," both prescribed for Intermediate Arts. The publication of these three books may be expected next February.

\* \* \*

MR. FISHER UNWIN is publishing "A Literary History of America," by Barrett Wendall, Professor of English at Harvard College. The history endeavours to define the ways in which the nation, character, and thought of America have diverged from those of England. Touching briefly on the seventeenth century, with a special chapter on Cotten Mather, it discusses the eighteenth century at greater length, with special chapters on Jonathan Edwards, Benjamin Franklin, and the American Revolution. The nineteenth century is treated in more detail, with special chapters on Brockden Brown, Irving, Cooper, Bryant, Poe, Emerson, Whittier, Longfellow, Lowell, Holmes, and Walt Whitman. The chief emphasis is laid on the literature of New England and its differences from that of the mother country.

### EDUCATION AT THE PARIS EXHIBITION.

At the monthly Evening Meeting of Members, held at the College of Preceptors on November 14, M. E. Sadler, Esq., in the Chair, the Rev. J. O. BEVAN read the following paper on the "Educational Exhibits at the Paris Exhibition":—

Education and Instruction and the kindred Third Group occupied the same building of the Champ de Mars on the west side—the Palace of Education and Instruction. A special exhibition of the Trade Schools of Paris was placed in the Pavillon de la Ville de Paris—Cours la Reine—at the right side of the Pont des Invalides.

The following were the classes:—French Sections, chiefly on the first floor, both official and private—important and complete: I. Education of the Child, Primary and Adult Schools. II. Secondary Education (of both sexes—for boys, classical and modern training; for girls, retrospective section of Schools of the Legion of Honour). III. Higher Education and Scientific Institutions. IV. Special Art Schools (design and music—French Section, ground floor, centennial collection of Prix de Rome). V. Special Agricultural Instruction (scientific and practical, including forestry and technical schools, and training in normal, technical, secondary, primary, and farm schools). VI. Special Industrial and Commercial Schools (retrospective section and annexe, Avenue de Suffren—samples from technical schools).

#### FRANCE AND HER COLONIES.

This exhibit was highly important. It was historical, comprehensive, well set out, beautifully shown forth in detail. The impression was left upon the mind that the organization of school work, whether by the State or private bodies or individuals, was complete, entering into various ramifications, the whole being reduced to a system, and the utmost skill and care exhibited in every part. Uniformity was the badge and sign everywhere displayed—precision, clearness, and finish met one at every turn. The exercise books were wrought out with the characteristic delicate spindle-shanked writing; neatness, almost painful in its regularity and monotony, succeeded unto neatness.

Recommendations were drawn up by the Commissioners at the beginning of last year, and were issued to school authorities in France. These dealt with questions of size, form, and shape, &c., best calculated to set forth to the best advantage the various objects exhibited. The

size of copy and exercise books was practically prescribed, so that uniformity should prevail. The result was most satisfactory, for it enabled the parts to be blended and arranged so as to constitute each separate exhibit a work of art. From a survey of the United States show one would presume that similar recommendations were put forth by the Commissioners for that country. As regards Old England, the usual happy-go-lucky conditions prevailed. The average Briton is so proud of his independence that he even glories in variety and want of harmony. It provides opportunities for the chanting his national carol, "Britons never shall be slaves."

In reference to the French show, the qualities were exhibited which have made France great in this particular kind of greatness; that have manifested themselves in her love of art, in the tasteful arrangement of her museums, in her elaboration of dress and ornament, in her love of organization, arrangement, painful detail—qualities that have manifested themselves politically in her power of recuperation after great losses and catastrophes, and in the strength and weakness of her colonial expansion, policy, and government.

[After speaking of the *écoles maternelles*, the agricultural schools, the associations for developing love of country, co-operation, social organization, helpfulness, and civics generally, the geographical, geodetical, and hydrographic surveys, and the centennial exhibit attached thereto, the Lecturer gave a more detailed account of the British exhibits.]

#### GREAT BRITAIN.

Great Britain occupied a somewhat humble position compared with her hostess, and, what is surprising, did not, at first sight, appear to advantage even by the side of our cousins from across the Atlantic—a fact partly explained by the circumstance that the material resources of the latter for the preparation and staging their exhibit exceeded by many times the amount set apart by our Government Commissioners. Herein it may be that an undue parsimony was shown by our keepers of the Exchequer. In connexion with this exhibit, as in the pavilion in the Rue des Nations, and in other ways, one felt that the greatest Empire on earth was not worthily represented. A specimen of our exclusiveness was manifested in the fact that our Royal Pavilion was opened only on certain days and at certain hours, so that intending visitors were often met with the shut door and a blank welcome.

It is undoubtedly the case that foreign visitors, from the Shah of Persia downwards, would be disposed to take us not at our own price as expressed in public and private demonstrations at home, but at such a valuation as would be suggested by the relative size and importance of the tangible objects set out before them in any world-show like unto this Exposition. But exhibitors need the support, countenance, and guidance of their Government. Not only so, but large contributions of money are necessary to enable the administrators to do justice to our importance as expressed in our productive and manufacturing skill, or in the educational side of our life. Looking unto the end, one may well entertain the opinion that a wise profusion—or, shall we say, a wise economy?—would have been exercised by Her Majesty's Government if the grant actually contributed had been multiplied manifold. We have reached such a stage in our national life, and are being pressed so hard by other nations, that it is of the utmost importance to settle within ourselves what we really can do well, and to manifest our full strength in the face of an ever increasing foreign competition.

Other circumstances which militated against our complete success in relation to the educational exhibit were:—(1) The conflict of administration in some departments; (2) the absence of organization in others. Thus, in this section, we had at work the Education Department, the Science and Art Department, and the Scotch and Irish Education Departments. Beyond these lay the spheres of action covered by the Universities, University Colleges, public and grammar schools, private schools, technical schools, and schools and departments controlled by voluntary and School Board agencies. It required great skill and knowledge to gather together a homogeneous and representative exhibit from such a motley group of bodies impressed by such various, and in some cases competing, energies. The way was partly cleared by the efforts which culminated, in the early part of this year, in the formation of an Educational Exhibition at the Imperial Institute. It is, perhaps, a fortunate circumstance that these exhibits, as a whole, were not forwarded to Paris, as certain specimens might have made the opposers scoff and the judicious grieve. Even so, it was difficult to make a selection that would truly represent what was best in each section. It must be allowed that, ultimately, this choice was made with discretion; furthermore, that the exhibit was set out with considerable skill and care. The representative of the Commissioners was always ready to be of service to those who solicited his aid. Moreover, hand-books were furnished affording valuable information about the history and development of the various forms of education existing in the British Isles. Probably from lack of funds, Ireland was represented in no other way than in the hand-book; but the work of England, Scotland, and Wales was writ large upon the walls.

The work done in Scotland seems solid and satisfactory; but an element of surprise was found in the omission of the Universities—which bulk so largely in the national life and supply to the schools so many of the teaching staff—to furnish any more public exhibitions of their existence and their work than that contributed by a few pictures.



Indeed, the exhibit on its literary side generally did not do justice to what we know to be the state of things in the Northern kingdom.

Wales showed a great advance (since the passing of the Act of 1889) in number of scholars, organization of work, and extension of University agencies; but the exhibit displayed traces of weakness in classification and detail. An important feature was the work projected by the University Colleges in reference to agricultural schools.

Certain considerations which a general survey forces upon us may here be set forth:—

I. In England the extension of primary education presents marked features. Within certain limits of literary excellence this form of education would seem to come up to the level of France, Germany, and the United States. It may be questioned, however, whether the variety of work and occupation and the early preparation of the pupils for the various manual industries are sufficiently provided for. The instruction imparted appears too restricted and booky; it seems to have a tendency to repress originality—to restrain observation and the use of the senses generally. Doubtless this is owing to the townified life led by many of the scholars, and to the prevailing idea that all knowledge worth the knowing must of necessity be derived from a book or from the teacher. In some sections it is also due to the inadequate, and even farcical, preparation of teachers called upon to instruct their scholars in other than literary subjects. Can it be supposed that any man can qualify himself to teach agriculture, let us say, by attending a short course of lectures on the subject, being instructed only by the deliverances of the lecturer or by the words of the text-book? Yet this is what is attempted in some quarters. "Getting up" a subject is substituted for its experimental study.

II. On the whole, the growing advance in the scheme and organization and results of our system of technical instruction is a subject for congratulation. Herein we really seem to be making progress—slowly it may be, but surely. Not, indeed, before the time; for it is beyond dispute that other nations—France, Germany, the United States, and, in some respects, smaller States, like unto Switzerland and Denmark—have seized the opportunity presented by our slowness and unwillingness to learn, and, by virtue of sheer pluck and perseverance, combined with sound methods of technical instruction, are outstripping us in the race (in many a product) on many a field of commerce. There is no doubt that, in the immediate future, our educational system must be shaped and conditioned so as to bring about something even over and above sound learning—viz., a change in certain of our national characteristics, such as our pride, our insular prejudice, our trade conservatism, our unwillingness to adapt ourselves to a wider outlook, to a deference to the wants, wishes, and even the prejudices, of our customers; to learn the lessons taught by our trade disputes, our fatuous strikes; by our tolerance of tyranny in the labour market, and of restrictions, whether on the part of masters or men, in respect of trade.

III. The third consideration worthy of mention is the one leading us to infer that our higher technical education is not based on a sound system of secondary instruction—in other words, that it has no bottom. This has been evident to thoughtful and far-seeing persons for some time. It is due to the fact that we somewhat suddenly woke up to the reflection that we were relatively losing ground in the race of giants, that other countries were far ahead of us in the attention they gave to the establishment of trade schools, technical colleges, and the like. It was also based upon the feeling that school work should be immediately profitable, and that the A B C of education—as soon as learned—ought to be readily convertible into bread and butter. It is, however, tolerably clear that the one thing needful, in this particular, is the training and discipline afforded to the mind, will, whole constitution of the student, by a broad and liberal secondary education, wherein the wisdom of the ancients, the lore of the middle ages, the keen and nimble wit of the scientist of to-day, shall alike combine to furnish a foundation, solid and four-square, to settle the principles that underlie not only all knowing, but all action, and to make the *man* before one attempts to make the chemist or the mechanic.

IV. The fourth consideration deals with the unique character of the public-school system. I do not use the word *excellence*, although in many ways it is excellent, because one cannot but be sensible of its limitations and drawbacks. The statistics and exhibits referring to public schools presented their claims and their doings in a satisfactory manner, and obtained suitable recognition at the hands of the jury. Of late the attention of French educationists has been closely directed to this system. Many have investigated matters on the spot, several have committed their impressions to print. Perhaps these gentlemen have been somewhat partial in their appraisal of certain schools as compared with others, but they unanimously testify to their appreciation of the fact that our system tends to make for independence, courage, and self-reliance far more than that followed in France. Englishmen (comparing French boys with their own sons and scholars) have long entertained that opinion, and we may perhaps be pardoned (in the midst of much international depreciation) if we can be permitted to taste what is a very substantial crumb of comfort. Naturally, to one intimately acquainted with the schools represented, it would appear that their doings and aspirations were better set out on paper than in

the actual history and condition of the school. Practice frequently lags far behind theory, and an enthusiastic headmaster can do much, in the way of description, to idealize his work and cast a glamour over every prospect. It is to be noted that certain schools under the control and management of an individual were represented as run on public-school lines.

V. The fifth consideration deals with the increasing ratio of female teachers in the schools of England and the States.

From the nature of the case, private schools, whether for boys or girls, were not largely represented; yet the attention of the jury was directed to their work, which, in certain cases, was honourably distinguished. It is to be hoped that the requirements of the new Education Acts will bring it about that a more formal organization shall be developed in this class of school, so that every institution may be brought under evaluation, and the bad weeded out from the good in respect both of the teacher and of all that essentially goes to make the school. Private schools, some time ago, were but a fortuitous concourse of atoms. Their promoters gloried in their isolation. Ordinary means having failed to bring them together, it remains to be seen what the iron hand of the State will find it possible to accomplish.

The Universities and University Colleges made a satisfactory show. Views of the colleges and statistics of their work were displayed in a very presentable form. One fact that strikes our Gallic neighbours is the requirement for residence on the part of our older Universities, which differentiates them very largely from most of their own institutions. Another feature that wins unbounded praise is the work connected with University Extension movements, which is happily, increasing in a satisfactory ratio, tending, as it does, to instruct and cheer that particular class of students who otherwise, perhaps, would have gone empty or silent on their way.

The Local Examination system, and that of University Settlements in the slums, also present to our friends marked features for congratulation. The display and working of the Clarendon Press must not be overlooked in this connexion.

#### UNITED STATES.

This exhibit was splendidly staged and set up. No expense had been spared to provide illustrations of the work accomplished; to display them in handsome hinged cases, where they were readily accessible; to translate the descriptions into French (a matter conspicuously neglected in our own section, a very noticeable and lamentable omission, due to paucity of funds); to furnish statistics of schools and colleges, specimens of work in all departments, selections of copy and exercise books. Altogether this exhibit was one of which the country might well be proud. Both Russia and the States—partly from their traditional friendship with France, partly (in respect of the latter country) from its natural go-ahead character—have put their best foot foremost, and made an admirable representation. The States also furnished gratuitously monographs on different subjects. Indeed, the number of official publications put forth from time to time, and the generosity their Government and the different States exercise in respect of them, are alike noticeable.

We are bound to congratulate our cousins on their show in this section, and, indeed, it all sections to which they contributed. They will carry many honours across the water. You will be prepared to hear of the progressive advance of education in that country, of its complete and formal organization, owing to each State making it a first charge on the national resources. This organization renders its work easy to do, easy to investigate. In this section we were likewise reminded of the munificent gifts to educational institutions bestowed by many of its leading citizens; of the enthusiasm displayed by its professors and teachers; of the freshness and originality of their work; of their striving—not always wisely, perhaps—after new methods, and the clothing of old ideas in new forms; of the manner in which they carry the University even into the woods, where, under the summer sun, they learn lessons from the trees and running brooks, as well as from the living voice declaiming the lessons of the modern laboratory, or the aphorisms of those who taught in the old time in the Porch or the Academy, or under the colonnade of some solemn temple.

The course of study prescribed for some of the series of public schools was well thought out, ultimately dividing into three lines—humanistic, scientific, economic—according to the bent of the scholar or his intended work in life. In some schools the practice of marking, place taking, has been entirely abolished. It is noticeable here, as in other countries, that the exhibit is mainly concerned with schools controlled by public authorities. There are private schools in the States, in Germany, in France; but they did not furnish many tokens of their existence. In France many of the girls are educated in convents, and, owing to the dislike of a section of the population to the State schools, where religion is not formally taught, certain religious communities have opened schools by way of competition; but, on the other hand, certain municipal authorities are arranging to open boarding schools for girls—a noticeable innovation. The feeling on the part of Frenchmen respecting the education of their boys is in favour of sending them to the municipal or State school. At least, so one gathered from educationists represented at the Exhibition.

Here are a few figures relating to higher education in the United States that are deeply significant. They testify to the number of Universities and colleges open in the years severally named:—1790, 17; 1850, 138; 1880, 394; 1895, 547. Thus in the far-away West does the tide of educational progress rise to a full flood.

When one comes to think of the educational aspect in general one naturally inquires: What new things has it shown to us? What new methods has it exhibited? And it furnishes the *raison d'être* of an address like the present to enlarge on any novelties that may have been presented either in matter or in form, rather than to give a mere catalogue of objects or a general characterization of the whole. Perhaps in this connexion the most noticeable feature alike in the United States, France, and Russia, is the development of Nature-study. This is a revulsion against bookish methods of education, and is thus readily understood and justified. We have all inveighed in our time against the separation of our pupils from the great world, their confinement within four walls, their forced dependence for all they learn upon the teacher's voice or the silent tongue of the book, for all they apprehend upon the judgment of the living man or even of the sage who died centuries ago. It is unnatural—almost cruel. It is hard for the teacher—harder still for the scholar. It has a tendency to lead the pupil to believe that all knowledge is contained within the narrow limits of a schoolroom or is confined to what others tell us in books. It tends to the disuse of observation, investigation, experiment, comparison, interchange of thought and action. It compels the student to learn what he does not like at times when he is disinclined to exertion; it represses effort at times when the senses are on the alert and the brain fully awake. It swamps originality; it makes us an inferior copy of those gone before; it converts the mind into a mere lumber-room, into which may be thrust, darkly and confusedly, the thoughts of others; turns our voices into a mere echo of the truisms and common-places of the dead past.

This may be a serious indictment; but it would be absolutely true if human nature did not contrive occasionally—by hook or by crook—to kick over the traces, and to find out new roads alone. One may try to expel this natural impulse by the ferule, but one will not wholly succeed. It is, then, only fitting that our relatives across the Atlantic, whose peculiar history and daily needs have thrust them back upon themselves, and stimulated to a high degree invention and resource, should have thrown themselves with zest into this study, and should be developing it into significant proportions. A class would be taken into the country or into the farm-yard. The children would be called upon to observe some natural object, such as a flower or an animal. This would then be made the starting-point for the educative process. On their return, by question and answer, the various facts concerning the object would be educed; writing would be begun by setting out its name in full on the board and calling upon the children to copy it, and so on with other processes.

Again, the children would be called upon to observe a tree and to continue the observation for days and seasons; to regard the clouds, the weather, the succession of day and night, the procession of the seasons. They would be invited to press the leaf, to gather the seed, to catalogue the natural products—by-and-by to plant the seed, to watch the processes of growth, to describe them in words, to delineate them alike with brush and pencil. In time they would be expected to discriminate the sequence of events, leading up to the formulation of the law or principle governing the growth of the object or the succession of phenomena under consideration. In some cases text-books would be entirely dispensed with—at all events, in early stages. The child would form his own text-book out of the notes set out every day recording his observations and impressions, these being ultimately bound together, so that he should become not only his own author, but even his own printer and binder. Original sketches in brush work would be occasionally called for by way of illustrating a story related to the child or an event brought under his notice. This course is supposed to stimulate originality and resource, and, indeed, it is surprising to see the effects produced, comprising much, of course, that is ludicrous, and, at first sight, worthless. It is, however, claimed that nothing in this connexion can be absolutely worthless, and with that dictum many of us will be found to agree. This may be styled the true heuristic method—a method certainly at least as old as Socrates. Such a system—any system, indeed—must be judged by its results. Many teachers in Paris were entirely sceptical as to the merits and satisfactory results of such a *régime*. The truth appears to be that it would be the best if certain requisites were furnished—viz., an infinity of time and opportunity, a teacher thoroughly instructed in his work and gifted with an endless store of enthusiasm and patient endeavour.

One can hardly conceive, in relation to this method, how any large number of pupils could be taught together or systematically, or that what we understand by discipline could be effectively maintained. It every child, e.g., was employed in dissecting a bird's nest and were permitted to exchange verbal notes with his neighbours; if, perchance, the spirit of mischief and fun should overpower the thirst for knowledge, patient investigation, and careful notation, what a Babel would arise, what a rag-and-bone shop would take the place of the orderly schoolroom! Every child would require from two to three

teachers, and life would be too short to enable a single lesson to be finished. Again, if one banished text-books altogether, where could the time be found, in our practical and surging life, to enable us, after burning our libraries, to gather together, in a short school course, all those accumulations of fact and principle which it has taken men centuries to discover and arrange? But that is stating the case in its worst and most exaggerated aspect. What is projected must of necessity fall far short of this end; and, although the scheme seems at first sight visionary and impracticable, we cannot fail to sympathize with its protest, with its inner principle—viz., that it is not the fact itself which alone is worth knowing, but the search after the fact and after the significance underlying the fact. These strengthen the powers of observation, and lead, by well marked and progressive stages, to the perfect development and education of the ideal man, with his observing and reflective faculties fully engaged and developed.

