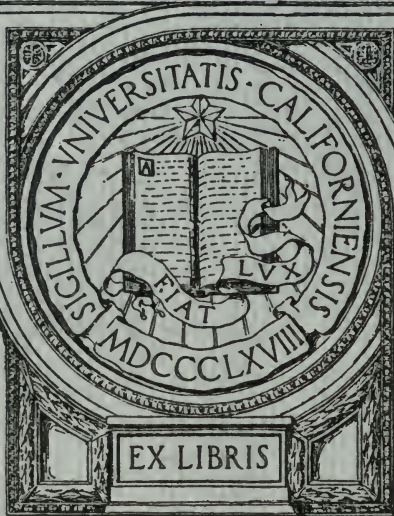


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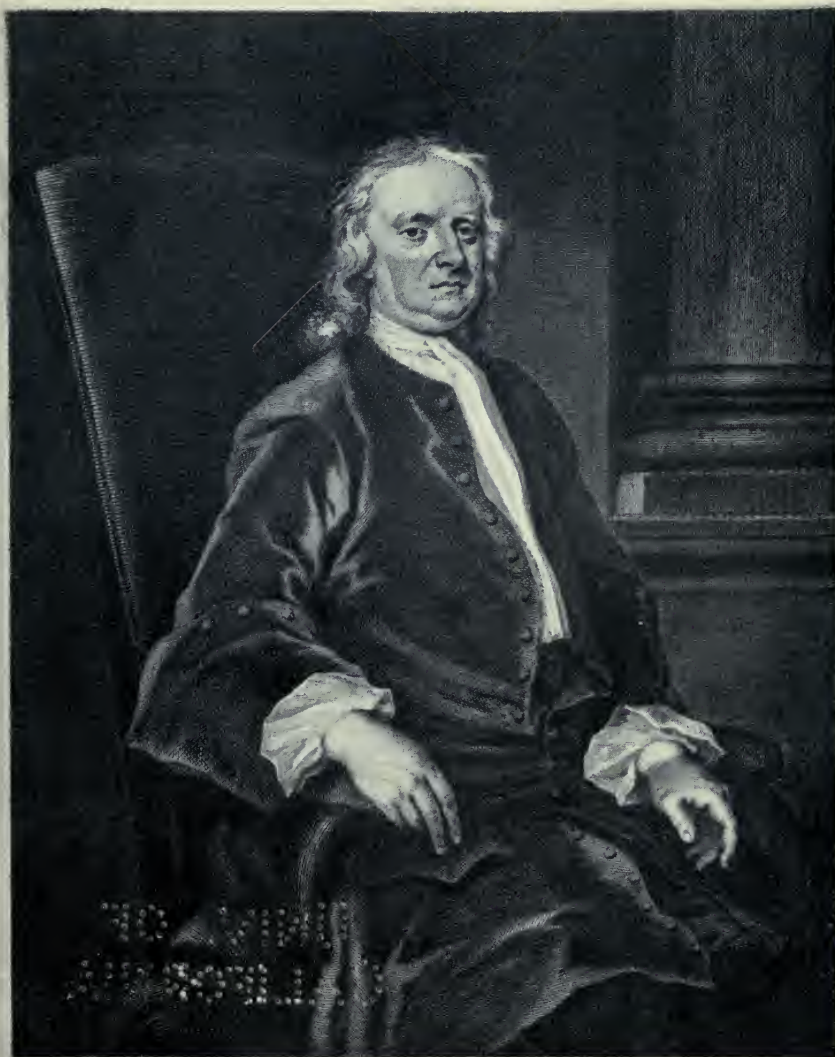
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BIBLIOTHECA
CHEMICO-MATHEMATICA.

VOLUME I.



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ISAACUS NEWTON EQ. AUR. ÆT. 83.

J. Vanderbank pinxit 1725

Geo. Vertue Sculpsit 1720.

Nos. 3258-61 (page 163).

Portrait of Sir Isaac Newton as contained in the Third Edition of the *Principia*.

THE ASTOR LENOX AND TILDEN FOUNDATION
NEW YORK

BIBLIOTHECA
CHEMICO-MATHEMATICA:

CATALOGUE
OF WORKS IN MANY TONGUES
ON
EXACT AND APPLIED SCIENCE,
WITH A SUBJECT-INDEX.

COMPILED AND ANNOTATED BY

H. Z.

AND

H. C. S.

*With 127 Plates,
containing 247 Portraits and Facsimiles.*

VOLUME I.

LONDON:
HENRY SOTHERAN AND CO.
(HENRY CECIL SOTHERAN)
140 STRAND, W.C.2, AND 43 PICCADILLY, W.1.

1921.

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PREFACE.

*T*HIS Catalogue was begun in 1906 as that of a large collection of books in exact and applied science, and was expected to reach to about three hundred pages. It grew as it went, and by the end of the alphabet so many more works in allied subjects, as well as other and interesting copies of books already described, had come in that a Supplement was begun, still more fully annotated, which far exceeded the size of the original scheme. To this a final Supplement was added, and the whole was indexed under a full classification of subjects.

The result is, perhaps, the first Historical Catalogue of Science published in any country, at least as giving at once the current price of each book included, bibliographical particulars, and many biographical and historical references both in the descriptions themselves and in the notes. In fact, it is felt that it will be found to have very considerable human interest. The pioneers of science have never been of the dryasdust order, and still less confined to one class, but have ranged from the ancients, the Arabs, and the great company of the Mediæval and after-Reformation clergy, with the remarkable contingent of the Jesuits, to the Lord Mayor of London who first Englished Euclid. How many coluere disciplinam tenui avenâ! And how many—why not acknowledge it?—are of our own race!

As the Catalogue is one of actual books for sale it is of course not complete, but it is believed that few of the great books will be found lacking.

The complement to the Catalogue is the INDEX. There is no comprehensive bibliography of exact science, in spite of numerous lists of special subjects. These have often the defect of excluding the older works as being out of date for practical purposes. But these very books are the landmarks in the history of life. The Index, from the nature

of the Catalogue, cannot be exhaustive, but it contains nearly all the standard works, and most of the earlier works of historical importance, and will be found of great use as a Reference-list apart from the Catalogue; and, to increase its value in this way, references have been included to two large scientific catalogues issued after the *Bibliotheca Chémico-Mathematica* was printed.

The ILLUSTRATIONS have all been produced from the actual books by a photographic process, and include, besides facsimiles of illustrations and portraits, textual passages from historically important works. Many such are here reproduced for the first time.

There remains to the writer of these lines the pleasure of saying that the whole work is due to HEINRICH ZEITLINGER, of Linz on the Danube, whom he has known for so many years as an equal wellwisher of learning and of England. His own share has been the lesser one of revision and proof-reading, and of further annotation from that *Cyclopædia of Useless Knowledge* to which we all become subscribers in our journey through the world.

Lastly, to have avoided all mistakes no man can hope; but both compilers can honestly say that from beginning to end they have never forgotten the great precept of Dr. Martin Joseph Routh.

H. C. S.

Allhallowtide, 1920.

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LIST OF AUTHORITIES CONSULTED.

- Allibone (S. A.) *Critical Dictionary of English Literature*. 5 vols. 1858-91.
- Ball (W. W. R.) *Mathematical Recreations and Problems*. 1892.
- *Short Account of the History of Mathematics*. 1908.
- Barbier (A. A.) *Dictionnaire des Ouvrages Anonymes*. 4 vols. 1872-9.
- Biographie (Allgemeine deutsche), 56 vols. 1875-1912.
- Biographie Générale (Nouvelle), publiée sous la Direction du Dr. Hofer. 46 vols. 1855-66.
- Brewster (Sir D.) *Memoirs of the Life, Writings, and Discoveries of Sir Isaac Newton*. 2 vols. 1855.
- British Museum Catalogue of Books to 1640. 3 vols. 1884.
- Brockhaus's *Konversations-Lexikon*. 17 vols. 1894-5.
- Brown (R.) *History of Accounting and Accountants*. 1905.
- Brunet (J. C.) *Manuel du Libraire*. 6 vols. 1860-5.
- Cajori (F.) *History of Mathematics*. 1894.
- *History of Physics*. 1899.
- Cantor (M.) *Vorlesungen über Geschichte der Mathematik*. 4 vols. 1880-1908.
- Chambers's *Encyclopædia*. 10 vols. 1895.
- Clerke (Agnes M.) *Popular History of Astronomy during the XIX. Century*. 1893.
- Copinger (W. A.) *Supplement to Hain's Repertorium Bibliographicum*. 3 vols. 1895-1902.
- Darmstädter (L.) *Handbuch zur Geschichte der Naturwissenschaften und der Technik*. 1908.
- Dictionary of National Biography*. 69 vols. 1885-1912.
- Dircks (H.) *Perpetuum Mobile*. 2 vols. 1861-72.
- Ebert (F. A.) *Allgemeines bibliographisches Lexikon*. 2 vols. 1821-30.
- Ferguson (J.) *Bibliotheca Chemica*. 2 vols. 1906.
- Grant (R.) *History of Physical Astronomy*. 1852.
- Gray (G. J.) *Bibliography of the Works of Sir Isaac Newton*. 1907.
- Glaisher (J. W. L.) *Report on Mathematical Tables*. 1873.
- Hain (L.) *Repertorium Bibliographicum*. 2 vols. 1826-32.
- Halkett (S.) and J. Laing. *Dictionary of the Anonymous and Pseudonymous Literature of Great Britain*. 4 vols. 1882-8.
- Heller (A.) *Geschichte der Physik*. 2 vols. 1882-4.
- Hofer (F.) *Histoire de la Chimie*. 2 vols. 1866-9.
- Hoppe (E.) *Geschichte der Elektrizität*. 1884.
- Houzeau et Lancaster. *Bibliographie générale de l'Astronomie*. 2 vols. 1882-9.
- Hutton (C.) *Philosophical and Mathematical Dictionary*. 2 vols. 1815.
- Kopp (H.) *Geschichte der Chemie*. 4 vols. 1843-7.
- Libri (G.) *Histoire des Sciences mathématiques en Italie*. 4 vols. 1838-41.
- , *Catalogue of the Mathematical, Historical, Bibliographical and Miscellaneous Portion of the celebrated Library of*. 2 vols. 1861.
- Lowndes (W. T.) *The Bibliographer's Manual of English Literature*. 6 vols. 1857-64.
- Mach (E.) *The Science of Mechanics*. 1893.
- Meyer (E. v.) *History of Chemistry*. 1891.
- Montucla (J. É.) *Histoire des Mathématiques*. 4 vols. 1799-1802.
- *Histoire des Recherches sur la Quadrature du Cercle*. 1831.
- Morgan (A. de). *Arithmetical Books*. 1847.
- *A Budget of Paradoxes*. 1872.
- Nelthropp (H. L.) *Treatise on Watch-Work*. 1873.

- Poggendorff (J. C.) Biographisch-literarisches Handwörterbuch zur Geschichte der exakten Wissenschaften, 2 vols. 1863.
 ——— Geschichte der Physik. 1879.
 Preston (T.) The Theory of Heat. 1904.
 ——— The Theory of Light. 1895.
 Riccardi (P.) Biblioteca Matematica Italiana. 1893.
 Ronalds Library, Catalogue of the. 1880.
 Roscoe (Sir H. E.), and C. Schorlemmer. Treatise on Chemistry. Vols. I-II. 1894-7.
 Rose (H. J.) New General Biographical Dictionary. 12 vols. 1848-50.
 Royal Society of London, Record of the. 1902.
 Stuart (R.) Historical and Descriptive Anecdotes of the Steam Engine. 2 vols. 1829.
 Thompson (S. P.) Elementary Lessons in Electricity and Magnetism. 1895.
 ——— Notes on the *De Magnete* of Dr. William Gilbert. 1900-1.
 Thurston (R. H.) History of the Growth of the Steam Engine. 1879.
 Todhunter (I.) History of the Mathematical Theories of Attraction and of the Figure of the Earth. 2 vols. 1873.
 ——— History of the Mathematical Theory of Probability. 1865.
 ——— History of the Progress of the Calculus of Variations. 1861.
 ——— History of the Theory of Elasticity. 3 vols. 1886-93.
 Turnor (C. H.) *Astra Castra*. 1865.
 Waite (A. E.) Lives of Alchemistical Philosophers. 1888.
 Watt (R.) Bibliotheca Britannica. 4 vols. 1824.
 Wilde (H. E.) Geschichte der Optik. 2 vols. 1838-43.
 Wolf (H.) Geschichte der Astronomie. 1877.
 Wolf (R.) Handbuch der Physik, Geodäsie und Astronomie. 2 vols. 1870.
 Wood (E. J.) Curiosities of Clocks and Watches. 1866.

Messrs. Sotheran's Catalogues referred to in the Index.

- No. 770. Catalogue of Rare and Standard Books on Exact and Applied Science**, including the Scientific Portion of the Library of the late RT. HON. SIR JAMES STIRLING, F.R.S., Lord Justice of Appeal; and Selections from those of GEORGE RENNIE, C.E., F.R.S. (1791-1866); SAMUEL ROBERTS, F.R.S., sometime President of the London Mathematical Society; and of some other well-known Scientists. 1918
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ERRATUM.

Page 5, no. 94 and page 292, no. 5750, notes—read *electric current* instead of *electro-motive force*.

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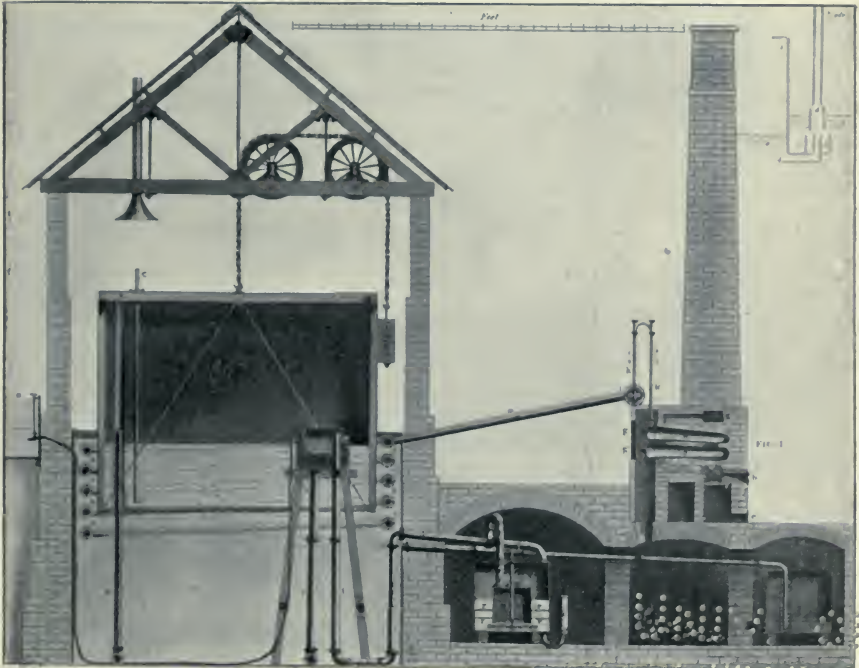
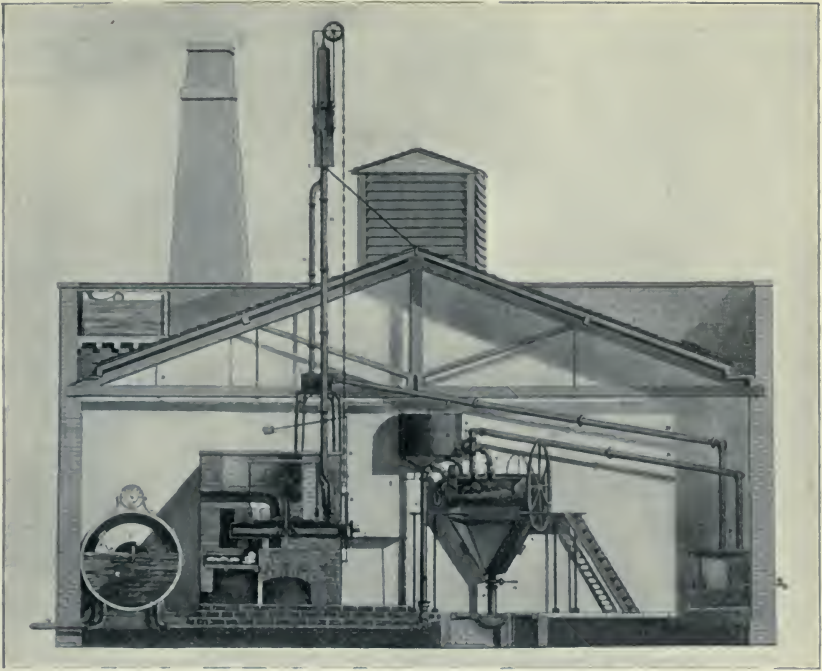
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CONTRACTIONS:—*Bp.*, bishop; *cl.*, cloth; *cr.*, crown; *D. N. B.*, Dictionary of National Biography; *fs.*, facsimile; *g. e.*, gilt edges; *p.*, published at; *pr.*, priest; *sm.*, small; *sq.*, square; *t. e. g.*, top edges gilt.

