

WEALE'S SERIES

OF

SCIENTIFIC AND TECHNICAL WORKS.

"It is not too much to say that no books have ever proved more popular with or more useful to young engineers and others than the excellent treatises comprised in WEALE'S SERIES."—**Engineer.**

" A New Classified List.

| | PAGE | | PAGE |
|--|------|-----------------------------------|------|
| CIVIL ENGINEERING AND SURVEYING | 2 | ARCHITECTURE AND BUILDING . . . | 6 |
| MINING AND METALLURGY | 3 | INDUSTRIAL AND USEFUL ARTS. . . | 9 |
| MECHANICAL ENGINEERING | 4 | AGRICULTURE, GARDENING, ETC. . . | 10 |
| NAVIGATION, SHIPBUILDING, ETC. . . | 5 | MATHEMATICS, ARITHMETIC, ETC. . . | 12 |
| BOOKS OF REFERENCE AND MISCELLANEOUS VOLUMES . . . | | 14 | |



**CROSBY LOCKWOOD AND SON,
7, STATIONERS' HALL COURT, LONDON, E.C.**

1900.

CIVIL ENGINEERING & SURVEYING.

Civil Engineering.

By HENRY LAW, M.Inst.C.E. Including a Treatise on HYDRAULIC ENGINEERING by G. R. BURNELL, M.I.C.E. Seventh Edition, revised, with LARGE ADDITIONS by D. K. CLARK, M.I.C.E. 6/6

Pioneer Engineering:

A Treatise on the Engineering Operations connected with the Settlement of Waste Lands in New Countries. By EDWARD DONSON, M.Inst.C.E. With numerous Plates. Second Edition 4/6

Iron Bridges of Moderate Span:

Their Construction and Erection. By HAMILTON W. PENDRED. With 40 Illustrations 2/0

Iron and Steel Bridges and Viaducts.

A Practical Treatise upon their Construction for the use of Engineers, Draught-men, and Students. By FRANCIS CAMPIN, C.E. With numerous Illustrations 3/6

Constructional Iron and Steel Work,

As applied to Public, Private, and Domestic Buildings. By FRANCIS CAMPIN, C.E. 3/6

Tubular and other Iron Girder Bridges.

Describing the Britannia and Conway Tubular Bridges. By G. DRYSDALE DEMPSEY, C.E. Fourth Edition 2/0

Materials and Construction:

A Theoretical and Practical Treatise on the Strains, Designing, and Erection of Works of Construction. By FRANCIS CAMPIN, C.E. 3/0

Sanitary Work in the Smaller Towns and in Villages.

By CHARLES SLAGG, Assoc. M.Inst.C.E. Third Edition 3/0

Roads and Streets (The Construction of).

In Two Parts: I. THE ART OF CONSTRUCTING COMMON ROADS, by H. LAW, C.E., Revised by D. K. CLARK, C.E.; II. RECENT PRACTICE: including Pavements of Wood, Asphalte, &c. By D. K. CLARK, C.E. 4/6

Gas Works (The Construction of),

And the Manufacture and Distribution of Coal Gas. By S. HUGHES, C.E. Re-written by WILLIAM RICHARDS, C.E. Eighth Edition 5/6

Water Works

For the Supply of Cities and Towns. With a Description of the Principal Geological Formations of England as influencing Supplies of Water. By SAMUEL HUGHES, F.G.S., C.E. Enlarged Edition 4/0

The Power of Water,

As applied to drive Flour Mills, and to give motion to Turbines and other Hydrostatic Engines. By JOSEPH GLYNN, F.R.S. New Edition 2/0

Wells and Well-Sinking.

By JOHN GEO. SWINDELL, A.R.I.B.A., and G. R. BURNELL, C.E. Revised Edition. With a New Appendix on the Qualities of Water. Illustrated 2/0

The Drainage of Lands, Towns, and Buildings.

By G. D. DEMPSEY, C.E. Revised, with large Additions on Recent Practice, by D. K. CLARK, M.I.C.E. Third Edition 4/6

The Blasting and Quarrying of Stone,

For Building and other Purposes. With Remarks on the Blowing up of Bridges. By Gen. Sir J. BURGUYNE, K.C.B. 1/6

Foundations and Concrete Works.

With Practical Remarks on Footings, Planking, Sand, Concrete, Béton, Pile-driving, Caissons, and Cofferdams. By E. DONSON, M.R.I.B.A. Eighth Edition 1/6

Pneumatics,

Including Acoustics and the Phenomena of Wind Currents, for the Use of Beginners. By CHARLES TOMLINSON, F.R.S. Fourth Edition . 1/6

Land and Engineering Surveying.

For Students and Practical Use. By T. BAKER, C.E. Eighteenth Edition, Revised and Extended by F. E. DIXON, A.M. Inst. C.E., Professional Associate of the Institution of Surveyors. With numerous Illustrations and two Lithographic Plates *Just published* 2/0

Mensuration and Measuring.

For Students and Practical Use. With the Mensuration and Levelling of Land for the purposes of Modern Engineering. By T. BAKER, C.E. New Edition by E. NUGENT, C.E. 1/6

MINING AND METALLURGY.

Mineralogy,

Rudiments of. By A. RAMSAY, F.G.S. Fourth Edition, revised and enlarged. Woodcuts and Plates 3/6

Coal and Coal Mining,

A Rudimentary Treatise on. By the late Sir WARINGTON W. SMYTH, F.R.S. Eighth Edition, revised and extended by T. FORSTER BROWN. *Just published* 3/6

Metallurgy of Iron.

Containing Methods of Assay, Analyses of Iron Ores, Processes of Manufacture of Iron and Steel, &c. By H. BAUERMAN, F.G.S. With numerous Illustrations. Sixth Edition, revised and enlarged 5/0

The Mineral Surveyor and Valuer's Complete Guide.