There does, then, appear to be a well authenticated indication—from what we see around us to-day—that all the great nations, in their educational systems, are not only desirous of enlarging their curriculum, of engaging a larger proportion of the population in the scheme of education, but of adopting more rational methods, and of suffering the teacher to enjoy greater liberty. In a word, there is an attempt made to humanize the instruction imparted, and to realize that it is not alone necessary to teach, but to make to learn. The lantern is used, not only to illustrate lessons in natural history, but in geography and history as well. Diagrams, pictures, coins, photographs are also employed. Excursions to historic sites, visits to museums and galleries, country walks are so treated as to have a scholastic value. More care is taken in the preparation of class-books and their illustrations. This is a fruitful subject. Of many text-books—having, too, a wide acceptance—it may be said that they bristle with errors. Take a combined geography and atlas, for example. You find the spelling of names of places different in the atlas and text; the length of rivers, the height of mountains set down as different in different pages; the results of recent discoveries not utilized. When complaint is made to the publishers you elicit the reply that alterations cannot be made until the existing edition has been worked off!

In relation to such institutions as the London School Board, and to such countries as France and the States or Canada, where a control is exercised over a large number of schools, the question of the choice and retention of class-books becomes of deep importance. Large numbers of a particular book may be in circulation; a better book might be produced; but questions of expense may arise leading to the retaining of the unsuitable book for some time.

Questions affecting the training of teachers arise from a survey of the normal schools of the States and the University system of Switzerland, but time does not admit of their description. The same lack forbids any reference to school books, furniture, developments of the lantern, and suchlike educational subjects.

The CHAIRMAN said that only those who had spent time in working at the Exhibition would be able fully to appreciate the width of view and sympathy of Mr. Bevan's paper. A visit to the Exhibition had been to many one of the great experiences of the end of the century. He was glad that the lecturer had taken as his title, "Education at the Paris Exhibition," and not "The Educational Section in the Paris Exhibition." There was all the difference in the world between the two ideas. Was there not sometimes a danger of our specializing our ideas and studies in education too much, and of our thinking of education as if it were confined to that important work which was done in the school or college, and which could be brought under the supervision or even control of the State? Education was a far wider, deeper, and more subtle thing than that; it was a complex of influences, an aspect of life. Anything which tended to professionalize education, or to induce people to think of it as a series of contrivances of teaching, or to dwell on the pecuniary rewards, in the form of "grants," which could be earned by excellence in this or that subject, seemed to him perilous, and apt to sterilize our ideas of what really was a great spiritual movement. The lecturer had avoided that, and had taken the Exhibition as a whole. It was the aspect of the whole Exhibition which threw light on the culture of the peoples who had contributed to it. The organization of the Exhibition seemed to him to reflect immense honour on the French nation. As he walked hour after hour through its immense area, nothing had impressed him so much as the fact that there were great intellectual ideas embodied in the organization of it. It would be impossible to exaggerate the impression (far from reassuring in many respects) made on the student's mind by this display of the world's activities and moral restlessness. It was like being taken up on to a great mountain and being suddenly shown the working of the world. One of the two or three finest things in the whole Exhibition was the British Pavilion, which contained a very fine collection of British masterpieces; and its arrangement was typical of national reserve and artistic refinement. But, as the lecturer had suggested, the really best things in education could not be exhibited. Things that mattered most in national life could not be nailed to a counter or put under a glass case. The British educational exhibit, which was marked by characteristic variety, was

remarkably successful, considering the difficulties the Committee had had to contend with; and great credit was due to our representative, Mr. Fabian Ware, who was ideally qualified to act as the expounder of the exhibit. In the Educational Section Germany did not exhibit at all, one reason being that the space assigned was considered by her Government insufficient to do justice to the greatness of the subject. The absence of Germany was a great blot on the completeness of the Educational Section of the Exhibition. The educational contribution of the United States was admirable, and the kindness of the Director, Mr. Rogers, added largely to the enjoyment of English visitors. It was intended to show the American exhibit in Manchester, and he would strongly urge English teachers to go and see it. The brushwork and illustrative drawings of the American children in the primary grades were particularly noteworthy as showing recent developments in this direction. Mr. Wilson's portfolios, illustrating Nature-study at the Philadelphia Normal School, would well repay study. The American exhibit, like the British, suggested the existence of that care for the liberty of the individual which is common to the two nations. The Exhibition had left some deep impressions on his mind:—(1) The immense importance, not simply in the material world, but in its effect on the imagination of our generation, of the victories of applied science. (2) All through the Exhibition organized knowledge showed itself as being more and more master of the situation, and he sometimes feared that there was a danger of those subtler and larger ideals which cannot be formulated in clear-cut logical expressions being crushed out from their right place by the pressure of more materialistic aims and by the prestige of useful achievements. (3) He could not help feeling that the effect of education over a large part of Europe had been to stimulate unduly the imitative faculty, to develop impressionableness to current ideas, and to lessen the power of resistance to what was temporarily in vogue. But in the intellectual standard of many parts of our education we were seriously behind. It behoved us, as a nation, to raise the intellectual standard of our education, and to bring more organized knowledge into the conduct of public affairs. Yet it would be disastrous if we failed to retain something at least of our traditional tenacity of principle, that adherence to old ways which we knew were good, but which we could not intellectually justify; and we must never forget that, though intellectual efficiency was becoming more and more necessary in human life, it was a perilous possession, unless it was founded on faith and moral discipline.

Mr. MILLAR INGLIS said that, when visiting an exhibition, one was apt to stray about examining curiosities, and it was difficult to devote the attention necessary to a thorough study of the various exhibits. Character was the chief thing in educational life, and he hoped that nothing in our educational system would be changed that would make it less the fact that the true Englishman was a man of sterling qualities—straightforward, of good character, grit, and capability.

Miss STEVENS thought that the first thing that struck a visitor to the Paris Exhibition was an overwhelming sense of the immensity of the work and the skill displayed in gathering it together. Her visit had had a profound influence on her life and teaching, and she had derived from it some valuable lessons, which she was now able to put into practice in her own school.

Miss CROMBIE had had a glimpse of the Paris Exhibition on her return from Switzerland, and had intended to limit the range of her visit to the Education Section and the National Pavilions. But the Exhibition was so overwhelming that she had found it impossible, in the space of a couple of days, to study anything thoroughly. One thing that specially delighted her was the way in which the people themselves enjoyed and appreciated their Exhibition.

A vote of thanks to the lecturer concluded the proceedings.

## REVIEWS.

### SOMERSET AND THE CHANTRY SCHOOLS.

*England under Protector Somerset: an Essay.* By A. F. Pollard. (Kegan Paul & Co.)

Mr. Pollard has amplified and developed the article which he wrote for the "Dictionary of National Biography" on Edward Seymour, first Duke of Somerset, Protector of England during part of the minority of Edward the Sixth. Edward was a child of nine at the time of his father's death. Dynastic precedent and the will of the King decreed that the minority should endure another nine years, and Seymour, as Lord Great Chamberlain, was named fifth in order of precedence amongst the executors of the royal will. Mr. Pollard reasonably urges that this fact is a strong argument against the charge which was subsequently made by Somerset's enemies that he had forged the document in question. He was the young King's uncle: it would have been no more than natural if he had been nominated to a position at least equal to that enjoyed by the Duke of Bedford, uncle of Henry VI., or the Duke of Gloucester, uncle of Edward V. At the same time he was not, like these two, personally of the royal

blood, so that the limitations of his authority as Protector are easily understood. Mr. Pollard gives us a clear and consistent account of the steps by which these limitations were rapidly removed. Somerset was unquestionably a very able man, with most of the essential qualities of statesmanship, but he was not sufficiently powerful, either by birth or by sternness of character, to establish his personal authority on a durable basis. His ambition marked out a course too high and difficult for his powers. No doubt the Council of Executors was from the beginning an unstable body, which must have led to administrative confusion, and even threatened a civil war. But the disturbance of Henry's settlements in Church and State, and the power reserved to the young King by statute to repeal all Acts which might be passed during his minority, undermined the authority of the Government which they were intended to confirm. The Protector aimed from the first at a religious revolution such as Henry himself had never contemplated. The opposition of Bonner and Gardiner was thus explained, if not justified.

Somerset found Parliament quite willing to pass Acts affecting the discipline of the Church in the sense of Protestant reform, on which his proclamations were based—as in the enjoining of communion in both kinds. He had the Privy Council at his back; the Star Chamber was equitable and even popular; the Protector was moderate, and scorned to resort to positive religious persecution, and the changes actually introduced were temperate and gradual. Still they did in some measure force the Church into Erastian and almost Calvinistic tendencies before the nation was prepared for the new models; and Somerset, with the best intentions, and with a real love of personal liberty, was not strong enough, or patient enough, to secure and maintain the general acquiescence of Englishmen in his administration. He stands out in history as an amiable failure. During his brief period of power

There was not a single execution for any kind of religious opinion, there was no torture, and the severest penalties which Somerset tolerated were the bearing of faggots by Anabaptists and the temporary imprisonment of two bishops for refusing to acknowledge the authority of his Government. It is only necessary to look before and after—to remember Fisher and More, Barnes and Lambert, Fetherstone, Abel and Powell, under Henry VIII.; Joan Bocher and George van Paris, under Northumberland; Cranmer, Latimer, Ridley, and a noble army of martyrs, under Mary; Campion, Robert Southwell, and the two hundred victims of Elizabeth's reign—to realize that the rule of Catholic sovereigns is not an unmixt blessing, and that the sway of a "rank Calvinist" may not be without its compensations.

That is Mr. Pollard's way of putting it. Perhaps the philosopher will remember Servetus, and the early records of the New Englanders, and smile.

Mr. Pollard does not endorse Mr. Leach's description of Edward VI. and his counsellors as "spoilers of schools." The question of the abolition of chantries is discussed in this volume with greater breadth of view than has been exhibited by some previous writers. He quotes from Foxe a very significant admission of Gardiner's:—"I that allow Mass so well, and I that allow praying for the dead (as indeed the Dead are of Christian charity to be prayed for) yet can agree with the realm in the matter of putting down chantries." It is useless in the face of such evidence to contend that these foundations for the repetition of masses for the souls of the departed were free from great abuses, or that they ought to have been preserved in the teeth of public opinion because they had some collateral uses. Gardiner had acquiesced in the abolition of chantries by Henry—who practically put the spoils in his pocket, though he professed to devote them to the purposes of war with France and the preservation and defence of the kingdom. Somerset, or rather the Act of 1 Ed. VI., c. 14, assigned the value of the abolished offices "to good and godly uses, as in erecting of Grammar Schools, to the Education of Youth in Vertue and Godliness, the further Augmenting of the Universities, and better Provision for the Poor and Needy." No doubt the contention of some has been that this excellent purpose was not carried out, and that the courtiers profited by the confiscations of religious endowments. Canon Dixon gives a list of chantries, colleges, &c., which were granted to private persons. Mr. Pollard points out that he does not draw the important distinction between free grants and sales, and does not show what proportion the number of grants which are mentioned bears to the total number of chantries abolished. The whole matter seems to be fairly considered in this volume. So far as Somerset's personal attitude is concerned, it must be remembered that his fall from power came too soon to allow him to carry out his declared intention—and the express provision of

the Act above mentioned—by refounding the schools which had been maintained out of the chantry funds.

#### HOMER AND HUMOUR.

*The Odyssey rendered into English Prose, for the use of those who cannot read the original.* By Samuel Butler. (Longmans.)

We welcome the appearance of this volume, which completes Mr. Butler's translation of the Homeric poems. Whatever may be thought of Mr. Butler's theories about the authorship of the "Odyssey" and the locality of the places therein described, we have no hesitation in declaring that he has rendered a real service to all who cannot read Greek and are likely to find the fashionable Wardour Street style of translation a bore. A little girl of ten peeped over the reviewer's shoulder as he was smiling at Mr. Butler's amusing version of *Circe and the pigs*. "How jolly it looks!" she exclaimed; "I should like to read that book." It is easy to cavil at the author's mannerisms; in a reader familiar with the Greek, his strange modernity arouses always a sense of incongruity, and not seldom "unquenchable laughter." But, even so, it may be that he is bewitched by some Minerva, and that, after all, Mr. Butler has as much right to be taken seriously as Mr. Butler has.

We often disagree with the rendering in details. Already in the first few lines of the poem we doubt his interpretation of ἀμόθεν (which, however, is not new); and we think that the young lady who, according to Mr. Butler, wrote the "Odyssey" should not be made to say "Bless my soul!" But it all makes delightful reading. Right or wrong, Mr. Butler is an admirable writer of common English idiom; and, as we have on occasions insisted, he is a humourist of no mean order. You can never say that he is consciously perpetrating a joke; but there is a perpetual naïveté about his English which is extremely amusing. "When I heard him I was in two minds whether or no to draw the keen blade that hung by my sturdy thigh and cut his head off, in spite of his being a near relation of my own." "The people here are very ill-natured, and some low fellow, if he met us, might say, 'Who is this fine-looking stranger that is going about with Nausicaa? Where did she find him? I suppose she is going to marry him.'" It is very curious to note what a weird effect the colloquial manner gives. The result is as though men in trousers and jackets and women in skirts and bodices were acting through the story of the "Odyssey." The more barbarous the actions described, the greater the shock produced by this quaint combination of primitive deed and latter-day language. The story of the shambles in Book XXII. is far more horrible here than we have ever found it before.

Has any one every found the death of Elpenor humorous? Yet who can restrain a smile when he reads Mr. Butler's version?

Even so, however, I did not get them away [from Circe's island] without misadventure. We had with us a certain youth named Elpenor, not very remarkable for sense or courage, who had got drunk, and was lying on the housetop away from the rest of the men to sleep off his liquor in the cool. When he heard the noise of the men busting about, he jumped up on a sudden, and forgot all about coming down by the main staircase; so he tumbled right off the roof and broke his neck, and his soul went down to Hades.

But, when the narrative takes a serious turn, the mannerisms cause all the pathos to disappear, and the translation is apt to become a burlesque; as may be judged from the meeting of the phantom Heracles and Odysseus in Hades:—

Hercules knew me at once when he saw me, and spoke piteously, saying: "My poor Ulysses, noble son of Laertes, are you leading the same sorry kind of life that I did when I was above ground? I was son of Jove, but I went through an infinity of suffering, for I became bondsman to one who was far beneath me—a low fellow, who set me all manner of labours."

The words we have placed in italics illustrate a kind of bathos to which Mr. Butler is very partial. It is effective enough in the lighter passages, perhaps, but it sometimes raises a laugh where it is no laughing matter. It occurs again in the address of Laertes to his son (Book XXIV.), whom he takes for a stranger:

His father shed tears, and said: "Alas! He has perished, far from his own country; the fishes of the sea have eaten him, or he has fallen a prey to the birds and wild beasts of some continent! Neither his mother nor I his father, who were his parents, could throw our arms about him and wrap him in his shroud, nor could his excellent and richly dowered wife Penelope bewail her husband."

But perhaps these things are an outcome of Mr. Butler's conviction that the "Odyssey" is not to be taken too seriously. His title-page contains a rather enigmatic quotation from a private

letter: "From some points of view," it runs, "it is impossible to take the 'Odyssey' seriously enough; from others it is impossible to take it seriously at all." Mr. Butler's point of view falls, would seem, under the "others."

Included in the volume are maps and pictures that support the author's ingenious theory of the Trapanese origin of the "Odyssey." It is pretty generally known by now that Mr. Butler maintains that the Thracian Island is Sicily, and that the "Odyssey" was written at Drepanum or thereabouts. It is one of his amusing paradoxes that the silence of critics means consent. But, until some theory can be constructed that will account satisfactorily for the language of the poem, and for the civilization therein described, it is impossible to consider the topographical proofs that he brings forward. We notice that Mr. Butler is unable to assign any locality to the Land of Endless Night, and dismisses the point by saying that it has no topographical significance. But, if so, why is it certain that the Lotophagi and Polyphemus have an ascertainable home? For the present we rest content in the belief that the local traditions sprang up at a time subsequent to the fictitious identification of the Thracian Island with Trinacria. We are certain that Mr. Butler will never win support for his views until he has himself written a book to prove that the Greek of the "Odyssey" could have been written at Drepanum, or has persuaded somebody to do it for him. The presumption against it is overwhelming, and cannot surely be brushed aside by the reference to the "Phocians" of Thucydides. As to the feminine authorship, we think it is unfortunate that Mr. Butler combines this theory with the other: it is so difficult to take it seriously, though we have a great respect for Mr. Butler in many ways.

#### EDUCATIONAL IDEALS.

*Education and the Philosophical Ideal.* By H. W. Dresser. (Putnam's Sons.)

The author tells us that his own education was unconventional. He was four years at school, but never attended any high or preparatory school; he was five years in business, travelled at twenty-two, and entered Harvard at twenty-four, where, no doubt, he followed Emerson's advice: "Room alone and keep a journal." He has evidently read widely in philosophy, and he is familiar with psychical research. Among his personal experiences are a realized presentiment of a railway accident, from which he was to escape uninjured, and the cure of an injured limb by the *vis medicatrix nature*. Both the merits and the defects of the book associate themselves with this account of his early life.

One cannot fail to be struck, among other things, by the importance he attaches to the "subconscious life," by which he means a great deal more than less metaphysical writers would include under the name.

Under this head [he says], as evidence of the soul's existence as an immortal spirit, functioning independently of matter, I class the higher impressions, guidances, spiritual insights, intuitions, and the power to communicate with other souls at a distance. I do not now refer to messages from incarnate souls, though guidance may sometimes come in this way; but rather to the soul's native ability to obtain knowledge by a quicker process than through the physical senses, or by the function of reason. Take, for example, the ability which many possess to describe the state of mind and body of people at a distance, to find their way by spiritual impression in a strange town or country, and the power to heal others at a distance through a purely spiritual process.

The reconciliation of science and religion presents no difficulty to him. "It is safe to say," he tells us, after putting aside orthodox religion, "that never in the history of thought has any revelation equalled in depth this discovery of the immanent God, whose presence modern science has declared. Few people in our day will realize the stupendous importance of this great revelation." Not many, probably, will accept the author's philosophical position, in which evolution, spiritualism, and intuitional philosophy are strangely combined.

Within one cup pour vinegar and oil,

And, look! unblent, unreconciled, they war.