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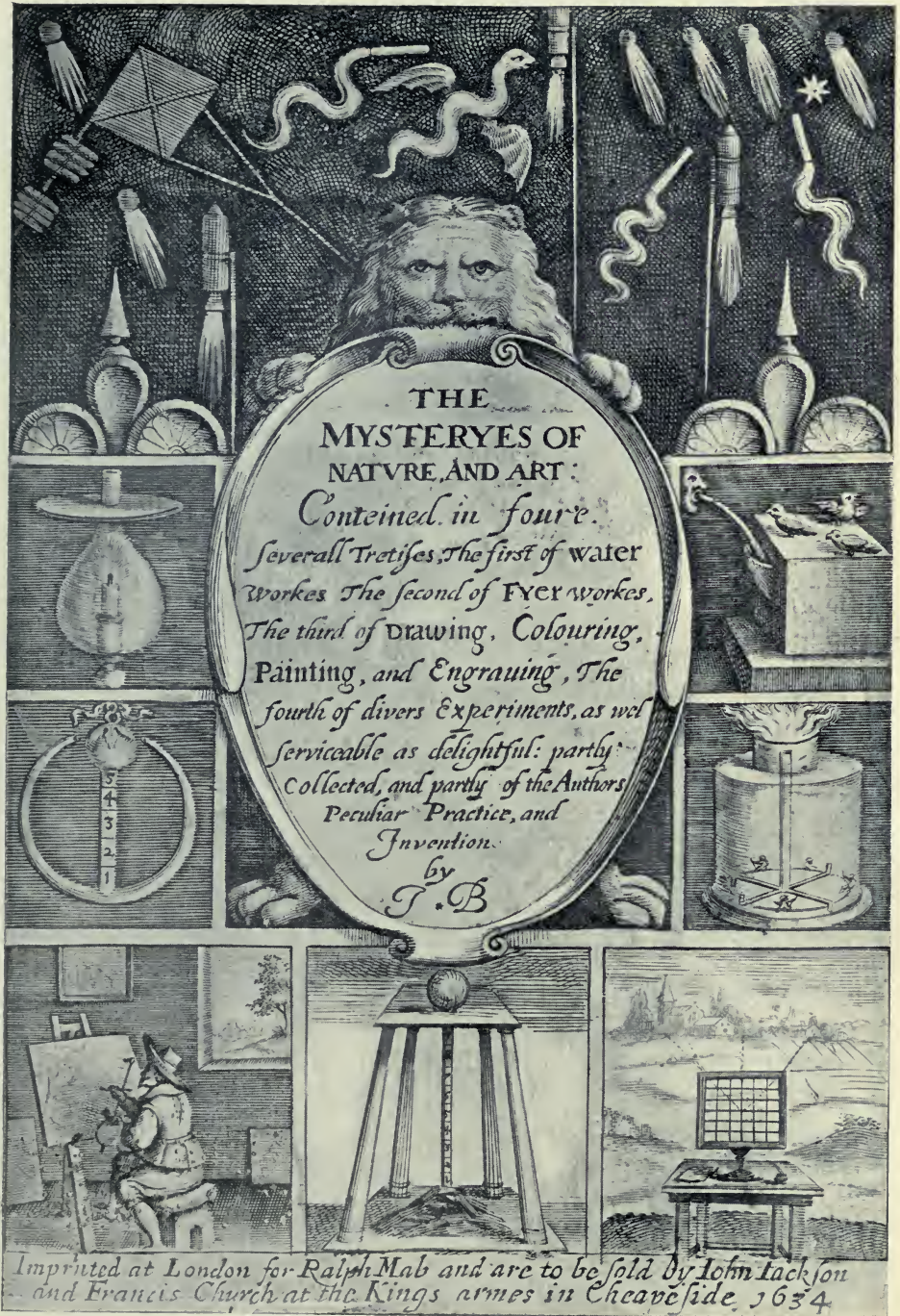
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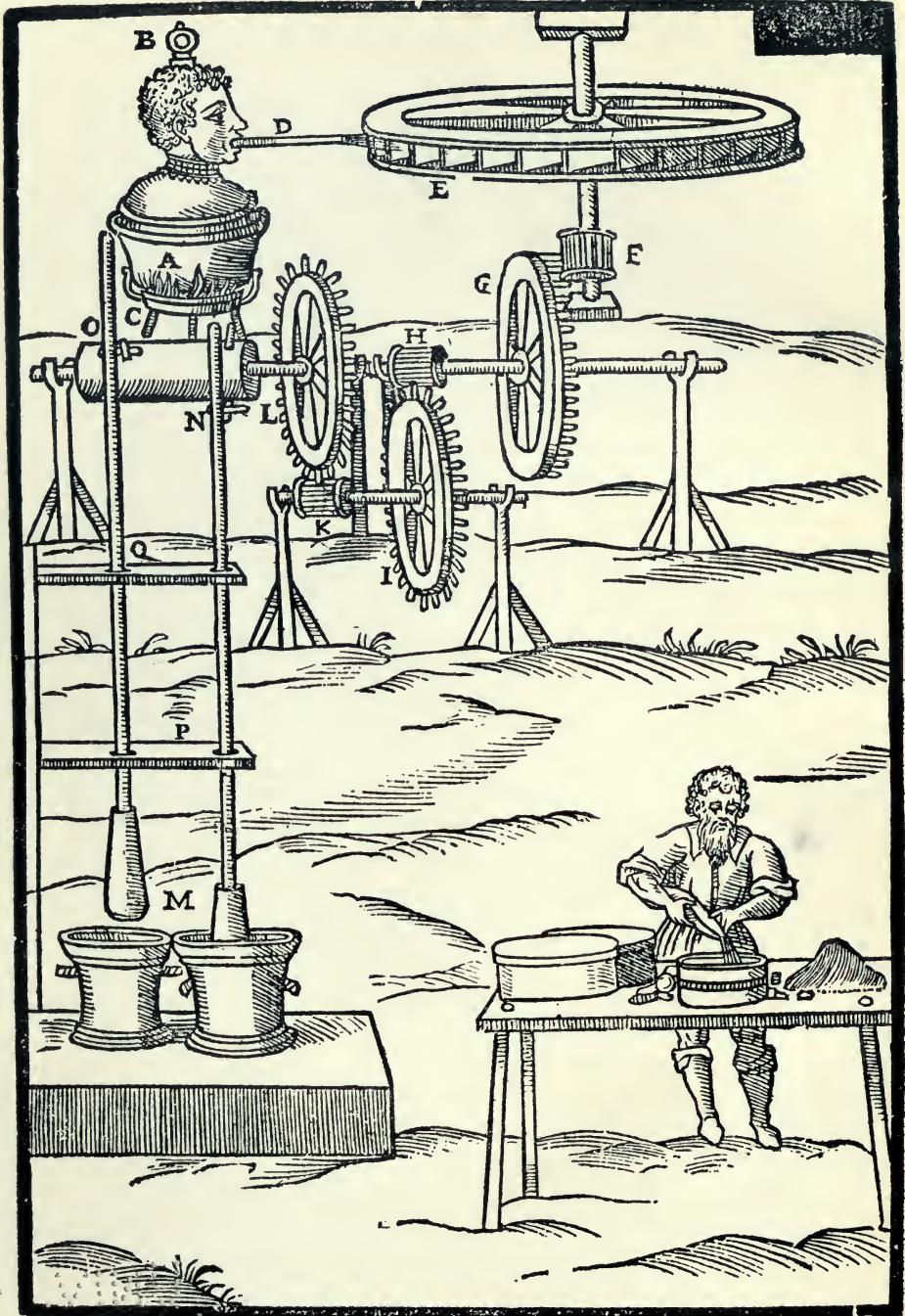
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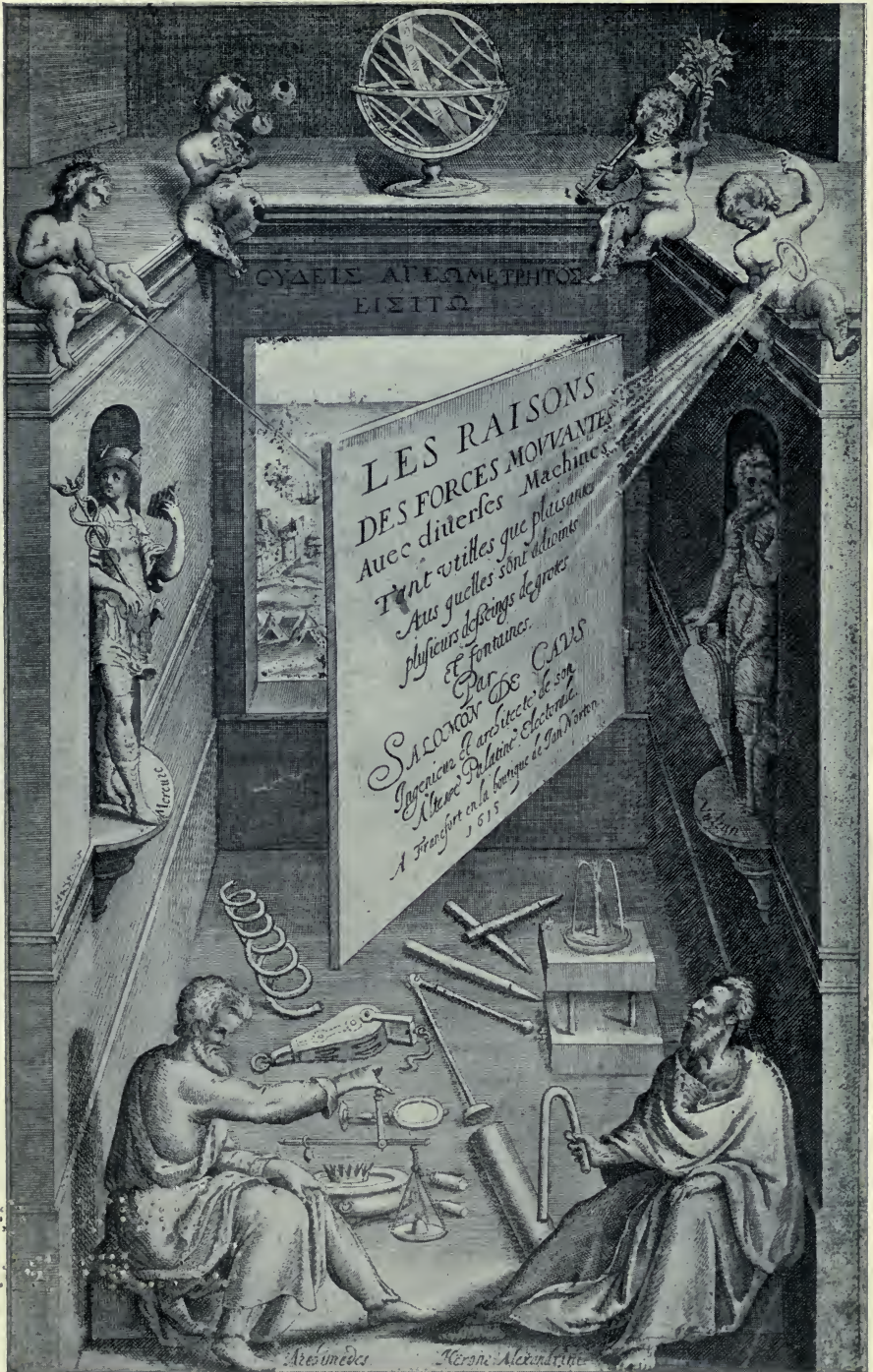
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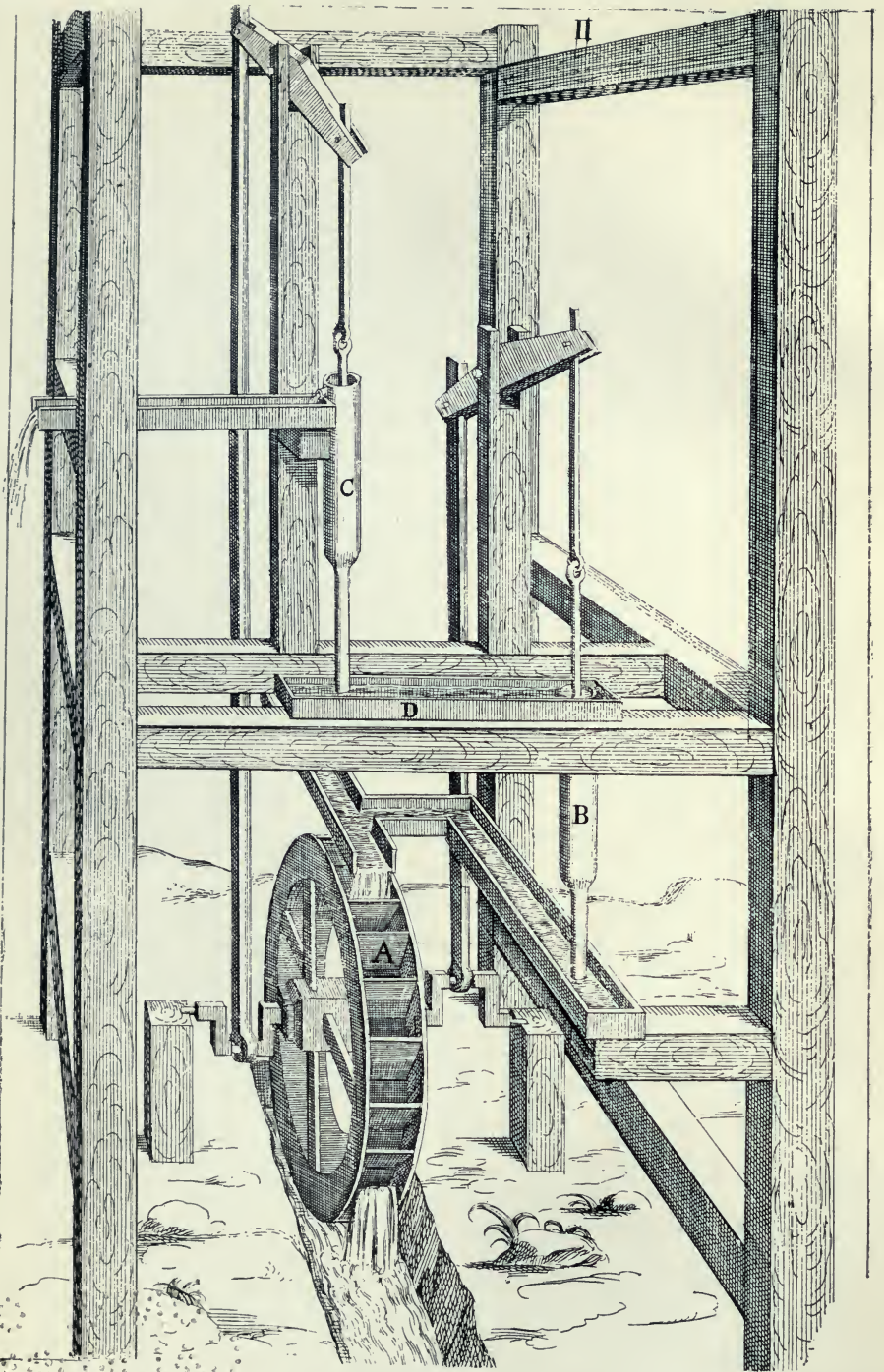
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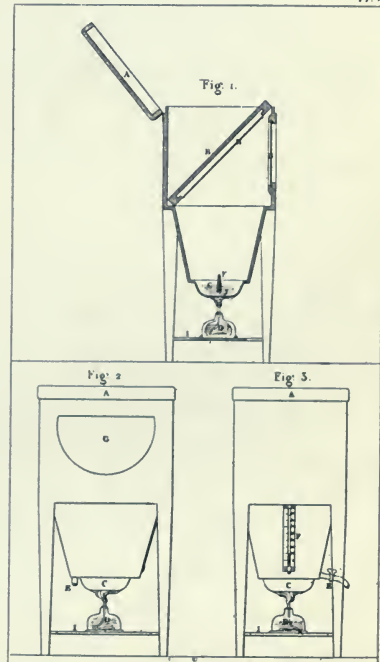
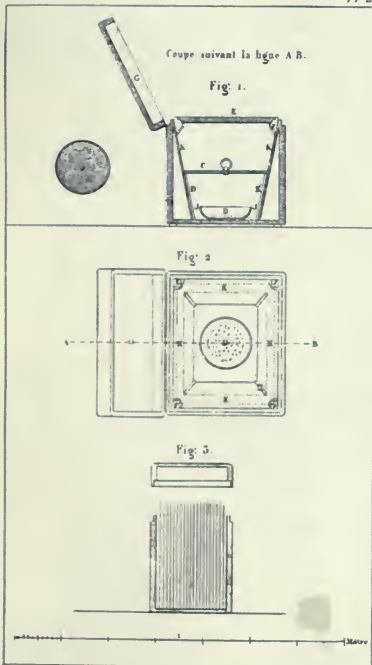
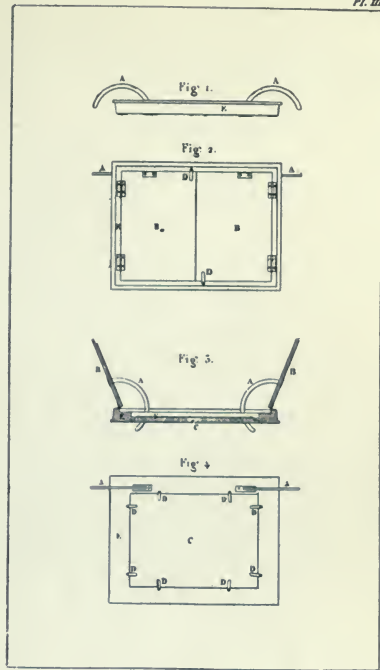
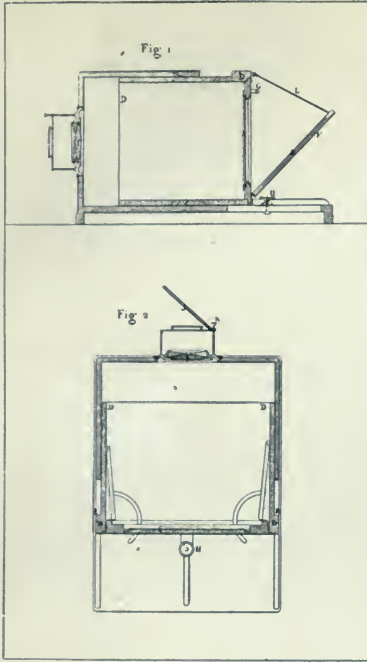
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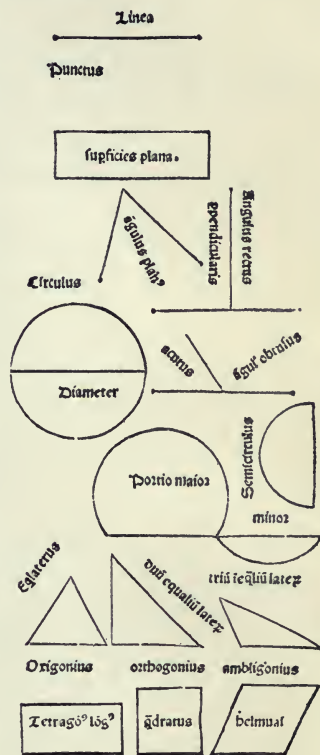
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cucissimi: in artem Geometrie incipit quâsoelicissime:



Primus est cuius pars non est. **L**inea est
longitudo sine latitudine cuius quidam ex-
tremitates sunt duo puncta. **L**inea recta
est ab uno puncto ad aliud brevissima exten-
sio in extremitates suas utriusque eorum reci-
piens. **S**uperficies est quae longitudine et lati-
tudine terminatur: cuius termini quidam sunt lineae.
Superficies plana est ab una linea ad aliam
extenso in extremitates suas recipiens.
Angulus planus est duarum linearum al-
ternis partibus: quarum expansio est super
superficiem applicatioque non directa. **Q**uando autem
angulum terminat duae lineae recte rectilineus
angulus nominatur. **Q**uia recta linea super
rectam steterit duorumque angulorum utrobique
fuerit aequales: eorum uterque rectus erit.
Linea quoque linea superioris cuius super
perpendicularis vocatur. **A**ngulus vero qui
recto maior est obtusus dicitur. **A**ngulus vero
minor recto acutus appellatur. **T**erminus est
quod uniuscuiusque terminus est. **F**igura
est quae terminis terminatur. **C**irculus est
figura plana una quaedam linea peripheria
quae circumferentia nominatur: in cuius medio
punctus est: a quo omnes lineae rectae ad
circumferentiam exierint sibi inaequales
sunt aequales. **E**t hic quidam punctus
centrum circuli dicitur. **D**iameter circuli
est linea recta quae super eum centrum
transiens extremitatesque suas circumferentiae
applicans circulum in duo media dividit.
Semicirculus est figura plana diametrum
circuli et medietate circumferentiae
peripheria. **P**ortio circuli est figura
plana recta linea et parte circumferentiae
peripheria: semicirculo quidem aut maior
aut minor. **R**ectilineae figurae sunt quae
rectis lineis continentur: quaedam
quadrilaterae quae quatuor rectis lineis.
quaedam multilaterae quae pluribus
quatuor rectis lineis continentur. **F**igurarum
trilaterarum: alia est triangulus huius
tria latera aequalia. Alia triangulus
duo huius aequalia latera. Alia
triangulus triu inequalium laterum. **H**ae
iterum alia est orthogoniū: unum scilicet
rectum angulum habens. Alia est
ambigoniū aliquem obtusum angulum
habens. Alia est oxigoniū in qua tres
anguli sunt acuti. **F**igurarum autem
quadrilaterarum Alia est quadratum
quod est equilaterum atque
rectangulum. Alia est tetragonum
longum: quod est figura
rectangula: sed equilatera non est.
Alia est belmuaym: quae est
equilatera: sed rectangula non est.

De principijs per se notis: et primo de diffini-
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TOLEMAICO, E COPERNICANO;

*Propoendo indeterminatamente le ragioni Filosofiche, e Naturali
tanto per l'una, quanto per l'altra parte.*



CON PRI

VILEGI.

IN FIORENZA, Per Gio: Batista Landini MDCXXXII.

CON LICENZA DE' SUPERIORI.

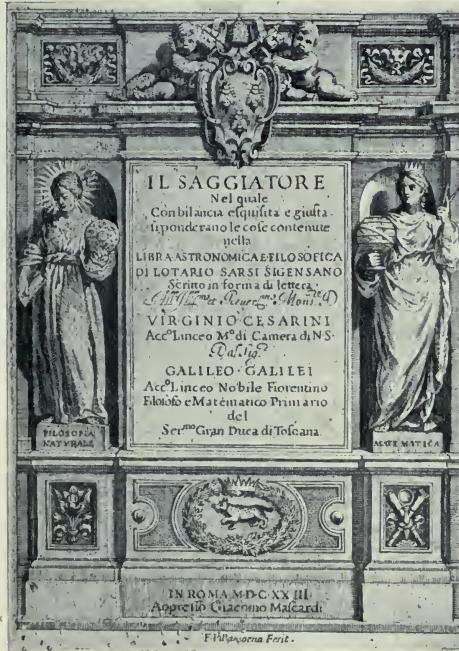
DEL GALILEO. 171
spatia tempore eodem à duobus mobilibus peracta, quorum
unum motu ex quiete uniformiter accelerato moveatur, al-
terum vero motu æquabili juxta momentum subduplum
momenti maximi velocitatis accelerati morus. quod erat
intentum.

THEOR. II. PROPOS. II.

*Si aliquod Mobile motu uniformiter accelerato descendat ex quie-
se spatia, quibuscumque temporibus ab ipso peracta, sunt inter
se in duplicata ratione eorundem temporum: nempe ut eo-
rundem temporum quadrata.*



Intelligatur fluxus temporis ex aliquo primo
instanti A representari per extensionem AB; in
qua sumantur duo quælibet tempora, AD, AE;
sitque HI linea in qua mobile ex puncto H, tan-
quam primo motus principio, descendat uni-
formiter accelerato; sitque spatium HL per-
actum primo tempore AD; HM vero sit spatium
per quod descenderit in tempore AE. Dico,
spatium MH ad spatium HL, esse in duplicata
ratione ejus quam habet tempus EA ad tempus
AD. Seu dicamus, spatia MH, HL, eandem ha-
bere rationem quam habent quadrata EA, AD.
Ponatur linea AC, quæcumque angulum cum
ipsa AB continens: ex punctis vero DE ductæ
sint parallelæ DO, EP; quarum DO representat
maximum gradum velocitatis acquisitæ
in instanti D temporis AD; PE vero maximum
gradum velocitatis acquisitæ in instanti E tem-
poris AE. Quia vero supra demonstratum est,
quod attinet ad spatia peracta, æqualia esse in-
ter se illa, quorum alterum conficitur à mobili
ex quiete motu uniformiter accelerato; alte-
rum vero, quod tempore eodem conficitur, à mobili motu
æquabili



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- 1730 ——— USO do QUADRANTE de HADLEY, que contem as Direçoens necessarias para fazer facil e certo o Uso deste Nobre Instrumento; with copperplate of the Quadrant, 8vo. (pp. 28), *sewn*, 6s 6d 1761
Londres, 1761
An interesting testimony to the still important position of the Portuguese as seamen in the Eighteenth Century.
- 1731 ——— The NATURE and USE of HADLEY'S QUADRANT, with the Theory of that Noble and Useful Instrument, and Description of the NONIUS, with folding copperplate illustrating the instrument and some of its applications, 8vo. (pp. 32), *sewn* (rare), 12s 6d [c. 1750]
The only description of the invention of the sextant by Hadley himself was a 10-pp. contribution to the Philosophical Transactions of the Royal Society. The above tracts were written by London opticians, and are now rare.
- 1732 **HAGELGANSS** (Johann Georg) MACHINA MUNDI SPHAERICA cum PLANISPHAIERIO, oder vollständige Beschreibung einer in der Architectura Cosmica angegebenen zweyfachen Welt-Kugel, '38: ARCHITECTURA COSMICA ECLECTICA et ENUCLEATA: das Welt-Gebäude, dessen Anfang, Währung und nächst-bevorstehender Untergang, '36: ARCHITECTURAE COSMICAЕ COMPLEMENTUM, mit einer Cometen-Beschreibung, '44—3 vols. 8vo. in 1, with numerous folding plates on copper; fine copies in old white vellum (RARE), £1. 1s Frankfurt a. M., 1736-44
This curious work was unknown to Houzeau and Lancaster, Poggendorff, etc.
- 1733 **HAIGH** (James, Silk and Muslin Dyer, Leeds) The DYER'S ASSISTANT in the Art of Dying [sic] WOOL and WOOLEN [sic] Goods, extracted from the Philosophical and Chemical Works of Ferguson, Dufay, Hellot, Geoffery, Colbert, and de Julienne, trans. from the French, with Additions and PRACTICAL EXPERIMENTS, first edition, post 8vo. *old hf. calf* (broken); rare, 12s 6d [1778]
One of the earliest English works on the subject.
- 1734 ——— NEW EDITION, post 8vo. *old hf. calf*, 15s York, 1787
This edition includes 'A Hint to the Dyers and Cloth-Makers' (with separate titlepage), not included in the foregoing.
- 1735 **HAIR** (T. H.) VIEWS of the COLLIERIES in NORTHUMBERLAND and DURHAM, 42 large and fine etchings (many PROOFS on INDIA PAPER), with descriptive Sketches and ESSAY on the COAL TRADE by M. ROSS, folio, *hf. bound* (some plates foxed or slightly stained); SCARCE, £1. 1s 1814
One of the very rare attempts to show the picturesque side of the heavy trades. The plates are very good etchings, and give most interesting views of the old-fashioned pit-brows, and stables on the Wear and Tyne, in the good old days of sixty years ago before the Factory Acts, when women and girls crawled half-naked on all fours dragging the trolleys along the underground ways. The book is unknown to Lowndes and Allibone.
- 1736 **HALDANE** (Robert) WORKSHOP RECEIPTS, SECOND SERIES, illustrated, cr. 8vo. (pp. 486), *cl.*, (out of print), 3s 6d 1890
- 1737 [**HALE** (Thomas)] ACCOUNT of several NEW INVENTIONS and IMPROVEMENTS now necessary for ENGLAND, relating to the BUILDING of our ENGLISH SHIPPING, the Conservancy of our Royal Rivers, etc. etc.; with the Proceedings relating to the MILL'D-LEAD-SHEATHING, and the Excellency and cheapness of Mill'd-Lead in preference to Cast Sheet-Lead; also a TREATISE of NAVAL PHILOSOPHY by SIR WILLIAM PETTY, 16mo. contemporary sheep, with armorial bookplate of Viscount Bruce of Amphilh, 1712 (RARE), £1. 1s 1691
With a 4 p. pamphlet 'Mill'd Lead, demonstrated to be a better and more durable Covering for Buildings,' etc., etc., 1695, added.
- 1738 **HALES** (Stephen; Vicar of Teddington, parish pr. of Peg Woffington; F.R.S.) CONSIDERATIONS on the CAUSES of EARTHQUAKES, 8vo. (pp. 21), *sewn*, 7s 6d 1750
The author gives a personal account of earthquakes which happened in London on March 8th, 1750, and assigns their causes to the ignition of 'ascending sulphureous vapours in the earth.'
- 1739 ——— DESCRIPTION of VENTILATORS: whereby Great Quantities of FRESH AIR may with Ease be conveyed into MINES, GOALS [sic], HOSPITALS, WORK-HOUSES and SHIPS . . . and their Great Usefulness in preserving all Sorts of Grain Dry, Sweet, and free from Weevels, etc. etc., also in drying Corn, Malt, Hops, Gun-Powder, etc., 2 folding plates: ACCOUNT of a USEFUL DISCOVERY to DISTILL double the USUAL QUANTITY of SEA WATER, by Blowing Showers of Air through the Distilling Liquor, the great Benefit of Ventilators, and the good Effect of blowing Showers of Air up through Milk, 2nd Ed., with farther considerable Improvements, the good Effect of Ventilators in Ships, etc. etc., plate—2 vols. 8vo. in 1, *old calf* (RARE), £1. 5s 1743-56
The author, 'a poor, good, primitive creature,' according to his fribble neighbour Horace Walpole, was one of the foremost scientists of his time, a zealous parish priest, and a most versatile man. He has the further interest for AMERICANS as having been one of the trustees for the Colony of GEORGIA, and the plant *Halesia* remains as a memento of this connexion, as it was named in his honour by JOHN ELLIS the naturalist, when governor of the colony.

- 1740 **HALES** (Stephen, *Vicar of Teddington, F.R.S.*) PHILOSOPHICAL EXPERIMENTS: shewing how SEA-WATER may be MADE FRESH and WHOLSOME: and how Fresh-Water may be preserv'd Sweet; how Biscuit, Corn, etc. may be preserved from the Weevil, Meggots, etc., and Flesh preserv'd in hot Climates by Salting Animals whole, with Experiments and Observations on Chalybeate or Steel Waters, and a Proposal for cleansing away Mud, etc., out of Rivers, Harbours, and Reservoirs, first edition, with copperplate, 8vo. sewn (very large and clean copy); RARE, 17s 6d 1739
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a. e., *ibidem*, 1887

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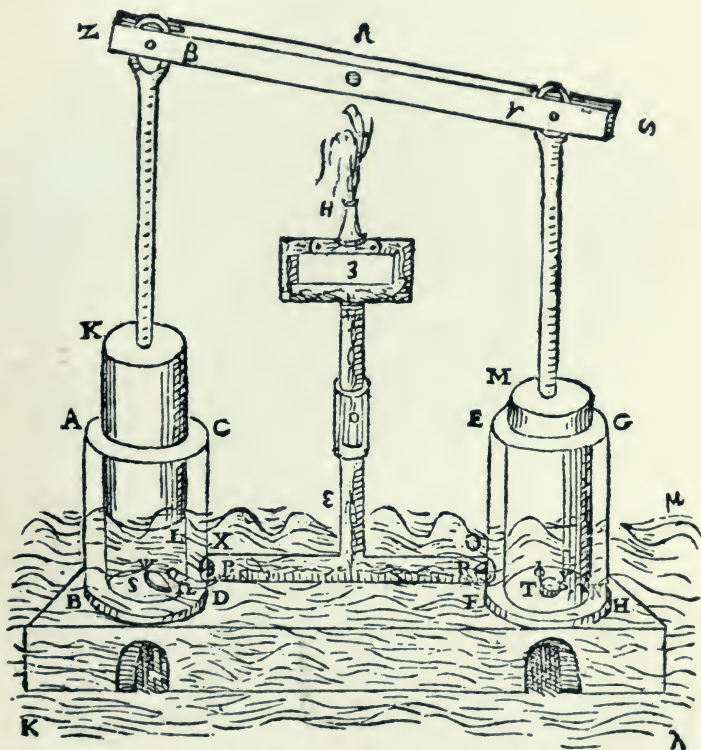
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- 1878 ——— : MARTIN (Théodore Henri) RECHERCHES sur la VIE et les OUVRAGES d'HÉRON d'ALEXANDRIE, et sur tous les Ouvrages Mathématiques Grecs, conservés ou perdus, publiés ou inédits, qui ont été attribués à un Auteur nommé Héron, 4to. (pp. 488), *sewn*, 7s 6d
Impr. Impériale, 1854
- 1879 **HERSCHEL** (Caroline [Lucretia]), MEMOIR and CORRESPONDENCE of, by MRS. JOHN HERSCHEL; 2nd Ed., with 2 *fine steel portraits (Miss Herschel, et. 92, and Sir William Herschel)*, and *plate of the 40-foot Telescope*, large post 8vo. cl. (*scarce*), 10s 6d
1879
The only biography of one of the most extraordinary characters in the history of science. Arrived in England to take over the household of her brother, she spent her time between household duties and 'sweeping' the heavens, resulting in her discovery of 8 comets between 1786 and 1797. For her Catalogue of Zones of Sir W. Herschel's Star Clusters and Nebulae she received the Gold Medal of the Astronomical Society.

HERONIS

XXVII.

Siphones autem, quibus utuntur ad incendia hoc modo construuntur.



Sint duo modioli ærei torno expoliti secundum interiorem eorum superficiem ad embolos, quemadmodū hydrauleorum modioli A B C D E F G H: & emboli ip[s]is congruentes sint KL MN. simul vero modioli perforentur inter sese per tubum X O D F: & ex partibus exterioribus intra X O D F tubum habeant assaria apposita P R, qualia in superioribus dicta sunt, ita ut in partem

Nos. 1875-6.

The Double Force-Pump invented by Hero of Alexandria.