By W. LINTERN. Fourth Edition, with an Appendix on Magnetic and Angular Surveying 3/6

Slate and Slate Quarrying:

Scientific, Practical, and Commercial. By D. C. DAVIES, F.G.S. With numerous Illustrations and Folding Plates. Fourth Edition . . . 3/0

A First Book of Mining and Quarrying,

With the Sciences connected therewith, for Primary Schools and Self Instruction. By J. H. COLLINS, F.G.S. Second Edition 1/6

Subterraneous Surveying,

With and without the Magnetic Needle. By T. FENWICK and T. BAKER, C.E. Illustrated 2/6

Mining Tools.

Manual of. By WILLIAM MORGANS, Lecturer on Practical Mining at the Bristol School of Mines 2/6

Mining Tools, Atlas

Of Engravings to Illustrate the above, containing 235 Illustrations of Mining Tools, drawn to Scale. 4to 4/6

Physical Geology,

Partly based on Major-General PORTLOCK'S "Rudiments of Geology." By RALPH TATE, A.L.S., &c. Woodcuts. 2/0

Historical Geology,

Partly based on Major-General PORTLOCK'S "Rudiments." By RALPH TATE, A.L.S., &c. Woodcuts 2/6

Geology, Physical and Historical.

Consisting of "Physical Geology," which sets forth the Leading Principles of the Science; and "Historical Geology," which treats of the Mineral and Organic Conditions of the Earth at each successive epoch. By RALPH TATE, F.G.S. 4/6

Electro-Metallurgy,

Practically Treated. By ALEXANDER WATT. Tenth Edition, enlarged and revised, including the most Recent Processes 3/6

MECHANICAL ENGINEERING.

- The Workman's Manual of Engineering Drawing.**
By JOHN MAXTON, Instructor in Engineering Drawing, Royal Naval College, Greenwich. Seventh Edition. 300 Plates and Diagrams. 3/6
- Fuels: Solid, Liquid, and Gaseous.**
Their Analysis and Valuation. For the Use of Chemists and Engineers. By H. J. PHILLIPS, F.C.S., formerly Analytical and Consulting Chemist to the Great Eastern Railway. Third Edition. 2/0
- Fuel, Its Combustion and Economy.**
Consisting of an Abridgment of "A Treatise on the Combustion of Coal and the Prevention of Smoke." By C. W. WILLIAMS, A.I.C.E. With Extensive Additions by D. K. CLARK, M.Inst.C.E. Fourth Edition. 3/6
- The Boilermaker's Assistant**
In Drawing, Templating, and Calculating Boiler Work, &c. By J. COURTNEY, Practical Boilermaker. Edited by D. K. CLARK, C.E. 2/0
- The Boiler-Maker's Ready Reckoner,**
With Examples of Practical Geometry and Templating for the Use of Platers, Smiths, and Riveters. By JOHN COURTNEY. Edited by D. K. CLARK, M.I.C.E. Fourth Edition. 4/0
- * * * *The last two Works in One Volume, half-bound, entitled "THE BOILER-MAKER'S READY-RECKONER AND ASSISTANT."* By J. COURTNEY and D. K. CLARK. Price 7/0.
- Steam Boilers:**
Their Construction and Management. By R. ARMSTRONG, C.E. Illustrated 1/6
- Steam and Machinery Management.**
A Guide to the Arrangement and Economical Management of Machinery. By M. POWIS BALE, M.Inst.M.E. 2/6
- Steam and the Steam Engine,**
Stationary and Portable. Being an Extension of the Treatise on the Steam Engine of Mr. J. SEWELL. By D. K. CLARK, C.E. Fourth Edition 3/6
- The Steam Engine,**
A Treatise on the Mathematical Theory of, with Rules and Examples for Practical Men. By T. BAKER, C.E. 1/6
- The Steam Engine.**
By Dr. LARDNER. Illustrated. 1/6
- Locomotive Engines,**
By G. D. DEMPSEY, C.E. With large Additions treating of the Modern Locomotive, by D. K. CLARK, M.Inst.C.E. 3/0
- Locomotive Engine-Driving.**
A Practical Manual for Engineers in charge of Locomotive Engines. By MICHAEL REYNOLDS. Tenth Edition. 3s. 6d. limp; cloth boards. 4/6
- Stationary Engine-Driving.**
A Practical Manual for Engineers in charge of Stationary Engines. By MICHAEL REYNOLDS. Sixth Edition. 3s. 6d. limp; cloth boards. 4/6
- The Smithy and Forge.**
Including the Farrier's Art and Coach Smithing. By W. J. E. CRANE. Fourth Edition. 2/6
- Modern Workshop Practice,**
As applied to Marine, Land, and Locomotive Engines, Floating Docks, Dredging Machines, Bridges, Ship-building, &c. By J. G. WINTON. Fourth Edition, Illustrated. 3/6
- Mechanical Engineering.**
Comprising Metallurgy, Moulding, Casting, Forging, Tools, Workshop Machinery, Mechanical Manipulation, Manufacture of the Steam Engine, &c. By FRANCIS CAMPIN, C.E. Third Edition. 2/6
- Details of Machinery.**
Comprising Instructions for the Execution of various Works in Iron in the Fitting-Shop, Foundry, and Boiler-Yard. By FRANCIS CAMPIN, C.E. 3/0

- Elementary Engineering:**
A Manual for Young Marine Engineers and Apprentices. In the Form of Questions and Answers on Metals, Alloys, Strength of Materials, &c. By J. S. BREWER. Fourth Edition 1/6
- Power in Motion:**
Horse-power Motion, Toothed-Wheel Gearing, Long and Short Driving Bands, Angular Forces, &c. By JAMES ARMOUR, C.E. Third Edition 2/0
- Iron and Heat,**
Exhibiting the Principles concerned in the Construction of Iron Beams, Pillars, and Girders. By J. ARMOUR, C.E. 2/6
- Practical Mechanism,**
And Machine Tools. By T. BAKER, C.E. With Remarks on Tools and Machinery, by J. NASMYTH, C.E. 2/6
- Mechanics:**
Being a concise Exposition of the General Principles of Mechanical Science, and their Applications. By CHARLES TOMLINSON, F.R.S. 1/6
- Cranes (The Construction of),**
And other Machinery for Raising Heavy Bodies for the Erection of Buildings, &c. By JOSEPH GLYNN, F.R.S. 1/6

NAVIGATION, SHIPBUILDING, ETC.