But the hopefulness and earnestness of the book, and the practical wisdom of many of its suggestions, will appeal to those who demur to its reasoning. It is clearly pointed out that education is for the whole of life, and not for the intellect alone. "It means not merely self-expression, but self-knowledge, and the progressive application of this knowledge in conduct." The author is by no means in favour of universal secondary education, especially if conducted with German thoroughness. His preference, at any rate in many cases, is for "the elective plan, by self-



development and experiment"—a preference easily explained by the very different conditions of life in America and in Germany. There are some sensible remarks on the advantage of practical life over the school in cultivating concentration. We are all familiar with examples of boys whose school life has been a comparative failure, and whose real education has begun in the dissecting-room, the engineering workshop, or the counting-house, and of others whose first awakening to anything like thought has come from some course of reading begun almost at haphazard. There is wisdom, too, in his application of his views of the subconscious mind. Like all the best writers on education, he lays great stress on the atmosphere with which a child is surrounded in his earliest years, and on the need of keeping a happy mean between over-training and leaving a child too much to its own resources. "A boy," he says, "is not an animal, nor is he a picture to be painted." It is hardly necessary to say that Mr. Dresser is an enemy to anything like hurry or pressure. A very interesting chapter is that on Equanimity, the principles of which are subsequently applied to education. The book is, altogether, a suggestive one, both in itself and for the light it throws on the working of the *Zeitgeist*, in dealing boldly and earnestly, if not always on sound principles, with the great problems of existence.

#### PROF. RALEIGH AS A LITERARY CRITIC.

*Milton.* By Walter Raleigh. (Edward Arnold.)

Almost every generation of Englishmen since the death of our greatest classical poet has seen him discussed anew as a theme and text of literary criticism; but never has he been handled more frequently or more acutely than at the critical close of the nineteenth century. Prof. Raleigh follows suit after a score of recent students of "Paradise Lost," yet he is in many respects the freshest and most penetrating of a long line of commentators, indebted to his predecessors for very little that is valuable in his estimate, and drawing many striking ideas and illustrations from the undying epic of the Puritan Commonwealth as though it were a new masterpiece of the later Victorian epoch. It is because he has devoted a trained academic spirit of criticism to the study of a poet who is, as he sees, as alien and aloof from the mere catenary of English poets of the last three centuries as he was from his contemporaries. The Puritans themselves, who sometimes claim him, "not without many searchings of heart and sharp misgivings," as one of the fathers of their creed, have no title in his poetical genius or his intellect.

His influence on the destinies and history of our literature might be compared to the achievement of Napoleon while he was winning the victories that changed the map of Europe. He could not change the character of a people, nor perpetuate his dynasty; but nothing is as it would have been without him. Our literature is as hospitable as the Hindoo pantheon; the great revolutionary has won a place even in our creed. And the writer has this advantage, at least, over the conqueror and legislator—that he has bequeathed to us, not maps nor laws, but poems whose beauty, like the world's unwithered countenance, is bright as at the day of their creation.

That is vivid as well as acute; it attests the true greatness of Milton as a poet who stands by himself, without models amongst his forerunners and without a school amongst his coevals or successors, although in the mere ledger of our chronological annals of literature we may treat him as the centre of an "age" and the leader of a "group."

Prof. Raleigh vindicates by this small volume his claim to be reckoned as one of our closest, shrewdest, and most delicate literary critics. We are thinking not so much of his comparative textual criticism, of his search for origins and parallels, of his exegesis or his philological scholarship, but rather of the intuition and insight with which he discusses the style and diction of the poet, his dissection of Milton's blank verse, his recognition of its "elements of musical delight," his exhibition of its "close-wrought mosaic," his fine perception, in short, of the qualities of a thoroughly original master of the art of word-painting. The fifth and sixth chapters of this volume would suffice by themselves to establish Prof. Raleigh's position as a literary critic. If we make a second quotation, it is not to show the Professor at his best, but to illustrate a certain freedom in his manner which often helps him to put his point more attractively, though it sometimes detracts a little from the worthiness of his discussion.

It remains a paradox that Milton's, of all styles in the world—unapproachable in its loftiness, invented by a temper of the most burning zeal and the profoundest gravity for the treatment of a subject wildly intractable by ordinary methods—should have been chosen by a generation of philosophical organ-grinders as the fittest pattern for their

professional melodies, and that a system of diction employed by a blind man for the description of an imaginary world should have been borrowed by landscape-gardeners and travelling pedlars for the setting forth of their works and their wares.

"Organ-grinders" and "pedlars" are rough terms to apply to the makers of eighteenth-century verse, especially when the borrowing which is justly condemned has been illustrated solely by passages from Pope, Gray, and Thomson.

#### THE ELEMENTS OF PSYCHOLOGY.

"Stonyhurst Philosophical Series."—*Psychology, Empirical and Rational.* By Michael Maher, S.J. (Longmans.)

After a test of ten years' use, there is good reason for saying that Father Maher's introduction to the science of psychology—which he quite frankly treats as inseparable from mental philosophy and metaphysics—is still one of the clearest and most helpful text-books on the subject from the dualistic point of view, and at the same time one of the most scholarly and comprehensive. The first edition was published in 1890, and the book was specially intended as an aid to its author as Professor of Mental Philosophy at Stonyhurst College. Its qualities of lucidity and simplicity soon brought it into general use, and three editions were printed with little variation in the text. The new edition is the fourth, and Father Maher has taken the opportunity of revising it in the light of ten years' discussion of psychological science, in England, on the Continent, and in America. He has revised so thoroughly, and added so much to his original text, that the book assumes a much more important character as a student's manual, and may almost be considered in the light of a new work.

Father Maher's "Psychology" is a rationalistic and ratiocinative treatise on an empirical basis, the outcome of a deductive process applied to the introspective observation of the mental activities. The analysis of these mental activities results, for him, in the conception of the human mind as an immaterial being endowed with free will and rational activity "of a spiritual order." His theory of the connexion of mind and body is, therefore, entirely opposed to the monistic theory, which regards mind and body not as two distinct realities, but rather as two aspects or phases of one being. With this "new Spinozism," as it is sometimes called, from its affinity to the metaphysical teaching of the father of modern Pantheism, our present author will have no truck. He is a dualist of the school of Aristotle, whose Christian interpreters have been St. Thomas Aquinas and the mediæval schoolmen. He is content with Aristotle's definition of the soul as the primary determining or actualizing principle (*entelechia*) of a physical body which has the potentiality of life. Soul and body thus denote form and matter—the informing principle and the organic germ which is capable of being informed with life and energized. Father Maher's fundamental definitions come last in his book: he leads up to them very skillfully by the discussion of the phenomena of psychology, of the laws of sensuous and rational life. The student who has followed him in his discussion, and has failed to find a flaw in it, will have to accept his conclusion that "the human soul cannot be the result of the gradual evolution of a non-spiritual principle."

Self-consciousness, free-will, conscience, are all facts *sui generis* which could never have been produced by the gradual transmutation of irrational states. In a word, all the proofs by which we established the spirituality of the higher faculties, and of the soul itself, demonstrate the existence of an impassable chasm between it and all non-spiritual principles, whether of the amoeba or the monkey. The special intervention of God must, therefore, have been necessary to introduce into the world this new superior order of agent, even if He had previously directed the gradual development of all non-spiritual creatures by physical laws.

The reader will understand the basis on which Father Maher has built. We need not say that there is no theology in his book, beyond the simple denomination of the creative Agent who has added the informing principle to the organic matter.

#### ETON.

*Eton.* By A. Clutton-Brock, B.A. (Bell & Sons.)

This history of Eton, while it tells quite agreeably and sufficiently the tale of the most renowned of the English public schools, suggests the larger and more important question as to the value of the whole English public-school system. For Eton may fairly stand as the representative of all, and, if it has not been the model of the others, it may certainly claim to represent the sum of the virtues and vices which are native to this very



distinctive system of education. In Eton tradition, prestige, devotion have achieved their highest results, and in Eton education, in its technical sense, has been, perhaps, most scandalously neglected. On the one hand, its merits are summed up in the often-quoted phrase of the Duke of Wellington as to the Battle of Waterloo; and, on the other hand, Mr. Clutton-Brock informs us of the miserable scheme of studies, in which not only was mathematics an extra, a sort of ornamental accomplishment, like guitar playing in a ladies' school, but even in the classics the list of authors was so arranged that the *Edinburgh Reviewer* of 1830 was able to conclude his indictment of Etonian instruction with these words:—"The Etonian who goes to either Cambridge or Oxford has not read a single book of Herodotus, Thucydides, Xenophon, Livy, Polybius, or Tacitus. He has not read a single Greek tragedy or comedy." It is clear then that, so far as the learning goes, the Etonian system was not merely bad—it might fairly be termed infamous; and in 1830 it would not have been difficult to represent the Royal College as an institution which vacillated between a farce and a scandal. And yet with the average Englishman Eton is a subject of pride, and English history shows that the Etonians have borne no small share in the great work of the Empire at home and abroad.

The solution of the puzzle is plainly to be sought in the distinction between "instruction" and "education." Of the former Eton gave very little, and that little was indifferent enough; but in the worst days it never failed to impart to young Englishmen the tradition of the English race. The Etonian left the College (and the University, very likely) lamentably deficient in information of any kind and every kind; but, unless he happened to be born hopeless, Eton had stamped upon him an unmistakable character. He was fitted by a peculiar training both to obey and to rule, and these lessons outbalanced all defects. He was ignorant of the height of mountains, but he dared to ascend the most perilous heights; he understood no French, but he understood how to conquer the French—in theory he was an imbecile; in practice a philosopher, an omniscient ignoramus. Now, the experiment is being made of reconciling education with serious and competent instruction, and there is every reason to hope that two things, in no way opposed to one another, may be combined. The Etonian of to-day has to acquire the abstruse art of the quadratic equation, the despised dialect of Paris; but so far there are no signs that these perilous accomplishments have impoverished his soul. And, after all, brave and good men have been able to spell.

## GENERAL NOTICES.

### CLASSICS.

"Latin Classics." Edited by the Rev. F. Marshall, M.A.—*Cæsar de Bello Gallico VI.* By the Rev. A. E. Humphreys, M.A. (Gill & Sons.)

Here is another illustrated *Cæsar*, provided with a "*Cæsar's grammar*," including "*Cæsar's pronouns and prepositions*," "*Cæsar's phrases and constructions*," and, in brief, a *Cæsar's apparatus* and *vade mecum*. Everything is thoroughly prepared, explained, annotated, vocabularized; hardly anything is left for the teacher or the pupil to do. On these lines the book has been very efficiently edited; Mr. Humphreys makes *Cæsar* as plain as a pikestaff.

In the "*Scriptorum Classicorum Bibliotheca Oxoniensis*" (Clarendon Press) we have Mr. F. A. Hirtzel's *Vergil* and Mr. E. Du Pontet's *Cæsar* ("*De Bello Gallico*").

### SCIENCE.

*Progressive Course of Chemistry for Junior Classes.* By Telford Varley, M.A., B.Sc. (Black.)

Like most modern introductions to chemistry, this starts off with what is really physics, which is quite as it should be. Afterwards chemical changes are studied, and before the end of the book (310 pages) is reached we have studied the properties of the most important metals and non-metals. The method is thoroughly scientific and practical, and well adapted for the use of schools of science.

*Elementary Physics and Chemistry.* Second and Third Stages. In two volumes. By R. A. Gregory, F.R.A.S., and A. T. Simmons, B.Sc. (Macmillan.)

These books carry on the useful methods of the First Stage. The extreme patience of the authors, and their care in not hastening too much, is well shown in the section on heat, where, in experiment after experiment on temperature and heat-capacity, an equivalent experiment on water-level and water-capacity is given. The second book is chiefly concerned with heat, but also takes up the subject of burning; while the third deals with chemistry only. Altogether, an excellent introduction to practical science.

*Preliminary Practical Magnetism and Electricity.* By John Henderson, D.Sc. (Longmans.)

Strictly a laboratory manual, containing instructions for elementary practical work, chiefly on magnets and electro-magnetics, with a few on electrostatics. The instructions are clear and precise.

*Agricultural Zoology.* By Dr. J. Ritzema Bos. Translated by J. R. Ainsworth Davis, M.A. With an Introduction by Eleanor A. Ormerod, F.E.S., &c. Second Edition. (Methuen.)

It is a pleasing thing that such a book as this should have reached its second edition. The book is not a school-book, but should be useful as a work of reference to rural teachers. After a brief introduction on the broad facts of anatomy and physiology, it gives a systematic account of all animals that are of interest to the farmer. These are practically restricted to four classes—mammalia, birds, insects, and worms—though a few other classes come in for brief treatment. Not the least interesting part is the appendix, on the subject of "plagues," in which Prof. Bos very lucidly points out that, so far from their being in any way supernatural in origin, they simply indicate the enormous fertility of animals in general, normally balanced by a host of inimical agencies of many kinds, but occasionally allowed by a combination of fortunate accidents to show itself plainly. The index is another important addition to this useful work.

*Exercises in Natural Philosophy, with Indications how to Answer them.* By Magnus Maclean, D.Sc. (Longmans.)

The Natural Philosophy classes in the University of Glasgow, under Prof. Lord Kelvin, had a unique reputation for the form and method of the courses of study pursued, and for the training afforded by the exercises systematically placed in the hands of the students. These examples are collected chiefly from the papers set to the students by an assistant to the professor. They cover the courses for ordinary degree students in colleges and Universities, and the added solutions make them a useful supplement to ordinary text-books. Very complete tables of physical constants are added, for the use chiefly of laboratory students. The course comprises questions in dynamics of solids, liquids, and gases, heat, sound, light, and electricity.

*Elementary Questions in Electricity and Magnetism.* Compiled by Magnus Maclean, D.Sc., and E. W. Marchant, D.Sc. (Longmans.)

This is a book of questions only intended to be used as exercises in an ordinary course of lectures or lessons for a first year's course of electricity and magnetism. The questions are carefully graduated, and are arranged under headings to cover the whole ground. The answers are given when the questions are arithmetical. Some rules are given with regard to the mode of answering, which might well be adopted generally:—(1) Leave a margin on the left-hand side of the page, in which the number of the question is to be placed. (2) Leave a space between your answers. (3) Do not give long answers; be clear and exact in your statements. (4) Give an illustrative sketch whenever practicable, and give a concise written description of it.

### MATHEMATICS.

*A Brief History of Mathematics.* An authorized translation of Dr. Karl Fink's "*Geschichte der Elementar-Mathematik*." By Wooster Woodruff Beman and David Eugene Smith. (Kegan Paul.)

There has been of late years a wholesome revival of interest in the history of mathematics, bred, no doubt, from increased attention to the art of teaching. For the teacher's purpose, however, the history should serve the purpose of arousing interest, stimulating attention, or establishing an association which will fix a fact, or series of facts, in the memory. This work is hardly interesting enough in style, and it does not bring out with sufficient prominence the points which would afford assistance to the memory. It is a work rather more useful to the young mathematician who hopes to labour for the further development of the principles than to the teacher. Yet it will not be without use in the class-room. The translators have done their best with a work written in the original in scientific form and a dry style, and have in parts revealed the system underlying the treatment in clearer fashion than the author.

*The Elements of the Differential and Integral Calculus.* By J. W. A. Young and C. E. Linebarger. (Hirschfeld Bros.)

This is based on the German text-book of Prof. Nernst, of Göttingen, and is a clear book for beginners. The first 76 pages deal with analytical geometry, and the next 25, "Concerning Limits," are equally introductory. This chapter, and those devoted to "Fundamental Conceptions," clear the way of all the usual difficulties. The integral calculus is taken up at length immediately after the derivations of the simpler functions have been established, and the easier applications of both parts are then treated together.

*First Stage Mechanics of Solids.* By F. Rosenberg, M.A., B.Sc. (Clive.)

As becomes a volume published by the University Correspondence College Press, this little text-book abounds in explanations tending to smooth the path of a student working without a tutor. These explanations sometimes strike the reader as trivial—e.g.: "In a roundabout, each rider experiences a tendency to continue to move along the line in which he was moving at the instant considered. He would do so did he not hold fast to some portion of the roundabout."

It is stated that "the distance passed over" has a different meaning from what it has in ordinary language. "If a man walks from Birmingham through Wolverhampton to Stafford, thirty miles, and then back to Wolverhampton, eighteen miles, we should ordinarily say the distance he has traversed was forty-eight miles, but, in mechanics, the distance traversed would be twelve miles." This is a confusion between "the distance from the starting-point" and the distance traversed—the first twelve miles, the second forty-eight. The exercises are well graduated and the answers trustworthy.

*Elementary Mechanics of Solids.* By W. T. A. Emtage, M.A. (Macmillan.)

This text-book really bases its theory on experiment, the theoretical proofs of proportions being occasionally added with the view of increasing the number of examinations for which the book is a reliable guide. The work is carefully prepared and printed, and the exercises are well graduated.

*The Elements of Plane Trigonometry.* By William P. Durfee. (Edward Arnold.)

There is often an advantage to the student of a mathematical subject in looking into a text-book which is prepared for students not connected with English colleges—hints and suggestions are always to be gathered from the greater liberty of treatment. This is true of the very elementary text-book before us. Its proofs often differ from those in common use in English examinations, and always gain in simplicity by the change. One illustration will suffice. The proof of the formula for  $\sin$  and  $\cos(\phi + \theta)$  draws a perpendicular to the middle line belonging to both angles, and uses the fact that the projections of two sides of a triangle on any given line are together equal to the projection of the third side on this given line. The formulae follow at once. The exercises are easy and useful.

*A Treatise on Geometrical Optics.* By R. A. Herman, M.A. (Cambridge University Press.)

There was room for a new work dealing with the higher mathematical treatment of optics, for a number of important researches, such as those of Clerk Maxwell and Cayley, communicated to the various scientific societies, had not found their way into the ordinary student's path. Mr. Herman's work supplies the want.

*The Elements of Hydrostatics.* By S. L. Loney, M.A. (Cambridge University Press.)

It was to be expected that Prof. Loney would supplement his "Elements of Statics and Dynamics" by a similar text-book on hydrostatics. This work equals its predecessors in clearness and simplicity.

*Workshop Mathematics.* Part II. By Frank Castle, M.I.M.E. (Macmillan.)

To provide the artisan who wishes to continue his education while learning his trade with sufficient mathematics for his purpose has become a problem of some interest. Classes in "workshop calculation and practical mathematics" have been started in many provincial towns for the purpose, and now the necessary text-book appears. The practical character of this book promises it success.

*The Higher School Arithmetic: Junior Course.* (Educational Supply Association.)

This is a book of examples almost exclusively. The rules and worked examples are reduced to a minimum. The exercises are very numerous and well arranged.

#### MODERN LANGUAGES.

*Krieg und Frieden.* Edited by W. Bernhardt. (Boston: Ginn; London: Arnold.)

This volume contains three well selected stories, of about thirty pages each, by Emil Frommel, "Villa Maria," and Hans Hoffmann, all writers of the second half of the present century. All three have an interest beyond the mere story—a most important point in the choice of books for school reading. The first, "Mutterliebe," by Frommel, is concerned with the history of a German lad, who ran away from home and took service, first with the French and afterwards with the English, in the Peninsular War; then became a French spy; then entered the Swiss Guard of the King of Naples; and eventually became a rich tradesman in Rome. Incidentally we get glimpses of the Peninsular War, and of Italian life and scenery. The next, "A Son of the Steppes," tells the sad tale of a Hungarian lad, whose brother and only protector meets his fate in the Hungarian Rising of '48, after almost effecting his escape from captivity by his marvellous skill in horsemanship and the use of the lasso. The horse, which plays a conspicuous part in the story, brings home the news of his master's death, like the dark grey charger of Mamilius in "Lake Regillus." The last, and perhaps the most touching of all, entitled "Publius," takes us to the war of 1870, and relates how the son of an old-fashioned German schoolmaster, to whom the Peloponnesian War was far more real than the conflicts of the nineteenth century, proved quite incapable of mastering Greek accident, but became a brilliant scholar of the *Realschule*, gained a commission in the artillery, and shared, before Paris, the fate of those whom the gods love. The notes are serviceable and adequate, though, perhaps, a little more attention might have been given to the grammatical side.