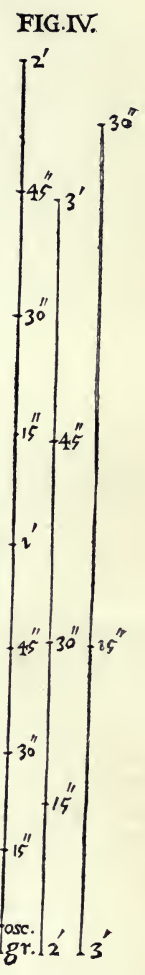
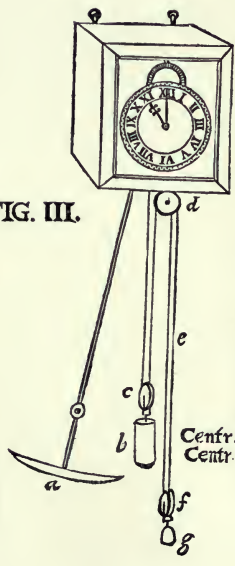
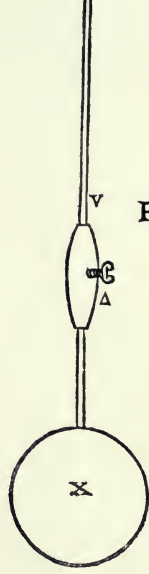
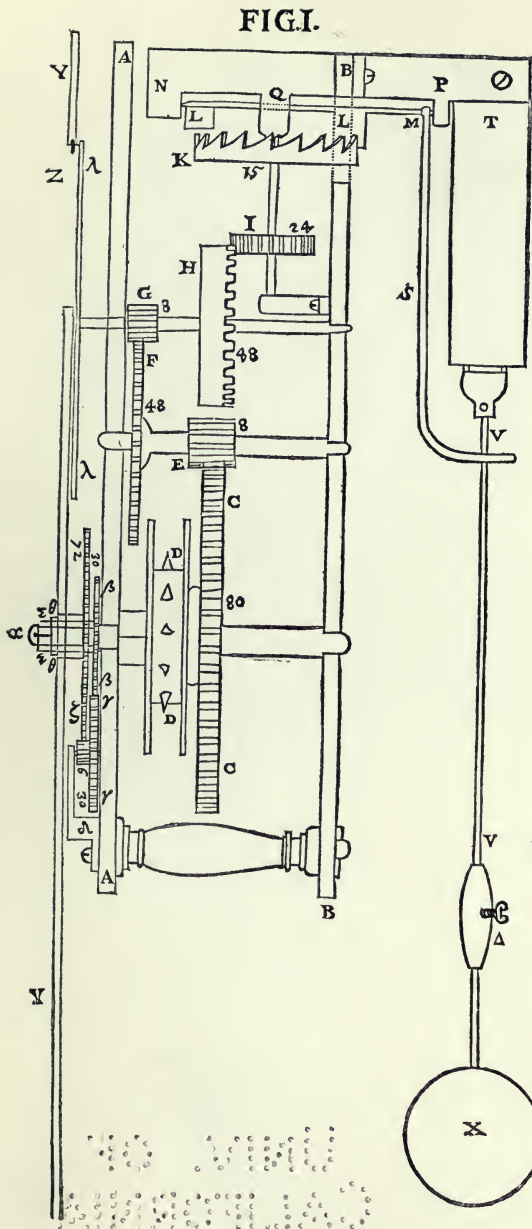
- 1880 **HERSCHEL** (Sir John Frederick William, F.R.S.) ACCOUNT of a Series of OBSERVATIONS in the Summer of 1825 for DETERMINING the DIFFERENCE of the MERIDIANS of the Royal Observatories of GREENWICH and PARIS, roy. 4to. (pp. 50), *sewn*, 2s 6d 1826
- 1881 — ADDRESS at a SPECIAL MEETING of the ASTRONOMICAL SOCIETY of LONDON, April 11, 1827, on presenting the Honorary Medals to F. Baily, Esq., Lieut. W. S. Stratford, R.N., and Col. Mark Beaufoy, roy. 4to. (pp. 14), *sewn*, 2s [1827]
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- 1904 — and Sir James SOUTH, F.R.S.: OBSERVATIONS of the APPARENT DISTANCES and POSITIONS of 380 DOUBLE and TRIPLE STARS made in 1821-3, and compared with those of other Astronomers, with Account of such Changes as appear to have taken place in them since their Discovery; also Description of a 5-Foot Equatorial Instrument employed in the Observations, with 4 *fine copperplates* by BASIRE of *Astronomical Instruments*, etc., roy. 4to. (pp. 424), *sewn*, *uncut* (*scarce*), 15s 1825
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- This work, originally published in the *Encyclopædia Metropolitana*, has never been published in English in a separate form. 'This admirable treatise, translated into French by Quetelet, besides including many original discoveries, gave European currency to the undulatory theory of light.'—*Miss A. M. Clerke.*
- THE MOON-HOAX:
- 1908 ———: SOME ACCOUNT OF THE GREAT ASTRONOMICAL DISCOVERIES lately made by SIR JOHN HERSCHEL, at the Cape of Good Hope, 2nd Ed., 12mo. *hf. roan (nice copy)*; SCARCE, £1. 1s
- Effingham Wilson, 1836*
- This solemn scientific hoax by an anonymous writer (supposed to have been M. NICOLLET), which was originally broached by the *New York Sun*, relates how Sir John Herschel during his astronomical observations in South Africa made the most startling discoveries on the moon by magnifying the image obtained by the telescope with a powerful microscope [!]. Mountain ranges, buildings, animals in motion, and even flowers (in one instance a red corn poppy) are described to have been observed by the lucky Astronomer Royal, and the statements were taken as genuine astronomical discoveries and swallowed wholesale by the numerous breed of the half-learned.
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- The above work was apparently unknown to the author's biographer in *D. N. B.*

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- The Tract of HENRY STUBBE, which follows Hobbes's Stigmata in this volume, is one of the rarest Tracts in the English Language. It is also exceedingly interesting from the Learning and Causticity which it displays. The only other Copies I ever saw, having sought & advertised for it for years, are those in the British Museum & Bodleian Library & another which I obtained from Henry Bohn, all of which however are imperfect, wanting the postscript from p. 17 to 38 so that this is in fact the only perfect copy known. I advised SIR WILLIAM MOLESWORTH to reprint it in his Edition of Hobbes's Works. He has not done so, but the reprint of the Stigmata in his Edition was from the Copy in this Volume.—JAS. CROSSLEY [Founder and President of the Chetham Society]. 3rd Ap[ri]l 1849.—Inscr. on flyleaf.
- 1947 [——] LUX MATHEMATICA: excussa Collisionibus JOH. WALLISII, D.D. et Thomæ Hobbesii, multis et fulgentissimis aucta radiis Authore R. R.; adjuncta est Censura Doctrinæ Wallisianæ de Libra, cum ROSETO HOBBSII, editio princeps; *with plate and numerous diagrams on copper*, sm. 4to. *hf. brown calf gilt (nice large copy)*, 7s 6d *Londini, 1672*
- Written at the age of eighty-four.
- 1948 [——] De PRINCIPIIS et RATIOCINATIONE GEOMETRARUM, ubi ostenditur incertitudinem falsitatemque; non minorem inesse scriptis eorum, quam scriptis Physicorum et Ethicorum. Contra fastum Professorum Geometriæ, editio princeps; *with plates and diagrams on copper*, sm. 4to. *old sheep (margins of some ll. wormed, but a tall and sound copy)*, *with bookplate of Philip 2nd Earl Stanhope, F.R.S.*, 12s 6d *ibidem, 1666*
- 1949 ——— QUADRATURA CIRCULI, CUBATIO SPHÆRÆ, DUPLICATIO CUBI, brevier DEMONSTRATA, editio princeps, 4to. (pp. 20), *hf. brown calf extra (nice large copy)*, 10s 6d *ib.*, 1669
- This pamphlet, containing the philosopher's singular notions on the quadrature of the circle, and other geometrical fallacies, was answered by JOHN WALLIS in his 'Thomæ Hobbes Quadratura Circuli, etc. confutata' (q. v. post).
- 1950 ——— ROSETUM GEOMETRICUM, sive Propositiones aliquot frustra antehac tentatæ, cum (ENSURA brevi DOCTRINÆ WALLISIANÆ de Motu, editio princeps; *with numerous diagrams on copper*, 4to. (pp. 68), *hf. brown calf extra (nice large copy)*, 8s 6d *ib.*, 1671
- 1951 ——— THREE PAPERS presented to the ROYAL SOCIETY AGAINST DR. WALLIS, with Considerations on his Answer to them, first edition, *with diagrams*, 4to. *hf. brown calf extra (nice large copy)*, 15s *Printed for the Author, 1671*
- Added is a broadsheet, dated April 20, 1674: 'Epistola Thomæ Hobbes ad Dom. Antonium à Wood,' also two broadsheets 'To the Learned Members of the Royal Society.'
- Hobbes was very wrong in his quadrature; but, though not a Gregory St. Vincent, he was not the ignoramus in geometry that he is sometimes supposed. His writings, erroneous as they are in many things, contain acute remarks on points of principle.—Prof. de Morgan.
- 1952 **HOBBS** (William) A NEW DISCOVERY for FINDING the LONGITUDE, *with 2 plates of the spring-movement*, sm. 4to. (pp. 7), *swan (rare)*, 7s 6d 1714
- The method advocated was by means of a curious watch (worked in conjunction with a chronometer) which is divided into 100 parts, and of which one hand moves to one part, while the other moves over the whole hundred. The illustration gives particulars as to its construction.
- 1953 **HOBLYN** (Richard Dennis; pr., Balliol Coll.) DICTIONARY of SCIENTIFIC TERMS, post 8vo. cl., 3s 1849
- 1954 **HODGE** (Paul R., C.E.) ANALYTICAL PRINCIPLES and PRACTICAL APPLICATION of the EXPANSIVE STEAM ENGINE, as employed in Pumping, Manufacturing, NAVIGATION, RAILWAY LOCOMOTION, etc., *with 8 folding plates, and diagrams*, 4to. *hf. roan*, 4s 6d (p. £3.) 1849
- An early treatise on the advantage of using steam expansively, so greatly developed since in the compound engine.
- 1955 **HODGES** (John A.) PICTORIAL LANDSCAPE PHOTOGRAPHY, *front. and 36 other illustrations*, 8vo. *buckram*, 2s 6d (p. 5s) *Chicago, 1901*
- 1956 **HODGSON** (James, F.R.S.) THE THEORY of NAVIGATION DEMONSTRATED: and its Rudiments Clearly and Plainly Proved, from the First and most Simple Principles of the Mathematicks, with Rules and Tables, Catalogue of the Right Ascensions, etc. of some Eminent Fixed Stars, and the Latitudes of several Ports and Cities, with their Longitudes [also a TRIANGULAR CANON LOGARITHMICAL]; *plates and numerous diagrams (some with MOVEABLE SLIPS)*, thick sm. 4to. *old sheep (joints cracked)*, 12s 6d 1706
- The author was Master of the Mathematical School at Christ's Hospital, and a friend of Flamsteed, whose niece he married.
- 1957 **HOFF** (Jacobus Hendrik van 't) LECTURES on THEORETICAL and PHYSICAL CHEMISTRY, trans. by R. A. LEHFELDT, Part II: CHEMICAL STATICS, *diagrams*, 8vo. cl., 6s (p. 8s 6d nett) [1899]
- 1958 ——— PHYSICAL CHEMISTRY in the SERVICE of the SCIENCES; trans. by ALEXANDER SMITH, *with portrait, and plate illustrating 'tin disease'*, 8vo. cl., 5s 6d (p. 7s 6d nett) *Univ. Press, Chicago, 1903*

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The Pendulum Clock invented by Huygens.

- 1959 **HOFF** (Jacobus Hendrik van 't) STEREOCHEMIE, nach 'Dix Années dans l'Histoire d'une Théorie,' unter Mitwirkung des Verfassers neu bearbeitet von W. MEYERHOFFER; with diagrams, Svo. cl., 3s (p. M. 5.) *Wien*, 1892
- 1960 ——— STUDIES in CHEMICAL DYNAMICS, revised and enlarged by ERNEST COHEN, trans. by THOMAS EWAN, with Preface by the Author; 49 illustrations, roy. 8vo., cl., 5s (p. 10s 6d) *Amsterdam*, 1896
- 1931 **HOFFMANN** (Friedrich) OBSERVATIONUM PHYSICO-CHEMICARUM selectiorum LIBRI III, in quibus multa curiosa EXPERIMENTA et lectissimæ Virtutis MEDICAMENTA exhibentur, 4to. *Hale*, 1722
old calf, 14s
The author made many important investigations and discoveries in pharmaceutical and analytical chemistry, including an analysis of mineral waters, and did good work in combating the iatro-chemical doctrines of Sylvius and Tachenius, but is perhaps best known by his invention of 'Hoffmann's Anodyne', which is still in use as *spiritus ætheris compositus* of the British Pharmacopœia.
- 1962 **HOFFMANN** (Johann Josef Ignaz v.) ABHANDLUNGEN aus der MATHEMATIK und PHYSIK, nebst mathematischen und physischen Belustigungen; with 15 folding plates, 8vo. seven, uncut, 5s *Mainz*, 1838
- 1963 **HOFMANN** (August Wilhelm v.; F.R.S.) ZUR ERINNERUNG AN VORANGEGANGENE FREUNDE: GESAMMELTE GEDÄCHTNISREIEN; with portraits and fss., 3 vols. 8vo. cl., 15s (p. M. 23.) *Braunschweig*, 1888
'George F. Wilson Esq. with the Author's affectionate regards. April 8, '89.'—Inscr. on flyleaf. See also LIEBIG, post.
- 1964 **HOLDEN** (Edward Singleton, Director Lick Observatory) MOUNTAIN OBSERVATORIES in AMERICA and EUROPE, with numerous plates, 8vo. seven, 3s *Washington*, 1896
- 1965 **HOLDER** (William, F.R.S., Canon of St. Paul's) DISCOURSE concerning TIME, with Application of the Natural Day, the Lunar Month, and Solar Year, as Natural; and of such as are derived from them, as Artificial Parts of Times, for Measures in Civil and Common Use: for the better UNDERSTANDING of the JULIAN Year and CALENDAR, etc., etc., first edition, large 12mo. original sheep, 10s 6d 1694
The author's last work. He was an accomplished musician, and also did much in teaching the deaf and dumb, one of whom, an Alexander Popham, he taught to speak, though he afterwards temporarily relapsed. He married an elder sister of Sir Christopher Wren, and had much to do with the latter's education.
- 1966 **HOLLAND** (Sir Henry, M.D., F.R.S.) ESSAYS on SCIENTIFIC and other SUBJECTS, 8vo. cl., 5s 1862
- 1967 ——— ANOTHER COPY, hf. green Levant morocco gilt, uncut, t. e. g. (fine copy), 8s
- 1968 ——— SECOND EDITION [revised and enlarged], 8vo. cl., 6s 1862
Containing essays on astronomical, physical, and chemical subjects.
- 1969 ——— FRAGMENTARY PAPERS on SCIENCE and other Subjects, edited by his Son, FRANCIS JAMES HOLLAND, Canon of Canterbury, 8vo. cl., 5s 1875
- 1970 [**HOLLAND** (John)] TREATISE on the PROGRESSIVE IMPROVEMENT and PRESENT STATE of the MANUFACTURES in METAL, vignettes by Finden, and 300 woodcuts, 3 vols. fcap. 8vo. hf. calf (nice copy), 5s 1831-4
- 1971 **HOLLEMAN** (A. F., Univ. Amsterdam) TEXT-BOOK of ORGANIC CHEMISTRY, trans. from the 2nd Dutch Edition by A. JAMIESON WALKER and OWEN E. MOTT, illustrated, 2 vols. 8vo. cl., 7s (p. 10s 6d nett) *New York*, 1903
One of the best text-books on the subject.
- 1972 **HOLMES** (J. H. H., F.S.A.) TREATISE on the COAL MINES of DURHAM and NORTHUMBERLAND; with the Stratifications of the two Counties, and Accounts of EXPLOSIONS from FIRE-DAMP for the last 20 Years, with Means proposed for their Remedy, and for the General Improvement of the Mining System, by NEW METHODS of VENTILATION, 6 plates, and map, 8vo. boards (rare), 12s 6d 1816
Plate 6 illustrates Clanny's, Brandling's, and Murray's Safety Lamps.
- 1973 **HOLTZAPFFEL** (Charles) NEW SYSTEM of SCALES of EQUAL PARTS, applicable to various purposes of ENGINEERING, etc., with folding plate of the Scales, 8vo. cl., 4s 1833
The author's first work.
- 1974 ——— TURNING and MECHANICAL MANIPULATION: a Work of General Reference and Practical Instruction on the Lathe, and the various Mechanical Pursuits followed by Amateurs: Vols. I, II, IV, and V, with very numerous plates and woodcuts, 4 vols. 8vo. cl., £2. 12s 6d 1846-84
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- 1975 **HOLWELL** (John, Philomath) A SURE GUIDE to the PRACTICAL SURVEYOR, also how to convey WATER from any Spring-Head, to any appointed place; THE LIKE NEVER BEFORE EXTANT [including a TABLE for FINDING the LONGITUDE and LATITUDE], with plates and diagrams, sm. 8vo. contemporary calf (rare), 15s 1673
The author's first published work.
- 1976 ——— TRIGONOMETRY made EASY; fitted to the meanest Capacity, 2 plates, 16mo. nice copy in contemporary sheep, with bookplate of Philip 2nd Earl Stanhope, F.R.S., 6s 1635
The author combined astrology, mathematics, and an extensive practice as a surveyor, and was grandfather of JOHN ZEPHANIAH HOLWELL, Governor of Bengal, and a survivor of the Black Hole of Calcutta. He was sent in 1685 on a Government mission to New York, and died there, it is said of poison, as it was not wished to have him back again.
- 1977 **HOOD** (Charles, F.R.S.) PRACTICAL TREATISE on WARMING BUILDINGS, on VENTILATION, and on the Laws of Radiant and Conducted Heat, the Chemical Constitution of Coal, and the Combustion of Smoke; 5th Ed., greatly enlarged, woodcuts, 8vo. cl., 3s 6d (p. 10s 6d) 1879
- 1978 **HOOPER** (William, M.D.) RATIONAL RECREATIONS, in which the PRINCIPLES of NUMBERS and NATURAL PHILOSOPHY are clearly and copiously elucidated, by a Series of Easy, Entertaining, Interesting EXPERIMENTS, including those commonly performed with the CARDS, with 65 folding plates on copper, 4 vols. 8vo. contemporary calf extra (fine copy), 15s 1774
- 1979 ——— THIRD EDITION, corrected, with 65 fine folding plates on copper (ALL HANDCOLOURED), 4 vols. 8vo. contemporary tree-calf gilt (nice copy), £1. 1s 1787

- 1980 **HOOKE** (Robert, F.R.S., *Gresham Prof. Astronomy*) **POSTHUMOUS WORKS**, containing his **CUTLERIAN LECTURES**, and other Discourses, with LIFE, published by RICHARD WALLER, F.R.S., with 13 copperplates, folio, *old calf (sound copy)*; RARE, £1. 15s 1705
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- 1981 ———: **MICROGRAPHIA RESTAURATA: or the COPPER-PLATES of DR. HOOKE'S WONDERFUL DISCOVERIES by the MICROSCOPE**, Reprinted and fully Explained: Whereby the most Valuable Particulars in that Celebrated Author's Micrographia are brought together in a narrow Compass; and intermixed, occasionally, with many Entertaining and Instructive Discoveries and Observations in Natural History [by HENRY BAKER, F.R.S.], with 33 large and fine copperplates (*some folding*), folio, *old calf gilt*, 15s 1745
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- 1982 ———: **PHILOSOPHICAL EXPERIMENTS and OBSERVATIONS of R. H., and other Eminent Virtuoso's in his Time**, publish'd by W. DERHAM, F.R.S., with plates and woodcuts, 8vo. nice copy in *old calf, newly rebounded* (RARE), £1. 1s 1726
Waller died before a projected second volume appeared, and some of the remaining MSS. furnished Derham's 'Philosophical Experiments'.—D. N. B.
'Hooke was a man of extraordinary inventive genius, and has justly been considered as the greatest of philosophical mechanics. There was no important invention by any philosopher of that time which was not in part anticipated by Hooke. His theory of gravitation subsequently formed part of Newton's; he anticipated the invention of the steam engine, and the discovery of the laws of the constrained motions of planets. Among his own completed discoveries are the law of the extension and compression of elastic bodies, the balance spring of watches and the anchor-escapement clocks, and the permanency of the temperature of boiling water. The quadrant, telescope, and microscope are also materially indebted to him.' The above three works comprise all ever printed of his writings.
- v. BOYLE (R.) **NEW EXPERIMENTS, and NOVA EXPERIMENTA, ante.**
- 1983 **HOOPER** (Egbert G.) **THE MANUAL OF BREWING: Scientific and Technical**, 2nd Ed., woodcuts, post 8vo. cl. (*slightly soiled*), 2s 6d 1882
- 1984 **HOOPER** (William George, F.S.S.) **ÆTHER and GRAVITATION**, 8vo. cl., 4s (p. 12s 6d nett) 1903
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- 1986 **HOPKINS** (George M.) **EXPERIMENTAL SCIENCE: Elementary, Practical, and Experimental Physics**, with front, and 672 woodcuts, thick large 8vo. cl., 6s (p. 17s nett) *New York*, 1890
- 1987 **HOPKINS** (Nevil Munroe, *George Washington Univ.*) **EXPERIMENTAL ELECTROCHEMISTRY**, with 130 illustrations, roy. 8vo. cl., 8s 6d (p. 12s nett) 1905
- 1988 **HOPKINS** (Thomas) **ON THE ATMOSPHERIC CHANGES which produce RAIN and WIND, and the Fluctuations of the BAROMETER**, 2nd Ed., with additional Essays and Diagrams, charts, 8vo. cl., 6s 1854
- 1989 ——— **ON THE INFLUENCE of the EARTH'S ROTATION on WINDS**, 8vo. (pp. 11), *sewn*, 1s n. d.
- 1990 ——— **ON THE INFLUENCE of SUN-HEATED LAND in PRODUCING ASCENDING ATMOSPHERIC CURRENTS**, 8vo. (pp. 16), *sewn*, 1s 6d *Manchester*, 1854
- 1991 ——— **ON THE SEPARATE PRESSURES of the AQUEOUS and the GASEOUS PORTIONS of the ATMOSPHERE**, 8vo. (pp. 25), *sewn*, 1s 6d *ib.*, 1854
- 1992 ——— **OUTLINES of an HYPOTHESIS to account for the PRODUCTION of RAIN and WIND**, 8vo. (pp. 8), *sewn*, 1s *ib.*, 1852
- 1993 **HOPKINS** (William) **ELEMENTS of TRIGONOMETRY, woodcuts; also, ELEMENTARY ILLUSTRATIONS of the DIFFERENTIAL and INTEGRAL CALCULUS, and a few other Tracts—in one vol.** 8vo. hf. bound, 4s 1833
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The author was known as the Senior Wrangler Maker, and had as his pupils Sir G. G. Stokes, Lord Kelvin, P. G. Tait, Henry Fawcett, James Clerk Maxwell, and Isaac Todhunter.
- 1994 **HOPPE** (Edmund) **GESCHICHTE der ELEKTRIZITÄT; illustrated**, 8vo. hf. calf gilt, 7s 6d *Leipzig*, 1884
(p. M. 13.50 unbound)
- 1995 **HOROLOGICAL JOURNAL** (The): the Special Organ of the BRITISH HOROLOGICAL INSTITUTE, COMPLETE from the beginning in 1858 to 1900, with numerous illustrations, 42 vols. large 8vo. and roy. 8vo. in 10, hf. morocco gilt (v. 1 wanting title and index, otherwise a SOUND and CLEAN SET), £5. 10s 1858-1900
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Of special interest is his 'Basis Astronomiæ,' in which he describes the astronomical instruments and methods of observation of OLOF ROEMER.
- 1997 **HORSLEY** (Samuel; *Bp. of St. Asaph*, F.R.S.) **ΚΟΣΚΙΝΟΝ ἘΠΑΤΟΣΘΕΝΟΥΣ, or the SIEVE of ERATOSTHENES: an Account of his METHOD of finding all the PRIME NUMBERS**, 4to. (pp. 23), *sewn*, 4s 1773
Collated with a MS. of Abp. Laud's. This tract is not mentioned in a professedly complete list of the author's works in D.N.B.
- 1998 ——— **REMARKS on the Observations made in the late VOYAGE towards the NORTH POLE, for determining the ACCELERATION of the PENDULUM, in Lat. 79° 50'**, 4to. (pp. 15), *sewn*, 2s 6d 1774
——— v. APOLLONIUS PERGÆUS, *ante*, and NEWTON, *post*.

- 1999 **HORROCKS (Jeremiah)**; *Curate of Hoole, Lancs.*; first observer of the Transit of Venus); JEREMIAE HORROCCII, Liverpoliensis Angli, OPERA POSTHUMA; accedunt GUIL. CRABTRÆI, Mancestriensis, Observationes Cœlestes; JOH. FLAMSTEDII de Temporis Æquatione Diatriba; Numeri ad Lunæ Theoriam Horroccianam; JOH. WALLISII de Cometarum Distantiis; de Rationum et Fractionum Reductione; de Periodo Juliana; with diagrams, thick cr. 4to. *old calf* (VERY RARE), £1. 15s
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 'In the lunar theory he effected an improvement which would alone suffice to obtain for him an imperishable reputation. His beautiful explanation of the inequality in the moon's longitude, termed the evection, by means of a libratory motion of the apsides and a variable eccentricity, was the last great step made in the development of the laws of planetary movement previous to the establishment of the theory of gravitation by Newton.'—*J. R. Grant.*
- 2000 ———, MEMOIR of the LIFE and LABOURS of, with Translation of his celebrated DISCOURSE on the TRANSIT of VENUS, by ARUNDELL BLOUNT WHATTON, pr., diagrams and chart, post 8vo. *cl.* (scarce), 10s 6d
 The Venus in Sole visa, of which the above is a translation, was not included in the foregoing posthumous works, and only saw the light by care of Hevelius at Danzig in 1602.
- HORTEGA (Juan de)**—v. ORTEGA, post.
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 A very rare work, unknown to Brunet, Græsse, Poggendorff, and other bibliographers. The only reference to it which the advertisers have been able to trace is in Prof. de Morgan's *Arithmetical Books*, who—although having seen no copy himself—quotes it on the strength of Dr. Peacock's 'History of Arithmetic.'
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 'Houghton is valuable for the laws relating to mines, and his explanation of miners' terms, etc.'—*Lowndes.*
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 New York, 1889
- 2010 **HOUCZEAU (Jean Charles)**; Directeur de l'Observatoire de Bruxelles) MÉTHODE pour DÉTERMINER SIMULTANÉMENT la LATITUDE, la LONGITUDE, l'HEURE et l'AZIMUT, pour des Passages observés dans deux Verticaux, 4to. (pp. 26), *cl.*, 3s 6d
 [Bruxelles, 1853]
- 2011 ———, et Albert LANCASTER, Bibliothécaire de cet Établissement: BIBLIOGRAPHIE GÉNÉRALE de l'ASTRONOMIE, on Catalogue méthodique des Ouvrages, des Mémoires, et des Observations astronomiques publiés depuis l'Origine de l'Imprimerie jusqu'en 1880; with chart, 2 thick vols. impl. 8vo. in 3, *sewn*, WITH AUTHOR'S INSCRIPTION (see below), £9.
 Bruxelles, 1887-9-2
 'A Monsieur Jenatzy, Chef de division au Ministère de l'Agriculture, hommage des auteurs. J. C. HOUCZEAU. A. LANCASTER.'—*Inscr. on title of v. I. 1.*
 The most important bibliography on the subject, the 2nd volume of which is now out of print and excessively scarce. It contains in Vol. I. 1. an interesting Introduction on the History of Astronomy by M. Houzeau (pp. 310), and a Bibliography of Astrology: in Vol. I. 2: Biographies et commerce épistolaire; Ouvrages didactiques et généraux; Astronomie sphérique; Astronomie théorique: in Vol. II: Mémoires et Notices insérés dans les Collections académiques et les Revues.
 A proposed third part of vol I, and vol. III have never been published.
- 2012 **HOWARD (Luke, F.R.S.)** ESSAY on the MODIFICATIONS of CLOUDS, 8vo. *cl.* (scarce), 5s
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- 2013 **HUDSON (Ronald William Henry Turnbull)** KUMMER'S QUARTIC SURFACE, with front. and diagrams, 8vo. *cl.*, 5s 6d (sells 8s nett)
 Univ. Press, Cambridge, 1905
 The author had a brilliant mathematical career and became a Fellow of St. John's Hall, Cantab., but died from rock-climbing in Wales in his 29th year in 1904.