- The Sailor's Sea Book:**
A Rudimentary Treatise on Navigation. By JAMES GREENWOOD, B.A. With numerous Woodcuts and Coloured Plates. New and enlarged Edition. By W. H. ROSSER 2/6
- Practical Navigation.**
Consisting of THE SAILOR'S SEA-BOOK, by JAMES GREENWOOD and W. H. ROSSER; together with Mathematical and Nautical Tables for the Working of the Problems, by HENRY LAW, C.E., and Prof. J. R. YOUNG. 7/0
- Navigation and Nautical Astronomy,**
In Theory and Practice. By Prof. J. R. YOUNG. New Edition. 2/6
- Mathematical Tables,**
For Trigonometrical, Astronomical, and Nautical Calculations; to which is prefixed a Treatise on Logarithms. By H. LAW, C.E. Together with a Series of Tables for Navigation and Nautical Astronomy. By Professor J. R. YOUNG. New Edition 4/0
- Masting, Mast-Making, and Rigging of Ships.**
Also Tables of Spars, Rigging, Blocks; Chain, Wire, and Hemp Ropes, &c., relative to every class of vessels. By ROBERT KIPPING, N.A. 2/0
- Sails and Sail-Making.**
With Draughting, and the Centre of Effort of the Sails. By ROBERT KIPPING, N.A. 2/6
- Marine Engines and Steam Vessels.**
By R. MURRAY, C.E. Eighth Edition, thoroughly revised, with Additions by the Author and by GEORGE CARLISLE, C.E. 4/6
- Naval Architecture:**
An Exposition of Elementary Principles. By JAMES PEAKE 3/6
- Ships for Ocean and River Service,**
Principles of the Construction of. By HAKON A. SOMMERFELDT 1/6
- Atlas of Engravings**
To illustrate the above. Twelve large folding Plates. Royal 4to, cloth 7/6
- The Forms of Ships and Boats.**
By W. BLAND. Ninth Edition, with numerous Illustrations and Models 1/6

ARCHITECTURE AND THE BUILDING ARTS.

Constructional Iron and Steel Work,

As applied to Public, Private, and Domestic Buildings. By FRANCIS CAMPIN, C.E. 3/6

Building Estates:

A Treatise on the Development, Sale, Purchase, and Management of Building Land. By F. MAITLAND. Third Edition 2/0

The Science of Building:

An Elementary Treatise on the Principles of Construction. By E. WYNDHAM TARN, M.A. Lond. Fourth Edition 3/6

The Art of Building:

General Principles of Construction, Strength, and Use of Materials, Working Drawings, Specifications, &c. By EDWARD DOBSON, M.R.I.B.A. 2/0

A Book on Building,

Civil and Ecclesiastical. By Sir EDMUND BECKETT, Q.C. (Lord GRIMTHORPE). Second Edition 4/6

Dwelling-Houses (The Erection of),

Illustrated by a Perspective View, Plans, and Sections of a Pair of Villas, with Specification, Quantities, and Estimates. By S. H. BROOKS, Architect 2/6

Cottage Building.

By C. BRUCE ALLEN. Eleventh Edition, with Chapter on Economic Cottages for Allotments, by E. E. ALLEN, C.E. 2/0

Acoustics in Relation to Architecture and Building:

The Laws of Sound as applied to the Arrangement of Buildings. By Professor T. ROGER SMITH, F.R.I.B.A. New Edition, Revised 1/6

The Rudiments of Practical Bricklaying.

General Principles of Bricklaying; Arch Drawing, Cutting, and Setting; Pointing; Paving, Tiling, &c. By ADAM HAMMOND. With 68 Woodcuts 1/6

The Art of Practical Brick Cutting and Setting.

By ADAM HAMMOND. With 90 Engravings 1/6

Brickwork:

A Practical Treatise, embodying the General and Higher Principles of Bricklaying, Cutting and Setting; with the Application of Geometry to Roof Tiling, &c. By F. WALKER 1/6

Bricks and Tiles,

Rudimentary Treatise on the Manufacture of; containing an Outline of the Principles of Brickmaking. By E. DOBSON, M.R.I.B.A. Additions by C. TOMLINSON, F.R.S. Illustrated 3/0

The Practical Brick and Tile Book.

Comprising: BRICK AND TILE MAKING, by E. DOBSON, M.INST.C.E.; PRACTICAL BRICKLAYING, by A. HAMMOND; BRICK-CUTTING AND SETTING, by A. HAMMOND. 550 pp. with 270 Illustrations, half-bound 6/0

Carpentry and Joinery—

THE ELEMENTARY PRINCIPLES OF CARPENTRY. Chiefly composed from the Standard Work of THOMAS TREGOLD, C.E. With Additions, and TREATISE ON JOINERY, by E. W. TARN, M.A. Seventh Edition 3/6

Carpentry and Joinery—Atlas

Of 35 Plates to accompany and Illustrate the foregoing book. With Descriptive Letterpress. 4to 6/0

A Practical Treatise on Handrailing;

Showing New and Simple Methods. By GEO. COLLINGS. Second Edition, Revised, including a TREATISE ON STAIRBUILDING. With Plates . 2/6

Circular Work in Carpentry and Joinery.

A Practical Treatise on Circular Work of Single and Double Curvature. By GEORGE COLLINGS. Third Edition 2/6

Roof Carpentry:

Practical Lessons in the Framing of Wood Roofs. For the Use of Working Carpenters. By GEO. COLLINGS 2/0

The Construction of Roofs of Wood and Iron;

Deduced chiefly from the Works of Robison, Tredgold, and Humber. By E. WYNDHAM TARN, M.A., Architect. Third Edition 1/6

The Joints Made and Used by Builders.

By WYVILL J. CHRISTY, Architect. With 160 Woodcuts 3/0

Shoring

And its Application: A Handbook for the Use of Students. By GEORGE H. BLAGROVE. With 31 Illustrations 1/6

The Timber Importer's, Timber Merchant's, and Builder's Standard Guide.