*Specimens of German Handwriting.* By H. Oskar Sommer. (Hachette.)

In examinations where a practical knowledge of German is required,

importance is very properly attached to the ability to decipher German handwriting. The book before us is the first published in England to meet this want; though several of the kind are to be found in Germany. It will prove very useful, not only for its immediate purpose, but as a help to the acquisition of epistolary style—always one of the hardest tasks for a student of a foreign language. There is a complete key, which is by no means unnecessary, considering the hieroglyphic appearance many of these specimens present to an Englishman.

*German Exercises, Part II.* By J. F. Stein. (Boston: Ginn; London: Arnold.)

The earlier exercises of this book are arranged on an excellent plan. A German anecdote is given, and corresponding to it is an English version, in somewhat different language, of the same anecdote. A great deal of help—one is inclined to think too much—is given at the bottom of the page; and the book is, therefore, suitable for rapid *viva voce* work. But it would be better if it were so arranged that each exercise impressed on the pupil some definite grammatical rule or some connected group of words. It should, at least, be used only to supplement more methodically drawn-up exercises.

*German Idioms.* Prepared and translated by Myra Taker, under the direction of F. F. Roget. (Macmillan.)

This may be regarded as a companion book to Mr. Roget's selection of French idioms. The main distinction in method is that in the present volume the German phrases are Englished in parallel columns—not quite literally, nor yet by the mere substitution of one idiom for another; though, of course, as a rule, idiom must be rendered by idiom. It is a careful and serviceable piece of work.

*Schiller's Maria Stuart.* Edited by Margarethe Müller and Carla Wenkebach. (Boston: Ginn; London: Edward Arnold.)

The editors are professors in Wellesley College in the United States, and their edition is prepared in accordance with the principles of the advanced reformers. The annotation is entirely in German. Their view is that translation into English should be used as a handmaid only, not as an end in itself, and that the use of English notes spoils the atmosphere, so to speak, with which a German lesson should be surrounded, and involves a loss of time in acquiring the foreign idiom. The notes, which are careful and correct, are strictly limited to what is necessary for interpretation, and for the brief explanation of historical allusions. A fair idea of them may be gained by taking the commentary of a good English edition, such as Dr. Breul's, and cutting out all the notes where the editor "lets himself go" a little, often the most suggestive of all. There is much to be said for the method of treatment, especially in the hands of a teacher who will add something, and who is thoroughly alive to the importance of scholarly treatment. Perhaps the most valuable part of the book is the appendix, consisting of a series of questions on each scene, some dealing directly with the details of the subject-matter, and others taking a wider range. Such questions are a great help to the intelligent study of the play, and, to take a lower point of view, they form an excellent preparation for the best form of oral examination—such, for example, as that prescribed for the Cambridge Higher Local Examinations.

*Selections from A. Daudet's Tartarin de Tarascon.* Edited by O. Siepman. With Key to the Appendices. (Macmillan.)

Tartarin is almost as great a favourite in England as in France, and for that reason, and also because of the many allusions to persons, places, &c., it is well worth while to publish for English schoolboys a selection from his adventures. The notes are less full than those to "L'Amé de Beethoven," being intended for more advanced classes. They are adequate and sensible. The volume has the usual appendices and a key.

*E. Laboulaye, Contes Bleus.* Edited by C. Fontaine. (Isbister.)

The longest of these little tales, "Pif Paf," has already been edited for English schools; the others, we believe, are new. Laboulaye's style is charming, and his mode of narration is sufficient to show that he was a lover of children. The editor has supplied a few pages of helpful notes and a thoroughly good vocabulary. The printing is clear and careful.

We have received from Mr. David Nutt a *Supplement to the Wellington College French Grammar*, by H. W. Eve and F. de Baudiss, embodying the licences tolerated by the "Arrêté du 31 Juillet, 1900." This is the first emendation of existing school grammars in England rendered necessary by the "Simplification de l'Enseignement de la Syntaxe Française." The editors preface their *résumé* by saying:—"As in duty bound, we lay before our readers a *résumé* of the variations of spelling and grammar tolerated by the French Education Department. It is only fair to warn them that the study of these variations may in many cases lead to confusion of thought. The difficulties which a fairly educated English boy or girl encounters in French spelling are by no means the same as those which beset natives, especially those aiming at only a low standard of culture. Nor have the innovations allowed as yet obtained the highest sanction, that of the Academy and of the literary world. M. Brunetière sums them up in the line

"Sunt mala, sunt quædam bona, sunt mediocria plura."

a slight variation on Martial."

## MISCELLANEOUS.

*Comenius and the Beginnings of Educational Reform.* By W. S. Monroe. (Heinemann.)

The series of books on "Great Educators" would be incomplete without a volume on the Moravian pastor who anticipated so many of the ideas which even now have not thoroughly permeated the educational world. In Comenius we find recognized, to mention only a few points, the application of philosophical principles to education, the importance of method from the very earliest stages, the necessity of a wide curriculum dealing with things and not with words alone, the need of a carefully graduated system of classes, and, above all, the desirability of making learning a pleasant and, as far as may be, a natural process. Considering the great mass of Comenius literature in German, and since the publication of Mr. Quick's essay in English also, the task of writing a fresh book on the subject is no easy one. It seems to us that Prof. Monroe has hardly risen to the occasion. Of his ten chapters, two are devoted to the condition of education in the sixteenth century and to the immediate predecessors of the great reformer, and two, which seem the most valuable portion of the book, to his influence on subsequent writers and teachers. The chapters on Comenius himself are hardly full enough, and do not show exceptional insight into his methods. Prof. Laurie had already given us a methodical analysis of his chief works, with an interesting biographical sketch; and Mr. Keatinge's introduction to his translation of the "Great Didactic" contains an excellent account, implying much original research, both of his life and of his educational views. Neither is likely to be superseded by Prof. Monroe's work. It is surely an error of judgment to quote a long extract about Hartlib, the English friend of Comenius, from Masson's "Life of Milton," and Raumer's eloquent summary of the life-struggle of Comenius, when both appear in Prof. Laurie's book.

"The Works of Shakespeare." Edited by Edward Dowden.—*The Tragedy of Romeo and Juliet.* (Methuen & Co.)

This new volume of Prof. Dowden's excellent edition of Shakespeare fully bears out the promise with which he began his arduous, but doubtless grateful, labour. Apart from the scholarly introduction and the critical apparatus and appendices, the notes alone form a most helpful and interesting commentary on the text. The edition is so well conceived, and the volume is so admirably printed, that students and readers of Shakespeare could not ask for better means of satisfying their needs. The editor, we are glad to see, has not yielded to any idle craving to suggest new readings. He has supplied a comma in one place, and a couple of hyphens in another—and that is all the liberty which he has allowed himself to take with the text as he accepted it from the Globe edition. No higher praise could be given to this volume than to say that it is on a level in every respect with Prof. Dowden's edition of "Hamlet."

"Old and Middle English Texts." Edited by L. Morbach, Professor at Göttingen University, and F. Holthausen, Professor at Kiel University.—*Havelok.* Edited by F. Holthausen. (Sampson Low & Co.)

These editions of Old and Middle English texts are intended for use at the Universities, and for private study. The apparatus is not elaborate, but it includes an introduction on the manuscript and previous editions of the text, on the date, author, and dialect, notes on variants, a serviceable glossary, lists of proper and geographical names, and of emendations and corrections. The poem of "Havelok"—which Prof. Holthausen, usually very careful, spells with a *c* as well as with a *k*—was probably written, by an unknown minstrel, at the beginning of the fourteenth century. Its story is laid in Lincolnshire, and it is in the Lincoln dialect; and, as it mentions the Parliament of Lincoln, which was held in 1301, and is quoted by Mannyng in his "Handling Sinne," it may be safely assigned to one of the first three years of the century. The text is clearly printed, and the edition is worthy of commendation.

*The First Epistle of S. Peter (Greek Text).* With Introduction and Notes. By the Rev. J. Howard B. Masterman, M.A. (Macmillan.)

A very serviceable volume for candidates for deacon's orders, and for general students. The text is not given consecutively, but phrase by phrase, with abundant explanations. The work is admirably done, for Mr. Masterman gives to the Epistle of Peter all the erudition and scrupulous care which he would have been expected to bestow on a dialogue of Plato.

*Cyclopædia of Mechanics.* First Series. Edited by Paul N. Hasluck. (Cassell & Co.)

The editor of *Work* and the *Building World* gives us, in this fully illustrated technical volume, a collection of very miscellaneous receipts, processes, and memoranda, suitable for experimental or practical mechanics. The eight or nine thousand paragraphs are thrown together without classification, but they are elaborately indexed, and there are as many as twelve hundred diagrams.

*Life of General Charles Gordon.* By M. B. Synge. (Nelson & Son.) There is nothing to show whether this appreciative little biography of Gordon is a reprint or not. At any rate, it will be welcome to hero-worshipping boys and girls.

*Model and Blackboard Drawing.* By F. F. Lydon. (Sampson Low & Co.)

This is a very good and well printed handbook for the assistance of teachers of model-drawing. It contains forty-four plates and a considerable number of explanatory diagrams, both on a white and on a black ground. The drawings are all clearly produced.

*Brushwork Copy Books.* Designed and arranged by A. R. Cartwright and F. C. Proctor. (Macmillan.)

This is a graduated scheme of lessons in simple brush forms, with the straight line and curve, in a series of six progressive books. It is a serviceable introduction.

*Queen Victoria: a Personal Sketch* (Cassell & Co.) is the last of Mrs. Oliphant's literary works, which will doubtless be reproduced many times before it has outlived its welcome. It is a graceful and sympathetic sketch of the life of the Queen, and is illustrated by many contemporary prints, as well as by three fine "Rembrandt" toned plates. It is a very acceptable book.

*Educational Drawing Copies of Ornament, Common Objects, &c.* (Educational Supply Association.)

These are loose copy cards specially intended for blackboard drawing for "the D Certificate" of the Code. The grey outlines are clearly drawn, and the designs are good, so that the set of thirty cards may be regarded as decidedly good.

*Philips' London School Board Atlas*, edited by George Philip, junior, has ninety maps in forty coloured plates, and eight pages of introductory letterpress. It is a good and serviceable publication, with special plans of London.

We have several new Readers in evidence this month. One of the most elaborate is the *Educational Reader* ("Holborn Series"—Educational Supply Association), in six progressive parts. All Readers are supposed to be educational; but in this instance particular care has been taken to bring together and graduate a good selection of pieces.—We have four parts of the *Continuous Story Reader* (Edward Arnold), simple stories without notes or spelling-words.—The *Conversational Readers* (Blackie & Son) include two Readers and two Primers for infants.—*Woodstock* is the latest volume of the "Sir Walter Scott Continuous Readers" (A. & C. Black). It is edited by H. Corstorphine.

WE HAVE ALSO RECEIVED the following publications and new editions:—

*Report of the Board of Education, 1899-1900: The Report; Appendix on Secondary Education; Appendix on Elementary Education* (Her Majesty's Stationery Office).

*Helps to the Study of "Lyra Heroica,"* by Ernest Ruse (Macmillan.)  
*Notes and Elucidations to Henley's "Lyra Heroica,"* by W. W. Greg and L. Cope Cornford (David Nutt).

*Foreign Correspondence*, by John Warren (Heywood)—English forms for various commercial purposes.

*French Grammar Reforms*, authorized by the French Minister of Education (Pitman & Sons).

*Laudate: a Hymn-Book for Secondary Day Schools*, by J. J. Findlay (A. & C. Black)—words only.

*Lessons on Israel in Egypt and the Wilderness*, by S. G. Stock (Sunday School Institute).

*The Story of the Heavens*, by Sir R. S. Ball (Cassell)—Part I. of a reissue.

## GIFT-BOOKS AND PRIZES.

## II.

## HISTORICAL TALES.

*Red, White, and Green*, by Herbert Hayens (Nelson & Sons), is a well told story of the Hungarian revolution of 1848. Its narrator is a Magyar faithful to the Emperor of Austria, but still a Liberal, from the Magyar point of view. The story is full of incident and excitement, with plenty of well marked characters, including a few ladies; and the reader is treated to a good deal of fighting and vicissitude.

*Ye Mariners of England* (same author and publishers) may be classed amongst the historical tales, though its stories are of ships, and its records are those of the British Navy. For a boy specially interested in these things, the volume is all that could be desired. It is well illustrated; and there are many narratives of historical sea-fights, with an account of the naval review of 1897, to wind up.

*One of Buller's Horse* (same publishers) is a tale of the Zulu campaign, by William Johnston. It begins with a lion-hunt in England, the hero being a young schoolmaster, who shoots his big game in the Pennine country, and subsequently develops (with his favourite pupil) into a soldier of the Queen. They have hard times with the Zulus, and fight at Isandwana and Ulundi. We can recommend this as a good and stirring tale.

*My Lady Marcia*, a story of the French Revolution, by Eliza F. Pollard (Nelson & Sons), is a pleasing and carefully written tale, in which historical facts are blended with imaginary scenes and characters, with considerable success. "My Lady Marcia" is a young English

heir, who is left in charge of her aunt, married to a French nobleman, while her father goes to fight with Lafayette in America. Her sympathies are all with the French; and she goes through many perilous adventures in consequence of her attachment to the unfortunate Royal Family.

The central idea of *Life's Anchor*, by Harriet E. Colville (Religious Tract Society), is the hope of immortality that Dr. Johnson only found in his last days; though he sought it diligently, with tears. The pathetic figure of the Doctor, with his morbid self-communings and his trenchant remarks, pervades the whole of this book. Much ingenuity has been exercised to introduce Hannah More, the Thrales, Fanny Burney, Lord George Gordon, and many other well known characters, with copious references to Wesley, Rousseau, Garrick, and innumerable books and plays. In addition to all this, there is a romantic tale with tragic episodes. We fear the whole is somewhat oppressive and overloaded with information. It is confused with so many characters that none stands out very strikingly. The religious conversations, though doubtless representative of the style of those days, will seem overstrained and wearisome to a young reader, and we hardly think the book is calculated to inspire a love of Dr. Johnson, or a desire to read more of his life and contemporaries; but, if read with an intelligent elder, it may impart a good deal of historical instruction.

*Iron Heart, War Chief of the Iroquois*. By Edward S. Ellis. (Cassell.)—No boy has ever heard enough about the North American Indians. There is a subtle charm in their wild bravery, their stupendous cunning, and their simplicity of heart, which seems inexhaustible. The present story brings out all these characteristics, and is exceedingly interesting without being blood-curdling or overstrained in any way. The chief *dramatis personæ* are the Iroquois chief and an English boy, a cripple, who knows the woods and the rivers as well as the Indians, but whose main weapon of defence is his Bible; and we think boys will quite as much enjoy his bravery with this as his pluck in the face of privation or death on several other occasions. The book is not too long, and is manly and healthy throughout.

Miss Everett-Green builds one of her pleasant combinations of the historical and the domestic—in *After Worcester* (Nelson & Sons)—on certain incidents of the flight of Charles II. from the field of Worcester, and the events of the following six weeks. Her heroines are Jane Lane and Juliana Coningsby, who actually played the historical parts here recorded; but the heroes are fictitious—which is a little hard on the historical Sir Clement Fisher, who married the actual Jenny Lane.

*In the King's Service* (Blackie & Son), by Captain F. S. Brereton, is a story of Cromwell's invasion of Ireland. The hero is a refugee son of a Cheshire Royalist, who visits his brother-in-law at Castle Driscoll and takes part in the defence of Drogheda. The book is exciting, and has eight good illustrations.

*Adventurers All* (Nelson & Sons), by K. M. Eady, is an illustrated tale of the Philippine Islands in time of war. It is, perhaps, more of an adventure-story than historical. It is a lively story of the "Annabel Lee" craft, bought by an American syndicate and run to the Philippine coast on a private venture by a dare-devil skipper and crew.

*Red Jacket: the Last of the Senecas* (Cassell & Co.) is a story by E. S. Ellis, of adventures amongst North American Indians. It is based on incidents in General Sullivan's expedition against the Iroquois; and the hero is a boy who found his way into danger and adventure as a scout. "Red Jacket" is a crafty Indian, whom the boy and his friends contrive to elude.

#### SCHOOLBOY STORIES.

The subjects of our Christmas books this year include, it seems to us, fewer stories of schoolboy life than we used to look for at this time of year. Still, there are a number of the old sort left, and amongst them is a good one by Harold Avery—*Heads or Tails: the Story of a Friendship* (Nelson & Sons). It is made up, for the most part, of the innocent or mischievous pranks of young boys, ending, as usual, with the more dubious pranks of the older ones.

*Jones the Mysterious*. By Charles Edwardes. A new motive has been struck in this schoolboy tale. A little boy is endowed by an Indian, Nana, with the power of disappearing whenever he is in trouble or difficulty. Placed in an English school, he finds occasions in plenty for such timely relief, much to the bewilderment of masters and boys. One situation follows another with little connexion, and there seems no reason why the gifted Jones should not have carried on his truly chequered career to the University and professional life; but the limit of his masters' endurance is reached when the boy disappears in the middle of a caning. At this awkward juncture Nana returns, and takes away the power he has given Jones, to the "satisfaction of all parties." The story is farcical rather than mirthful, and we half suspect the author intends it to be serious, and even pathetic. It cannot be called a great success on either count, but it is a very readable story for young boys.

*Geoff Blake*, by S. S. Pugh (Religious Tract Society), is a schoolboy's tale somewhat out of the ordinary run. It is supposed to be a man's recollections of his school-days in the early fifties, and it centres in one of his school-fellows. Geoff Blake's moral development is the theme of the story, which cannot be said to have a plot, though there are one or two interesting incidents. There is a good deal of moral introspection

and laboured explanation of the true meaning of "sneak," hardly calculated to affect a boy's notions in this matter. The reminiscences of the intellectual life of the school are of the most meagre, chiefly consisting of the solemn recital of some funny mistakes in examination papers, and, as even these jokes seem to need explanation, the book is, on the whole, a little heavy; but, as the hero quotes in the introductory chapter, "whatever boys do interests boys," and we expect Geoff's fortunes and misfortunes will find many sympathizers.

*Every Inch a Briton* (Blackie & Son), by Meredith Fletcher, is a good schoolboy story, told by an ordinary honest English lad, and full of ordinary, honest, schoolboy incidents. It will hurt nobody, and amuse many.

*Tom Andrews* (Elliot Stock) is a good and genial story of East-end Board-school life, by the Rev. A. Chandler, Rector of Poplar. It is realistic and natural—a simple shifting of the plane from the more familiar kind of schoolboy story.

#### STORIES FOR GIRLS.

Mrs. L. T. Meade, the author of *Seven Maids* (W. & R. Chambers), needs no introduction, for she is an old favourite with the young public. Her new Christmas story is sure of a favourable verdict, being written much in her usual vein. The heroine, Marjorie, strays into devious places from the time when her parents decide to take girl-boarders into the home where hitherto she has reigned supreme, but she is properly repentant in the end. The various steps in her humiliation will be followed with interest. Mrs. Meade writes sympathetically, and Marjorie's character is excellently realized. The American girls, too, whom Marjorie finds it so hard to welcome, are fairly convincing portraits. The dialogue is, perhaps, a little stilted in parts, but we fancy that the average girl reader will not cavil at this in a tale that is likely to engross her interest. Altogether, *Seven Maids*, with its attractive binding and pleasing illustrations, is a very suitable Christmas gift for a schoolgirl.