- 2014 **HUES (Robert)** A TREATISE descriptive of the GLOBES constructed by EMERY MOLYNEUX, published in 1592, edited by SIR CLEMENTS R. MARKHAM; also SAILING DIRECTIONS for the CIRCUMNAVIGATION of ENGLAND, and for a Voyage to Gibraltar, from a XVth Century MS., edited by JAMES GAIRDNER, with Glossary by E. DELMAR MORGAN, *front. and map*, 8vo. *cl.*, 10s 6d
Hues sailed round the World with Thomas Cavendish, and was a friend of Thomas Chapinan the poet, and of Sir Walter Raleigh.
- 2015 **HULL (Edward, F.R.S.)** The COAL-FIELDS of Gt. BRITAIN: their History, Structure and Resources, with the Coal-Fields of our Indian and Colonial Empire, and of other Parts of the World, 5th [last] Ed., revised, embodying the Reports of the Royal Commission of 1904, 2 *plates*, 13 *maps* (the large folding one in pocket), and *diagrams*, 8vo. *cl.*, 10s (p. 14s nett) 1903
- 2016 ——— THIRD EDITION, revised and enlarged, 14 *plates and maps*, and 23 *woodcuts*, 8vo. *cl.*, 5s (p. 16s) 1873
The standard work on the subject.
- 2017 ——— SKETCH OF GEOLOGICAL HISTORY, with *coloured folding diagram*, cr. 8vo. *cl.*, 2s 1887
- 2018 ——— VOLCANOES: Past and Present, with 4 *plates* and 41 *woodcuts*, post 8vo. *cl.*, 2s 1892
- 2019 **HULLMANDEL (Charles Joseph)** The ART of DRAWING on STONE; giving a full Explanation of the various Styles, the different Methods, the Modes of Correcting, and the several Causes of Failure, new Ed., revised, with 9 *lithographs by the Author* (2 on India paper), 8vo. *hf. roan* (scarce), 15s 1835
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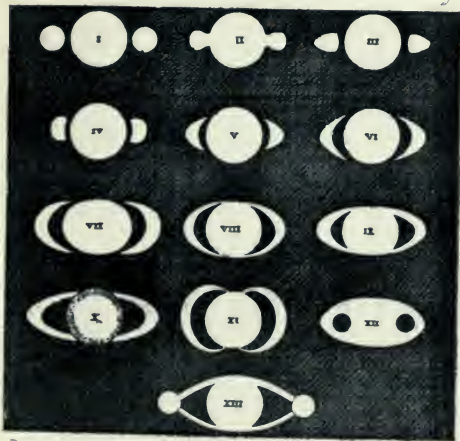
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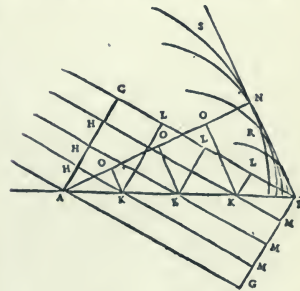
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DE LA REFLEXION. CHAP. II. 25

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verre ou autre corps, A B, que d'abord je considèreray comme parfaitement unie (me réservant à parler des inégalitez, dont elle ne peut estre exempte, à la fin de cette démonstration) & qu'une ligne A C, inclinée sur A B, représente une partie d'une onde de lumière, dont le centre soit si loin

que cette partie A C puisse estre considérée comme une ligne droite; parce que je considère tout cecy comme dans un seul plan, m'imaginant que le plan, ou est cette figure, coupe la sphaere de l'onde par son centre, & le plan A B à angles droits; ce qu'il suffit d'avertir une fois pour toutes.

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Portrait of Huygens.

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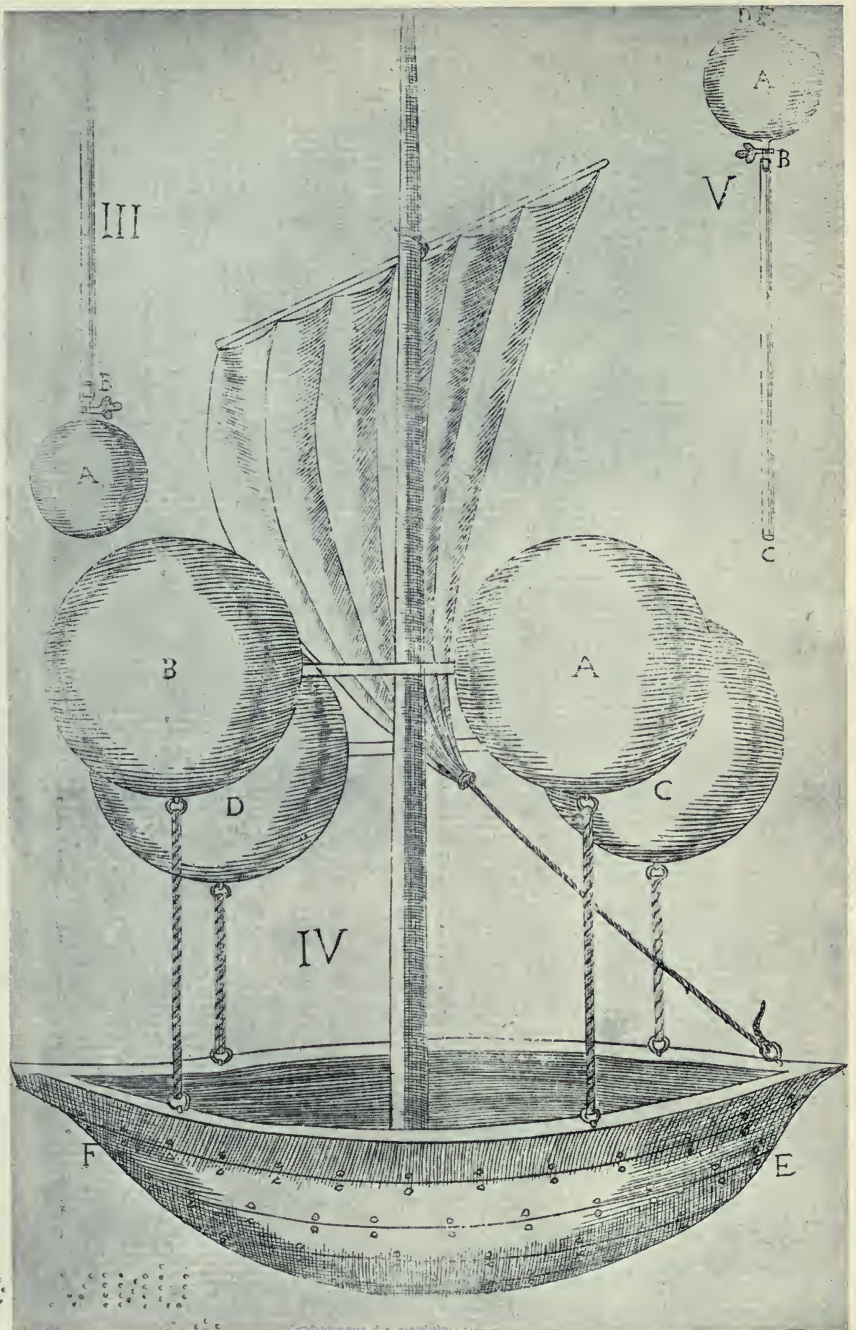
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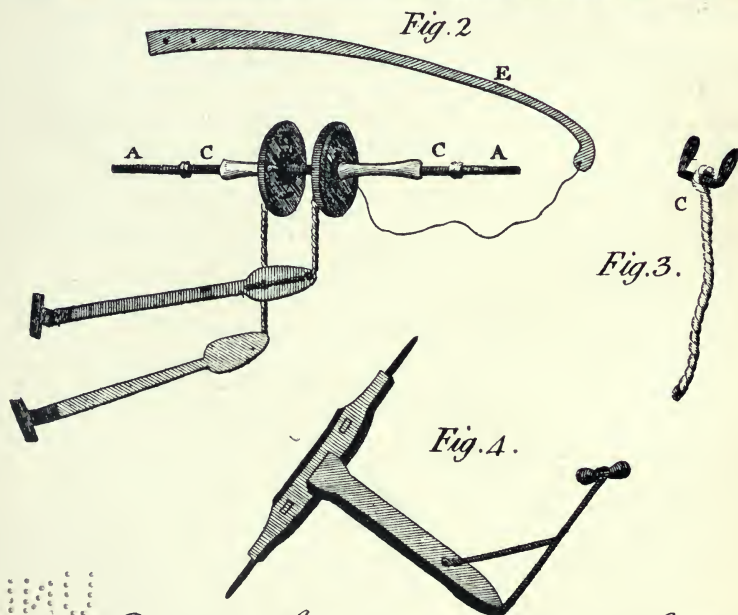
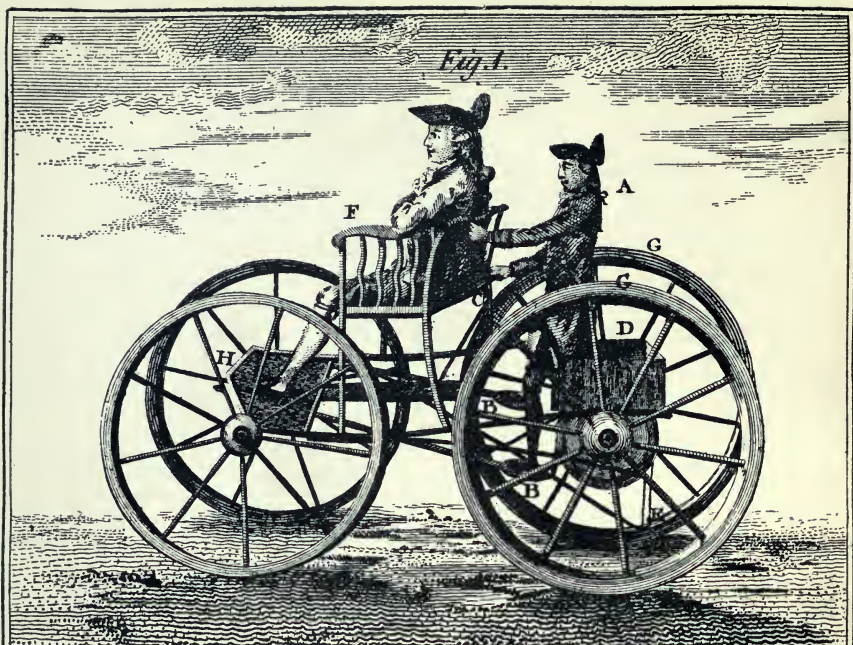


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- 3412 ——— ANOTHER COPY, with auto. 'J. W. COLENSO, *St. John's Coll. Cambridge*' [*Bp. of Natal*], 3s 6d
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In his preface the author claims to be the inventor of 'my Patent American hand Clearing Machines, and hand Clearing Engines for cutting down standing Timber level with the ground, which have been used in the Western World for over a quarter of a century', and of 'my lately patented Self-reefing and unreefing Paddle Wheels, the Submarine Feathering Propeller Wheels, and my Expanding and Contracting Propellers, etc.' He also claims to have invented and constructed 'the working model of a steam boat, some 10 years before one was seen on the River Thames'. The modest inventor is however not mentioned in D. N. B.
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'Cet ouvrage curieux contient la solution d'une foule de problèmes. On y trouve encore un traité de horloges élémentaires, une dissertation sur les lampes perpétuelles, enfin un ample recueil de tours de gobelets et d'escamotage'.—*Quéraud*.
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* In the arithmetic Pacioli gives rules for the four simple processes, and a method for extracting square roots. He deals pretty fully with all questions connected with mercantile arithmetic, in which he works out numerous examples, and in particular discusses at great length bills of exchange and the theory of book-keeping by double entry. This part was then the first systematic exposition of algeristic arithmetic. . . . In the algebra he discusses in some detail simple and quadratic equations, and problems on numbers which lead to such equations. He mentions the Arabic classification of cubic equations, but adds that their solution appears to be as impossible as the quadrature of the circle. . . . Though much of the matter described is taken from Leonardo's *Liber Abaci*, yet the notation in which it is expressed is superior to that of Leonardo, etc. etc.—*W. W. E. Ball*.
* In the mathematical writings of the monk Luca Pacioli symbols began to appear. They consisted merely in abbreviations of Italian words, such as *p* for *piu*, *m* for *meno*, *co* for *cosa* . . .—*Prof. Cajori*.
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A very rare work, quite unknown to Prof. de Morgan, who did not even mention it in his 'List of 1580 Names of Reported Authors of Works on Arithmetic,' nor to Poggendorf, Grassé, Brunet, and others.
- 3435 **PAGE** (James Morris, *Univ. Virginia*) ORDINARY DIFFERENTIAL EQUATIONS, with Introduction to LIE'S THEORY of the GROUP of ONE PARAMETER, post 8vo. cl., 3s 6d (p. 6s 6d) 1897
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The author burnt some tobacco with a burning glass, for which he found he could substitute a lens made of ice; which led him to the discovery that 'the sun is a crystalline body receiving the radiance of God,' etc. etc.
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Important for the editor's preface (pp. 78), in which he lays the foundation of his theory of the fracturing and folding origin of the earth's crust.

Summario de la prima parte principale.



Vuidese tutta la presente opera in .5. parti principali. In la pria si tratta de numeri in tutti modi che ala pratica semplici e speculatiua aspecti: cioe de figurare e rilcuare caratteri: partire: multiplicare: summare: sottrare: e d' tutte sorte progressioni con dignissime regole di nouo indutte e casi fortissimi e de la extractione de . \sqrt{x} . con numeri e con strumenti e per via geometrica co loro approssimamenti de le q̄li pri li algorismi physiosophici trattano d' q̄ li la notitia per questo sempre se hauera de sani: rotti: radici: binomij: radici e radici d' . \sqrt{x} . e tutti modi a soluere ogni caso proposto da algebra e de le proportioni e proportionalita e partire: multiplicare: summare: sottrare: per q̄ le a ogni bisogno prospectiuo: musico: astrologo: cosmografo: architecto: legista: e medico: con tutta substantia del quinto libro de Euclide e de le regole del catayno con loz propter quid: e de le linee irrationali de le quali tutto el decimo libro de Euclide tratta con loz modi operatiui ala pratica con dimostrazioni euidentis sempre de tutto operare in modo che ciascuno. con grandissima facilità potra imprendere. E queste cose tutte con sequeenti. saranno secondo li antichi. E ancora moderni. mathematici. Maxime del persi acutissimo physiosopho megarense. Euclide E del seuerin Boetio. e de nostri moderni Leonardo. pifano. Giordano. Biagio da parma. Gioià sacrobusco. e Prodocolino padoano. a iquali in maggior parte cauo el presente volume. de laqual parte. e ancora de tutte laltre. qui disotto. a vna per vna. hauea la sua tauola ordinatamente posta. secondo lozo distinctioni. trattati. e artico. l' e carti. secondo che sia distinta. a parte per parte. E contiensc anco za in questa prima parte. tutte occurrenze dragioni. e regole mercatesche. cioe per c. \overline{AD} : s. \overline{S} . inuestite. vendite. guadagni. perdite. viaggi o vero trasportati di robbe. pesi misure e monete. de luogo a luogo. E carattare de pregi. con limitationi de guadagni o vero perdite. tare. doni. vfi. d'arii. gabelle. messerarie. fontacaggi. passaggi. stalle. E qualunche angaria altra si fosse. commo noleggi. peccioni. salarii familiari. factoraggi. e maestrançe. Adgloramenti. e pegloramenti. dozi orienti. e rami. legerece. e graucçe. de tutti ipesi. ingordita. e scar sita. de tutte misure. Longhe. larghe. colme. e rafe. secondo le quali se costuma mercare. Dele quali diffusamente nelli notau di mercateschi. desotto a suo luogo secondo l'ordine dela tauola sequente trouerai.

Summario dela seconda parte principale

D
 A seconda parte principale contiene compagnie. secondo ogni erigentia mercatesca. cioe como se principiano fra mercatanti. E poi nela fine commo fra lozo se babino a partire co casi degni a ogni occurentia exemplificatiui. per vie ordinarie e ancora s'raordinarie con belle substituia. in pratica semplici. cioe negociaria. e ancora speculatiua. cioe algebratica. zc. E simile deli baratti. in tutti modi vsitari. cioe semplici. composti. e col tempo con la dichiaratiõe che co la sia baratto. E como se inteda diffusamente con bellissimo casi secondo ciascuna pratica operatiua et predicti. cioe negociaria. e algebratica. co dichiaratione dela parte o parti. che in denari contanti excolte ue sinterpone. comme la sabia apprendere zc. che anche a suo luogo per la sequente tauola trouerai zc. E contien cambi de ciascuna sorte. cioe Decco. Reale. Fittitio. e diminuto ouero commie. co la dichiaratiõe optinamente de ciascuno. e de la forma de le lettere de cambi. Reali. con casi vili e diuersi. secondo luna e l'altra pratica. negociaria. e speculatiua. cioe algebra. comme diffusamente i la sequente tauola appare zc. Meriti semplici e a capo danno. de denari e robbe. e conti de tempi e denari. e saldi de ragioni. con larecare a vndi. E legare e affinare. ozi e argenti. puri e mesti. per ceche. socleri. e ore fi. E socide de animali. peccionamenti: cottimi: liuelli godimeti de denari. e fitri de case. e terreni. i tutti modi acadenti con casi dignissimi. exemplari a tutte cose. in pratica. semplici. e speculatiua.

Summario dela terza parte principale.

D
 A terza parte principale contiene regole. modi. versi. e vie di sapere tenere tutti conti e scripture del corpo trafficante. E ancora duna borega. o fontego particolare sufficienti e bastati a tutto l'ouiuerso maxime del modo di vinegia applicabile a qualunqualro si voglia. cioe di sapere tenere con tutta diligenza vn quaderno. con suo giornale. e memoriale. ouer vcherza atramete squartafoglio. ouo dir squartafaccio quale e lozigne. e radici sempre de tutti li libri: e scripture che li mercanti tengano in tutti luoghi del mondo. commo in quel luogo intenderai per ordine de la sua tauola de nançe in principio de ditto trattato posta distintamente per li soç capitoli. La qual

Nos. 3429-30 (page 172).

A typical page of the first comprehensive work (A.D. 1494) on arithmetic and algebra.

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— v. ARISTARCHIUS, *ante*.

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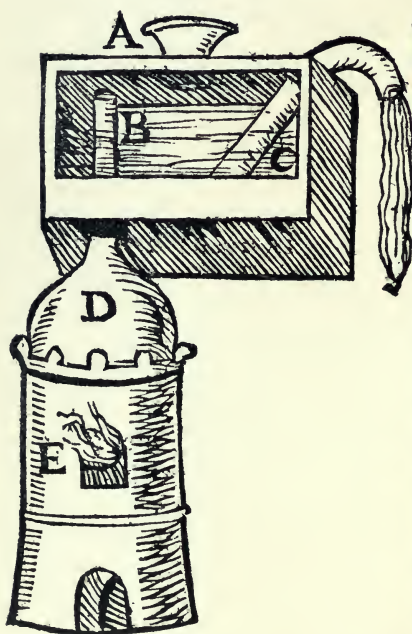
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cassa BC di ve-
tro, ò di sta-
gno, e sia nel
fondo busato,
per doue passi vna canna di
vn'ampolla da distillare,
che sia D, e questa habbi
vna, ò due oncie d acqua
dentro, e sia il collo salda-
to nel fondo della cassa, che
nò possa di là scorrer fuori.
dal fondo della cassa si par-
ti vn canale tanto lontano
dal fondo quanto basti à
scorrer l'acqua, e questo ca-
nale passi per lo couerchio
fuori, poco lontano dalla
sua superficie. questa cassa
si riempi di acqua per il bu

so A, e poi si ferri bene, che non possa respirare. all' vltimo po-
nerete la detta boccia sopra il fuoco, & andate scaldandola pian-
piano, che soluendosi l'acqua in aria, premerà l'acqua nella
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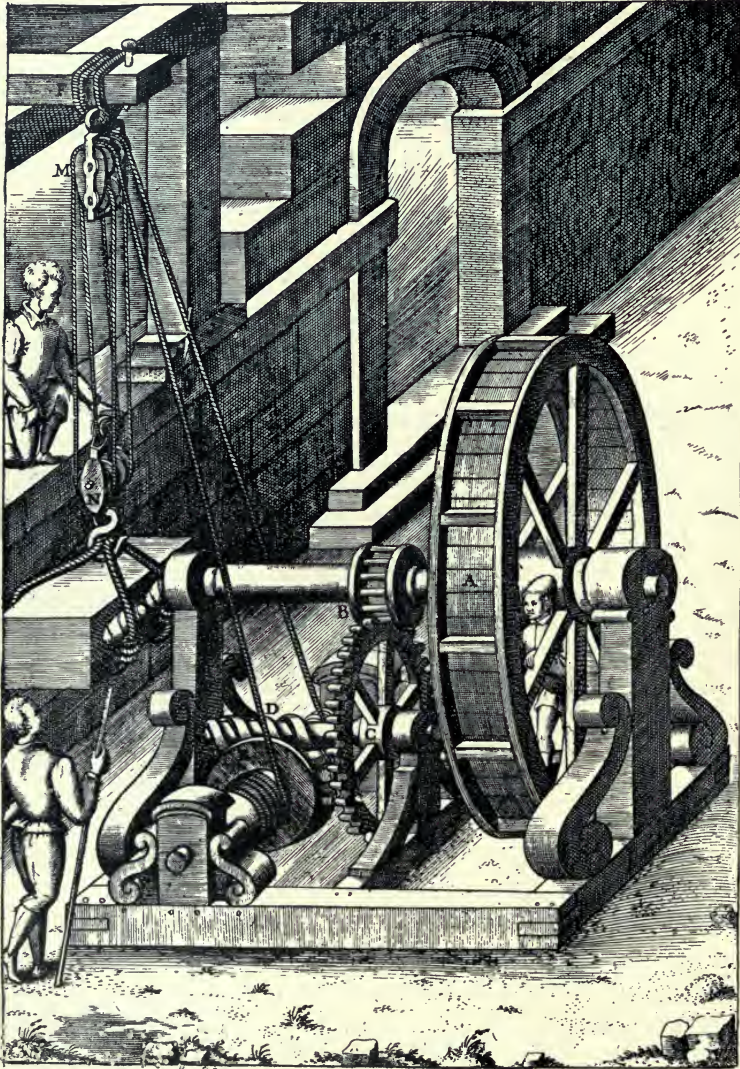
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FIGVRE CLXX.



No. 3881 (page 195).

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partly (at the least) accomplished.

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Schollar. This oftentimes as I haue considered, maketh me to muse what mynd is in them, which care for no knowledge, nor esteeme any science.

Maister. This is the greatest pointe of all ignorance, not
A. i. to

The grosse-
nes of i-
gnorances

No. 3910 (page 197).