By R. E. GRANDY 2/0

Plumbing:

A Text-Book to the Practice of the Art or Craft of the Plumber. With Chapters upon House Drainage and Ventilation. By WM. PATON BUCHAN. Eighth Edition, Re-written and Enlarged, with 500 Illustrations . 3/6

Ventilation:

A Text Book to the Practice of the Art of Ventilating Buildings. By W. P. BUCHAN, R.P., Author of "Plumbing," &c. With 170 Illustrations 3/6

The Practical Plasterer:

A Compendium of Plain and Ornamental Plaster Work. By W. KEMP 2/0

House Painting, Graining, Marbling, & Sign Writing.

With a Course of Elementary Drawing, and a Collection of Useful Receipts. By ELLIS A. DAVIDSON. Seventh Edition. Coloured Plates 5/0

*** The above, in cloth boards, strongly bound, 6/0*

A Grammar of Colouring

Applied to Decorative Painting and the Arts. By GEORGE FIELD. New Edition, enlarged, by ELLIS A. DAVIDSON. With Coloured Plates . 3/0

Elementary Decoration

As applied to Dwelling Houses, &c. By JAMES W. FACEY. Illustrated 2/0

Practical House Décoration.

A Guide to the Art of Ornamental Painting, the Arrangement of Colours in Apartments, and the Principles of Decorative Design. By JAMES W. FACEY. 2/6

*** The last two Works in One handsome Vol., half-bound, entitled "HOUSE DECORATION, ELEMENTARY AND PRACTICAL," price 5/0*

Portland Cement for Users.

By HENRY FAIJA, A.M.Inst.C.E. Third Edition, Corrected 2/0

Limes, Cements, Mortars, Concretes, Mastics, Plastering, &c.

By G. R. BURNELL C.E. Fifteenth Edition 1/6

Masonry and Stone-Cutting.

The Principles of Masonic Projection and their application to Construction.
By EDWARD DOBSON, M.R.I.B.A. 2/6

Arches, Piers, Buttresses, &c.:

Experimental Essays on the Principles of Construction. By W. BLAND. 1/6

Quantities and Measurements.

In Bricklayers', Masons', Plasterers', Plumbers', Painters', Paperhangers',
Gilders', Smiths', Carpenters' and Joiners' Work. By A. C. BEATON 1/6

The Complete Measurer:

Setting forth the Measurement of Boards, Glass, Timber and Stone. By R.
HORRAN. Sixth Edition 4/0

. *The above, strongly bound in leather, price 5/0.*

Light:

An Introduction to the Science of Optics. Designed for the Use of Students
of Architecture, Engineering, and other Applied Sciences. By E. WYND-
HAM FARN, M.A., Author of "The Science of Building," &c. 1/6

Hints to Young Architects.

By GEORGE WIGHTWICK, Architect. Sixth Edition, revised and enlarged
by G. HESKISSON GUILLAUME, Architect 3/6

Architecture—Orders:

The Orders and their Aesthetic Principles. By W. H. LEEDS. Illustrated. 1/6

Architecture—Styles:

The History and Description of the Styles of Architecture of Various
Countries, from the Earliest to the Present Period. By T. TALBOT BURY,
F.R.I.B.A. Illustrated 2/0

. ORDERS AND STYLES OF ARCHITECTURE, *in One Vol.*, 3/6.

Architecture—Design:

The Principles of Design in Architecture, as deducible from Nature and
exemplified in the Works of the Greek and Gothic Architects. By EDW.
LACY GARBETT, Architect. Illustrated 2/6

. *The three preceding Works in One handsome Vol., half bound, entitled
"MODERN ARCHITECTURE," price 6/0.*

Perspective for Beginners.

Adapted to Young Students and Amateurs in Architecture, Painting, &c.
By GEORGE PYNK 2/0

Architectural Modelling in Paper.

By T. A. RICHARDSON. With Illustrations, engraved by O. JEWITT 1/6

Glass Staining, and the Art of Painting on Glass.

From the German of Dr. GESSERT and EMANUEL OTTO FROMBERG. With
an Appendix on THE ART OF ENAMELLING 2/6

Vitruvius—The Architecture of.

In Ten Books. Translated from the Latin by JOSEPH GWILT, F.S.A.,
F.R.A.S. With 23 Plates 5/0

N.B.—This is the only Edition of VITRUVIUS procurable at a moderate price

Grecian Architecture.

An Inquiry into the Principles of Beauty in. With an Historical View of the
Rise and Progress of the Art in Greece. By the EARL OF ABERDEEN 1/0

. *The two preceding Works in One handsome Vol., half bound, entitled
"ANCIENT ARCHITECTURE," price 6/0.*

INDUSTRIAL AND USEFUL ARTS.**Cements, Pastes, Glues, and Gums.**

A Practical Guide to the Manufacture and Application of the various Agglutinants required for Workshop, Laboratory, or Office Use. With upwards of 900 Recipes and Formulæ. By H. C. STANDAGE . . . 2/0

Clocks and Watches, and Bells,

A Rudimentary Treatise on. By Sir EDMUND BECKETT, Q.C. (Lord GRIMTHORPE). Seventh Edition 4/6

The Goldsmith's Handbook.

Containing full Instructions in the Art of Alloying, Melting, Reducing, Colouring, Collecting and Refining, Recovery of Waste, Solders, Enamels, &c., &c. By GEORGE E. GEE. Fifth Edition 3/0

The Silversmith's Handbook,

On the same plan as the GOLDSMITH'S HANDBOOK. By GEORGE E. GEE. Third Edition 3/0

* * * *The last two Works, in One handsome Vol., half-bound, 7/0.*

The Hall-Marking of Jewellery.

Comprising an account of all the different Assay Towns of the United Kingdom; with the Stamps and Laws relating to the Standards and Hall-Marks at the various Assay Offices. By GEORGE E. GEE 3/0

French Polishing and Enamelling.