*Three Fair Maids: or, The Burkes of Derrymore*. By Katharine Tynan. (Blackie & Son.)—The three maids of whom this story tells are, of course, Irish girls, and, in their different ways, all equally fascinating. They have fallen on evil days, as their father had been disinherited by his uncle for not marrying according to his wish. The story is put into the mouth of Joan, the second daughter, and relates how Elizabeth, the eldest and the moving spirit of the family, persuades her widowed mother to take in "paying guests" at Ardeelish, the country house in which they live. The love-affairs of the three girls—not to speak of those of other girls who figure incidentally—the reconciliation with the dreaded Uncle Peter, and the various adventures, more or less exciting, which go to make up this book, we will leave its readers to discover for themselves. The writer knows her Ireland, and writes with sympathetic insight and humour. Her new story is sure to be no less popular than "The Handsome Brandons," which found favour last year, and its undaunted optimism will be, no doubt, an additional inducement to those who desire a suitable Christmas gift. The book is tastefully illustrated and handsomely bound.

*The Schoolmistress of Haven's End*. By Ella Edersheim Overton. (Religious Tract Society.)—A high-born girl who has a mission to teach village children and reform their drunken and unhygienic parents, is no new figure in fiction; but it must be admitted that the schoolmistress of Haven's End is a very taking one. Although the book has a frankly moral and religious purpose, it is not only bright and healthy, but full of dramatic little incidents, and there are no less than four romantic matches made. Some of the descriptions of character and conversation are distinctly clever, and a delicate flavour of humour throughout the book makes it good reading from beginning to end, and suitable to almost any age.

*Sisters Three*. By Jessie Mansergh. (Cassell.)—It is astonishing how much interest can be obtained from the simple record of a commonplace family life, with its trivial hopes, fears, and disappointments. This book does not pretend to be any more, but there is not a dull page from beginning to end. It opens with a description of the motherless boys and girls of a well known novelist—the three girls, in their teens, are wishing that something would happen to break the cold-mutton monotony of their existence. Of course, things do happen—all of them charmingly lifelike and possible (with, perhaps, the one exception of an incident in an underground passage), and we follow the girls' fortunes till they are all engaged to be married. We can heartily recommend the book for girls of any age: younger ones will enjoy the harmless practical jokes and breezy fun of the talk, and the elder ones will enjoy the sensible and healthy love story of the youngest and nicest of the "Sisters Three."

*The Girl Without Ambition*, by Isabel Stuart Robson. (Cassell.)—The moral of this tale is very plain and excellent, and one that needs pressing upon many a girl of the present day. It is, briefly, that there is a great deal of scope, not only for talent and energy, but for pleasure and fun, in the commonplaces of home life to even a lonely girl. Mrs. Robson has succeeded admirably in making her heroine attractive, without a trace of priggishness. More wonderful still, the girl is not compelled to do anything extraordinary or impossible; she is merely good-tempered, jolly, and naturally unselfish, with a wholesome contempt for grinding at examinations; and the worse thing she has to do is to hunt

for lodgings by herself, for her little adventure of singing in the street for coppers is more amusing than distressing. The elder sister who reads at meals, and cares for nothing but her own intellect, makes a good foil, without being overdrawn, and the subsidiary characters provide some romantic interest. There are eight good illustrations by Percy Tarrant.

In *Tom's Boy*, by the Author of "Laddie," "Tipcat," &c. (W. & R. Chambers), "Tom" has a considerably bigger part to play in the story than his "Boy." Tom Bannister makes the mistake of marrying, against his father's wish, a young actress. The story is a sad one, but is neither gloomy nor depressing, and the moral is all that it should be. Mr. Percy Tarrant supplies the illustrations.

*A Sister of the Red Cross*, by Mrs. L. T. Meade (Nelson & Sons) is decidedly a story of to-day. The heroine—Mollie Hepworth, the hospital nurse—goes to South Africa, where she nurses the sick, has various love affairs of her own and other people's to attend to, and a good deal of trouble with her younger sister Kitty. All ends well, and the interest of the story is well sustained from the first chapter to the last.

*Through a Needle's Eye* (Religious Tract Society) is an excellent story, by Hesba Stretton, of two half-brothers who were both, in a sense, heirs to the same estate—one by birth, and the other by will. The latter has the chance of keeping everything for himself; but he has noble impulses, and plays a noble part. There are many well drawn characters in this book, which is not in any exclusive sense a tale for girls, but only a quietly conceived and delicately told romance.

*Celia's Conquest*, by L. E. Tiddeman (W. & R. Chambers) is a very pretty, pathetic little story for girls—a good book, without being the least bit "goody."

#### TALES OF ADVENTURE.

One of the oldest, and still one of the most popular, books of romantic and magic adventure is the "Odyssey" of Homer. Mr. J. M. Dent publishes *The Adventures of Odysseus*, retold in English by F. S. Marvin, R. I. C. Mayor, and F. M. Stawell, artistically pictured by Charles Robinson, with coloured frontispiece and title-page. It is a very delightful gift-book.

*In Far Bolivia* (Blackie & Son) is a story of a strange wild land, by Dr. Gordon Stables. The heroine is carried off by "Bolivian savages," and the hero rescues her—to the accompaniment of some very exciting pictures.

Dr. Gordon Stables has spun another yarn of seafaring life and adventure—*Allan Adair: or, Here and There in Many Lands* (Religious Tract Society). There is humour as well as stir and excitement in all the doctor's stories, and this is, perhaps, one of the best of them. It certainly does not lack movement and variety. The pictures are rather horrible—not in drawing, but terribly exciting for a youthful imagination.

*Gunpowder Treason and Plot* (Nelson & Sons) is one of a collection of short stories for boys; the authors are Harold Avery, F. Wishaw, and E. B. Townshend. There are numerous illustrations, and the stories are well told, and varied in subject.

*Boy Crusoes*, adapted from the Russian by Léon Golschmann (Blackie), is an exciting story of the adventures of two boys in a Siberian forest during a period of three years. There is a decided element of novelty in it, and the incidents are quite unlike those in any other Crusoe story we have come across. The only fault to be found with it is that the author is a trifle prolix; but perhaps this is a criticism which a young reader might apply to the immortal Defoe himself.

*Adventures in the South Pacific* (Religious Tract Society) is a narrative of life and doings in the Tahiti Group, by the son of a missionary. The narrator was born on his father's station, and—being a rebel in his younger days, inclined to chum with the native boys—he had a good share of wild adventure. The book is very readable, and well illustrated.

*A Life on the Ocean Wave* (Nelson & Sons) contains some excellent reproductions—taking into consideration the extremely moderate price of the book—of pictures of ships of all kinds. The letterpress is of varying quality, but is generally suited to the tastes of the young and not too critical readers into whose hands it is most likely to fall.

#### ANNUAL VOLUMES.

Amongst annual volumes we have *Cassell's Saturday Journal*, a large book of nearly 1,100 pages, with many pictures. There are three serial stories, four special series of articles on London and other topics, over a hundred short stories, interviews, with portraits, and a large number of articles, domestic items, anecdotes, and the like.—The year's volume of *Bo-Peep* (Cassell) is a volume for the youngest readers, with a gay binding, eight coloured plates, and many other pictures.—*The Leisure Hour* (Religious Tract Society) is a year's volume, from November to November. It has thirteen coloured plates or reproduced photographs, besides a large number of other illustrations. Sir W. Besant's "Alabaster Box" is the principal serial. There are many exceptionally good articles on subjects of general interest, and the volume is, altogether, a very attractive and satisfactory book.—*The Sunday at Home* (same publishers) is the corresponding annual volume of a favourite magazine. It has more distinctly religious features, but its interest is thoroughly general. It is full of good and quiet reading,

with plenty of variety, and will make a very acceptable present.—We have also *Little Folks* (Cassell) and *The Children's Treasury* (Nelson & Sons), two annual favourites for very young readers.

#### FOR CHILDREN.

*The True Annals of Fairyland*. By William Canton (Dent).—No pains have been spared to make this a most attractive volume for children—a dainty get-up, lavish illustrations, and an abundance of stories. Of the last there are plenty of old favourites, and some fresh ones as well; but the principle of selection seems past finding out. There is something incongruous in such a tragedy as "King Lear" being placed among fairy tales; and the wonderful classical atmosphere that Kingsley created in his "Argonauts" is marred in this collection by a facetious introduction of a baby in long clothes as a tail-piece. The illustrations by Charles Robinson are clever and original, and some of them are very graceful; but many of them present difficulties for the adult mind to decipher, and are, we fear, meaningless to children, who would rather value a few plain and pretty pictures, even if more commonplace. The work of the artist in some cases is too fine for satisfactory reproduction by the engraver.

*Animal Land for Little People*, by S. H. Hamer (Cassell) is a quarto picture-book all about animals, illustrated from photographs and original drawings, with four coloured plates. The animals tell stories about themselves, after their kind.—From the same author and publisher we have *The Jungle School*; or *Dr. Jibber-Jabber Burchall's Academy*, illustrated by Harry B. Neilson. It is a very laughable production, just sufficiently allegorical and satirical to amuse those who can enjoy something beyond a laugh.

*A Noah's Ark Geography: a true Account of the Travels and Adventures of Kit, Jum-Jum, and the Cockyolly Bird* (Macmillan), "is faithfully set forth and pictured" by Mabel Dearmer. It is a thick quarto, giving an ample and delightful account of an imaginary run round the world by little Kit and his Noah's Ark companions—an excellent conception, as one would naturally expect from the name of the author.

*In Pinafore Land* (Ward, Lock, & Co.) is an animal picture-book, with a text of poetry and prose, by Flora Kirkmann. It is full of fairies and odd conceits; and the drawings are very artistic.

Messrs. Nelson & Sons provide for the season a number of oblong picture-books in stiff covers, with coloured illustrations:—*By Rail*, dealing with trains and railway-lines; *The Red, White, and Blue*, all about ships and the sea; *A Week at the Farm*; and *The Dear Old Fairy Tales*, a capital collection of familiar folk-stories.

## MATHEMATICS.

14651. (Professor G. B. MATHEWS, F.R.S.)—Let  $\alpha, \beta$  be any two given complex quantities, and let  $t$  be such that  $(\alpha + t\beta)/(1 + t)$  is real. Prove that, if  $t = x + iy$ , the locus of  $(x, y)$  is, in general, a circle. How is this to be reconciled with the fact that the line joining two imaginary points  $(\alpha, \beta)$ ,  $(\gamma, \delta)$  contains only one real point?

I. Solution by Professor E. B. ELLIOTT, F.R.S.

A "real" line contains  $\infty^2$  points, of which  $\infty$  are real; a "real" plane  $\infty^4$  points, of which  $\infty^2$  are real; and a "real" space  $\infty^6$  points, of which  $\infty^3$  are real.

The connector of two imaginary points on a "real" line is that line, and contains all its real points; that of two imaginary points in a "real" plane, but not on a "real" line in that plane, contains one real point; that of two imaginary points in "real" space, but not in a "real" plane, contains no real point.

First on a "real" line, if  $x + iy : 1$  be the ratio in which a real point divides the intercept between two points whose distances from a real origin are  $a + ia'$ ,  $b + ib'$ , we have, from the reality of

$$\frac{a + ia' + (x + iy)(b + ib')}{1 + x + iy}, \quad \frac{a + bx - b'y}{1 + x} = \frac{a' + bx + by}{y},$$

i.e., the equation of circular form

$$b'(x^2 + y^2 + x) + a'(1 + x) + (b - a)y = 0,$$

as the only relation limiting  $x$  and  $y$ . One of these may be taken at will, subject to the requirement that the resulting quadratic for the other have real roots, and the infiniteness of the number of ratios of division for real points is apparent. The solution  $x + 1 = 0$ ,  $y = 0$  is excluded.

Next in a "real" plane, if  $(a_1 + ia'_1, a_2 + ia'_2)$  and  $(b_1 + ib'_1, b_2 + ib'_2)$  be the coordinates referred to "real" axes of the points, the intercept between which is divided in the ratio  $x + iy : 1$ , we have, for the reality of the dividing point,

$$b'_1(x^2 + y^2 + x) + a'_1(1 + x) + (b_1 - a_1)y = 0$$

and

$$b'_2(x^2 + y^2 + x) + a'_2(1 + x) + (b_2 - a_2)y = 0,$$

which give, besides the irrelevant  $x = -1$ ,  $y = 0$ , which refers to the point at infinity on the connector, a single pair of real finite values of  $x$  and  $y$ , and so a single ratio of division.

And generally in "real" space, referring to three "real" planes, we have three such equations of circles with a common point  $x = -1$ ,  $y = 0$ .



They have as a rule no common second intersection; and so as a rule there is no real dividing point of our intercept.

II. *Solution by the PROPOSER.*

Let  $\alpha = a + bi, \beta = c + di, t = x + yi.$   
 Then  $\frac{\alpha + t\beta}{1+t} = \frac{(a+cx-dy) + (b+dx+cy)i}{(1+x) + yi},$   
 and this is real when  $(1+x)(b+dx+cy) - y(a+cx-dy) = 0,$   
 or when  $d(x^2+y^2) + (b+dx)x + (c-a)y + b = 0 \dots\dots\dots (i).$   
 Suppose now that  $\gamma = a' + b'i, \delta = c' + d'i.$   
 Then  $(\gamma + t\delta)/(1+t)$  is real when  
 $d'(x^2+y^2) + (b'+d')x + (c'-a')y + b' = 0 \dots\dots\dots (ii).$

The circles (i.) and (ii.) intersect at the fixed point  $(-1, 0),$  and at another point whose coordinates are rational functions of  $a, a', \&c.$   
 The first point gives  $t = -1,$  and this makes  $(\alpha + t\beta)/(1+t)$  and  $(\gamma + t\delta)/(1+t)$  both infinite; the other leads to the one real point on the line joining  $(\alpha, \gamma)$  to  $(\beta, \delta).$

14028. (G. H. HARDY.)—Reduce the evaluation of  $\int_0^\pi \frac{\cos(p/q)\phi d\phi}{1+2t\cos\phi+t^2},$  where  $p, q$  are integers,  $p < q$  and  $t < 1,$  to the integration of a rational fraction. Prove, in particular, that

$$\int_0^\pi \frac{\cos \frac{1}{2} \phi d\phi}{1+2t\cos\phi+t^2} = \frac{2}{1+t} \frac{\tanh^{-1} \sqrt{t}}{\sqrt{t}};$$

and deduce (and also prove independently) that  $\int_0^\pi \tan^{-1} \left( \frac{2t \sin \phi}{1-t^2} \right) \frac{d\phi}{\sin \frac{1}{2} \phi} = 8 \tan^{-1} \sqrt{t} \tanh^{-1} \sqrt{t}.$

*Solution by the PROPOSER.*

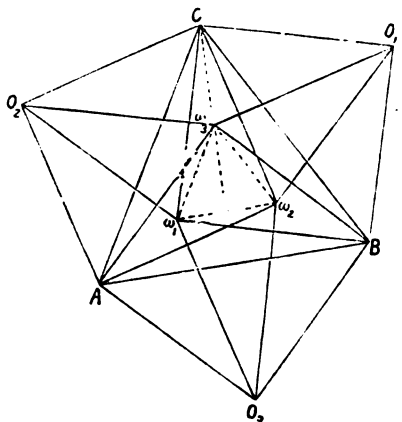
Since  $\frac{1-t^2}{1+2t\cos\phi+t^2} = 1 + 2 \sum_1^\infty (-t)^n \cos n\phi, \quad t < 1,$   
 $\int_0^\pi \frac{\cos \alpha \phi d\phi}{1+2t\cos\phi+t^2} = \frac{1}{1-t^2} \int_0^\pi \left\{ \cos \alpha \phi + 2 \sum_1^\infty (-t)^n \cos \alpha \phi \cos n\phi \right\} d\phi$   
 $= \frac{\sin \alpha \pi}{1-t^2} \left\{ \frac{1}{\alpha} + 2 \sum_1^\infty \left( \frac{1}{n+\alpha} - \frac{1}{n-\alpha} \right) t^n \right\};$   
 if  $\alpha < 1.$  That is, to say,  
 $= \frac{\sin \alpha \pi}{1-t^2} \left\{ t^{-\alpha} \int_0^1 \frac{t^{\alpha-1} dt}{1-t} - t^\alpha \int_0^1 \frac{t^{-\alpha} dt}{1-t} \right\}.$

[The rest in Volume.]

14473. (W. S. COONEY.)—Construct the triangle, being given any three of the following six points:—the centres of the squares described externally and internally on the sides.

*Solution by the PROPOSER.*

Let  $O_1, O_2, O_3, \omega_1, \omega_2, \omega_3$  be the centres of squares described externally and internally on sides of ABC. By Quest. 13716, or easily from figure,  $O_1O_2$  is perpendicular and equal to  $CO_3,$  for  $CO_2$  and  $C\omega_1$  are proportional to AC and BC, and  $\angle O_2C\omega_1 = \angle C;$  therefore  $\triangle O_2C\omega_1$  is similar to ABC; therefore  $O_2\omega_1 = AO_3.$  Similarly  $O_3\omega_1 = AO_2;$  therefore  $AO_2\omega_1O_3$  is a parallelogram; as are also  $BO_1\omega_2O_3, CO_2\omega_3O_1, A\omega_2O_1\omega_3, B\omega_3O_2\omega_1,$  and  $C\omega_1O_3\omega_2;$  therefore evidently  $CO_3 = O_1O_2,$  and  $C\omega_3$  is also equal and perpendicular to  $\omega_1\omega_2;$  therefore, if  $O_1, O_2, O_3$  or  $\omega_1, \omega_2, \omega_3$  be given, the perpendiculars of the triangles being drawn, the construction is obvious in each case. If  $\omega_1, O_2, O_3$  or  $O_1, \omega_2, \omega_3$  be given, the completion of the parallelogram in each case gives A. If  $O_1, \omega_1, \omega_2$  be given, B and C are known, which disposes of the twenty cases; therefore, &c.