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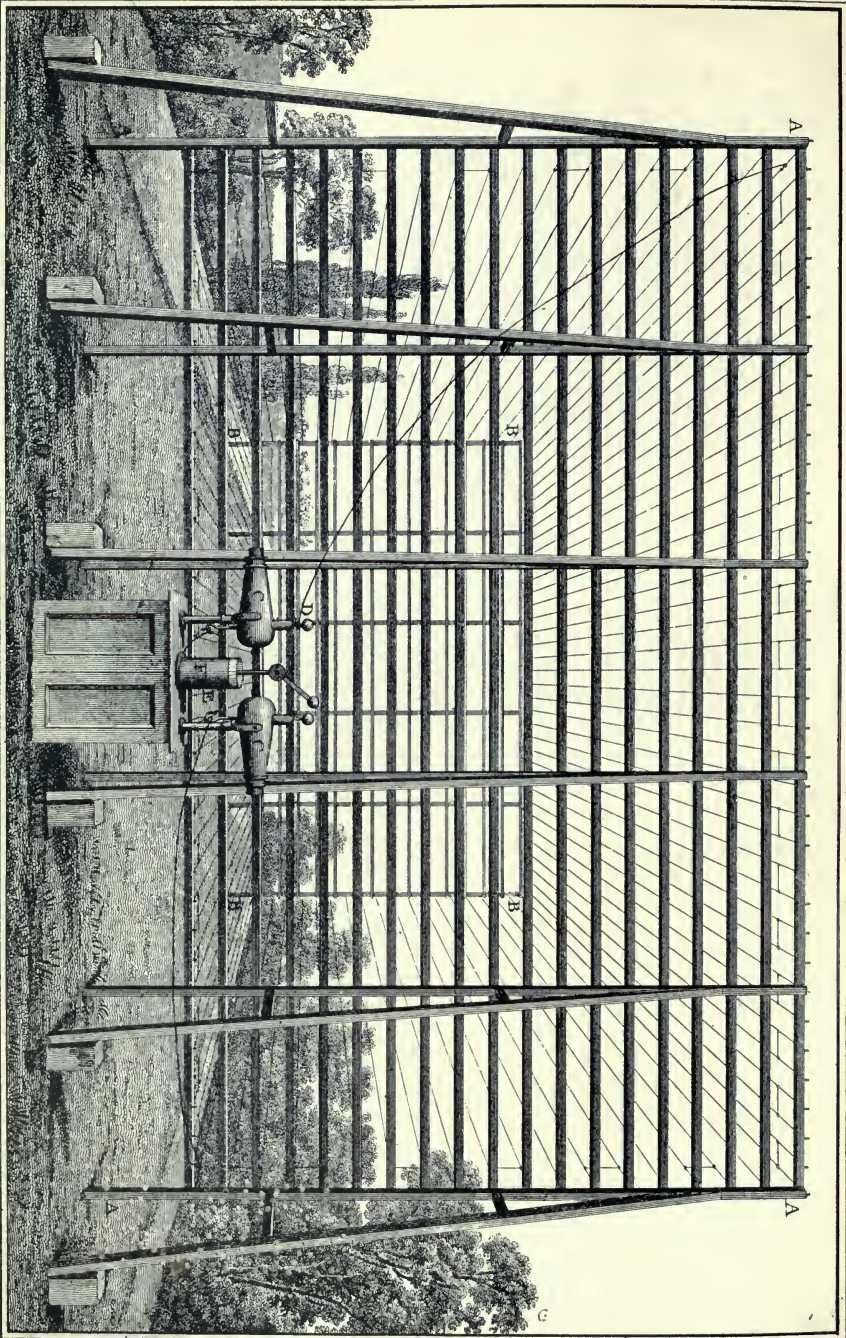
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 See JURIN (No. 2209), ante, for the pamphlet which provoked it.
- 4043 — MATHEMATICAL TRACTS, published [with LIFE (pp. 42)] by JAMES WILSON, M.D., plates and diagrams, 2 vols. 8vo. old calf (VERY RARE), £1. 10s 1761
 CONTENTS: I. New Principles of Gunnery, with several subsequent Discourses on the same Subject, the greatest Part never before printed. II. Discourse on the Method of Fluxions, and of Prime and Ultimate Ratios, with other Miscellaneous Pieces.
- 4044 — NEW PRINCIPLES of GUNNERY: containing the Determination of the Force of Gunpowder, and Investigation of the Difference in the Resisting Power of the Air to Swift and Slow Motions; with Account of his LIFE and WRITINGS by JAMES WILSON; new Ed., with Additions by CHARLES HUTTON, F.R.S., 2 plates, 8vo. hf. calf gilt (stamp on title), SCARCE, 12s 6d 1805
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 'In 1769 Robison anticipated Meyer in the important electrical discovery that the law of force is very nearly or exactly in inverse square.'—*D. N. B.* 'One of the greatest mathematical philosophers of his age.'—*Sir James Mackintosh*.
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- 4050 **ROBSON (Thomas Charles, H.E.I.C.S.)** TREATISE on MARINE SURVEYING, with 7 folding plates, 8vo. hf. calf (scarce), 7s 6d 1834
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 The most complete dictionary of sea terms ever published.
- 4052 **ROHAULT (Jacques)** ŒUVRES POSTHUMES [publiées par CLAUDE CLERSÉLIER]; with numerous diagrams, thick 4to., (?) LARGE PAPER; old calf gilt (fine copy), with bookplate of Philip 2nd Earl Stanhope, F.R.S., 12s 6d 1682
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 A finely printed and VERY RARE EDITION, unknown to Poggendorff, Graesse, Quérard, etc.
- 4054 — TRAITÉ de PHYSIQUE; with 16 plates, 2 vols. sm. 8vo. old calf gilt, 12s 6d *ibidem*, [c. 1680]
 A spurious reprint of the above edition. All editions of this work are now rare.
 'Il construisait avec trois tubes de verre une espèce de baromètre, connu aujourd'hui sous le nom de chambre de Rohault'. Il démontrait, par les différentes réfractions de la lumière, que les couleurs n'étaient que des modifications de cette matière. Ses expériences sur l'aimant furent aussi très-remarquables'.—*Biogr. Gén.*
- 4055 — SYSTEM of NATURAL PHILOSOPHY, with DR. SAMUEL CLARKE'S Notes, taken mostly out of Sir I. Newton's Philosophy, done into English by JOHN CLARKE, Dean of Sarum, 2nd Ed., plates, 2 vols. 8vo. in 1, old panelled calf, newly rebacked (RARE), 16s 6d 1729-8
 This work long formed the text-book of physics at Cambridge. The translation itself is of importance in the history of science as having been instrumental in introducing the Newtonian system there, by means of marginal notes in which the translator exposed the fallacies of the Cartesian system, then still omnipotent at Cambridge University.
- 4056 **ROHR (Moritz v.)** Die BINOKULAREN INSTRUMENTE, nach Quellen bearbeitet; with 90 illustrations, roy. 8vo. sewn, 4s 6d (p. M. 6.) Berlin, 1907
 The best history of the binocular telescope, with a copious bibliography of works of historical importance.
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 Pp. 399-435 comprise a valuable bibliography.

- 4057* **ROIAS** (Joannes de) COMMENTARIORUM in ASTROLABIUM, quod Planisphaerium vocant, Libri VI, nunc primum in Lucem editi; additus est INDEX Capitum et Rerum, quae toto Opere continentur, locupletissimus; *handsomely printed in italics; with numerous fine woodcuts, 3to. fine copy in contemporary limp vellum (VERY RARE), £1. 15s* Lutetiae, 1551
Houzeau-Lancaster No. 3275; it was however unknown to Poggenдорff and Brunet.
- 4058 **ROLFE** (William James; editor 'Popular Science News'), and **J. A. GILLET**: ELEMENTS of ASTRONOMY, 4th Ed., enlarged, *with coloured spectrum plate, 17 star-maps, and woodcuts, post 8vo. cl., 3s* New York [1868]
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This important work first demonstrated the law of constancy of angles in crystallography.
- RÖMER** (Olaf) De CRASSITIE TUBORUM, et EXPERIMENTA PROJECTIONIS GRAVIUM—v. PICARD (J.), ante.
- 4062 **RONALDS** (Edmund, Queen's Coll., Galway), and **Thomas RICHARDSON**: CHEMICAL TECHNOLOGY, incorporating a REVISION of DR. KNAPP'S 'TECHNOLOGY', 2nd [last] Ed., Parts I and II: FUEL and its APPLICATIONS, with 6 plates (2 coloured), and 433 woodcuts, 2 vols. 8vo. cl., uncut, 6s 6d (p. £1. 16s) 1855
'The book, which was recognised as a standard work, has been incorporated by C. E. Groves and W. Thorp in their *Chemical Technology*'.—D. N. B.
Prof. Ronalds was a nephew of Sir Francis Ronalds, and though a graduate of Giessen, Jena, Berlin, Heidelberg, and Paris, he was boycotted as a 'tradesman' by the savants of Edinburgh when he resigned his chair at Galway to take charge of the Bonnington Chemical Works.
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This work contains the account of the electric telegraph invented by the author, which transmitted signals from his house at Hammersmith (occupied later on by WILLIAM MORRIS, the poet, and known as 'Kelmescott House') over a system of wires 8 miles long, by observing at one end the divergence of a pair of pith balls when a charge of electricity was sent into the other.
'Ronalds's instrument was of real practical use, and the brilliant idea of using synchronously rotating discs, now employed in the Hughes printing apparatus, was entirely his own. The only defect in his invention was the comparative slowness with which a succession of symbols could be transmitted'.—D. N. B. He at once offered the invention to the Admiralty, and was officially answered that now the French war was over telegraphs of any kind were totally unnecessary, and that no other than the semaphore then in use would be adopted. The inventor published the above account in 1823, and then dropped telegraphy for good.
- 4066 **RONKETTI** (John G. H., instrument-maker) TREATISE on a NEW DRY and WET BULB HYGROMETER, for measuring the Force and Weight of Aqueous Vapour in the Atmosphere, and the Corresponding Degrees of Evaporation [with Formula and Tables], front., 8vo. (pp. 15), sewn (scarce), 7s 6d 1842
The final form of the hygrometer—an improvement on Daniell's--which seems to have been invented by Ronketti himself
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The first communication of the discovery of X rays.
- 4068 ——— **RAY SOCIETY** (AMERICAN), TRANSACTIONS of the, 1905, with plates and woodcuts, 8vo. Philadelphia, 1905
cl., 4s
- 4069 **ROOD** (Ogden Nicholas, Columbia Univ.) MODERN CHROMATICS, with Applications to Art and Industry, 2nd Ed., with coloured front., and 130 illustrations, post 8vo. cl., 2s 6d (p. 5s) 1883
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INHALT:—I. Die Phasenlehre. Systeme aus einer Komponente. II. Systeme aus zwei Komponenten. I. Teil.
The author's investigations on the chemical theory of phases are of well-known importance.
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- 4080 ———, Forming the most extensive, and at the same time readable, text-book on the subject.—D. N. B. The LIFE and EXPERIENCES of, written by HIMSELF, with numerous portraits of the author and celebrated chemists of his time, and plates, thick 8vo. cl. 8s (p. 12s nett) 1906
- 4081 **ROSE** (Gustav) ELEMENTE der KRISTALLOGRAPHIE, nebst einer tabellarischen Übersicht der Mineralien nach den Krystallformen, 2. Auflage; with 10 copperplates, 8vo. boards, with auto. of Prof. Alex. W. Williamson, F.E.S., 4s Berlin, 1838
- The author was the discoverer of polymorphism in crystallography. The above was the first text-book on the subject published.

- 4082 **ROSE** (Thomas Kirke, Assayer of the Mint) THE METALLURGY of GOLD, with 69 woodcuts, thick 8vo. cl., 6s (p. £1. 1s) 1894

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- 4083 **ROSENBERG** (E.) ELECTRICAL ENGINEERING: an Elementary Text-Book, trans. by W. W. HALDANE GEE and CARL KINZBRUNNER, with front. and 263 woodcuts, 8vo. cl., 3s (p. 6s) 1903
- ROSENBERGER** (Ferdinand) ISAAC NEWTON und seine PHYSIKALISCHEN PRINCIPALIEN—v. NEWTONIANA (No. 3300), ante.

- 4084 **RÖSLING** (Christian Lebrecht) KRITISCHE PRÜFUNGEN und BERICHTIGUNG der bisherigen ELEKTRICITÄTSLEHRE, durchgängig auf Experimente gegründet, als Vorbereitung einer künftig aufzustellenden richtigern Theorie vom Galvanismus; with plate, 8vo. hf. calf (joints cracked), 7s 6d Ulm, 1823

A laborious recapitulation of the knowledge on electro-magnetism gained since 1820 by Oersted, Ampère, Biot, Arago, etc.

- 4085 **ROSS** (Alexander, Vicar of Carisbrooke) THE NEW PLANET no PLANET: or the EARTH NO WANDRING STAR; except in the WANDRING HEADS of GALILEANS. Here out of the Principles of Divinity, Philosophy, Astronomy, Reason, and Sense, the EARTH'S IMMOBILITY is ASSERTED; the true sens of Scripture in this point, cleared; the Fathers and Philosophers vindicated; divers Theological and Philosophicall points handled, and COPERNICUS his OPINION, as erroneous, ridiculous, and impious, fully REFUTED, sm. 4to. hf. white vellum extra (title soiled, corners of a few ll. damaged, and some ll. water-stained); VERY RARE, £1. 10s J. Young, 1646

- 4086 ——— The PHILOSOPHICAL TOUCH-STONE: or Observations upon SIR KENELM DIGBIE'S DISCOURSES of the nature of Bodies, and of the reasonable Soule [v. No. 1053]. In which his erroneous PARADOXES are REFUTED, the Truth, and ARISTOTELIAN PHILOSOPHY VINDICATED, the immortality of mans Soule briefly, but sufficiently proved, and the weak Fortifications of a late Amsterdam Ingeneer, patronizing the Soules mortality, briefly slighted, sm. 4to. calf gilt (water-stained, otherwise a sound and very large copy); VERY RARE, £2. 2s apud eundem, 1645

The author was immortalised by Butler in Hudibras:

'There was an ancient sage philosopher

That had read Alexander Ross over.'

He was chaplain to Charles I., and was buried in Eversley Church, after leaving legacies to All SS., Southampton, Carisbrooke Parish, Aberdeen University, and the University Libraries at Oxford and Cambridge.

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The preface includes an attack on LAVOISIER, 'who seems to have been a clever man utterly devoid of honourable principle, with about as much candour as a cat surprising mice'.

- 4092 **ROSS** (Major William Gordon, R.E., R.M.A., Woolwich), MANUAL of PRACTICAL SOLID GEOMETRY, 26 diagrams, cr. 8vo. cl. (out of print) 2s 1887

- 4093 **ROSSI** (Gaetano) SOLUZIONE esatta e regolare del Difficilissimo Problema della QUADRATURA del CIRCOLO, con molte Corollarj, non che di molte altre importanti Dimostrazioni cernenti al Soggetto; with portrait by Charles Knight (imitator of Bartolozzi), and folding table, 8vo. sewn (rare), 10s 6d Londra, 1804

Interesting for a list of subscribers, including many English names, and headed by the Prince of Wales (with 10 copies), which would make it appear that the circle-squarers of the time were largely depending upon their English patrons. The preface is signed by the author in MS.

The Table of Longitudes which I have Calculated, containing the Leagues, Miles, and Staves, that make a Degree in any Parallel, betwixt the Equinoctial and the Poles.

10. Leagues.			10. Leagues.		
Latit.	lev. M.	Staves.	Latit.	lev. M.	Staves.
1	10	994	21	17	851
2	10	984	22	18	800
3	10	973	23	19	748
4	10	961	24	20	695
5	10	948	25	21	641
6	10	934	26	22	586
7	10	919	27	23	531
8	10	903	28	24	475
9	10	886	29	25	418
10	10	869	30	26	361
11	10	851	31	27	303
12	10	832	32	28	245
13	10	812	33	29	187
14	10	791	34	30	129
15	10	769	35	31	71
16	10	746	36	32	13
17	10	722	37	33	0
18	10	697	38	34	0
19	10	671	39	35	0
20	10	644	40	36	0
21	10	616	41	37	0
22	10	587	42	38	0
23	10	557	43	39	0
24	10	526	44	40	0
25	10	494	45	41	0
26	10	461	46	42	0
27	10	427	47	43	0
28	10	392	48	44	0
29	10	356	49	45	0
30	10	319	50	46	0
31	10	281	51	47	0
32	10	242	52	48	0
33	10	202	53	49	0
34	10	161	54	50	0
35	10	119	55	51	0
36	10	76	56	52	0
37	10	32	57	53	0
38	10	0	58	54	0
39	10	0	59	55	0
40	10	0	60	56	0



TO
THE RIGHT HONORABLE,
THOMAS,
Earle of ARUNDEL and SURRY,
Lord High Marshall of England,
 Knight of the Noble Order of the
 Garter, and One of his Majesties
most Honourable Privie
Council.

RIGHT HON:



When a right Noble disposition is once generally discovered, it emboldens men that are meer Strangers, to presse into their presence, provided they errants are onely concerning vertuous Actions, which move hath made these rude lines voyd of all Rhetoricke, runne with such hast to your Lordships hands, intrating for a favourable acceptance of a

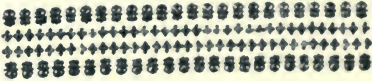
The Epistle Dedicatorie.

few experimentall Conclusions, performed in the admirable Art of NAVIGATION, by one that is as much a stranger to your Lordship, as I am to the Land and my Kinsfolkes; many long Voyages having banished me from the remembrance of them both; so that I may justly asseme, I am scarce knowne to eyther of them, except now by reading my Name, they rub up their remembrance and finde me revived, who have layne a long time rak'd up in the embeyes of oblivion. Howsoever it happen in that respect, it is a matter very indiffernt to my mind; for I onely desire, that these my Practices may prove pleasing to your Lordship, which although they are delivered in a blunt phraise, I assure you (*Right Honourable*) will speake the plaine Truth, otherwise they should not dare to desire such Noble protection, if they could not deserve and merit that which is most esteemed amongst vertuous mindes: Therefore I doe in a manner assure my selfe they will gaine Your gracious aspect, which is too great a reward, to let fall upon the first borne of my braine, and so will bind me perpetually to study, how to illustrate my present performance, that it may ever gaine Your Honours goodwill.

Your Lordships, to Command
 in any service.

CHARLES SALTONSTALL:

The Navigator. 65

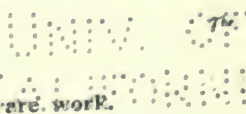


CHAP. II.

The order and considerations w bich are to be observed when you are to find the distance betwix any two places Assigned, according to the Arch of a great Circle extended.



Doe desire that you would take some little paines in thoroughly acquainting your selfe with the former short Theorems or definitions, before you proceed farther into the work. For I assure you, they will give you so great a light perfectly to conceive and rightly to understand the true reason, that it will be well worth your labour: But to proceed in the finding out of the true Distance betwixt any two places upon the Terrestrial Globe, you must in the first place, provide your selfe of a Circle containing in the Diameter, about some 120. Inches, for if it be smaller, the degrees will be so little that halfe a degree will be of no consequence, which is tenne Leagues in distance; therefore the larger the better, this Circle must be divided most exactly into 160. degrees equal parts, with figures set to each 5. degrees, for the reader numbering, and so proceed until it make 160. degrees which concludeth the whole Circle, as this Figure following plainly expresseth.



No. 4198 (page 212).

Specimen pages from this excessively rare work.

- 4094 **RÖSSLER** (Balthasar) SPECULUM METALLURGIE Politissimum, oder: hell-polierter BERG-BAU-SPIEGEL, darinnen zu finden: wie man Bergwerk suchen, ausschürfen, mit Nutzen bauen, allenthalben wohl anstellen, befördern, dabey alles Gestein und Erzte gewinnen, fördern, rösten, schmelzen, u. s. w.; with numerous copperplates depicting mining and metallurgical processes, folio, fine copy in old parchment, £2 2s
Dresden, 1700
VERY RARE; unknown to Poggendorf, Graesse, Brunet, etc. The plates are most interesting as showing geological sections of lodes, mine-timbering, winding apparatus, smelting and refining processes, etc. as practised in Saxony in the Seventeenth Century.
- 4095 **ROST** (Johann Leonhard) ASTRONOMISCHES HAND-BUCH, worinnen das nothwendigste [sic] anzutreffen ist, was zur Ausübung der unentbehrlichen Astronomie erfordert wird; with front. and 14 folding plates (7 of astronomical instruments), thick 4to. sewn, uncut, 5s
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Leipzig, 1717
FIRST EDITION of this once popular work, which went through many editions, and was translated into French.
- 4097 **ROTHSCHILD** (M. D.) HAND-BOOK OF PRECIOUS STONES, illustrated, post 8vo. cl. (out of print), 2s 6d (p. 5s)
New York, 1890
- 4098 **ROTHWEILER** (Johann Jakob) ΔΙΑΣΚΕΨΙΣ CHEMICO-PHYSICA, de METALLORUM GENERATIONE et TRANSMUTATIONE, sm. 4to. (pp. 20), sewn (rare), 5s
Tubingæ, 1665
- 4099 **ROUCHE** (Eugène), et Charles de COMBEROUSSE: TRAITÉ de GÉOMÉTRIE ÉLÉMENTAIRE; with 570 diagrams, 8vo. (pp. 800), hf. calf gilt, 3s 6d
1866
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 [col., v. I:] *in Alma Complutensi Universitate, apud Michaelem de Eguia xv. Decembris, 1526*
 VERY RARE, and typographically of great interest, having been printed only 10 years after the famous Complutensian Polyglott Bible. It was unknown to Houzeau-Lancaster, who only quotes (No. 1643) a folio edition of Paris of the above date, edited by ORONTIUS FINÆUS.
- Ciruelo's mathematics comprise Arithmetic, Geometry, Circle-Squaring (intending a solution of the problem, and unknown to Prof. de Morgan), and Perspective. It has no colophon, which may possibly be missing. At end is 'Petri Cirueli Darocensis questionūcula prenia in MUSICAM speculativam Divi SEVERINI BOETHI (sign. A 1—8, B 1—8, and C 5 leaves —3 apparently missing—in all 23 ll.), which does not seem to belong to the work, as the last pages bear the date 1523.
 'Ciruelo fut un des hommes qui contribuèrent le plus à la diffusion des sciences exactes au X^{VI}e siècle.'—*Biogr. Gén.*
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 In spite of a rent in the balloon (which he partially repaired with his neckcloth) he nearly succeeded in crossing the Channel; but when over Anglesey a strong southerly current carried him out to sea, and he had a most perilous escape, being rescued by a fishing craft, which ran its bowsprit through the balloon.'—*D. N. B.*
 The above account contains a poem by ERASMUS DARWIN.
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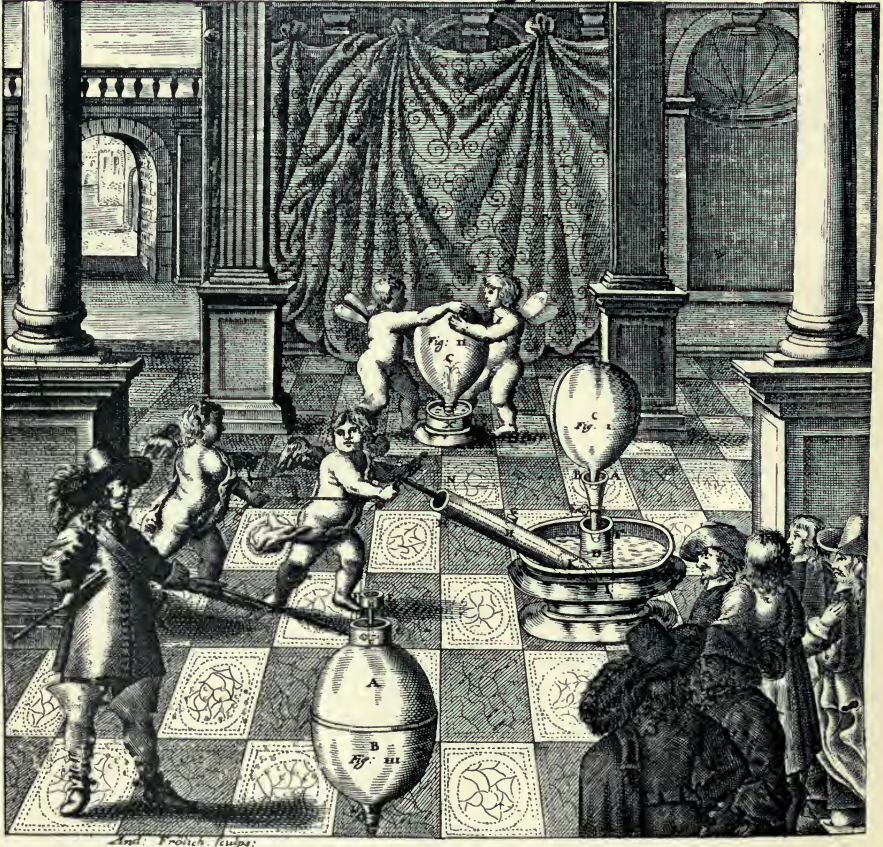
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Tis openbaer, dat by alden de schalen yet swaerter waren dan bouen gheleyt is, ofte dat in haer enighe euen waerheden gheleyt werden, soo en soude sijn balk dan niet alle gh' e'nalz houden diemzen hem gheeft, maer euewydich blijpen vanden sich einder, daerom en sijn sulcke waeghen niet de volmaeckste.

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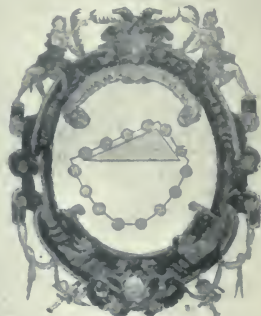
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F euew'lychtich hanghe, ende dat bouen dien de scherpe vanden dwerffas D (shuyken F ghe'waert sijnde) swaerheit is middellini blyue des

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Ghelijck des driehoek rechter sijde tot de slincker, also e'nalz w'icht des cloots op de slincker sijde, totter e'nalz w'icht des cloots op de rechter sijde.

T O N G H E V I N. Laet ABC een driehoek wesen diens plat sy rechthoekich op den sich einder, ende den grondi A C euewydich vanden sich einder, ende op de sijde A B, die doebel sy an B C, ligge een cloot D, ende op de sijde B C een cloot E, euew'lychtich ende euegroot met den cloot D. **T A E G H E E R D E.** Wy moeten bewyfen dat ghelijck de sijde AB 1, tot BC 1, alsoo e'nalz w'icht des cloots E, totter e'nalz w'icht des cloots D.

T W E R C K. Laet ons maekken rondom den driehoek ABC enen crans van veertien clooten, euegroot, euew'lychtich, ende euew'lychtich van makcanderen, als E, F, G, H, I, K, L, M, N, O, P, Q, R; D, al gheueert an een lini, streckende door haer "middelpunten, also dat sy op die middelpunten dreyen m'gheuen. Daer coek twee clooten paffen op de sijde B C, ende vier op BA, dat in ghelijck lini tot lini, also cleuen tot cloot; laet ook an S, T, V, die vastpunten staen; ouer welke de lini ofte e'noer der clooten sieren mach, also dat de uwe' deelen des inoers die bouen den driehoek staen, euew'lychtich sijn vande sijden A B, B C, inder voeghen dat almen den crans an een ofte t'ander sijde oecmedt, soo rollen de clooten op de linnen A B, B C. **T A E L V V Y.** Soo e'nalz w'icht der vier clooten D, R, Q, P, niet enen waer met het e'nalz w'icht der twee clooten E, F, een of rander (al swaerder sijn, laet wesen (soor m'ueghelick waer) der vier D, R, Q, P; Maer de vier clooten O, N, M, L, sijn euew'lychtich met de vier clooten G, H, I, K, de sijde dan der acht clooten D, R, Q, P, O, N, M, L, is swaerder na de gheleide dan de sijde der sey clooten E, F, G, H, I, K; niet en waer het swaerste alijcht het lichtste oecw'eght, de acht clooten sullen neerwaert rollen, ende d'ander festrijen: Laet soo wesen, ende D

16 S. STEVIN'S BEGHINSELEN

kende, is alijcht in 'oppervlak des omringhenden waters, ouermides 'vlakvat met en weeght) euew'lychtich sijn an e'gheleghen lichaem A B, Reden, dat twee gheu'chten die een van cuerdiep doen sinnen coek enefser sijde, diert de g' begheerte. **T A B E L L V V Y.** Een sijnlichaem dan slijchter als water daert in licht, is euew'lychtich an e'water euegroot met sijn deel dat buuten t'water is, u'welck wy bewyfen moesten.



I E V I C H.

VI V O O R S T E L.

L I G G H E N D E t'een deel des sijnlichaems bekender grootheyt, in water bekender swaerheit, ende t'ander deel daer buyten: Te vinden e'gheu'icht des heelen lichaems.

T O N G H E V I N. Laet ABCD een sijnlichaem wesen van form 'foot valde E F een waer van t'welck een teerlijckhe voer weeght 65 lb (soo veel weeght naer d'ensering een Delfsche voer Delfs water, ende daerop sullen wyte inde volghende voorbeelden alijcht sichten) ende des lichaems deel binnen t'water sy A C D, wiens grootheyt sy vaa 10000 teerlijckhe binnen. **T W E R C K.** Wy moeten vinden hoe swaer t'heel lichaem A B C D sy, met al daer in ende op is.

T W E R C K. Men sal 10000 mens'lyckhe waer de 65 lb come 65000 lb voer e'gheerde.