A Practical Work of Instruction, including numerous Recipes for making Polishes, Varnishes, Glaze-Lacquers, Revivers, &c. By R. BITMEAD. [Just Published. 1/6

Practical Organ Building.

By W. E. DICKSON, M.A. Second Edition, Revised, with Additions 2/6

Coach-Building:

A Practical Treatise. By JAMES W. BURGESS. With 57 Illustrations 2/6

The Brass Founder's Manual:

Instructions for Modelling, Pattern Making, Moulding, Turning, &c. By W. GRAHAM 2/0

The Sheet-Metal Worker's Guide.

A Practical Handbook for Tinsmiths, Coppersmiths, Zincworkers, &c., with 46 Diagrams. By W. J. E. CRANE. Third Edition, revised . . . 1/6

Sewing Machinery:

Its Construction, History, &c. With full Technical Directions for Adjusting, &c. By J. W. URQUHART, C.E. 2/0

Gas Fitting:

A Practical Handbook. By JOHN BLACK. New Edition 2/6

Construction of Door Locks.

From the Papers of A. C. HOBBS. Edited by C. TOMLINSON, F.R.S. 2/6

The Model Locomotive Engineer, Fireman, and Engine-Boy.

Comprising an Historical Notice of the Pioneer Locomotive Engines and their Inventors. By MICHAEL REYNOLDS 3/6

The Art of Letter Painting made Easy.

By J. G. BADENOCH. With 12 full-page Engravings of Examples . 1/6

The Art of Boot and Shoemaking.

Including Measurement, Last-fitting, Cutting-out, Closing and Making. By JOHN BEDFORD LENO. With numerous Illustrations. Fourth Edition 2/0

Mechanical Dentistry:

A Practical Treatise on the Construction of the Various Kinds of Artificial Dentures. By CHARLES HUNTER. Fourth Edition 3/0

Wood Engraving:

A Practical and Easy Introduction to the Art. By W. N. BROWN . 1/6

Laundry Management.

A Handbook for Use in Private and Public Laundries. By the EDITOR of "The Laundry Journal." 2/0

AGRICULTURE, GARDENING, ETC.

- Draining and Embanking:**
A Practical Treatise. By Prof. JOHN SCOTT. With 68 Illustrations 1/6
- Irrigation and Water Supply:**
A Practical Treatise on Water Meadows, Sewage Irrigation, Warping, &c.; on the Construction of Wells, Ponds, Reservoirs, &c. By Prof. JOHN SCOTT. With 34 Illustrations 1/6
- Farm Roads, Fences, and Gates:**
A Practical Treatise on the Roads, Tramways, and Waterways of the Farm; the Principles of Enclosures; and the different kinds of Fences, Gates, and Stiles. By Prof. JOHN SCOTT. With 75 Illustrations 1/6
- Farm Buildings:**
A Practical Treatise on the Buildings necessary for various kinds of Farms, their Arrangement and Construction, with Plans and Estimates. By Prof. JOHN SCOTT. With 105 Illustrations 2/0
- Barn Implements and Machines:**
Treating of the Application of Power and Machines used in the Threshing-barn, Stockyard, Dairy, &c. By Prof. J. SCOTT. With 123 Illustrations. 2/0
- Field Implements and Machines:**
With Principles and Details of Construction and Points of Excellence, their Management, &c. By Prof. JOHN SCOTT. With 138 Illustrations 2/0
- Agricultural Surveying:**
A Treatise on Land Surveying, Levelling, and Setting-out; with Directions for Valuing Estates. By Prof. J. SCOTT. With 62 Illustrations 1/6
- Farm Engineering.**
By Professor JOHN SCOTT. Comprising the above Seven Volumes in One, 1,150 pages, and over 600 Illustrations. Half-bound 12/0
- Outlines of Farm Management.**
Treating of the General Work of the Farm; Stock; Contract Work; Labour, &c. By R. SCOTT BURN 2/6
- Outlines of Landed Estates Management.**
Treating of the Varieties of Lands, Methods of Farming, Setting-out of Farms, Roads, Fences, Gates, Drainage, &c. By R. SCOTT BURN. 2/6
* * The above Two Vols. in One, handsomely half-bound, price 6/0
- Soils, Manures, and Crops.**
(Vol. I. OUTLINES OF MODERN FARMING.) By R. SCOTT BURN 2/0
- Farming and Farming Economy.**
(Vol. II. OUTLINES OF MODERN FARMING.) By R. SCOTT BURN 3/0
- Stock: Cattle, Sheep, and Horses.**
(Vol. III. OUTLINES OF MODERN FARMING.) By R. SCOTT BURN 2/6
- Dairy, Pigs, and Poultry.**
(Vol. IV. OUTLINES OF MODERN FARMING.) By R. SCOTT BURN 2/0
- Utilization of Sewage, Irrigation, and Reclamation of Waste Land.**
(Vol. V. OUTLINES OF MODERN FARMING.) By R. SCOTT BURN 2/6
- Outlines of Modern Farming.**
By R. SCOTT BURN. Consisting of the above Five Volumes in One, 1,250 pp., profusely Illustrated, half-bound 12/0

Book-keeping for Farmers and Estate Owners.

A Practical Treatise, presenting, in Three Plans, a System adapted for all classes of Farms. By J. M. WOODMAN. Third Edition, revised . 2/6

Ready Reckoner for the Admeasurement of Land.

By A. ARMAN. Fourth Edition, revised and extended by C. NORRIS 2/0

Miller's, Corn Merchant's, and Farmer's Ready Reckoner.

Second Edition, revised, with a Price List of Modern Flour Mill Machinery, by W. S. HUTTON, C.E. 2/0

The Hay and Straw Measurer.

New Tables for the Use of Auctioneers, Valuers, Farmers, Hay and Straw Dealers, &c. By JOHN STEELE 2/0

Meat Production.

A Manual for Producers, Distributors, and Consumers of Butchers' Meat. By JOHN EWART 2/6

Sheep :

The History, Structure, Economy, and Diseases of. By W. C. SPOONER, M.R.V.S. Fifth Edition, with fine Engravings 3/6

Market and Kitchen Gardening.