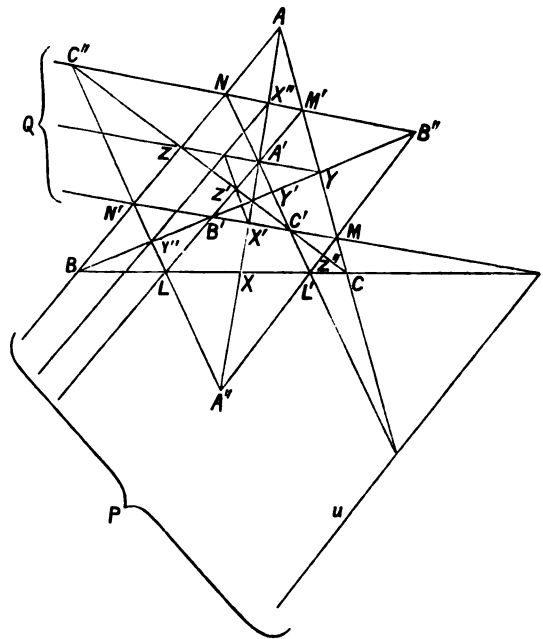
This construction shows that the triangles  $O_1O_2O_3$  and  $\omega_1\omega_2\omega_3$  are so related that the perpendiculars of each bisect the sides of the other, and pass through A, B, C, for  $CO_3$  bisects  $\omega_1\omega_2,$  and  $C\omega_3$  bisects  $O_1O_2.$

14329. (J. A. THIRD, M.A., D.Sc.)—L, L', M, M', N, N' are points on a conic. LL', MM', NN' form the triangle ABC; MN', NL', LM' the triangle A'B'C'; and M'N, N'L, L'M the triangle A''B''C''. The straight line AA'A'' meets BC, B'C', B''C'' in X, X', X'' respectively; the straight line BB'B'' meets CA, C'A', C''A'' in Y, Y', Y'' respectively; and the straight line CC'C'' meets AB, A'B', A''B'' in Z, Z', Z'' respectively. Show that the following are triads of concurrent lines:—

YZ, Z'X', X''Y''; ZX, X'Y', Y''Z''; XY, Y'Z', Z''X'';  
 YZ, Z''X'', X'Y'; ZX, X''Y'', Y'Z'; XY, Y''Z'', Z'X'';

and that the points of concurrence lie on a conic.  
*Solution by the PROPOSER.*

The pairs AB and A'B', BC and B'C', CA and C'A' meet on the same PASCAL line  $u.$  Let P be the point of intersection of AB and A'B'. Join



PX'', PY''. Then, since  $u$  is a diagonal of the quadrilaterals ANA'M' and BLB'N', PX'' and PY'' are harmonic conjugates of  $u$  with respect to PA and PA', and therefore coincide. Thus, AB, A'B', and X''Y'' are concurrent. Similarly, B'C', B''C'', YZ are concurrent, say in Q. Hence the triangles X'Z'A' and QZN are copolar with respect to C'. Therefore Z'X' and YZ intersect on the same line as the pairs A'B', AB and X'A', QN. Thus the first triad consists of concurrent lines. A similar proof holds for each of the other triads.

Again, the triangles XYZ and X'Y'Z' are obviously in perspective. Therefore the six points of intersection of the sides of the one with the non-corresponding sides of the other lie on a conic.

14173. (D. RIDDLE.)—The sides of a triangle being given,  $a > b > c,$  draw a line parallel to one of them, such that the quadrilateral formed shall have the maximum area possible in proportion to its perimeter, and find both area and perimeter.

*Solution by W. C. STANHAM, B.A.*

Let PQR be a triangle whose sides are  $a, \beta, \gamma.$  Parallel to PQ ( $= a$ ) draw P'Q', so that P'Q' =  $\lambda a.$  Then, if  $\Delta$  and  $s$  denote area PQR and  $\frac{1}{2}(a + \beta + \gamma)$  respectively, and if  $a/s = \mu,$   
 area  $PP'Q'Q = \Delta(1 - \lambda^2) \dots\dots\dots (1),$   
 perimeter  $PP'Q'Q = 2s(1 - \lambda) + 2\lambda a \dots\dots\dots (2).$

The ratio which is to be a maximum is therefore  $(1 - \lambda^2)/(1 - \lambda + \mu\lambda),$  which for any value of  $\lambda$  is clearly a maximum when  $a = c,$  the least side. Differentiating, the value of  $\lambda$  which gives a maximum is found to be

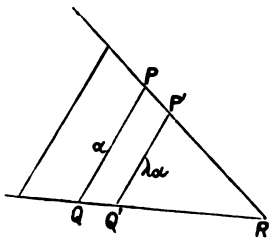
$$\left[ \frac{1}{1 - \mu} - \frac{1}{2} \left\{ \frac{1}{1 - \mu^2} - 1 \right\} \right]^{1/2}.$$

Substituting this value of  $\lambda$  in (1) and (2), and putting  $a = c, \mu = c/s, s = \frac{1}{2}(a + b + c),$  the required values are obtained.

14519. (Professor U. C. GHOSH.)—Find the sum of the products of the terms of the geometric series  $a, a^2, a^3, a^4, \dots, a^n,$  taken  $r$  at a time,  $r$  being less than  $n.$

*Solution by Lt.-Col. ALLAN CUNNINGHAM, R.E.*

Let  $s_1 = a + a^2 + a^3 + \dots + a^n, s_r = a^r + a^{2r} + a^{3r} + \dots + a^{nr}.$   
 Let  $S_r$  = required sum of products of the terms of  $s_1,$  taken  $r$  together.  
 Let  $X_r$  = sum of terms in  $S_r,$  containing a particular term  $a^r.$   
 Let  $S'_r$  = sum of terms in  $S_r,$  free from a particular term  $a_r.$   
 Let  $\Sigma$  denote summation with respect to  $x.$   
 Here  $s_1 = \Sigma a^x = a \cdot (a^n - 1)/(a - 1),$   
 $s_r = \Sigma a^{rx} = a^r \cdot (a^{nr} - 1)/(a^r - 1);$



and  $X_r = a^r \cdot S'_{r-1}$ ,  $S_r = \sum (a^r \cdot S'_{r-1})$ .  
 Hence  $S_1 = s_1$ ,  $S'_1 = S_1 - a^x$ ,  
 $S_2 = \sum a^x (S_1 - a^x) = S_1 \cdot \sum a^x - \sum a^{2x} = S_1 s_1 - s_2 = s_1^2 - s_2$ ,  
 $S'_2 = S_2 - a^x \cdot S'_1$ ,  $S_3 = \sum a^{2x} (S_2 - a^x \cdot S'_1) = \sum (a^x \cdot S_2 - a^{2x} \cdot S_1 + a^{3x})$ ;  
 therefore  $S_3 = s_1 S_2 - s_2 S_1 + s_3 = s_1^3 - 2s_1 s_2 + s_3$ ,  
 $S'_3 = S_3 - a^x \cdot S'_2$ ,  $S_4 = \sum a^{3x} S'_3 = \sum (a^{2x} S_3 - a^{3x} S_2 + a^{4x} S_1 - a^{4x})$ ;  
 therefore  $S_4 = s_1 S_3 - s_2 S_2 + s_3 S_1 - s_4 = s_1^4 - 3s_1^2 s_2 + s_2^2 + 2s_1 s_3 - s_4$ .  
 The law of formation of each sum ( $S_r$ ) from the preceding ( $S_{r-1}$ ) is now clear, all the terms being of equal weight ( $r$ )  
 $S_r = s_1 S_{r-1} - s_2 S_{r-2} + s_3 S_{r-3} - \dots + (-1)^{r-1} s_r$ .

**14549.** (J. A. THIRD, M.A., D.Sc.)—K is a conic circumscribed to a triangle ABC; P is a point on it; Q is the isogonal conjugate of P with respect to the triangle; R is the point where PQ meets K again; L, M, N are the points where AR, BR, CR meet BC, CA, AB respectively; X, Y, Z are variable points, Y lying on QM and Z on QN, such that the pairs AY and AZ, BZ and BX, CX and CY are equally inclined to the bisectors of the angles A, B, C respectively. Prove that the locus of X is QL, and that the locus of the point of concurrence of AX, BY, CZ is K.

The construction usually given for KIEPERT'S hyperbola (see CASEY'S *Analytical Geometry*, p. 442) is a particular case of the foregoing.

*Solution by Rev. J. CULLEN.*

Taking ABC for the triangle of reference and P to be the point  $(x, y, z)$ , we have  $K \equiv \sum l/x = 0$ . It is easy to see that R is the point

$$ax^2(y^2 - z^2)/l = \dots = \dots \dots \dots (1).$$

Now, if X, Y, Z be the points  $(x_1, y_1, z_1)$ ,  $(x_2, y_2, z_2)$ , and  $(x_3, y_3, z_3)$ , then  $AY \equiv \beta z_2 - \gamma y_2 = 0$ ,  $AZ \equiv \beta z_3 - \gamma y_3 = 0$ , ...

These lines are equally inclined to the bisectors of A, ..., if

$$y_3 y_2 = z_2 z_3, \quad z_1 z_2 = x_1 x_3, \quad x_1 x_2 = y_1 y_3.$$

L, M, and N are given by putting, successively,  $a = 0$ ,  $\beta = 0$ ,  $\gamma = 0$  in (1). Q is  $ax = \dots = \dots$ . Hence

$$QM \equiv \begin{vmatrix} x_3 & y_2 & z_2 \\ \frac{1}{x} & \frac{1}{y} & \frac{1}{z} \\ \frac{l}{x^2(y^2 - z^2)} & 0 & \frac{n}{z^2(x^2 - y^2)} \end{vmatrix} = 0 \equiv p_2 x_2 + q_2 y_2 + r_2 z_2,$$

and  $QN \equiv p_3 x_3 + q_3 y_3 + r_3 z_3 = 0$ , where  $p_3, \dots$ , are the coefficients of  $x_3, \dots$ , when a similar determinant is expanded.

[The rest in Volume.]

**4963.** (W. J. C. MILLER, B.A.)—A king is placed at random on a clear chess board, and then, similarly, (1) a bishop, or (2) a rook. Find, in each case, the chance that the king is in check so as to be unable to take the attacking piece; and find also (3) the chance of check, with or without the power of taking, for any combination of two or three of the pieces. [If we estimate the powers of the pieces (a) by the chances of simple check, as investigated in the solution of Quest. 3314, *Reprint*, Vol. xv., pp. 50, 51, in January 1871; (b) by the chances of safe check, as shown in an interesting paper by H. M. TAYLOR in the *Philosophical Magazine* for March, 1876; (c) by the results given in the *Berliner Schachzeitung*, we have the relative values of the knight, bishop, rook, queen as (a) 3 : 5 : 8 : 13; (b) 3 : 3½ : 6 : 9½; (c) 3 : 3½ : 4½ : 9½.]

*Solution by Professor SANJANA.*

**Simple check.**—1. Knight.—When the king occupies one of the 16 squares marked a, this piece can check from 8 squares; on the 16 marked b, from 6 squares; on the 20 marked c, from 4 squares; on the 8 marked d, from 3 squares; and on each of the 4 corner squares, from 2 squares: altogether 336 squares. Thus the chance of checking the king is  $336 + 64 \times 63 = \frac{1}{3}$ .

2. Bishop.—When the king occupies one of the four squares marked a, this piece can check from 13 squares; on the 12 marked b, from 11 squares; on the 20 marked c, from 9 squares; and on each of the 28 border squares, from 7 squares: altogether 560 squares. Thus the chance of checking the king is  $560 + 64 \times 63 = \frac{2}{3}$ .

[The rest in Vol.]

**14913.** (ROBERT W. D. CHRISTIE.)—If

$$A_n = m^n - n \cdot m^{n-2} + \frac{n \cdot n-3}{2!} m^{n-4} - \frac{n \cdot n-4 \cdot n-5}{3!} m^{n-6} + \dots$$

	d	c	c	c	c	d	
d	c	b	b	b	b	c	d
c	b	a	a	a	a	b	c
c	b	a	a	a	a	b	c
c	b	a	a	a	a	b	c
d	c	b	b	b	b	c	d
	d	c	c	c	c	d	

1. KNIGHT.

for all integral values of m and n, then  $X^{2n} - A_n X^n + 1 = (X^2 - mX + 1)(a_1 X^{2n-2} + a_2 X^{2n-4} + \dots + a_n X + 1)$ , where  $a_n =$  a series allied to  $A_n$ . *Ex. gr.*—If  $m = 5$ ,  $n = 3$ , then  $x^6 - 110x^3 + 1 \equiv (x^2 - 5x + 1)(x^4 + 5x^2 + 24x + 5x + 1)$ . There are two other allied theorems for positive values of  $A_n$  and  $m$ ; it is required to establish them.

*Solution by the PROPOSER.*

Let  $\alpha = m + \sqrt{(m^2 - 4)}/2$ ,  $\beta = m - \sqrt{(m^2 - 4)}/2$ ; then we have

$$A_n = \alpha^n + \beta^n$$

$$= m^n - n \cdot m^{n-2} + \frac{n \cdot n-3}{2!} m^{n-4} - \frac{n \cdot n-4 \cdot n-5}{3!} m^{n-6} + \dots + \frac{n \cdot n-r-1}{r!} m^{n-2r} + \dots$$

(which is the generalized form of the "continuant" series 1, 1, 2, 3, 5, 8, 13, &c.).

$$\text{Also } \frac{1}{n} \frac{du}{dm} A^n = m^{n-1} - n-2 \cdot m^{n-3} + \frac{n-3 \cdot n-4}{2!} m^{n-5} + \dots$$

$$\dots + \frac{n-r-1}{r!} m^{n-2r-1}.$$

(i.) We have to show that  $x^{2n} - A_n x^n + 1 = (x^2 - mx + 1)(M)$ , where

$$(M) = a_0 x^{2n-2} + a_1 x^{2n-4} + a_2 x^{2n-6} + \dots + a_{n-1} x^2 + a_n x^0.$$

On multiplying this series (M) by  $x^2 - mx + 1$ , we find the law of the coefficients, excepting the middle one, is  $a_n - ma_{n-1} + a_{n-2}$ , and for the middle one  $ma_n - 2a_{n-1}$ . Now the values of these are respectively 0 and  $\alpha^n + \beta^n$ . Hence the theorem. [The rest in Volume.]

**QUESTIONS FOR SOLUTION.**

**14733.** (Professor G. B. MATHEWS, F.R.S.)—If  $x, a, b$  are any quantities whatever, and  $n$  is a positive integer,

$$(x+a)^n = x^n + na(x+b)^{n-1} + \frac{n(n-1)}{2} a(a-2b)(x+2b)^{n-2} + \dots + \binom{n}{s} a(a-sb)^{s-1} (x+sb)^{n-s} + \dots + a(a-nb)^{n-1}.$$

ABEL proves this with the help of the integral calculus (see his works, ed. SYLOW and LILJ, Vol. I., p. 102; or *Crelle*, Vol. I.). Can a more elementary proof be found which is not too laborious?

**14734.** (Professor E. LEMOINE.)—Démontrer que, pour trouver la direction des axes de la conique  $lx^2 + my^2 + nz^2 + 2fyz + 2gzx + 2hxy = 0$  (coordonnées normales, triangle de référence ABC), on peut joindre un sommet quelconque de ABC, A par exemple, au point de M du cercle circonscrit qui a pour coordonnées

$$\frac{a}{l(b^2 - c^2) + ma^2 - na^2 + 2ga - 2hab},$$

et que les directions cherchées seront celles des bissectrices de l'angle qui fait AM avec BC. Ce résultat a une certaine utilité parce qu'il spécifie d'une façon symétrique et d'un calcul facile les directions des axes d'une conique quelconque.

**14735.** (Professor MURLEY.)—Given five planes  $a_1, \dots, a_5$ , and a quadric Q, let a quadric  $Q_n$  pass through the intersection of Q and  $a_n$  ( $n = 1, \dots, 5$ ) and the four intersections of the four other planes. Then  $Q_n$  intersects Q in a second plane  $\beta_n$ , whose polar as to Q is a point  $a_n$ . Prove that the line  $a_1 a_2$  passes through the point  $a_3 a_4 a_5$ ; or, reciprocally, that the line  $a_1 a_2$  lies in the plane  $a_3 a_4 a_5$ . Also prove that, if one of the points  $a$  lies on Q, then all the points  $a$  lie on Q. Arrange the proof so as to hold for the analogous theorem in  $n$  dimensions. [The theorem in two dimensions that, given four lines and a conic C, and conics  $C_n$  being passed through the three intersections of three lines and the intersections of C and the fourth line, then, if one  $C_n$  touches C, all  $C_n$ 's touch C, is M. HUMBERT'S, *Comptes Rendus*, Vol. cxxix.; and an elegant elementary proof is given by M. BRICARD, *Nouv. Ann.*, Ser. 3, Vol. xix., p. 369.]

**14736.** (Professor NEUBERG.)—Un quadrilatère sphérique ABCD est circonscrit à un petit cercle de rayon r. Soient a, b, c, d les segments des côtés déterminés par les points de contact. Démontrer que

$$\sin^2 r = \sum \tan a \tan b \tan c / 2 \tan a.$$

**14737.** (Professor E. J. NANSON.)—Show that an  $m$ -circular  $2m$ -ic has  $2m^2 - 2m$  single foci,  $m$  double foci,  $2m^2$  tangents, and  $2m^2$  normals from an arbitrary point  $x, y$ ; and that, if T, N, F are respectively the products of the tangents, normals, and distances of the single foci from  $x, y$ , then  $T = N = FS$ , where  $S = 0$  is the equation of the curve in its simplest form. Also, if  $l, n, f, f'$  be the sums respectively of the angles made with an arbitrary line by the tangents, normals, and distances of the single and double foci from  $xy$ , then  $l = n = f + 2f'$ .

**14738.** (Professor JAN DE VRIES.)—The equation

$$a_{11}x^2 + 2a_{12}xy + a_{22}y^2 + b_1x + b_2y = 0$$

being referred to rectangular axes, the axes are supposed to turn about the origin. Prove that the function  $I = (a_{11} - a_{22})b_1 b_2 - a_{12}(b_1^2 - b_2^2)$  does not undergo change of form, and state the geometric meaning of  $I = 0$ .

**14739.** (J. A. THIRD, M.A., D.Sc.)—M and N are points on the sides CA, AB of a triangle, such that CA . CM = BA . BN. M' and N' are the images of M and N with respect to BC. Through M' and N' parallels are drawn to CA, AB respectively, intersecting in P. AP meets BC in D. The connector of A with the circumcentre of ABC meets BC in E. Show that BD = CE.

**14740.** (Professor COCHEZ.)—Intégrer  
 $(1+x^2)(d^2y/dx^2) - 2x(dy/dx) + (1+x^2)y = 0.$

**14741.** Professor LANGHORNE ORCHARD, M.A., B.Sc.)—Find the mean distance, from the centre, of all points within the oblate spheroid generated by the revolution of the ellipse  $(a-h)^2 x^2 + a^2 y^2 = a^2(a-h)^2$ , where  $h$  is very small compared with  $a$ .

**14742.** (Professor SANJANA.)—In a spherical triangle ABC, P is the isogonal conjugate of O, the pole of the circumcircle. Prove that  $\Sigma \cot OA \cot PA \sin(S-A) = -\frac{1}{2} \sec S \{ \Sigma \sin 2A + 2\Sigma \sin(2S-2A) \}$ , employing the ordinary notation.

**14743.** (Professor N. BHATTACHARYA.)—Find the envelope of the chord of intersection of the ellipse  $x^2/a^2 + y^2/b^2 = 1$ , and the circle which touches it and passes through its centre. Show that the first positive pedal of the envelope is the ellipse  $x^2/b^2 + y^2/a^2 = (1-e^2)/e^4$ .

**14744.** (Professor UMES CHANDRA GHOSH.)—Find the maximum and minimum triangles self-conjugate with respect to a circle, having a given vertex.

**14745.** (D. BIDDLE.)—Explain the following method of factorizing  $N = 1843, 2N = 61^2 - 35^2$  :—

61	62	63	64	65	66	67
35	158	283	410	539	670	803
96	220	346	474	604	736	870 = 29 . 30 ;

$$N = \frac{1}{2} (67-29)(67+30) = 19 . 97 ;$$

and show that, if it had been known beforehand that the factors were of form  $2\Delta m + 1$ , where  $\Delta$  is in this case 3, the first and last columns would have sufficed, or, at most, these and the middle one. In a table of quarter-squares 870 is found against 59 (= 29 + 30).