T A B E L L V V Y. Het heel lichaem A B C D is euew'lychtich an t'water euegroot met

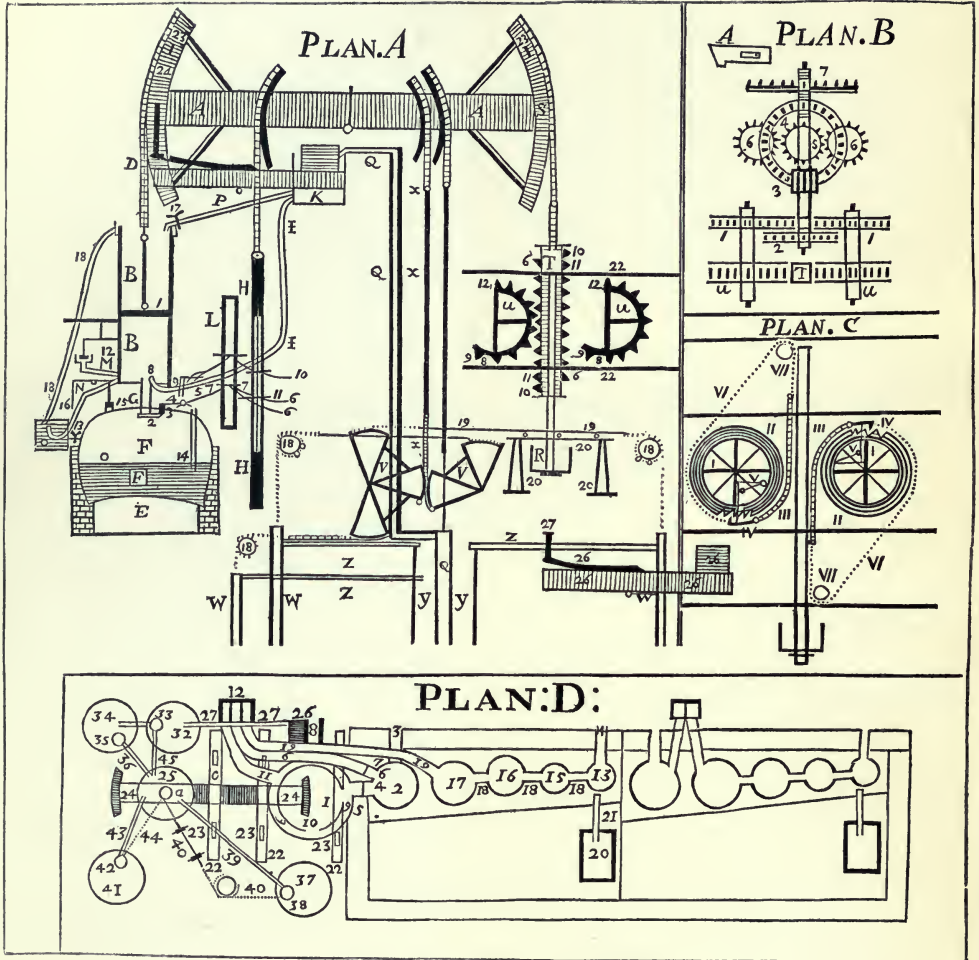
- 1) A C D duet het 'voorstel, maer t'water euegroot an A C D weeght 65000 lb, het heel lichaem dan A B C D weeght 650000 lb, u'welck wy bewyfen moesten.
- 2) **T A B E L L V V Y.** Ligghende dan t'een deel des sijnlichaems bekender grootheyt, in water bekender swaerheit, ende t'runder deel daer buyten, wy hebben e'gheu'icht des heelen lichaems gheuoonden oer den e'lych.



vid. de waterw'ichtheit daer p. 81
es. de waterw'ichtheit daer p. 81

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Oxford, 1723
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- 4647 **STROUD** (Henry, *Armstrong Coll., Newcastle-on-Tyne*) *ELEMENTARY PRACTICAL PHYSICS, 115 diagrams, post 8vo. cl., 2s* 1899
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VERY RARE, and unknown to bibliographers. The only reference to the author's name is in Prof. de Morgan's 'Arithmetical Books', where it is misspelt *Suevius*.

4679 **SUESS** (Eduard, *Univ. Vienna*) *THE FUTURE OF SILVER*, trans. by ROBERT STEIN, Svo. cl., 2s 6d
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The author, an Englishman, who settled in Paris as a watchmaker, was the inventor of the frictional roller, and was the maker of watches showing both mean and apparent time. The work contains 'Remarques sur le Discours de Mr. H. S.', by LEIBNIZ, a 'Description d'une Montre de Nouvelle Construction' by the author, and his controversy with Jacob Kress, s.r.

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The author's invention was taken up by the Admiralty, who provided every ship with the apparatus. The above edition has a preface by RICHARD MEAD, M.D., F.R.S., in which he exclaims: 'The invention, I may venture to say, does honour to our nation, and will in time be found of more public benefit than any discovery in mechanics, which has been produced these hundred years.' There is no notice of the author in *D. N. B.*, and the work was unknown to Lowndes.

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4690 **SUZZI** (Giuseppe) *DISQUISITIONES MATHEMATICÆ; with 2 plates and vignettes*, 4to. (pp. 86), sewn, 4s *Venetis*, 1723

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4715 ——— ANOTHER AND COMPLETE COPY, with finely engraved title and portrait of Card. Rospigliosi, and numerous folding plates, very thick folio, old English calf (fine copy), with etched bookplate of Robert Loundes, 1702 (RARE), £1. 1s

This copy contains 'Cylindricorum et Annularium Libri V', and 'Dissertatio de Circulorum Volutionibus', which are often missing, and absent in the first-named copy. In the first the author shows a new method of calculating the contents of a number of bodies, which had hitherto only been found by the method of indivisibles.

4716 ——— ARITHMETICÆ THEORIA ET PRAXIS, Editio II. correctior; with plate, 12mo. old vellum; or, old calf, 5s 6d *ibidem*, 1665

According to Dean Peacock, Tacquet was a late employer of the old method of division.

4717 ——— ELEMENTA GEOMETRIÆ Planæ ac Solidæ, quibus accedunt Selecta ex Archimede Theoremata, Editio III. correctior; with plates, 12mo. old vellum; or, old calf, 5s *ib.*, 1672

4718 ——— ELEMENTA EUCLIDÆ GEOMETRIÆ, Planæ ac Solidæ; et selectæ ex Archimede Theoremata, quibus accedit Trigonometria, novissimam hanc Ed. adornavit, Schemata XL addidit, etc. etc. GUL. WHISTON; with plates, 8vo. old calf (fine copy), with bookplate of Philip 2nd Earl Stanhope, F.R.S., 4s 6d *Amstelodami*, 1725

'Les ouvrages élémentaires de Tacquet se recommandent par une grande clarté.'—*Biogr. Gén.*

4719 ——— THE ELEMENTS OF EUCLID, with select Theorems out of ARCHIMIDES, with Practical Corollaries, shewing the Uses of many of the Propositions, by WILLIAM WHISTON, pr., 6th Ed., with Appendix of Practical Geometry, by S. F[ULLER], plates, 8vo. old calf, 4s *Dublin*, 1728

Including an 'Historical Account of the Rise and Progress of the Mathematicks' (pp. 12).

4720 **TADDEI** (Annibale) IL RAGIONIERE PERFETTO, ossia Nuovo Corso d'Istruzioni per la di lui Professione, 4 vols. 4to. *hf. white vellum gilt*, 15s *Roma*, 1839

Containing an interesting historical introduction (pp. 33).

4721 **TAGLIANI** (Giuseppe, Canonico da Macerata) OROLOGI RIFLESSI per mezzo di un picciolo Specchio parallelo, & perpendicolare all' Horizonte; with arms on title and numerous woodcuts, 4to. old Italian vellum (title very slightly mended, otherwise a FINE AND UNCUT COPY); RARE, £1. 1s *Macerata*, 1648

One of the few works treating of reflecting sundials. It was unknown to Poggendorf.

AN EXCESSIVELY RARE EDITION:

4722 **TAGLIENTE** (Giovanni Antonio): CONSIDERANDO io IOANNI ANTONIO TAIENTE, quanto e ne | cessaria cosa a diuersi Mercatanti, & a molti Artesani | li quali fanno le sue mercantie ne le loro boteghe, & | assai di loro nõ sanno la regola del tenere con | to dei loro libri sempii ne dopii, & pero | mi sono mosso a componer la presen | te opereta per quelli che hãno | debisogno accio che sapi- | no tenere ordinata | mente el detto conto del suo libro Vgnoso | come seguendo piu altra ue- | derete la regola sua, cr. 4to. *hf. vellum* (the last 8 pp. partly water-stained and wormed, and parts of letters defective, also 2 very slight wormholes through the first 8 ll.), £18. 18s

[Colophon.] *Hauendo Io Giouanniantonio Tagliente provisionato dal | Serenissimo Dominio Venetiano, con ogni debita cura di- | mostrato a fare diverse Partite di ragione mercantile con | le sue regole secondo el consueto della pratici mercatanti, | Et sforzatosi di narrare quito e stato il bisogno si della | Inclita citta de Venetia come etiã de tutte le altre citta del | la Italia, Hormai io faro fine & se per alcuno mio difet | to o uero corso di penna alcuno pelegrain ingegno retrouas | se nella presente mia opera qualche erroreprego che in | mio loco uoglia supplire, laquale e intitulata Luminaria di | Arithmetica stampata cõ gratia et Priuilegio del Anno di | nostra salute, M.D.XXV.*

THE EARLIEST ISSUE OF THE FIRST EDITION OF THE FIRST WORK TREATING EXCLUSIVELY OF BOOKKEEPING. All editions of the work are of great rarity, but the above is exceptionally so. It is quite unknown to bibliographers, e.g., Riccardi, Brunet, Grasse, etc., nor is there a copy in the British Museum or in any other great public library.

The first author to refer at all to the 1525 edition is Mr. Richard Brown, who in his *History of Accounting and Accountants*, mentions an edition in 24 ll. of this date, which actually forms a later issue of the above edition. The above edition in 16 leaves, however, is quite unknown to bibliographers, nor with the sole exception of this and another copy in a London Professional Library, can any copy be traced as being still in existence.

4723 ———: CONSIDERANDO Io GIOVANN' ANTONIO TAGLIENTE quanto e necessaria cosa a li nostri Magnifi [sic] gentilluomini & ad altri mercatanti il laudabile MODO da TENERE CONTO de LIBRO DOPPIO cioe, el Zornale, el Libro con l'alphabetto secondo il consueto di questa inclita Citta di Vinegia, io qui segnando con l'agiuto del . . . ALUISE DA LA FONTANA, ui daremo lo amaestramento che con facilità lo potrete imparare, laqual opera ancor sara di molto utilità Vniuersalmente ad ogniuno, come ne l'opera uedereti; with woodcut on title of pen in hand, 16mo. boards (some ll. water-stained, otherwise a SOUND COPY); very rare, £5. 5s

[col.] *Vinegia, per Giouann' Antonio di Nicolini da Sabio, 1533*

4724 [———] LIBRO di ABACHO il quale insegna a fare ogni ragione mercantile & pertegare le terre. Con l'arte della GEOMETRIA, & altre nobilissime ragioni straordinarie. Con la Tavola come rispondeno i PESI, & MONEDE, di molte Città & Paesi, con la inclita città di Venetia. Il quale Libro si chiama Tesoro Uniuersale; title in red within woodcut border, with large woodcut of a Business College on rev., and numerous smaller woodcuts and ornaments throughout, 16mo. old painted wrapper (a few ll. mended on blank margin, and a few others slightly gnawed, but a sound copy); very rare, £3. 15s

[col.] *Venetia per Francesco de Leno, 1570*

Of great rarity, like all the editions of Tagliente's Abaco. The above edition was unknown to Brunet.

It is a remarkable fact that, although Tagliente was one of the earliest and most important writers on commercial arithmetic, hardly any copies of any editions are left at the present time. This rarity may account for the fact that these works were unknown to bibliographers of scientific works, as Montucla, Poggendorf, Prof. de Morgan, etc., and that no bibliography of either Tagliente can be found in any biographical dictionary.

4725 **TAGLIENTE** (Giovanni Antonio) OPERA NOVA che insegna a fare ogni RAGIONE di MERCANTIA. Et prima a sapper releuare ogni numero, Poi a Moltiplicare, Partire, Somare, Sottrarre con le sue prouo, la Regola del tre con laquale si puo fare ogni ragione di Mercantia, cioe come saria a dire. Se la libra, el centenario ouer el magliaro di una Mercantia uale tanti danari, che ualera tante libre. Et anchora a sapper fare le Ragioni delle Compagnie & baratti con altre molte ragione. Et a pertegare le terre & muri con arte Geometricale come nellopera uederete; *title within fine woodcut border, with portrait of Archimedes on rev., also numerous interesting woodcuts and ornaments*, sm. 4to. boards (3 ll. stained and last l. slightly wormed, otherwise a REMARKABLY FINE COPY), £8. 8s [col. :] *Stäpado ꝑ Bernadin Venetian de Vidali, [Venetia,], 1527*

EXCESSIVELY RARE, and unknown to Brunet, Graesse and other bibliographers. The work consists of signatures A to N (the last misprinted F) in fours, or 52 ll. in all.

4726 ———: **Lo PRESENTE LIBRO Insegna LA VERA ARTE de lo EXCELLÈ | TE SCRUIERE de diuerse VARIE SORTI de LITERE Le quali se | fano ꝑ geometrica Ragione, & con LA presente | opera ognuno Le Potra Imparare impochi giorni ꝑ | Lo amaistramento, | ragioni, | & | Essenpli, come qui sequente | Vedrai. | Opera del TAGLIENTE nouamente | composta cum gratia nel anno di fira salute | MDXXV; | with numerous beautiful specimens of handwriting, ornamental alphabets, initials, printing characters, etc., some in white on black ground, besides full-page woodcut of writing tools**, sm. 4to. hf. vellum (a very fine and large copy); excessively rare, £15. [Venetia,] 1525

One of the earliest and most important works on calligraphy, giving a great variety of specimens of handwriting, printing characters, etc., all beautifully executed.

The above edition, the second and probably the rarest of all (which consists of 24 unnumbered ll., signatures A–F in fours), is excessively rare, and was unknown to Brunet and Graesse. Riccardi mentions this edition, but gives a very faulty copy of the title, and moreover mistakenly states that the signatures consist of A–E only. The only copy he quotes was that of the Bibliotheca Communale of Reggio. The first edition of 1521 was known alike to Brunet, Graesse, and Riccardi.

A copy of the edition of 1527 fetched £10. at auction in 1898.

4727 **TAGLIENTE** (Hieronymo) OPERA che insegna a fare ogni RAGIONE de MERCANTIA, & a pertegare le terre con arte geometrica Intitolata **COMPONIMENTO di ARITHMETICA**; *printed in gothic letter, title printed in white on black ground, with large woodcut on reverse, and numerous curious woodcuts in text, and arithmetical diagrams*, 16mo. hf. bound, rough edges (half the title missing, but a TALL AND REMARKABLY CLEAN COPY), very rare, £7. 7s s. l. aut t. n. (? 1528)

The date is given on the title, but a portion of the latter being torn off, only MDX is still discernible. Owing to the extreme rarity of all the works of both Taglientes, no complete bibliography of their works and editions has ever been given, and it is therefore impossible to identify this, or the edition given below. It consists of 88 leaves, or signatures A to Z in fours, the last l. being blank.

4728 ———: **ANOTHER EDITION, printed in gothic letter, with numerous woodcuts and ornaments**, 16mo. boards (wanting title, and with a small hole going through the larger part of the work); very rare, £5. 10s s. l. aut a.

The collation of this edition agrees exactly with the one above, but the different spelling, as well as some woodcut ornaments varying from those in it, mark it as a distinct, and judging from internal evidence, earlier edition.

According to Cicogna (in 'Saggio di Bibliografia Veneziana') the author wrote the work at the request of his kinsman Giovanni Antonio. It resembles to some extent the latter's *Opera Nova* (q. v. supra).

4729 **TAISNIER** (Jean) OPUS MATHEMATICUM VIII Libros completens, quorum VI priores Libri Absolutissimæ CHEIROMANTIE Theoricam . . . VII. PHYSIOGNOMIÆ Dispositionem . . . VIII. PERIAXIOMATA de FACIEBUS SIGNORUM . . . complectitur . . . Item ISAGOGEN ASTROROLOGIÆ JUDICIARIE, et totius Diuinatoricis Artis Encomia, cum Indice copioso; *with author's portrait on reverse of title, and very numerous woodcuts illustrating Palmistry, Physiognomy, and Astrology*, folio, sound copy in old limp vellum (RARE), £2. 2s Colonia: Agrippinae, 1582

4730 ———: **ANOTHER COPY, sewn (slightly wormed, and 3 small holes in title)**, £1. 10s 'Il y a beaucoup emprunté au médecin B. Cocolis pour cet ouvrage, qui expose d'une façon didactique la chiromancie, la physiognomie, les présages, l'astrologie, etc.'—*Biogr. Gén.*

4731 **TAIT** (Peter Guthrie, F.R.S.E.) **ELEMENTARY TREATISE ON QUATERNIONS, with diagrams**, 8vo. cl., 5s (p. 12s 6d) Clarendon Press, Oxford, 1867

4732 ———: **SECOND EDITION, enlarged, with diagrams**, 8vo. prize calf extra (nice copy), 7s 6d Univ. Press, Cambridge [1873]

Still the best working book on the subject for the student.

4733 ———: **LECTURES on some RECENT ADVANCES in PHYSICAL SCIENCE, with woodcuts**, post 8vo. cl. (out of print), 4s 1876

4734 ———: **SECOND EDITION, revised, with a Lecture on FORCE, woodcuts**, post 8vo. cl., 5s 1876
An excellent sketch on the more recent discoveries in physics based on the doctrine of energy. It includes a chapter on the 'Early History of Energy'.

4735 ———: **LIGHT, with diagrams**, post 8vo. cl., 3s Edin., 1884

4736 ———: **PROPERTIES of MATTER, with diagrams**, post 8vo. cl., 3s (p. 7s 6d) ib., 1885

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4737 ———: **SKETCH of THERMODYNAMICS**, 2nd Ed., extended, large post 8vo. cl., 3s ib., 1877

———, and Lord **KELVIN**, P.R.S.: **ELEMENTS of NATURAL PHILOSOPHY**—v. Nos. 2247-50, ante.

4738 ———, and William John **STEELE**: **TREATISE on the DYNAMICS of a PARTICLE, with numerous Examples**, 2nd Ed., with diagrams, post 8vo. cl., 3s Cambridge, 1865

4739 ———: **THIRD EDITION, considerably augmented, diagrams**, post 8vo. cl., 4s 1871

———, and Balfour **STEWART**: **The UNSEEN UNIVERSE**—v. Nos. 4597-8, ante.
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Venetia, 1606
Apparently the last edition of the above four works published, and the only one with a collective title.
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- 4744 — — — GENERAL TRATTATO di NUMERI, et MISURE; with *portraits (duplicated), and numerous diagrams*, 6 vols. folio in 2, old vellum (back of binding of v. I damaged, title of v. III margined and stamped, a few ll. wormed, and a number slightly water-stained, but on the whole a sound and large copy); very rare, £2. 15s
ibidem, per Curtio Troiano, 1556-60
Forming to some extent a continuation of the *Arithmetica* (q. v. *infra*). 'In this he showed how the coefficients of x in the expansion of $(1+x)^n$ could be calculated, by the use of an arithmetical triangle, from those in the expansion of $(1+x)^{n-1}$ for the cases when n is equal to 2, 3, 4, 5, or 6. The treatise on arithmetic and numbers is one of the chief authorities for our knowledge of the early Italian algorithm. It is verbose, but gives a clear account of the different arithmetical methods then in use, and has numerous historical notes which, as far as we can judge, are trustworthy, and are ultimately the authorities for many of the statements in the last chapter [of Mr. Ball's 'History of Mathematics']. It contains an immense number of questions on every kind of problem which would be likely to occur in mercantile arithmetic, and there are several attempts to frame algebraical formulæ suitable for particular problems. These problems give incidentally a good deal of information as to the ordinary life and commercial customs of the time,' etc. etc. etc.—
W. W. R. Ball.
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[col. :] Vinegia, 1558-62
In the *Nova Scientia* the author investigates the fall of bodies under gravity, and first makes known the theorem that the range of projectiles is largest if the angle of projection is 45° ; while in the *Quesiti* (which contains a dedication to Henry VIII.) the author claims the invention of the theorem for solving cubic equations (known as 'Cardan's Formula'), which was treacherously published by Cardan in 1545 as his own in his *Ars Magna*. See No. 684, ante. It further contains investigations on gunnery, the composition of Gunpowder, the invention of which the author ascribed to Archimedes, and chapters on fortification; and gives interesting autobiographical information.
- 4748 — — — QUESITI, et INVENTIONI DIVERSE, prima edizione, with *portrait, woodcuts, and diagrams (title stained and mended)*, [col. :] Venetia, 1546: La NOVA SCIENTIA, con una Gionta al Terzo Libro; with *woodcut title, woodcuts and diagrams*, ib., 1551: REGOLA GENERALE da SULEVARE con RAGIONE e MISURA nō solamēte ogni affondata Nave; ma una Torre Solida di Mettallo, trovata da Nicola Tartaglia, delle discipline Mathematiche amatore intitolata la TRAVAGLIATA INVENTIONE, prima edizione; with *portrait (different from that in 'Quesiti'), and woodcuts* (ib., 1551): RAGIONAMENTI sopra la sua TRAVAGLIATA INVENTIONE, nelli quali se dichiara volgarmente quel libro di Archimede Siracusano intitolato de Insidentibus Aquæ, con altre Speculative Pratiche da lui ritrovate sopra le Materie, prima edizione, ib., 1551—4 vols. sm. 4to. in 1, old Italian vellum, £2. 5s
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petua mentis et corporis sa
nitate gaudere et gloriosa beate Alba
rie semper virginis et intercessione a
presenti liberari tristitia.

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Adelium domunus om
nium conditor et rector

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rando pieuente et adiuuando proficere
ut cuncta nostra oia et operatio a te sem
per incipiat et per te cepta finatur. Per
christum dominum nostrum. Amen.

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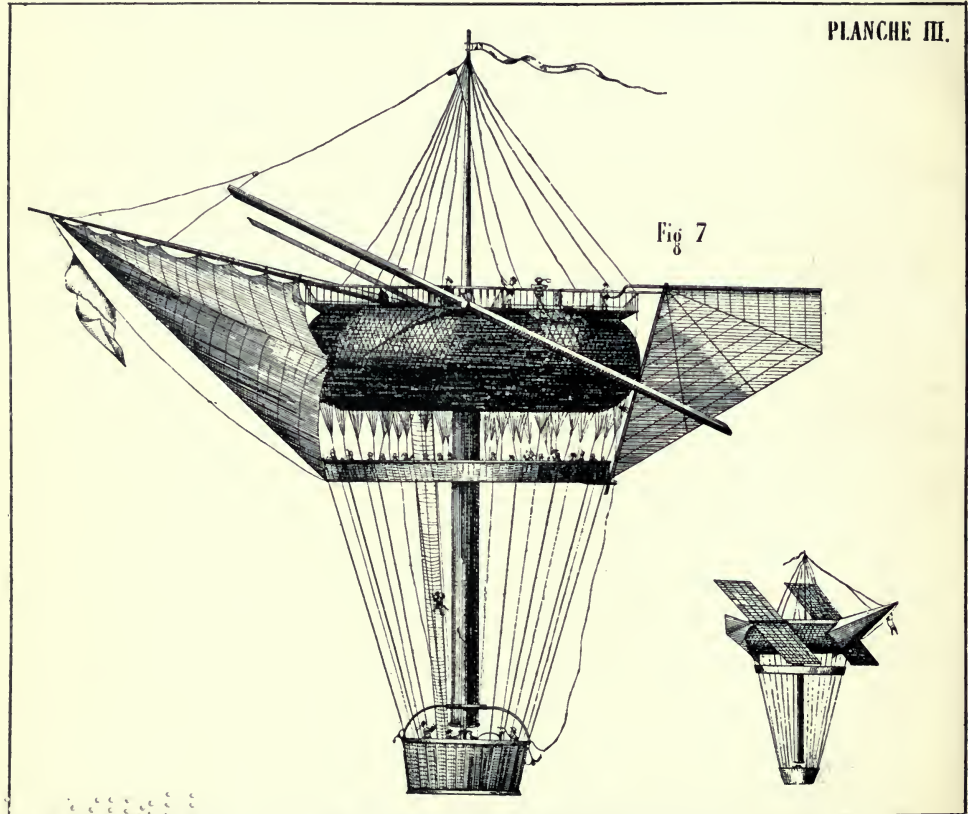
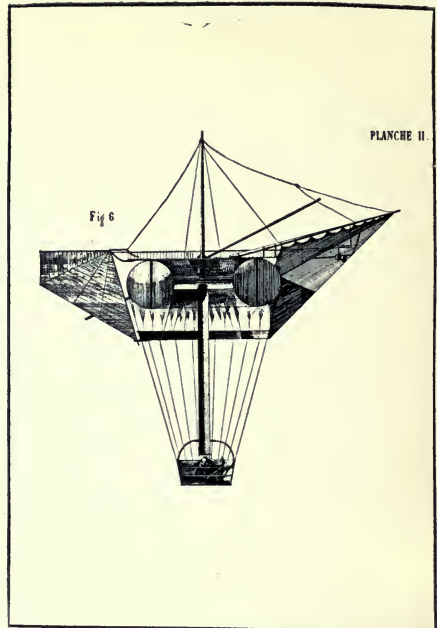
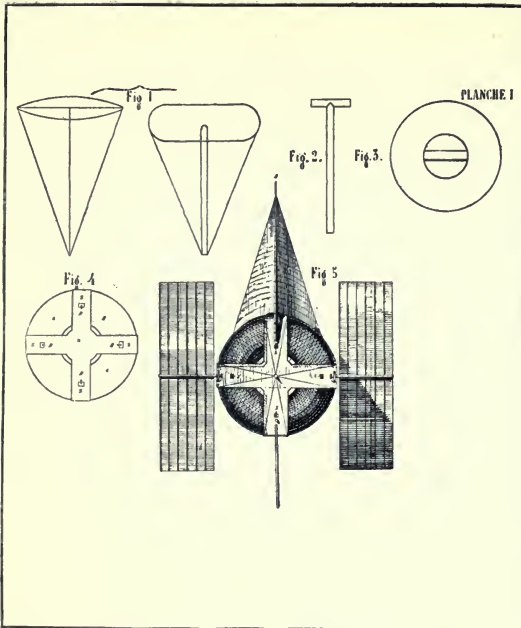
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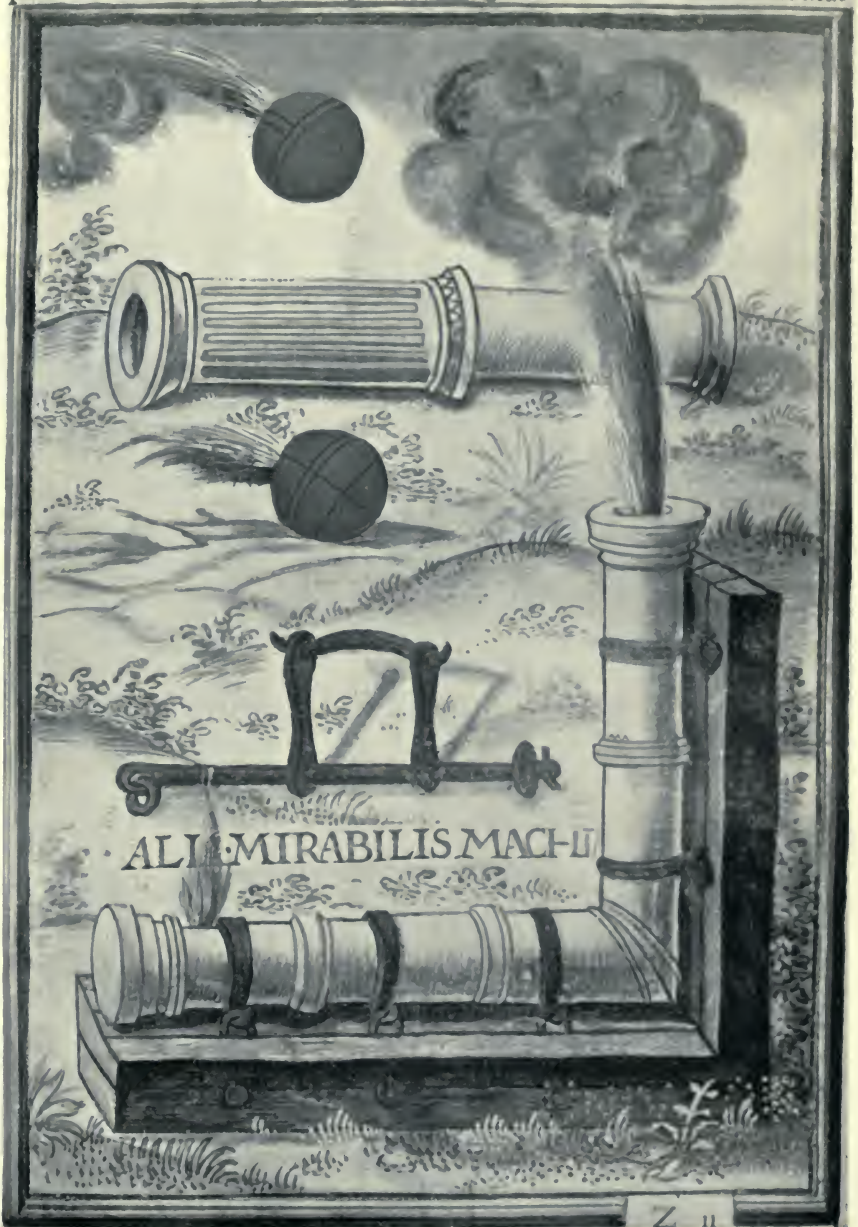
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Inuentum est quoque machinæ huiusce tuum, Sigismunde Pandulphe, qua
pilæ æneæ tormentarii pulueris plenæ cū fungi aridi fomite vrentis emittuntur



No. 5037 (page 255).