By C. W. SHAW, late Editor of "Gardening Illustrated" 3/0

Kitchen Gardening Made Easy.

Showing the best means of Cultivating every known Vegetable and Herb, &c., with directions for management all the year round. By GEORGE M. F. GLENNY. Illustrated 1/6

Cottage Gardening:

Or Flowers, Fruits, and Vegetables for Small Gardens. By E. HOBDAY. 1/6

Garden Receipts.

Edited by CHARLES W. QUIN 1/6

Fruit Trees,

The Scientific and Profitable Culture of. From the French of M. DU BREUIL. Fifth Edition, carefully Revised by GEORGE GLENNY. With 187 Woodcuts 3/6

The Tree Planter and Plant Propagator :

With numerous Illustrations of Grafting, Layering, Budding, Implements, Houses, Pits, &c. By SAMUEL WOOD 2/0

The Tree Pruner :

A Practical Manual on the Pruning of Fruit Trees, Shrubs, Climbers, and Flowering Plants. With numerous Illustrations. By SAMUEL WOOD 1/6

* * The above Two Vols. in One, handsomely half-bound, price 3/6

The Art of Grafting and Budding.

By CHARLES BALTET. With Illustrations 2/6

BRITISH MINING.

A Treatise on the History, Discovery, Practical Development, and Future Prospects of Metalliferous Mines in the United Kingdom. By ROBERT HUNT, F.R.S., late Keeper of Mining Records. Upwards of 950 pp., with 230 Illustrations. Second Edition, Revised. Super-royal 8vo, cloth. £2 2s.

"The book is a treasure-house of statistical information on mining subjects, and we know of no other work embodying so great a mass of matter of this kind. Were this the only merit of Mr. Hunt's volume it would be sufficient to render it indispensable in the library of every one interested in the development of the mining and metallurgical industries of this country."—*Athenæum*.

MINE DRAINAGE.

A Complete Practical Treatise on Direct-Acting Underground Steam Pumping Machinery. By STEPHEN MICHELL. Second Edition, Re-written and Enlarged, 390 pp. With about 250 Illustrations. Royal 8vo, cloth. [Just Published. Net 25/0

SUMMARY OF CONTENTS:—HORIZONTAL PUMPING ENGINES.—ROTARY AND NON-ROTARY HORIZONTAL ENGINES.—SIMPLE AND COMPOUND STEAM PUMPS.—VERTICAL PUMPING ENGINES.—ROTARY AND NON-ROTARY VERTICAL ENGINES.—SIMPLE AND COMPOUND STEAM PUMPS.—TRIPLE-EXPANSION STEAM PUMPS.—PULSATING STEAM PUMPS.—PUMP VALVES.—SINKING PUMPS, &c., &c.

"This volume contains an immense amount of important and interesting new matter. The book should undoubtedly prove of great use to all who wish for information on the subject, inasmuch as the different patterns of steam pumps are not alone lucidly described and clearly illustrated, but in addition numerous tables are supplied, in which their sizes, capacity, price, &c., are set forth, hence facilitating immensely the rational selection of a pump to suit any purpose that the reader may desire, or, on the other hand, supplying him with useful information about any of the pumps that come within the scope of the volume."—*The Engineer*.

THE PROSPECTOR'S HANDBOOK.

A Guide for the Prospector and Traveller in search of Metal-Bearing or other Valuable Minerals. By J. W. ANDERSON, M.A. (Camb.), F.R.G.S., Author of "Fiji and New Caledonia." Eighth Edition, thoroughly Revised and much Enlarged. Small crown 8vo, cloth, 3/6; or, leather, pocket-book form, with tuck. [Just Published. 4/6

"Will supply a much-felt want, especially among Colonists, in whose way are so often thrown many mineralogical specimens the value of which it is difficult to determine."—*Engineer*.

"How to find commercial minerals, and how to identify them when they are found, are the leading points to which attention is directed. The author has managed to pack as much practical detail into his pages as would supply material for a book three times its size."—*Mining Journal*.

NOTES AND FORMULÆ FOR MINING STUDENTS.

By JOHN HERMAN MERIVALE, M.A., Late Professor of Mining in the Durham College of Science, Newcastle-upon-Tyne. Fourth Edition, Revised and Enlarged. By H. F. BULMAN, A.M.Inst.C.E. Small crown 8vo, cloth. [Just Published. 2/6

"The author has done his work in a creditable manner, and has produced a book that will be of service to students and those who are practically engaged in mining operations."—*Engineer*.

THE MINER'S HANDBOOK.

A Handy Book of Reference on the subjects of Mineral Deposits, Mining Operations, Ore Dressing, &c. For the Use of Students and others interested in Mining Matters. By JOHN MILNE, F.R.S., Professor of Mining in the Imperial University of Japan. Revised Edition. Fcap. 8vo, leather. 7/6

"Professor Milne's handbook is sure to be received with favour by all connected with mining, and will be extremely popular among students."—*Athenæum*.

POCKET-BOOK FOR MINERS AND METALLURGISTS.

Comprising Rules, Formulæ, Tables, and Notes for Use in Field and Office Work. By F. DANVERS POWER, F.G.S., M.E. Second Edition, Corrected. Fcap. 8vo, leather. [Just Published. 9/0

"This excellent book is an admirable example of its kind, and ought to find a large sale amongst English-speaking prospectors and mining engineers."—*Engineering*.

FIELD TESTING FOR GOLD AND SILVER.

A Practical Manual for Prospectors and Miners. By W. H. MERRITT, M.N.E. Inst. M.E., A.R.S.M., &c. With Photographic Plates and other Illustrations. Fcap. 8vo, leather. [Just Published. Net 5/0

MATHEMATICS, ARITHMETIC, ETC.