**14746.** (R. TUCKER, M.A.)—ABC is a triangle. P, Q are taken so that  $\angle PBC = \angle PCB = \angle PAC = \theta$ , and  $\angle QBC = \angle QCB = \angle QAB = \phi$ . Prove (i.)  $\sin 2\theta \sin 2\phi = \sin^2 A$ ; (ii.)  $P^2 Q^2 = R^2 \sqrt{(4R^2 - a^2)(4R^2 - b^2)}$ ; and (iii.)  $(m+l \cos C)(m'+l' \cos C) = a^2 bc/4l'l'$ , where  $l, l', m, m'$  stand for PB, QB, PA, QA respectively.

**14747.** (R. F. DAVIS, M.A.)—If  $a, b, c, d, e$  be the sides in order of a cyclic pentagon and  $x$  the diagonal joining  $bc, de$ ,  $c^2 d^2 \{ x^2 - (a^2 + b^2 + c^2)x - 2abc \}^2 = (x^2 - c^2 - d^2)^2 (ax + be)(bx + ae)(cx + ad)$ .

**14748.** (JAMES BLAIR, M.A.)—If a tetrahedron have its opposite edges equal, its four escribed spheres are equal, and the radius of an escribed sphere is equal to twice the radius of the inscribed sphere.

**14749.** (G. H. HARDY, B.A.)—Prove that  
 (i.)  $\int_{-\infty}^{\infty} \frac{\log(ax^2 + 2bx + c)}{a^2 x^2 + 2bx + c} dx = \frac{\pi}{\Delta} \log \frac{1}{\alpha} \{ (\alpha\gamma + ca) - 2(\beta\beta - D\Delta) \}$ ,

where  $D = \sqrt{(ac - b^2)}$ ,  $\Delta = \sqrt{(\alpha\gamma - \beta^2)}$ , provided the coefficients are real and  $a, \alpha, D, \Delta$  positive;

(ii.)  $\int_0^{\infty} \frac{\cos mx \log x}{a^2 + x^2} dx = \frac{\pi}{2a} \{ e^{-ma} \log a + (e^{ma} \operatorname{li} e^{-ma} - e^{-ma} \operatorname{li} e^{ma}) \}$ ,  
 $\int_0^{\infty} \frac{x \sin mx \log x}{a^2 + x^2} dx = \frac{\pi}{2} \{ e^{-ma} \log a - (e^{ma} \operatorname{li} e^{-ma} + e^{-ma} \operatorname{li} e^{ma}) \}$ ,

where  $\operatorname{li} e^{-u} = \int_{-\infty}^{-u} \frac{e^u}{u} du$  ( $u > 0$ );  $-P \int_{-\infty}^{-u} \frac{e^u}{u} du$  ( $u < 0$ ).

**14750.** (R. P. PARANJAYE, B.A.)—Find the limit, if there be any, of  $4^{-4^{-1 \text{ ad inf.}}}$

**14751.** (H. MACCOLL, B.A.)—The chance that A is true (assuming nothing as to B) is  $a$ ; the chance that B is true (assuming nothing as to A) is  $b$ ; and the chance that A is true, assuming B true, is  $k$  times the chance that B is false, assuming A false. Show that the dependence of A upon B is  $(1-a)(k-kb-a)/(1-a-kb)$ , except when the numerator and denominator of this fraction both vanish. Discuss this exceptional case. (See *Reprint*, Vol. LXXII., pp. 79, 80.)

**14752.** (D. EDWARDS, BA.)—Prove that the solution of  $2x(dy/dx) = x^2 - y + (y^2 - 4x^2y + x^4 + 6x)^{\frac{1}{2}}$  is  $(x^2 - 2y) \{ 2(x^2 - 2y)^2 - 9(y^2 - 2x) \} + 2 \{ (x^2 - 2y)^2 - 3(y^2 - 2x) \}^{\frac{1}{2}} = \text{constant}$ .

**14753.** (R. F. MUIRHEAD.)—ABC is a triangle; D, E, F are points lying on the sides BC, CA, AB respectively. Lines are drawn through D, E, F intersecting in three points L, M, N within the triangle, the three triads DMN, ENL, FLM being collinear. Show that AL, BM, and CN cannot concur.

**14754.** (Rev. J. CULLEN.)—Prove that the six sides of TUCKER'S triangles touch a conic the locus of whose centre is a cubic passing through the symmedian point and the centroid having a double point where it cuts EULER'S line again, and touches the S-point axis at the centroid.

**14755.** (J. J. BARNVILLE, B.A.)—Having  $u_{n-1} + u_{n+1} = 3u_n$ , prove that  $\frac{1}{10+11} + \frac{1}{17+11} + \frac{1}{41+11} + \frac{1}{106+11} + \dots = \frac{3\sqrt{5}+1}{66}$ ,  
 $\frac{1}{10+22} + \frac{1}{17+22} + \frac{1}{41+22} + \frac{1}{106+22} + \dots = \frac{3\sqrt{5}+1}{88} - \frac{1}{672}$ ,  
 $\frac{1}{17+19} + \frac{1}{26+19} + \frac{1}{61+19} + \frac{1}{157+19} + \dots = \frac{2\sqrt{5}+1}{78}$ ,  
 $\frac{1}{25+19} + \frac{1}{58+19} + \frac{1}{149+19} + \dots = \frac{2\sqrt{5}-1}{76}$ ,  
 $\frac{1}{29+31} + \frac{1}{53+31} + \frac{1}{130+31} + \frac{1}{337+31} + \dots = \frac{5\sqrt{5}+1}{310}$ .

**14756.** (ROBERT W. D. CHRISTIE.)—Prove the following theorem in circulating decimals:—(i.) If  $\frac{1}{p}$ , where  $p$  is any integer ending 1, 3, 7, or 9, equals the figures  $a_1, a_2, a_3, \dots, a_p$ , then an infinite number of multipliers can be obtained which will enable us to get the figures by simple multiplication in a few seconds. (ii.) Do this by two distinct methods, e.g.,  $\frac{1}{7} = 142857$ . Multipliers, 5, 12, &c.

**14757.** (E. W. REES, B.A.)—Prove that  $8\Sigma a(bc - a^2)^2 - \Sigma (b + c - 2a)(3bc + ca + ab) = 8(a^2 + b^2 + c^2)(a^3 + b^3 + c^3 - 3abc)$ .

**14758.** (W. J. JOHNSTON.)—Show that the usual expansion by LAGRANGE'S theorem of  $F(z)$  where  $z = x + \lambda\phi(z)$  is the result of putting  $y = 0$  in  $\sigma . F(x)$  where  $\sigma$  is the following operator:—

$$\sigma = \Delta^{\lambda} D^{-1} [\phi(x)]^{\nu} D,$$

where  $D \equiv d/dx$ ,  $\Delta \equiv E^F$  where  $E \equiv e^{d \cdot dx}$ ,  $F \equiv e^{d \cdot dy}$ .

Also, if  $\psi(u)$  is any function of  $u$ , where  $u$  is a function of  $x$ , prove that the operator  $\sigma$  has the following properties:—

$$\sigma [\psi(u)] = \psi[\sigma . u], \quad \sigma(u+v) = \sigma . u + \sigma . v.$$

**14759.** (R. KNOWLES.)—ABCDEFGH is a heptagon inscribed in a conic; prove that the four points of intersection of AB, FD; GA, EC; GE, HD; and FE, AC are collinear (no pair of these lines being parallel).

**14760.** (R. CHARTRES.)—If the perimeter of a triangle be constant, give an elementary proof that the volume of the double cone described by the revolution of the triangle about a side is a maximum when that side is  $\frac{1}{2}$  of the perimeter. (TODHUNTER'S *Diff. Calc.*, p. 247.)

**14761.** (A. F. VAN DER HEYDEN, B.A.)—Let  $I, I_1, I_2, I_3$  denote the in- and ex-centres of a triangle. Given the circumcentres of the triangles  $II_2I_3, II_3I_1$  and of the original triangle, construct the triangle.

**14762.** (F. H. PRACHELL, B.A.)—Find the equation of the locus of a point which moves so that the square of the tangent drawn from it to a fixed circle is the arithmetic mean between the squares of the tangents drawn from it to a fixed parabola.

OLD QUESTIONS AS YET UNSOLVED (IN OUR COLUMNS).

**6729.** (A. J. C. ALLEN, B.A.)—If the centre I of the inscribed circle of a triangle be joined to the centroid G, and if IG be produced to G', so that  $IG' = 2IG$ , show that the inscribed circle will pass through G' if  $3 \sin \frac{1}{2}A \sin \frac{1}{2}B \sin \frac{1}{2}C (5 \sin \frac{1}{2}A \sin \frac{1}{2}B \sin \frac{1}{2}C - 4) + 1 + \cos A \cos B \cos C = 0$ .

**6730.** (J. R. HARRIS, M.A.)—Prove that (1) the pedal of a helix with regard to any point on its axis is a curve lying on a hyperboloid of revolution; and (2), if the pitch of the helix be  $\frac{1}{2}\pi$ , this curve cuts all the generators of one system of the hyperboloid at right angles.

**6732.** (Professor CAVALLIN.)—If each radius of curvature  $\rho$  in a conic be prolonged a length  $\lambda = \mu(A\rho^{\frac{1}{2}} + B\rho^{-\frac{1}{2}})$ , where A and B are constants and  $\mu$  an infinitely small constant, prove that (1) the curve thus derived is also a conic; (2) if  $B = 0$ , the curves are confocal; and (3), if  $A = 0$ , similar.

**6735.** (Prince C. DE POLIGNAC.)—An unclosed polygon is inscribed in one conic and circumscribed about another;  $M_1, M_2$  are two consecutive fixed sides;  $a_1, a_2$  any other pair of consecutive sides taken in the same order;  $a_1$  meets  $M_2$  in  $m_2$ ; and  $a_2$  meets  $M_1$  in  $m_1$ . If the line  $m_1 m_2$  passes through a fixed point, prove that the conics have double contact.

**6742.** (Professor CAVALLIN.)—A random straight line is determined by two points taken at random within a sphere; find the average velocity acquired by a particle in descending the line.

**6747.** (A. J. C. ALLEN, B.A.)—A point P is joined to K, the ortho-

centre, and the line PK produced to meet the sides BC, CA, AB of a triangle ABC in D, E, F; prove (1) that, if

$$\frac{PE}{KE} \cdot \frac{PF}{KF} \sin 2A + \frac{PF}{KF} \cdot \frac{FD}{KD} \sin 2B + \frac{PD}{KD} \cdot \frac{PE}{KE} \sin 2C = \text{a const.},$$

the locus of P is a circle; and (2) find its centre and radius.

6748. (R. A. ROBERTS, M.A.)—Show that any tangent to the cuspidal cubic  $(a+b)y^3 - abx^2z = 0$  is cut in involution by the cuspidal cubics  $y^3 - ax^2z = 0$ ,  $y^3 - bx^2z = 0$ .

#### NOTICE TO CORRESPONDENTS.

It is requested that all Mathematical communications should be sent to D. BIDDLE, Esq., Charlton Lodge, Kingston-on-Thames.

**NOTICE.**—Vol. LXXIII. of the "Mathematical Reprint" is now ready, and may be had of the Publisher, FRANCIS HODGSON, 89 Farringdon Street, E.O. Price, to Subscribers, 5s.; to Non-Subscribers, 6s. 6d.

#### THE LONDON MATHEMATICAL SOCIETY.

Thursday, November 8, 1900.—Lord Kelvin, G.C.V.O., President, in the Chair. Twenty-four members present.

At this, the opening meeting of the Seventh Session of the Incorporated Society, the Treasurer read his report, the reception of which was moved by Mr. A. B. Kempe, seconded by Mr. W. F. Sheppard, and carried unanimously.

The Senior Secretary reported three deaths during the Session—viz., Prof. Beltrami (hon. member), Mr. J. J. Walker, and Major-General F. Close, R.A. Extra work had been undertaken, in the form of the publication of an index (in three parts) to the first thirty volumes of the *Proceedings* and of a list of names of members from the commencement of the Society (January, 1865) to November, 1899. Prof. Love stated that the number of names on the Society's roll was 252.

The ballot was subsequently taken, the Scrutineers being Messrs. M. Jenkins and W. W. Taylor, with the result that the gentlemen whose names were published in last month's *Educational Times* were declared to have been elected for the Council of the ensuing Session (1900-1).

Lord Kelvin, on leaving the Chair, thanked the Society for their having elected him to the office of President, and for their tolerating so kindly his infrequent attendance at their meetings; a result due to his being so far off—four hundred miles from town. He then welcomed his successor, and expressed his pleasure at Dr. Hobson's election. This latter gentleman, on taking the Chair, thanked the members present, and then called on Lord Kelvin to communicate his address, entitled "On the Transmission of Force through a Solid."

A vote of thanks, with a request that the address might be printed in the *Proceedings*, was then moved by Dr. Glaisher, seconded by Dr. Larmor, and carried by acclamation.

Dr. Glaisher communicated two papers—viz.: (1) "A General Congruence Theorem relating to the Bernoullian Function"; and (2) "On the Residues of Bernoullian Functions for a Prime Modulus, including as special cases the Residues of the Eulerian Numbers and the *I*-Numbers."

Mr. Tucker communicated further notes on Isoscelians, and spoke on the properties of two In-triangles which are similar to the Pedal Triangle.

The President (Dr. Hobson) communicated the following papers by reading their titles:—

"In a Simple Group of an Odd Composite Order every System of Conjugate Operators or Sub-groups includes more than Fifty," Dr. G. A. Miller.

"Prime Functions on a Riemann Surface," Prof. A. C. Dixon.

"On Green's Function for a Circular Disc," Dr. H. S. Carslaw.

"On the Real Points of Inflexion of a Curve," Mr. A. B. Basset.

"On Quantitative Substitutional Algebra," Mr. A. Young.

"On a Class of Plane Curves," Mr. J. H. Grace.

(i.) "On Group Characteristics"; and (ii.) "On Some Properties of Groups of Odd Order," Prof. W. Burnside.

(i.) "Conformal Space Transformations"; and (ii.) "Dynamical and other Applications of Algebra of Bilinear Functions," Mr. T. J. I'A. Bromwich.

Mr. Tucker's in-triangles are the triangles formed by lines perpendicular to the antiparallels of a triangle. If  $\alpha, \beta, \gamma$  are the angular points on CA, AB, BC, and  $\alpha', \beta', \gamma'$  the points on AB, BC, CA, then  $\alpha = \alpha' = 180^\circ - 2A$ , and so on. Parallels through  $\alpha, \alpha'$  to BC, and so on, intersect in the in-centres of  $\alpha\beta\gamma, \alpha'\beta'\gamma'$ . These points and the centroids lie on a line through P, the centre of perspective of the triangles. The intercept  $\gamma\beta' \alpha \sec A$ . The co-ordinates of P are as  $p \cos(B-C), q \cos(C-A), r \cos(A-B)$ , where  $p, q, r$  stand for  $\sin 2A, \sin 2B, \sin 2C$ ; of the in-centres  $q \cos A, r \cos B, p \cos C$ , and  $r \cos A, p \cos B, q \cos C$ ; of the symmedian points  $pq [p \cos A + q \cos(B-C)], \dots, \dots$ , and  $rp [p \cos A + r \cos(B-C)], \dots, \dots$



## THE SHORTHAND REVOLUTION.

An interesting booklet containing valuable information, and Shorthand Alphabet, specimens, &c., gratis.

Rev. J. E. RYAN, Christian Brothers' School, St. John's, N.F., writes:—"Nearly every boy leaves school a *verbatim reporter*. Our boys have the greatest facility in obtaining the most lucrative positions in the city."

Mr. CHAS. W. RERCE, Thomas Street Board School, Limehouse, E., writes:—"Her Majesty's Inspector has reported 'Shorthand shows remarkable success.'"

### SLOAN-DUPLYAN SHORTHAND.

"The system of the future."—Dr. G. F. SHAW, F.T.C.D.

It will cost you nothing to investigate.

Special Postal Classes for Teachers now forming.

SLOAN-DUPLYAN SHORTHAND INSTITUTE, ARKLOW SQUARE, RAMSGATE.

Headmasters should apply for

## EYRE & SPOTTISWOODE'S

ILLUSTRATED CATALOGUE OF

### DRAWING INSTRUMENTS,

Sets in Boxes, Protractors, Rules, Scales, Ruling Pens, Drawing Boards, Set-squares, T-squares, Drawing Pins, Indian Ink, Brushes, Palettes, Pencils, Crayons, &c., &c.

BOXES OF WATER AND OIL COLOURS,

And all Drawing Material suitable for Schools and Colleges.

LONDON: GREAT NEW STREET, FLEET STREET, E.C.

Now Ready.

ENGLISH, NEW CODE (1900).

## FIRST GRAMMAR READER,

By JOHN B. TIMSON, B.A. (St. Mark's, 1875-6).

Teacher's Oral Text-Book (Standards I.-IV.) and Revision Reader (Standards V.-VII.).

For the First Year's Course in English this work contains just what can be well done and no more. Forty Lessons are graduated for forty weeks, with easy Explanations in simple language, and careful Revisions as worked out in many years of actual teaching. No long Exercises and dry lists. Brief Memory Notes.

Large type, strongly bound, 1s. 6d.

JOHN MARSHALL & CO., PATERNOSTER ROW, E.C.  
E. J. ARNOLD & SON, LEEDS.

### STUDENTS' EDITION OF SIDNEY LEE'S "LIFE OF SHAKESPEARE."

With a Photogravure Plate and 4 Full-page Illustrations.  
Crown 8vo, 2s. 6d.

## SHAKESPEARE'S LIFE AND WORK.

Being an Abridgment chiefly for the Use of Students of  
"A LIFE OF WILLIAM SHAKESPEARE."

By SIDNEY LEE, Editor of "The Dictionary of National Biography," Honorary Doctor of Letters in the Victoria University.

\*\* Also the Fourth Ordinary Edition of "A Life of William Shakespeare," with two Portraits of Shakespeare, a Portrait of the Earl of Southampton, and Facsimiles of Shakespeare's known Signatures, crown 8vo, 7s. 6d.; and the Illustrated Library Edition, in 1 Vol. medium 8vo, profusely illustrated with Photogravures, Topographical Views, &c., 16s.

Literature.—"Mr. Lee's work, both for its literary qualities and its scholarship, does credit to English letters, and it will probably be regarded for years to come as the most useful, the most judicious, and the most authoritative of all existing biographies of the poet."

London: SMITH, ELDER, & CO., 15 Waterloo Place, S.W.

Seventh Edition. Crown 8vo.

### MODERN SIDE ARITHMETIC: EXAMPLES ONLY. By

the Rev. T. MITCHESON, B.A., Assistant-Master in City of London School.  
Part I., crown 8vo, cloth, pp. 119, 1s. (Answers, 1s.; Teachers' Copy, with Answers, 1s. 6d.)

Part II., crown 8vo, cloth, pp. 200, 1s. 6d. (Answers, 1s.; Teachers' Copy, with Answers, 2s.)

Complete in One Volume, crown 8vo, cloth, 2s. (Answers, 1s. 6d.; Teachers' Copy, with Answers, 3s.)

LONDON: FRANCIS HODGSON, 89 FARRINGDON STREET.