A curious type of cannon to hurl *modo hibernico* projectiles 'round the corner'.

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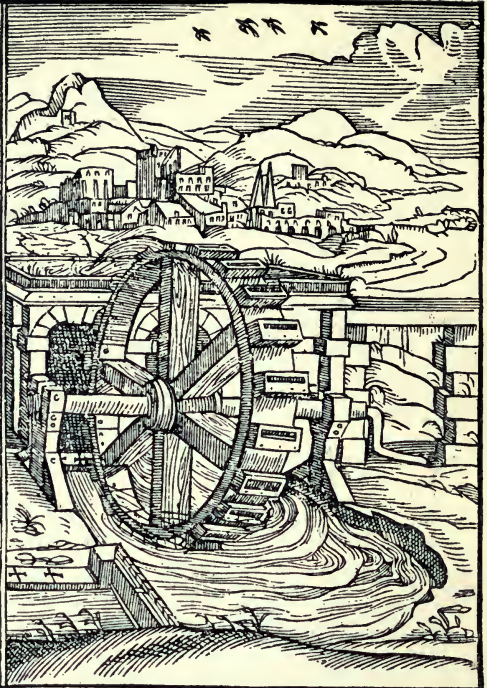
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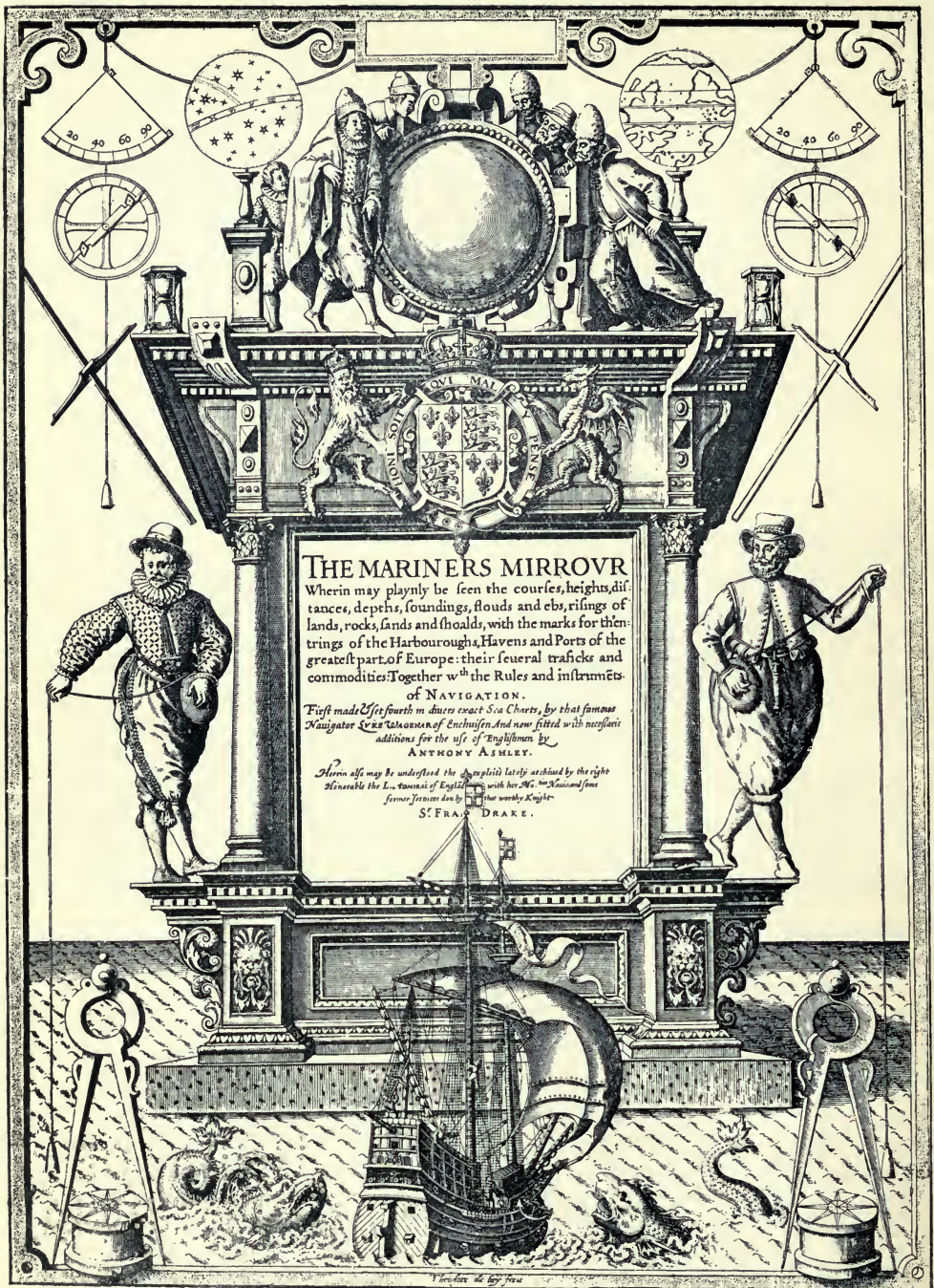
The translator, the grandfather of the first Earl of Shaftesbury, afterwards accompanied Drake and Sir John Norris on their expedition to Spain in 1589, and in 1596 acted as secretary to the Earl of Essex during the expedition to Cadiz.

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Archimedes; or, Lib. I.



Cap. 13. Mechanical Motions.

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scends near to the loadstone, may be contrived to fall down through some hole in the plane, and so to return unto the place from whence at first it began to move; and being there, the loadstone will again attract it upwards, till coming to this hole it will fall down again: and so the motion shall be perpetual, as may be more easily conceivably by this figure.



S 2 Suppose

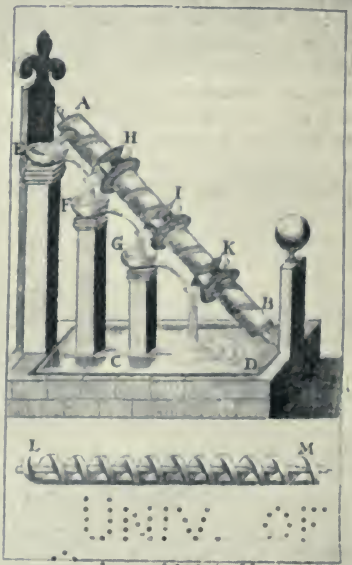
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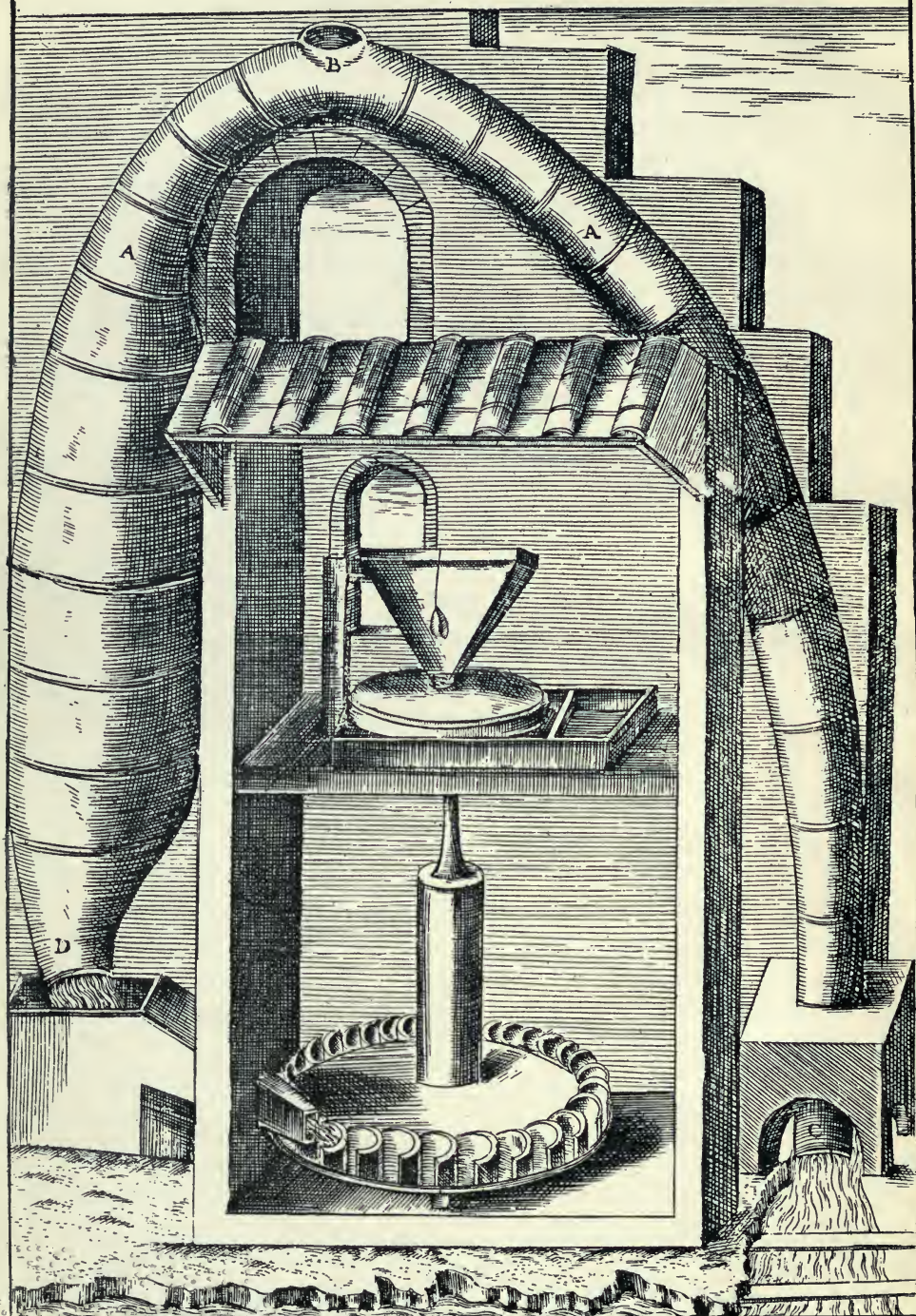
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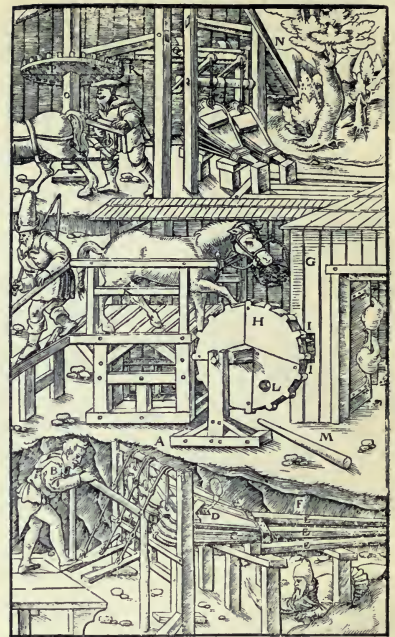
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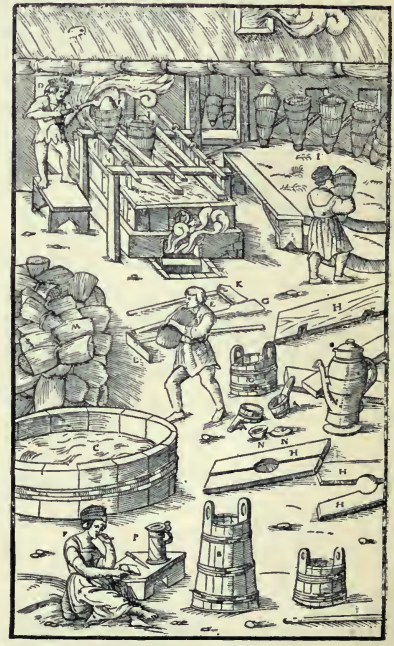
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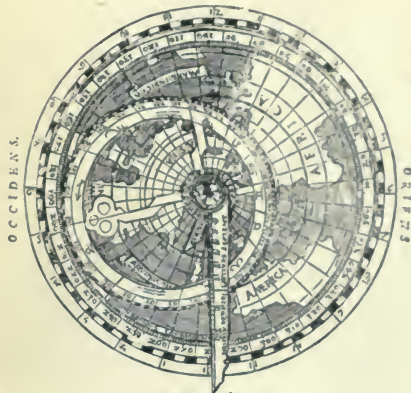
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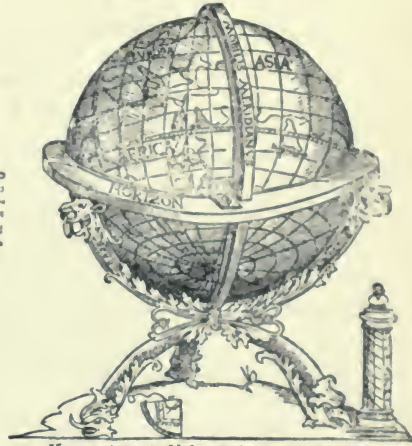
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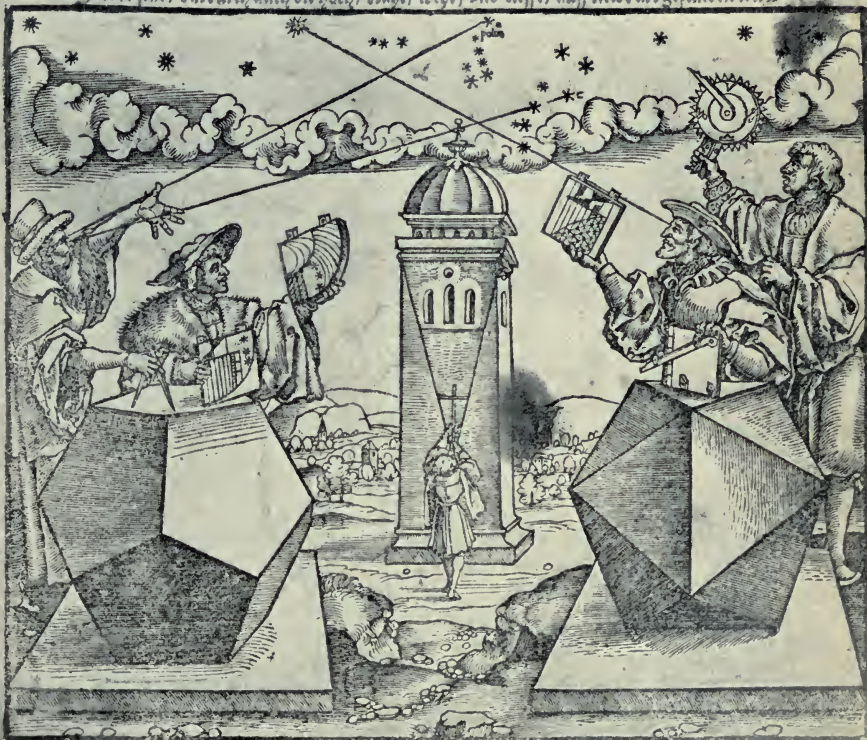
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Page 155 describes how to make a FREEZING MIXTURE, which is of special interest, ROBERT BOYLE having been credited with making the first experiments in 1667—thirty-three years after the publication of the above work.

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All the above works belonged to Richard Watson, F.R.S., the absentee Bp. of Llandaff, and bear his Calgarth Park booklabel, and were doubtless used by him when victoriously cramming for his chemistry professorship at Cambridge.

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Nos. 6401-2 (*page 327*).

Portrait of the Hon. Robert Boyle, F.R.S.

Breue cōpendium artis geometrie

a Thoma brauardin ex libris Euclidis Boecij et campani peroptime cōpilatus. et diuiditur in quattuor tractatus ¶ Prohemium

Geometria est arithmetice

consecutiuā: nam posterioris ordinis est et passiones numerorum magnitudinibus deseruiunt. Propter quod euclidēs geometrie arithmeticam interposuit. Nos autem in alio tractatu de Arithmetica expediimus ideo conclusiones in permixtas. i. distintas ab arithmetica ponemus geometricas.

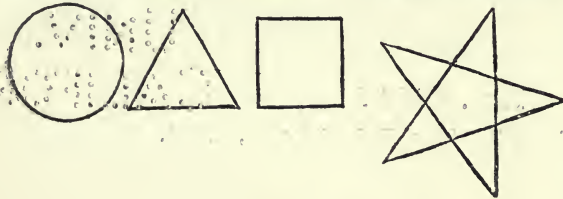
¶ Diuiditur autē geometria in theoricam et praticam Theorica passiones magnitudinis inuestigat sillogismo et ratione quē admodum concludimus q̄ omnis rectilinea est apta nata esse basis trianguli equilateri per definitionem circuli et per hoc assumptum q̄ omnem rectā lineam cōtingit esse semidiametrum duorum circuloꝝ.

¶ Pratica uero est que mensuras magnitudinis inuestigat arte et instrumento. Et subdiuiditur in altimetriam et planimetriam et solimetriā. quarū prima est de mēsurā ratione altitudinis, secūda de mensuratione planorū. tertia de mensuratione solidorum. Instrumenta que huiusmodi mensurationibus deseruiunt sunt quatuor scilicet lindrū. astroabulum. armille et torquetū nauicula. Et huiusmodi passiones quas de magnitudine demonstramus sunt pene omnes relatiue. ut equalitas et inequalitas regularitas et irregularitas. cōmensurabilitas et incōmensurabilitas. Etiam utriusque tales passiones sunt res distinte a subiectis solēt fieri alterationes sed hoc ad aliā pertinet facultatem.

¶ Tractatus primus Capitulum primum de principiis incompleta que sunt definitiones terminorum.

¶ Suppono igitur principia demonstrationis et uoco principia demonstrationis a definitiones et propositiones inmediate. quā propositiones inmediate nō habent se priores ex quibus demonstrant. talia enī supponi habēt in quolibet scēcia. Huiusmodi enī principiorū quodam est dignitas uel maxima. p̄posito et ad hoc genus principiorum reducuntur propositiones inmediate in geometria que dicuntur cōmunes anīmī conceptiones: siue cōmunes scientie. Aliud est quod uocatur ab aristotele positio. positio q̄dā est principii cōplexu et uocat ab aristotele supposito in geometria positio. Aliud est t̄m̄ extremū. p̄positio et uocat diffinitio. ¶ A diffinitionibus igitur exordiu est sumēdū q̄ significata terminorū exprimunt significata autē terminorū in oibus scēctis p̄supponi habēt. ¶ Punctū uo uoco quod magnitudinis est p̄ncipiū. Magnitudinis autē que unam habet dimensionē: linea dicitur: que duas superficies que uero. 3. corp⁹ appellatur. Est uero corp⁹ perfectius omni q̄ritate quia post trinam nō est quarta dimensio. figuram uero cō magnitudinem terminatam aut lineis aut superficiebus. Ergo figura omnia aut est plana aut est solida planas quidem terminat linee figurā solidas superficies. Omnia autem figura solida aut est rotunda aut conica. i. angularia. ¶ Conicarum autem alie regulares et sunt solum. s. f. tetraedron. exaedron. octoedron. duodecedron. icocedron. quemadmodum declarabo. Alie uero sunt irregulares: ut sunt corpora serratilia et pyramides laterate et huiusmodi. ¶ Rotundarum quedā sunt regulares ut spherica. quedam irregulares ut ouales et lenticulares. Planarū uero figurarū: alia circularis. i. sine angulo. Alia rectilinea et polygonia. i. multorū angulorum. ¶ Circulus est figura plana unica linea contenta que circiferentia nominatur in cuius medio est punctus a quo omēs linee ducte ad circiferentiam sunt equales et hic punctus centrum circuli dicitur. Rectilinearum quedam sunt simplicia. Alie egredientiū angulorum

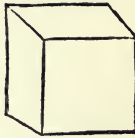
Circulus triāgul⁹ q̄dratū figura egrediētū anguloꝝ



tetraedron



hexaedron



sphaera



corpus ouale



corpus lenticulare



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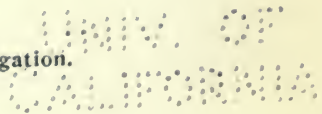
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They that get downe to the Sea in Ships, and occupie their
business in great waters: These men for the works of the
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ca anitij manilij feuerini Boetij vi-
ri clarissimi ⁊ illustrissimi ex cōsulis:
ordinarij: patricij: ad patricium sim-
machum.



N dandis accipi-
endisque muneribus ita recte offi-
cia precipue inter
eos q̄ sese magni
faciunt estimant
si liquido ostabit
nec ab hoc aliud
q̄d liberalius afferret inuentū: nec
ab illo: n̄q̄ q̄d iucundius beniuolē-
tia cōplecteret acceptū. Hęc ipse cō-
siderans: atuli non ignaua opum
pōdera quibus ad faciūsus nihil in-
structius est: cū habendi sitis incan-
duit: ad meritū nihil vilius cū ea si-
bi victor anim⁹ calcata subiecit: sed
ea que ex grecarū opulentia littera-
rū in romane orationis thesaurum
sūpta cōuerim⁹. Ita enī mei quoq̄
operis mihi ratio cōstabit: si que ex
sapientie doctrinis elicui: sapientis-
simi iudicio cōpobent. Cūdes igit̄
vt tam magni laboris effectus tuuz
tantū expectet examē: nec in aures
p̄dire publicas nisi doctę sentētie a
stipulatione nitat. In quo nihil mi-
ri videri debet: cū id opus q̄d sapiē-
tę inuenta persequit: non auctoris
s̄ alieno incūbit arbitrio. Suis q̄p-
pe instrumentis res rationis expen-
ditur: cū iudicium cogit subire pru-
dentis. Sed huic munusculo: nō ea-
dem que ceteris imminent artibus
munimenta cōstituo. Neque enim

fere vlla sic cūctis absoluta partib⁹
nullius indiga suis tantū est sciētia
nixa p̄sidijs: vt nō ceteraz quoq̄ ar-
tiū adiumenta desideret. Nā in effi-
giandis marmore statuis: alius ex-
cidendę molis labor est: alia formā-
dę imaginis ratio: nec eiūsdē artifi-
cis manus politi operis nitor expe-
ctat. At picture manibus tabule cō-
missę fabrorum. cere rustica obser-
uatione decerptę: colorū fuci merca-
torū solertia perquisiti: lintea operto-
sis elaborata tertrinis: multiplicem
materiā prestant. Nōne idem quo-
que belloꝝ visitur instrumentis: Pic-
spicula sagittis eracuit: illi validus
thorax nigra gemit incude. At ali-
us: crudi ymbonis tegmina pprij la-
bori orbi infigenda mercatur. tam
multę artibus ars vna perficiat. At
nostri laboris absolutio lōge ad fa-
cilioꝝ currit euentuz. Tu enī solus
manuz supremo operi impones: in
quo nihil de decernentiū necesse est
laborare cōsensu. Quālibet enī hoc
iudiciū multīs artibus probeꝝ excul-
tū vno tamē cumulat examine. Ex-
periare igitur licet quantū nobis in
hoc studio longis tractus ocijꝝ la-
bor adiecerit. An rerū subtilium fu-
gas exercitate mentis velocitas cō-
phendat. vtz ieiunę macies oratio-
nis ad ea que sunt caligantibus im-
pedita sententijs expedienda suffici-
at. Qua in re mihi alieni quoque iu-
dicij lucra querim̄. Cum tu vtrariū
que peritissimus litteraz: possis gra-
tę orationis expertibus quantuz de
nobis iudicare audeant: sola tantū
pnunciacione prescribere. At nō al-

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The translation of the foregoing work, with an appendix not contained in the original. It is of special interest on account of its translator, a German professor at Cassel, who fled to England to avoid punishment for theft. He was elected a Fellow of the Royal Society, but struck off the rolls on his antecedents becoming known. He was the author of the original 'Baron Munchausen,' and a swindler of a most interesting type. 'In the autumn of 1791 Raspe went on a tour in the extreme North of Scotland, where he professed to discover signs of vast mineral wealth. To sustain his reputation as a mineralogist he brought out, in 1791, a translation of Baron Born's new process of amalgamation. By plausible manoeuvres he inveigled a local magnate, Sir John Sinclair of Ulbster, into disbursing large sums for preliminary operations. When the time came for the fruition of his schemes, Raspe disappeared. The incident was crystallised in a tradition which Sir Walter Scott utilised in *The Antiquary* [where Raspe figures in the character of *Dousterswivel*].—*D. N. B.* See Nos. 3302-3, ante.