Descriptive Geometry,

An Elementary Treatise on; with a Theory of Shadows and of Perspective, extracted from the French of G. MONGE. To which is added a Description of the Principles and Practice of Isometrical Projection. By J. F. HEATHER, M.A. With 14 Plates 2/0

Practical Plane Geometry:

Giving the Simplest Modes of Constructing Figures contained in one Plane and Geometrical Construction of the Ground. By J. F. HEATHER, M.A. With 215 Woodcuts 2/0

Analytical Geometry and Conic Sections,

A Rudimentary Treatise on. By JAMES HANN. A New Edition, rewritten and enlarged by Professor J. R. YOUNG 2/0

Euclid (The Elements of).

With many Additional Propositions and Explanatory Notes; to which is prefixed an Introductory Essay on Logic. By HENRY LAW, C.E. 2/6

* * Sold also separately, viz:—

Euclid. The First Three Books. By HENRY LAW, C.E. 1/6
 Euclid. Books 4, 5, 6, 11, 12. By HENRY LAW, C.E. 1/6

Plane Trigonometry,

The Elements of. By JAMES HANN. 1/6

Spherical Trigonometry,

The Elements of. By JAMES HANN. Revised by CHARLES H. DOWLING, C.E. 1/0

* * Or with "The Elements of Plane Trigonometry," in One Volume, 2/6

Differential Calculus,

Elements of the. By W. S. B. WOOLHOUSE, F.R.A.S., &c. 1/6

Integral Calculus.

By HOMERSHAM COX, B.A. 1/3

Algebra,

The Elements of. By JAMES HADDON, M.A. With Appendix, containing Miscellaneous Investigations, and a Collection of Problems 2/0

A Key and Companion to the Above.

An extensive Repository of Solved Examples and Problems in Algebra. By J. R. YOUNG 1/6

Commercial Book-keeping.

With Commercial Phrases and Forms in English, French, Italian, and German. By JAMES HADDON, M.A. 1/6

Arithmetic,

A Rudimentary Treatise on. With full Explanations of its Theoretical Principles, and numerous Examples for Practice. For the Use of Schools and for Self-Instruction. By J. R. YOUNG, late Professor of Mathematics in Belfast College. Thirteenth Edition 1/6

A Key to the Above.

By J. R. YOUNG 1/6

Equational Arithmetic,

Applied to Questions of Interest, Annuities, Life Assurance, and General Commerce; with various Tables by which all Calculations may be greatly facilitated. By W. HIPSLEY 1/6

Arithmetic,

Rudimentary, for the Use of Schools and Self-Instruction. By JAMES HADDON, M.A. Revised by ABRAHAM ARMAN 1/6

A Key to the Above.

By A. ARMAN 1/6

Mathematical Instruments:

Their Construction, Adjustment, Testing, and Use concisely Explained. By J. F. HEATHER, M.A., of the Royal Military Academy, Woolwich. Fourteenth Edition, Revised, with Additions, by A. T. WALMSLEY, M.I.C.E. Original Edition, in 1 vol., Illustrated 2/0

* * *In ordering the above, be careful to say "Original Edition," or give the number in the Series (32), to distinguish it from the Enlarged Edition in 3 vols. (as follows)—*

Drawing and Measuring Instruments.

Including—I. Instruments employed in Geometrical and Mechanical Drawing, and in the Construction, Copying, and Measurement of Maps and Plans. II. Instruments used for the purposes of Accurate Measurement, and for Arithmetical Computations. By J. F. HEATHER, M.A. 1/6

Optical Instruments.

Including (more especially) Telescopes, Microscopes, and Apparatus for producing copies of Maps and Plans by Photography. By J. F. HEATHER, M.A. Illustrated 1/6

Surveying and Astronomical Instruments.

Including—I. Instruments used for Determining the Geometrical Features of a portion of Ground. II. Instruments employed in Astronomical Observations. By J. F. HEATHER, M.A. Illustrated. 1/6

* * *The above three volumes form an enlargement of the Author's original work, "Mathematical Instruments," price 2/0. (Described at top of page.)*

Mathematical Instruments:

o Their Construction, Adjustment, Testing and Use. Comprising Drawing, Measuring, Optical, Surveying, and Astronomical Instruments. By J. F. HEATHER, M.A. Enlarged Edition, for the most part entirely re-written. The Three Parts as above, in One thick Volume. 4/6

The Slide Rule, and How to Use It.

Containing full, easy, and simple Instructions to perform all Business Calculations with unexampled rapidity and accuracy. By CHARLES HOARE, C.E. With a Slide Rule, in tuck of cover. Seventh Edition 2/6

Logarithms.

With Mathematical Tables for Trigonometrical, Astronomical, and Nautical Calculations. By HENRY LAW, C.E. Revised Edition 3/0

Compound Interest and Annuities (Theory of).

With Tables of Logarithms for the more Difficult Computations of Interest, Discount, Annuities, &c., in all their Applications and Uses for Mercantile and State Purposes. By FEDOR THOMAN, Paris. Fourth Edition 4/0

Mathematical Tables,

For Trigonometrical, Astronomical, and Nautical Calculations; to which is prefixed a Treatise on Logarithms. By H. LAW, C.E. Together with a Series of Tables for Navigation and Nautical Astronomy. By Professor J. R. YOUNG. New Edition 4/0

Mathematics,

As applied to the Constructive Arts. By FRANCIS CAMPIN, C.E., &c. Third Edition 3/0

Astronomy.

By the late Rev. ROBERT MAIN, F.R.S. Third Edition, revised and corrected to the Present Time. By W. T. LYNN, F.R.A.S. 2/0

Statics and Dynamics.

The Principles and Practice of. Embracing also a clear development of Hydrostatics, Hydrodynamics, and Central Forces. By T. BAKER, C.E. Fourth Edition 1/6

BOOKS OF REFERENCE AND
MISCELLANEOUS VOLUMES.