# MESSRS. BELL'S EDUCATIONAL LIST.

EDUCATIONAL CATALOGUE POST FREE ON APPLICATION.

READY IN JANUARY.

Part I., with Four Coloured Plates and Numerous other Illustrations.  
Crown 8vo, 1s. 6d.

## BELL'S LATIN COURSE.

FOR THE FIRST YEAR. IN THREE PARTS.

BY E. C. MARCHANT, M.A.,

AND

J. G. SPENCER, B.A.,

ASSISTANT-MASTER IN ST. PAUL'S PREPARATORY SCHOOL.

### From the Preface:—

"This Latin Course is intended to be used for instruction of children who have not hitherto done any Latin. The Course is complete in itself, and may be used without the aid of a dictionary or grammar. The Designers of the method have endeavoured to conform to the golden rule—*Secundum Naturam*. The results of this endeavour are apparent in arrangement of the matter.

1. The method is inductive. We attempt to lead the child from the known to the unknown, from the concrete to the abstract. Therefore our rules follow, instead of preceding, the exercises; the rule sums up what has been practically learnt above it.

2. We make the fullest use of the *eye*, first by employing conspicuous and varied *type*, secondly by employing *pictures*. In practising vocabulary, it will be found useful to place a picture before the child and ask for the Latin names of the details in the design. It will be a revelation to some teachers to find how quickly the child will learn the words.

3. The *subjects* of the Exercises are *interesting*: indeed, we have even ventured to try to amuse, as well as to instruct. *Ridentem dicere verum quid vetat?* is a question to which, in teaching children, it is surely safe and right at times to answer *Nihil*.

4. The Exercises, from the very start, are *coherent* and sensible: we do not attempt to rival *Ollendorf*.

5. Each part consists of two divisions—the one containing the 'Latin into English,' the other 'English into Latin.' These may be used *pari passu*, or separately; and the book can be made into either a reader or an exercise book only, if it is desired. At the end of the first part the learner will know the inflexion of substantives and adjectives of the first and second declensions, the indicative mood of *sum* and of the first conjugation, and the personal pronouns. All the Exercises on verbs are given in the form of letters, dialogues, or stories, so as to introduce freely, all the three persons of the verb. Thus the learner will be able to make simple sentences of considerable length, since he will understand how to employ every word and grammatical form which he has learned.

Believing that the elementary teaching of Latin has made more advance on the Continent than in England, we have examined the most successful German works on the subject. We have also sought the advice of leading authorities on education, both English and American; and it is hoped that our method will commend itself to *training colleges* as well as to preparatory schools."

## BELL'S ILLUSTRATED CLASSICS.

NEW VOLUMES.

GREEK PLAYS. 2s. each.

**AESCHYLUS.—PROMETHEUS VINCTUS.** Edited by C. E. LAURENCE, M.A., Second Master at Blackheath School. [Jan.]

**EURIPIDES.—ALCESTIS.** Edited by E. H. BLAKENEY, M.A., Headmaster of Sir Roger Manwood's Grammar School, Sandwich. [Dec.]

**EURIPIDES.—BACCHAE.** Edited by G. M. GWYTHER, M.A., Assistant-Master at Plymouth College. [Jan.]

**EURIPIDES.—HECUBA.** Edited by the Rev. A. W. UPCOTT, M.A., Headmaster of St. Edmund's School, Canterbury. [In the press.]

**EURIPIDES.—MEDEA.** Edited by the Rev. T. NICKLIN, M.A., Assistant-Master at Llandoverly College. [In the press.]

## BELL'S ILLUSTRATED LATIN READERS.

NEW VOLUME. Price 1s.

**SCALAE TERTIAE.** Graduated Extracts in Verse and Prose from Phaedrus, Ovid, Caesar, and Nepos. With Notes, Vocabulary, and Illustrations. By E. C. MARCHANT, M.A.

Full Illustrated List of this Series post free on application.

Fcap. 8vo, 2s. 6d. net.

**A SOLDIER IN CHRIST'S ARMY.** An Explanation of Confirmation and the Catechism for Public School Boys. By A. C. CHAMPNEYS, M.A., formerly a House-Master at Marlborough College.

Small post 8vo, 3s. 6d.

**THE LETTERS OF THOMAS GRAY.** Including the Correspondence of Gray and Mason. Edited, with an Introduction and Notes, by DUNCAN C. TOVEY, Editor of "Gray and his Friends," &c. Vol. I. [Bohn's Standard Library.]

Post 8vo, 7s. 6d. net.

**LEADING DOCUMENTS OF ENGLISH HISTORY.** Together with Illustrative Material from Contemporary Writers and a Bibliography of Sources. By GUY CARLETON LEE, Ph.D., of Johns Hopkins University.

With 83 Portraits and other Illustrations. Imperial 8vo, 21s. net.

**SIDE LIGHTS ON ENGLISH HISTORY.** Being Extracts from Letters, Papers, and Diaries of the past three centuries. Collected and arranged by ERNEST F. HENDERSON, Ph.D.

Crown 8vo, 2s. 6d.

**ROUEN—THE CATHEDRAL AND OTHER CHURCHES.** By the Rev. T. PERKINS, M.A., Rector of Turnworth, Dorset. With 50 Illustrations, chiefly from Photographs by the Author. [Bell's Continental Churches.]

Crown 8vo, 1s. 6d.

**WORCESTER CATHEDRAL.** By E. F. STRANGE. With 53 Illustrations. [Bell's Cathedral Series.]



# OXFORD UNIVERSITY PRESS.

**The Holy Bible: Two-Version Edition.** Being the AUTHORIZED VERSION, with the differences of the REVISED VERSION printed in the Margins, so that both Texts can be read from the same page. With central column References. Brevier 8vo. Prices:—On Ordinary Paper, from 7s. 6d.; on Oxford India Paper, 10s. 6d. Interleaved with Writing Paper, prices from 21s.; or bound with "The Oxford Helps to the Study of the Bible," prices from 18s. 6d.

**Helps to the Study of the Bible,** taken from the "Oxford Bible for Teachers." New, Enlarged, and Illustrated Edition. Prices from 1s. net.

**A Greek Testament Primer.** An Easy Grammar and Reading Book for the use of Students beginning Greek. By E. MILLER, M.A. Second Edition. Extra fcap. 8vo, paper, 2s.; cloth, 3s. 6d.

**The Oxford Book of English Verse.** 1250–1900. Chosen and Edited by A. T. QUILLER-COUCH. Crown 8vo, top edge gilt, 7s. 6d.; extra fcap. 8vo, Oxford India paper, 10s. 6d. And in leather bindings for prizes.

**Demosthenes.—Speech on the Crown.** With Introduction and Notes, by EVELYN ABBOTT, M.A., and P. E. MATHESON, M.A. Extra fcap. 8vo, 3s. 6d.

**Aristophanes, The Peace.** With Introduction and Notes, by W. W. MERRY, D.D., Rector of Lincoln College, Oxford. Extra fcap. 8vo, price 3s. 6d.

**Cicero.** Philippic Orations I, II, III, V, VII. With Introduction and Notes. By J. R. KING, M.A. Extra fcap. 8vo, 3s. 6d.

**Tales of the Roman Republic.** Part I. J. BARROW ALLEN. Extra fcap. 8vo, 1s. 6d.

**A Treatise on Statics with Applications to Physics.** By G. M. MINCHIN, M.A. Vol. I, Equilibrium of Coplanar Forces. Fifth Edition. 8vo, 10s. 6d. Vol. II, Non-Coplanar Forces. Fourth Edition. 8vo, 16s.

**Hydrostatics and Elementary Hydrokinetics.** By the Same Author. Crown 8vo, 10s. 6d.

**Geometry for Beginners.** An easy Introduction to Geometry for young learners. By the Same Author. Extra fcap. 8vo, 1s. 6d.

**The "Junior" Euclid.** Books I and II. By S. W. FINN, M.A. Crown 8vo, 1s. 6d.

\* \* \* Books III and IV. *In Preparation.*

**Euclid Revised.** Ed. by R. C. J. NIXON. Crown 8vo, 6s. Sold separately: Book I, 1s.; Books I, II, 1s. 6d.; Books I–IV, 3s.; Books V, VI, 3s. 6d.

**Elementary Plane Trigonometry.** By R. C. J. NIXON. Crown 8vo, 7s. 6d.

**Introduction to the Mathematical Theory of Electricity and Magnetism.** By W. T. A. EMTAGE. Second Edition. Crown 8vo, 7s. 6d.

**Class-Book of Chemistry.** By W. W. FISHER. Fourth Edition. Crown 8vo, 4s. 6d.

**An Elementary Treatise on Pure Geometry.** With Numerous Examples. By J. WELLESLEY RUSSELL, M.A. Crown 8vo, 10s. 6d.

**Elementary Mechanics of Solids and Fluids.** By A. L. SELBY, M.A. Crown 8vo, 7s. 6d.

**The Collected Mathematical Papers of Henry John Stephen Smith, M.A., F.R.S.,** late Savilian Professor of Geometry in University of Oxford. Edited by J. W. L. GLAISHER, Sc.D., F.R.S. 2 vols. 4to, £3. 3s.

**Elementary Architecture (Classic and Gothic)** for Schools, Art Students, and General Readers. By MARTIN A. BUCKMASTER. With thirty-eight full-page Illustrations. Crown 8vo, 4s. 6d.

**Introduction to Greek Sculpture.** By L. E. UPCOTT, M.A. Second Edition. Crown 8vo, 4s. 6d.

**An Elementary Latin Dictionary.** By CHARLTON T. LEWIS, Ph.D. Square 8vo, 7s. 6d.

**A Greek-English Lexicon,** abridged from the Quarto Edition, chiefly for the use of Schools. Square 12mo, 7s. 6d.

## Forthcoming School Editions in the Clarendon Press Series.

**Demosthenes.—The Speech against Meidias.** With Introduction and Notes by J. R. KING, M.A.

**Thucydides.—Book III.** Edited by H. F. FOX, M.A.

**Euripides.—Hecuba.** By C. B. HEBERDEN, M.A., Principal of Brasenose College, Oxford.

**A French Grammar.** By A. H. WALL, M.A.

**A Historical Primer of French Phonetics and Inflection.** By MARGARET S. BRITAIN, M.A., French Lecturer in Victoria College, Belfast. With Introductory Note by PAGET TOYNBEE, M.A. Extra fcap. 8vo, cloth, 2s. 6d. [Ready.]

**The Three Friends.** A Story of Rugby in the Forties. Crown 8vo, cloth extra, 3s. [Published by Henry Frowde.]

LONDON: HENRY FROWDE, OXFORD UNIVERSITY PRESS WAREHOUSE, AMEN CORNER, E.C.

# WINTER MEETING FOR TEACHERS

(JANUARY, 1901)

CONDUCTED BY THE

## COLLEGE OF PRECEPTORS.

(BLOOMSBURY SQUARE, LONDON, W.C.)

---

THE Third Winter Meeting for Teachers will take place at the College of Preceptors in the first fortnight in January, 1901.

The Meeting will extend over two weeks, and the Programme will include Lectures on general principles of education and on methods of teaching various school subjects, with exhibits of apparatus, and visits to educational institutions in London.

The Fee for the whole Meeting is 15s.

Tickets may be obtained from the Secretary of the College of Preceptors, and should be applied for on or before December 22.

Tickets (not transferable) will also be issued AT HALF FEES (*i.e.*, 7s. 6d. for the whole Meeting) to members of the following Teachers' Societies:—The Teachers' Guild (Central Guild and Branches), The Birmingham Teachers' Association, The Liverpool Teachers' Guild, The Training College Association, The Headmasters' Conference, The Incorporated Association of Headmasters, The Private Schools' Association, The Assistant-Masters' Association, The Association of Assistant-Mistresses, The Froebel Society, The National Union of Teachers.

Tickets at half fees will also be issued to candidates at the Diploma Examination of the College of Preceptors (January 1-5).

Members of the College of Preceptors will receive a ticket (not transferable) without charge, on applying for it to the Secretary of the College on or before December 20.

Tickets, price 1s., for any single Lecture may also be had at the College on the day of the Lecture, if the available seats are not already occupied.

C. R. HODGSON, B.A.,  
*Secretary.*

## LIST OF LECTURES.

---

- Principles and Practice of Education.** Four Lectures. By P. A. BARNETT, M.A.
- Discipline and Form Management.** By H. L. WITHERS, M.A., Professor of Education in Owens College, Manchester.
- The Choice of Studies,** with special reference to education in large towns. By J. J. FINDLAY, M.A., Ph.D., Headmaster of the Cardiff Intermediate School for Boys.
- The Development of the Moral Sense in Children.** By Professor EARL BARNES.
- On Observation of Children,** as a guide to the study of educational problems. By Dr. FRANCIS WARNER, F.R.C.P., Physician to the London Hospital.
- The Teaching of Mathematics.** Three Lectures. By Professor HUDSON, M.A., King's College, London.
- The Teaching of Elementary Arithmetic.** By Miss M. E. FINDLAY, Southlands Training College, Battersea, S.W.
- The Visualization of certain Processes in Arithmetic,** by means of metric magnitudes and other apparatus. By ADOLPH SONNENSCHN.
- The Aims of Teaching Foreign Languages in Schools.** By H. W. EVE, M.A., Dean of the College of Preceptors.
- Methods of Teaching Modern Foreign Languages.** By Professor STRONG, University College, Liverpool.
- The Colloquial Teaching of French** (with Demonstration). By S. BARLET, B.Sc., Mercers' School, E.C.
- "Die Neuere Richtung,"** with special reference to the teaching of German. By W. C. BROWN, M.A., F.C.P., Tollington Park College, N.
- A Reading Lesson.** By A. BURRELL, M.A., Principal of the Borough Road Training College, Isleworth.
- The Teaching of History.** By W. M. CHILDS, M.A., Vice-Principal of Reading College.
- The Teaching of Geography.** By EDWIN BARKBY, B.A., Vice-Principal of the Borough Road Training College, Isleworth.
- Ruskin and Education.** By J. L. PATON, M.A., Headmaster of University College School, W.C.
- An Educational Reformer** (the late R. H. Quick). By J. RUSSELL, B.A., Hon. Librarian of the Teachers' Guild.
- On Tennyson's "In Memoriam."** By H. W. EVE, M.A., Dean of the College of Preceptors.

*All the above Lectures will be delivered at the College of Preceptors.*

---

### *Conference on Science Teaching in connexion with the Technical Education Board of the London County Council.*

(UNDER THE DIRECTION OF C. W. KIMMINS, M.A., D.Sc.)

A Conference, extending over two days, and open to all teachers attending the Meeting, will be held at the South-West London Polytechnic, Manresa Road, Chelsea (Sloane Square Station). In connexion with the Conference there will be an Exhibition of Apparatus used in schools for Practical Science Teaching.

---

### *Visits to Educational Institutions, &c.*

Visits (to take place during the afternoons) will be made to Christ's Hospital, the City of London School, the Technical College, South Kensington, the Northern Polytechnic Institute, the Central Foundation School for Girls, Spital Square, E., the South Hampstead School of the Girls' Public Day School Company, and the Passmore Edwards Settlement, Tavistock Place. Instruments for taking the weights and measurements of children will be exhibited by Messrs. Avery.

**TIME TABLE. — January 1 to January 5.**

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
10.	<p align="center">PRINCIPLES AND PRACTICE OF EDUCATION. Mr. P. A. Barnett.</p>					<p align="center"><i>The Choice of Studies.</i> Dr. J. J. Findlay.</p>
		I. <i>Formulas in Education.</i>	II. <i>The "Abstract" Studies in Education.</i>	III. <i>The "Esthetic" Studies in Education.</i>	IV. <i>The Construction of Time Tables, and Examinations.</i>	
11.30.	<p align="center">THE TEACHING OF MATHEMATICS. Professor Hudson.</p>					<p align="center"><i>The Teaching of Elementary Arithmetic.</i> Miss Findlay.</p>
		I. <i>Arithmetic.</i>	II. <i>Algebra.</i>	III. <i>Geometry.</i>		<p align="center"><i>Visualization of Arithmetical Processes.</i> Mr. A. Sonnenschein.</p>
2.30.			<p align="center">Visit to Christ's Hospital.</p>	<p align="center">Visit to the Technical College, Exhibition Road, S. Kensington.</p>	<p align="center">Visit to the City of London School.</p>	
5.		<p align="center"><i>Ruskin and Education.</i> Mr. J. L. Paton.</p>	<p align="center"><i>The Development of the Moral Sense in Children.</i> Professor Earl Barnes.</p>	<p align="center"><i>Tennyson's "In Memoriam."</i> Mr. H. W. Eve.</p>	<p align="center"><i>A Reading Lesson.</i> Principal Burrell.</p>	<p align="center">Visit to the Passmore Edwards Settlement, Tavistock Place.</p>

**January 7 to January 11.**

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
10.	<p align="center">THE TEACHING OF MODERN FOREIGN LANGUAGES. <i>The Aims of the Teaching.</i> Mr. H. W. Eve.</p>	<p align="center"><i>Colloquial Teaching of French (with Demonstration).</i> Mr. S. Barlet.</p>	<p align="center"><i>The Teaching of History.</i> Mr. W. M. Childs.</p>	<p align="center">CONFERENCE ON SCIENCE TEACHING. (Technical Education Board.) 11 a.m. to 1 p.m.      11 a.m. to 1 p.m.</p>		
11.30.	<p align="center"><i>Methods of Teaching.</i> Professor Strong.</p>	<p align="center"><i>"Die Neuere Richtung" in the Teaching of German.</i> Mr. W. C. Brown.</p>	<p align="center"><i>The Teaching of Geography.</i> Mr. E. Barkby.</p>	<p align="center">(a) <i>Instrument-Making for Schools and Technical Classes.</i> (b) <i>Co-ordination of Workshop and Laboratory Instruction.</i></p>		<p align="center"><i>Science Teaching in Girls' Schools, and the Teaching of Domestic Science.</i></p>
2.30.	<p align="center">Visit to the Central Foundation School for Girls, Spital Square, E.C.</p>	<p align="center">Visit to the Northern Polytechnic Institute, Holloway Road, N.</p>	<p align="center">Visit to the South Hampstead School of the Girls' Public Day School Company.</p>	<p align="center">2 to 4 p.m.      2 to 4 p.m.</p>		
5.	<p align="center"><i>Discipline and Form Management.</i> Professor Withers.</p>	<p align="center"><i>A recent Educational Reformer.</i> Mr. J. Russell.</p>	<p align="center"><i>Observation of Children.</i> Dr. Francis Warner.</p>	<p align="center"><i>The Fitting-up of Laboratories: Chemical, Physical, and Mechanical.</i></p>		<p align="center"><i>Nature Teaching for Young Children, and Science Teaching from a Psychological Point of View.</i></p>

## DIRECTORY.

A Directory of the Meeting will be issued during the month of December, containing fuller details or brief Syllabuses of some of the Lectures, a list of the Meetings of various Teachers' Societies which are to take place in London during January, and other items of interest to Teachers intending to visit London at this time.

NOTE.—If any alterations are made in the arrangements now announced, the corrections will be found in this Directory. Such corrections will also be announced in a revised issue of this Programme, which will be sent, *after December 20, together with the tickets*, to all who enter their names. The Directory may be obtained, post free, for 6d., from the Secretary of the College, after December 20. Teachers wishing to purchase the Directory should apply for it when sending their fee for the ticket of admission.