- A Dictionary of Painters, and Handbook for Picture Amateurs.**
Being a Guide for Visitors to Public and Private Picture Galleries, and for Art-Students, including Glossary of Terms, Sketch of Principal Schools of Painting, &c. By PHILIPPE DARYL, B.A. 2/6
- Painting Popularly Explained.**
By T. J. GULLICK, Painter, and JOHN TIMBS, F.S.A. Including Fresco, Oil, Mosaic, Water Colour, Water-Glass, Tempera Encaustic, Miniature, Painting on Ivory, Vellum, Pottery, Enamel, Glass, &c. Sixth Edition 5/0
- A Dictionary of Terms used in Architecture, Building, Engineering, Mining, Metallurgy, Archaeology, the Fine Arts, &c.**
By JOHN WEALE. Sixth Edition. Edited by R. HUNT, F.R.S. 5/0
- Music:**
A Rudimentary and Practical Treatise. With numerous Examples. By CHARLES CHILD SPENCER 2/6
- Pianoforte,**
The Art of Playing the. With numerous Exercises and Lessons. By CHARLES CHILD SPENCER 1/6
- The House Manager.**
A Guide to Housekeeping, Cookery, Pickling and Preserving, Household Work, Dairy Management, Cellarage of Wines, Home-brewing and Wine-making, Gardening, &c. By AN OLD HOUSEKEEPER 3/6
- Manual of Domestic Medicine.**
By R. GOODING, M.D. Intended as a Family Guide in all cases of Accident and Emergency. Third Edition, carefully revised 2/0
- Management of Health.**
A Manual of Home and Personal Hygiene. By Rev. JAMES BAIRD 1/0
- Natural Philosophy,**
For the Use of Beginners. By CHARLES TOMLINSON, F.R.S. 1/6
- The Elementary Principals of Electric Lighting.**
By ALAN A. CAMPBELL SWINTON, M.INST.C.E., M.I.E.E. Fourth Edition, Revised [Just Published] 1/6
- The Electric Telegraph,**
Its History and Progress. By R. SABINE, C.E., F.S.A., &c. 3/0
- Handbook of Field Fortification.**
By Major W. W. KNOLLYS, F.R.G.S. With 163 Woodcuts 3/0
- Logic,**
Pure and Applied. By S. H. EMMENS. Third Edition 1/6
- Locke on the Human Understanding,**
Selections from. With Notes by S. H. EMMENS 1/6
- The Compendious Calculator**
(*Intuitive Calculations*). Or Easy and Concise Methods of Performing the various Arithmetical Operations required in Commercial and Business Transactions; together with Useful Tables, &c. By DANIEL O'GORMAN. Twenty-seventh Edition, carefully revised by C. NORRIS 2/6

- Measures, Weights, and Moneys of all Nations.**
 With an Analysis of the Christian, Hebrew, and Mahometan Calendars.
 By W. S. B. WOOLHOUSE, F.R.A.S., F.S.S. Seventh Edition 2/6
- Grammar of the English Tongue,**
 Spoken and Written. With an Introduction to the Study of Comparative
 Philology. By HYDE CLARKE, D.C.L. Fifth Edition. 1/6
- Dictionary of the English Language.**
 As Spoken and Written. Containing above 100,000 Words. By HYDE
 CLARKE, D.C.L. 3/6
Complete with the GRAMMAR, 5/6
- Composition and Punctuation,**
 Familiarly Explained for those who have neglected the Study of Grammar.
 By JUSTIN BREMAN. 18th Edition. 1/6
- French Grammar.**
 With Complete and Concise Rules on the Genders of French Nouns. By
 G. L. STRAUSS, Ph.D. 1/6
- English-French Dictionary.**
 Comprising a large number of Terms used in Engineering, Mining, &c.
 By ALFRED ELWES 2/0
- French Dictionary.**
 In two Parts—I. French-English. II. English-French, complete in
 One Vol. 3/0
*** Or with the GRAMMAR, 4/6.*
- French and English Phrase Book.**
 Containing Introductory Lessons, with Translations, Vocabularies of Words,
 Collection of Phrases, and Easy Familiar Dialogues 1/6
- German Grammar.**
 Adapted for English Students, from Heyse's Theoretical and Practical
 Grammar, by Dr. G. L. STRAUSS 1/6
- German Triglot Dictionary.**
 By N. E. S. A. HAMILTON. Part I. German-French-English. Part II.
 English-German-French. Part III. French-German-English 3/0
- German Triglot Dictionary.**
 (As above). Together with German Grammar, in One Volume 5/0
- Italian Grammar.**
 Arranged in Twenty Lessons, with Exercises. By ALFRED ELWES. 1/6
- Italian Triglot Dictionary,**
 Wherein the Genders of all the Italian and French Nouns are carefully
 noted down. By ALFRED ELWES. Vol. I. Italian-English-French. 2/6
- Italian Triglot Dictionary.**
 By ALFRED ELWES. Vol. II. English-French-Italian 2/6
- Italian Triglot Dictionary.**
 By ALFRED ELWES. Vol. III. French-Italian-English 2/6
- Italian Triglot Dictionary.**
 (As above). In One Vol. 7/6
- Spanish Grammar.**
 In a Simple and Practical Form. With Exercises. By ALFRED ELWES 1/6
- Spanish-English and English-Spanish Dictionary.**
 Including a large number of Technical Terms used in Mining, Engineering,
 &c., with the proper Accents and the Gender of every Noun. By ALFRED
 ELWES 4/0
*** Or with the GRAMMAR, 6/0.*

Portuguese Grammar,

In a Simple and Practical Form. With Exercises. By ALFRED ELWES 1/6

**Portuguese-English and English-Portuguese Dic-
tionary.**

Including a large number of Technical Terms used in Mining, Engineering,
&c., with the proper Accents and the Gender of every Noun. By ALFRED
ELWES. Third Edition, revised 5/0

* * Or with the GRAMMAR, 7/0.

Animal Physics,

Handbook of. By DIONYSIUS LARDNER, D.C.L. With 520 Illustrations.
In One Vol. (732 pages), cloth boards 7/6

* * Sold also in Two Parts, as follows:—

ANIMAL PHYSICS. By Dr. LARDNER. Part I., Chapters I.—VII. 4/0

ANIMAL PHYSICS. By Dr. LARDNER. Part II., Chapters VIII.—XVIII.
3/0