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FIRST EDITION OF THE FIRST PRINTED TREATISE ON ARITHMETIC, AND OF EXCESSIVE RARITY. No copy has happened for sale at auction within the last 22 years, and probably not for many years before. The Libri copy, sold in 1861, is the last sale-record that can be traced.

It consists of one unnumbered leaf with verses, beginning 'Chi de arte matematiche ha piacere, Che tengon di certeca el primo grado . . .', 116 numbered ll., and one unnumbered l. of Table, or signatures a—o in eights and p in six. On the reverse of the last l. are verses in Italian, from which it can be gathered that the edition was printed by Erhard Ratdolt of Augsburg. The above copy is, save for the few defects mentioned, in a most desirable condition, and uniform in binding with the following copy of the second edition.

- 6345 ——— **SECONDA EDIZIONE.** [F. 2a:] Qui comēza la nobel opera de | arithmeticha ne laqual setracta | tutte cosse amercantia pertinen- | te facta τ compilata per Piero | borgi da Vienesia; *printed in gothic letter, with numerous woodcut initials*, sm. 4to. *newly and finely bound in polished brown Levant morocco extra, rough g. e., by W. PRATT, uniform with the above (an exceptionally fine and large copy)*, £21.

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Sessa & Piero di Rauani compagni | anno dñi. 1517. adi. 25. de zugno.

The collation of the above edition corresponds exactly with that of the foregoing. The above copy contains a MS. index in an old hand.

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The first two editions are by most bibliographers mistakenly quoted as a different work.

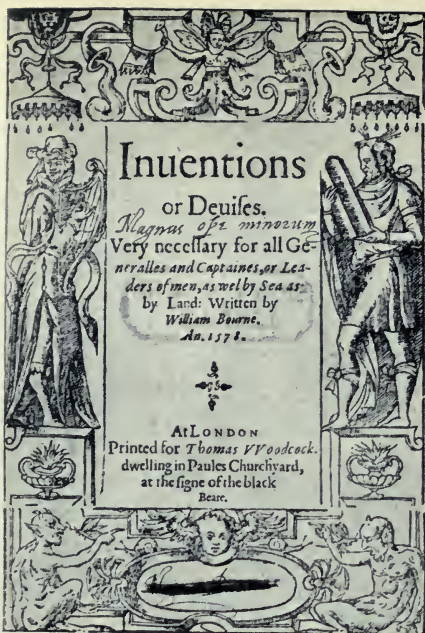
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- 6416 ——— EXPERIMENTS and CONSIDERATIONS about the POROSITY of BODIES, in Two Essays, **first edition**, 12mo. *sound tall copy in contemporary calf gilt (RARE)*, 15s
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- 6417 [——] A FREE ENQUIRY into the VULGARLY RECEIV'D NOTION of NATURE; made in an Essay, address'd to a Friend, by R. B., Fellow of the Royal Society, **first edition**, sm. 8vo. *sewn (rare)*, 10s
John Taylor, 168½
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- 6418 ——— The GENERAL HISTORY of the AIR, **first edition**, sm. 4to. *fine copy in old calf (VERY RARE)*, £1. 5s
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Samuel Smith, 1690
Containing investigations on specific gravity. Bound up at end is: 'Catalogue of the Philosophical Books and Tracts, written by the Hon. Robert Boyle, Esq.; together with the Order or Title wherein each of them hath been Publish'd respectively; with a Catalogue of his Theological Books' (pp. 14).
- 6422 ——— The ORIGINE of FORMES and QUALITIES (according to the CORPUSCULAR PHILOSOPHY), illustrated by Considerations and Experiments (written formerly by way of Notes upon an Essay about Nitre), **first edition**, 12mo. *old calf (RARE)*, £1. 5s
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- 6423 ——— SECOND EDITION, augmented by a DISCOURSE of SUBORDINATE FORMES, 8vo. *old calf*, 15s
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Inuentions

or Deuises.

Regias ope minorum
 Very necessary for all Generall
 and Capitaines, or Leaders
 of men, as well by Sea as
 by Land: Written by
 William Bourne.

An. 1578.

AT LONDON
 Printed for Thomas VVoodcock,
 dwelling in Paules Churchyard,
 at the signe of the black
 Bear.

and strange Deuises.

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some, and there it may rest at your pleasure: and then when that you would haue it swimme, then with the Skrewes winde out the things on both the sides, and that will thrust the water out againe at the holes, and so it will rise and come vp about the water, and swimme as it did before, &c.

The 19. Deuise.

AND furthermore, you may make a Boate to goe without oares or Sayle, by the placing of certaine wheelles on the outside of the Boate, in that sort, that the armes of the wheelles may goe into the water, and so turning the wheelles by some prouision, and so the wheelles shall make the Boate to goe.

The 20. Deuise.

AND also, they make a water Mill in a Boate, for when that it rideth at an Anker, the tyde or streame will turne the wheelles with great force, and these Milles are vsed in France, &c.

The 21. Deuise.

AND in like manner, they may make an engine to know the way or going of a Ship, for to knowe how fast or softly that any Ship goeth, which is very necessary for all them that goeth of long voyages, in a number of caules. The instrument is to be made in this manner. There must be made a little small Boate, and then there must be placed a wheele in the Boate, that the armes thereof must goe in the water, and so as the Ship passeth or goeth in the Sea, so the way of the Ship doth turne the wheele by the armes that goeth in the water of the Sea, and from that

and strange Deuises.

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the forme of certaine lightes in the night, as this, you hauing consulted or talked together, that if that they doo shew you so many lights, and standing on such a fashion or forme, that it signifieth such a thing is done by the enemy, or else that you must do something, and in such a forme, that it signifieth such a thing, &c. accordingly vnto the tokens that you haue agreed vpon, &c. And furthermore, you may diuise by the formes of lightes in the night, to cause your friends to write a letter by, and so by that means to declare your whole minde vnto your friends: as thus, you hauing agreed vpon them, that if that there be so many lightes, and stand after such a fashion; that it signifieth A, and if so many lightes, and in such a forme, then to write B; and so fourth vnto the numbers of the letters, according vnto the forme & number of the lightes so shewed, and then at the ende of euery word so written; to shew but one light for a stop, for the ende of a word; &c. vntill that you haue finished. And furthermore, in like manner by lightes in the night is the most speediest thing to liue any thing knowne, that may be to giue warning vnto any countrey to bee in a readinesse vpon the suddaine, as we here in England, doo prepare for the use thereof, by the firing of the beacons, &c. And forthermore, it is vsed vnto a further practise vnderneath the king of Spaynes dominions, vpon the fourth coast called *Análaxia*, within the Straights of *Iubertare* the sea beinge called *Mara Mediterraneum*, as there is small towers all alongst the coast that they doo keepe watch in, and at the ende of euery league or in lesse distance, there is one of those small towers: and it is so ordeyved amongst them, that they can tell whether that any of the Turkes, or Moores galleys hath been on the coast, and what number of Gallies that there bee of them, and whether that they haue landed or been a boare, and whether that they be gone or remainyng stilly by the very forme and the

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numbers

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Rare Inuentions

that all the reflected beames or shadowes doo rest vpon one place, and so by a great number of glasses to multiply the heate, that in the ende it will be set on fire and burne: but you must be sure that all the reflected beames or shadowes doo rest in one place, or else it will be vnto no purpose, and at a great distance you shall haue much to desire to decrese or see it, &c. Wherefore you must haue the ayde of Geometry, to vse it according vnto the distance, and to place the glasses in a frame, which I doo cōt at this time for breuicie.

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The 110. Deuise.

FOR to see any small thing a great distance of from you, it requireth the ayde of two glasses, and one glasse must be made of purpose, and it may be made in such sort, that you may see a small thing a great distance of, as this, to reade a letter that is set open neare a quarter of a myle from you, and also to see a man foure or fīue miles from you, or to view a Towne or Castell, or to see any window or such like thing sixe or seauen myles from you. And to declare what manner of glasses that these must bee: the one glasse that must be made of purpose, is like the small burning glasses of that kinde of glasse, and must be round, and set in a frame as those bee, but that it must be made very large, of a foote, or 14. or 16. inches broad, and the broader the better: and the propertie of this glasse, is this, if that you doo behold any thing throw the glasse, then your eye beinge neare vnto it, it sheweth it selfe according vnto the thing, but as you doo goe backwardes, the thing sheweth bigger and bigger, vntill that the thing shall seeme of a monstrous biggnesse: but if that you doo goe to farre backwardes it will decrese and be small, & turne the fashion downwardes. But now to vse this glasse, to see a small thing a great distance, then doo this, the thing or

place

No. 6391 (page 327).

The forerunner of the Marquess of Worcester's 'Century of Inventions.'

- 6424 **BOYLE** (Hon. Robert; F.R.S.; founder of the Boyle Lectures) NEW EXPERIMENTS PHYSICO-MECHANICAL, touching the SPRING of the AIR, and its Effects (made, for the most part, in a NEW PNEUMATICAL ENGINE), SECOND EDITION, whereunto is added a DEFENCE of the Author's Explication of the Experiments, against the OBJECTIONS of FRANCISCUS LINUS, and THOMAS HOBBS, with 2 copperplates (one folding), sm. 4to. fine copy in old calf (VERY RARE), £1. 15s

Oxford, H. Hall, 1662

Containing the author's invention of an improved air-pump ('machina Boyleana'), 'presenting all the essential qualities of the modern machine. By a multitude of experiments performed with it, Boyle vividly illustrated the effects (at that time very imperfectly recognised) of the elasticity, compressibility, and weight of the air; investigated its function in respiration, combustion, and conveyance of sound, and exploded the obscure notion of a *fuga vacui*.'—*Agnes M. Clerke.*

The above edition is of special importance, as it first contains what is now known as Boyle's Law. 'The Defence against Linus' contained experimental proof of the proportional relation between elasticity and pressure, still known as Boyle's Law. This approximately true principle, although loosely demonstrated, was at once generalised and accepted, and was confirmed by MARIOTTE [under whose name it is generally known on the Continent] in 1676.—*Eadem.*

BISHOP BURNET'S COPY:

- 6425 ——— CONTINUATION OF NEW EXPERIMENTS, PHYSICO-MECHANICAL, touching the SPRING and WEIGHT of the AIR, and their Effects. The I. Part, with a short DISCOURSE of the ATMOSPHERES of CONSISTENT BODIES, first edition, with 8 fine plates on copper, sm. 4to. contemporary calf (a sound and large copy); RARE, with armorial bookplate of GILBERT BURNET as *Bp. of Sarum*, £1. 5s

Specially valuable for giving a description of his air-pump as improved by ROBERT HOOKE, F.R.S., the author's assistant—spoken of as the 'second Engine' in this work.

- 6426 ——— THE SCEPTICAL CHYMIST: or CHYMICO-PHYSICAL DOUBTS and PARADOXES, touching the Spagyrist's Principles commonly call'd Hypostatical, as they are wont to be Propos'd and Defended by the Generality of Alchemists, whereunto is premis'd Part of another Discourse relating to the same Subject, first edition, sm. Svo. old sheep (VERY RARE), with bookplate of John Sherveen, M.D., sold J. Cadwell for J. Croke, 1661

One of the most important, as well as by far the rarest, of all the author's writings, especially in the above first edition. It was reprint'd in 1680. The above copy has a duplicate title, reading: 'The Sceptical Chymist: or Chymico-Physical Doubts and Paradoxes, touching the Experiments whereby Vulgar Spagyristes are wont to Endeavour to Evince their Salt, Sulphur, and Mercury, to be the true Principles of Things, Printed for J. Croke, 1661.'

'In the "Sceptical Chymist" he virtually demolished, together with the peripatetic doctrine of four elements, the Spagyristic doctrine of the *tria prima*, tentatively substituting the principles of a 'mechanical philosophy', expounded in detail in his 'Origin of Formes and Qualities' [q. v. *supra*].—D. N. B.

'In his *Sceptical Chymist* he criticises the Aristotelian and the alchemistic elements, which were still accepted by many of the intra-chemical age. He enunciated the axiom that only what can be demonstrated to be the uncomposable constituents of bodies are to be regarded as elements. . . . With a far-seeing glance he looked forward to the discovery of a much greater number of elements than was at that time assumed, at the same time contending that many of the substances then held to be elementary were not really so. . . . Boyle was the first to state with perfect clearness that a chemical compound results from the combination of two constituents, and that it possesses properties totally different from those of either of its constituents alone, thus enabling him to draw a sharp distinction between mixtures and chemical compounds.'—*Prof. E. v. Meyer.*

- 6427 ——— SOME CONSIDERATIONS touching the USEFULNESSE of EXPERIMENTAL NATURAL PHILOSOPHY, propos'd in a Familiar Discourse to a Friend, by way of Invitation to the Study of it, 2nd Ed., 4to. original calf, 10s 6d

Containing an interesting preface by ROBERT SHARROCK, Archdn. of Winchester.

'I scruple not to acknowledge there are things that incline me to suspect, that some in the world . . . may have Arcana, to which most of the Processes I reserve may prove little more than Trifles'.—*Author's preface.* This passage is interesting as first avowing his belief in alchemy.

- 6428 ——— TRACTS containing New Experiments, touching the RELATION betwixt FLAME and AIR. And about EXPLOSIONS. An HYDROSTATICAL DISCOURSE occasion'd by some Objections of DR. HENRY MORE against some Explications of New Experiments made by the Author, with an Hydrostatical Letter, dilucidating an Experiment about a Way of Weighing Water in Water. New Experiments of the POSITIVE and RELATIVE LEVITY of BODIES under Water, of the Air's Spring on Bodies under Water, and about the Differing Pressure of Heavy Solids and Fluids, first edition, large 12mo. old calf, or, old sheep (RARE), 16s 6d

R. Davis, 1672

Containing the author's important investigations on specific gravity.

It includes chapters 'Of the Difficulty of producing and preserving Flame without Air', 'Of the Propagation of Actual Flame in Vacuo Boyleano', 'New Experiments about the Relation betwixt Air and the Flamma Vitalis of Animals', 'Of the Pressure of the Air's Spring on Bodies under Water', etc. etc.

- 6429 ——— TRACTS: containing I. SUSPICIONS about some HIDDEN QUALITIES of the AIR; with Appendix touching CELESTIAL MAGNETS, and some other Particulars. II. ANIMADVERSIONS upon MR. HOBBS'S Problemata de Vacuo. III. DISCOURSE of the CAUSE of ATTRACTION by SUCTION, first edition, 12mo. old calf, newly rebounded (RARE), 17s 6d

M. Pitt, 1674

Containing also a chapter on the 'Preservation of Bodies in Vacuo Boyleano'.

- 6430 [——] TRACTS consisting of OBSERVATIONS about the SALTNESSE of the SEA; ACCOUNT of the STATICAL HYGROSCOPE and its Uses; the FORCE of the AIR'S MOISTURE; the Natural and Preternatural State of Bodies, and a Sceptical Dialogue about the POSITIVE or PRIVATIVE NATURE of COLD, with some Experiments, by a MEMBER of the ROYAL SOCIETY, first edition, sm. 8vo. old sheep, newly rebounded (RARE), 17s 6d

E. Fleisher, 1674

- 6431 [——] SECOND EDITION, sm. 8vo. original sheep, 12s 6d

S. Smith, 1690

Describing some of the author's most interesting investigations, and exploring the Aristotelian doctrine then held that the saltness of the sea was found only on its surface. He also explains the origin of the salts in the sea, shows how to make sea water drinkable by distillation and freezing, and ascertains its density.

- 6432 BRACKENBURY (Charles Ernest, A.M.I.C.E.) BRITISH PROGRESS in GAS WORKS' PLANT and MACHINERY, with 113 illustrations (including 5 plates), roy. 8vo. boards, 3s 6d (p. 6s nett) 1905

- 6433 BRADLEY (Thomas) PRACTICAL GEOMETRY, LINEAR PERSPECTIVE, and PROJECTION, including Isometrical Perspective, Projections of the Sphere, and the Projection of Shadows, with Description of the Principal Instruments used, etc., 8 plates and numerous woodcuts, 8vo. cl., 3s 6d

S. D. U. K. [1834]

- 6435 **BOYS** (Charles Vernon, F.R.S.) SOAP-BUBBLES, and the Forces which mould them, *with front.*, and 68 woodcuts, and folding plate of thaumatrope, cr. 8vo. cl., 1s 6d 1890
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- 6437 **BRADDOCK** (John, Deputy Commissary of Ordnance) MEMOIR on GUNPOWDER, discussing the PRINCIPLES both of its MANUFACTURE and PROOF, *with front.*, 8vo. hf. cl., 5s 1832
- 6438 **BRADWARDINE** (Thomas, 53rd Abp. of Canterbury; 'doctor profundus'): GEOMETRIA SPECULATIVA THOME BRAUARDINI recoligens omnes conclusiones geometricas studentium artium z philosophie ARISTOTELIS valde necessarias simul cum quodam tractatu de QUADRATURA [sic] CIRCULI nouiter edito [a PETRO SANCHEZ CIRUELO]; editio princeps; *handsomely printed in gothic letter, with fine woodcut with printer's device on title, and numerous geometrical figures on margins; the initials painted in red and blue, 4to. limp white vellum, with leather tiers (A FINE AND VERY LARGE COPY); very rare, £8. 8s* [col.:] . . . operaq; Guidonis mercatoris diligētissime impressa parisijs in cāpo gaillardii. Anno dñi. 1495. die 20. maij

The most important of the author's writings, and of excessive rarity, especially in the above first edition. It consists of signatures A—C in sixes, and D in four, or 22 ll. in all, without foliation or catchwords, the last leaf being blank. Hain (3712) had seen no copy of the work and was unable to give a collation, which is supplied in Dr. Copinger's 'Supplement.' It is Mr. Proctor's no. 7997. The above copy is, save for some slight pin-holes, in an EXCEPTIONALLY CHOICE condition, with large margins.

It treats *inter alia* of star polygons, and, according to M. Chasles, contains 'une théorie nouvelle qui doit faire honneur au XIV^e Siècle,' as well as 'discussions on the infinite and infinitesimal—subjects never since lost sight of.—Prof. Cajori. The treatise on circle-squaring is, according to Prof. de Morgan, probably by the editor. A full account of the work may be found in Prof. Cantor's 'Vorlesungen über Geschichte der Mathematik,' v. II (1892), pp. 102-9.

The late Dean Stephens, in his interesting article in *D. N. B.*, gives 1530 as the first edition of this work, but really mentions it under the title 'De Quadratura Circuli', 1495. Abp. Bradwardine was as eminent as a man and a theologian as he was as a mathematician. He was a Sussex man of Chichester, and an early student at Merton College, where he wrote his celebrated 'De Causa Dei contra Pelagium', which became the standard work in Augustinian theology, and caused him to be referred to in the 'Nun's Priest's Tale'. He held the unpleasant office of Confessor to Edward III., and gave Christian exhortation to the troops on the eve of the Battle of Crecy. He was consecrated to the Archbishopric at Avignon in 1349, and at once hastened to his diocese although the Black Death was raging; was seized with it on the morrow of his arrival in Lambeth, and died two days after.

- 6439 **BRAHE** (Tyge, *latine Tycho*) ASTRONOMIÆ INSTAURATÆ MECHANICÆ; *with portrait within armorial border, and very numerous large engravings on wood and copper of astronomical instruments, folio, boards (browned as usual, otherwise a SOUND AND LARGE COPY); VERY RARE, £3. 3s*

Noriberge, Levinus Hulsius, 1602

This is Tycho Brahe's chief work, now of great rarity, and very valuable for containing descriptions and illustrations of the astronomical instruments used by him at Uraniborg Observatory, which for the first time made possible approximately accurate measurements, and thus gave the great impetus to the study of practical astronomy, which as its first-fruit produced the genius of Kepler. Many of the instruments were of the author's own invention, e. g. the mural quadrant (quadrans maximus), while nearly all others received great improvements from him.

- 6440 ——— OPERA OMNIA, sive ASTRONOMIÆ INSTAURATÆ PROGYNMNASMATA, in II Partes distributa, quorum I. de RESTITUTIONE MOTUUM SOLIS et LUNE, Stellarumque Inerrantium tractat. II. de MUNDI ÆTHEREI Recentioribus Phænomenis [sic] agit; *with plate, and numerous diagrams, 4to. old Italian vellum (browned, but sound copy), with Prof. Riccardi's booklabel (RARE), £2. 2s*

Francfurti, Godofredus Schönwetterus, 1648

Containing observations on the comet of 1577, the right ascension and declination of 100 stars, and lunar and solar theories, but above all noteworthy for explaining the peculiar planetary system invented by the author, which for some time found many followers, and among them Sir Francis Bacon. It also includes a reprint of the author's 'De Nova Stella' (q. v. *infra*).

- 6441 ——— HISTORIA CÆLESTIS [complectens Observationes Astronomicas varias ad Historiam Cœlestem spectantes, cum Commentariis LUCH BARRETI [ALBERTI CURTII] et Paralipomenis ad Historiam Cœlestem, ex Recensione et MSS. GUIL. SCHIKARDI]; *with fine full-size portrait and front. representing the Emperors Rudolph II., Ferdinand II. and III., and Leopold I., with celestial and terrestrial globes, both by P. KILIAN, plate of views, and very numerous woodcuts, including large ones of Astronomical Instruments, 2 vols. folio, old Italian vellum (some ll. stained, otherwise a VERY FINE COPY); RARE, £3. 10s* [col.:] Auguste Vind., Simon Utzschneider, 1666

FIRST EDITION of this rare work, containing the author's astronomical observations between 1582 and 1601, at the Observatory of Uraniborg Castle, and including his Catalogue of Fixed Stars, pronounced to be 'more perfect than any that had previously appeared.' The copious and interesting preface contains beautiful woodcuts of the astronomical instruments in use at the time.

He made the first table of refractions, and discovered the variation and annual equation of the moon, the inequalities of the motion of the nodes, and the inclination or the lunar orbit, and rejected the trepidation of the precession, which had hitherto injuriously affected all tables. He also made some interesting cometary investigations.

- 6442 ——— METEOROLOGISCKE DAGBOG, holdt paa Uraniborg for Aarene 1582-97, udgven af det Kgl. Danske Videnskabernes Selskab; *with diagrams, large 8vo. boards, uncut, 6s 6d* Kjøbenhavn, 1876

With appendix 'Sammendrag af Vejr-Jagttagelserne i Tyge Brahes Meteorologiske Dagbog', 'Résumé d'un Journal Météorologique par Tycho Brahe', both by POUL LA COUR, and Index.

'The principal interest attached to it arises from the short notes about the arrival or departure of Tycho, his pupils or visitors.'—Dr. Dreyer. It is moreover valuable as testifying to the uniformity of the climate with that now prevailing.

- 6443 ——— DE NOVA STELLA; denuo editit Regia Societas Scientiarum Danica; *with portrait and fs. auto., 4to. seven, uncut, 7s 6d* Hauniae, 1901


A fs. reprint of the excessively rare original edition of 1573, with preface and appendix (in Danish). It was the author's first work, and contains his discovery, on Nov. 11, 1572, of a new star in Cassiopeia, which became again invisible in March, 1574.

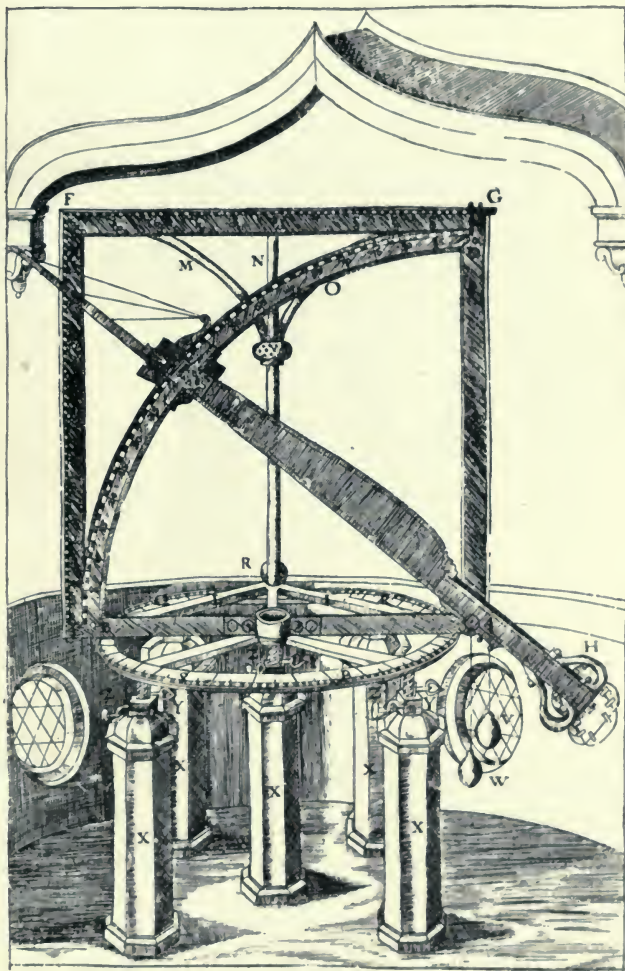
- 6444 ——— DREYER (John Louis Emil, F.R.A.S., Director of Armagh Observatory) TYCHO BRAHE: A Picture of Scientific Life and Work in the XVI. Century, *with portrait, 4 plates, and woodcuts, 8vo. cl., 5s* (p. 123 6d) Edin., 1890

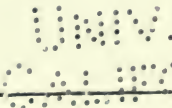
Forming a highly interesting account of the state of astronomy from its revival by Peuerbach and Regiomontanus to Kepler. The author is a countryman of his illustrious subject.

- 6145 **BRAHE** (Tyge, *latine* Tycho) : GASSENDI (Pierre) TYCHONIS BRAHEI, Equitis Dani, Astronomorum Coryphæi VITA, accessit NICOLAI COPERNICI, GEORGI PEURBACHII, et JOANNIS REGIOMONTANI, Astronomorum celeberrimorum Vita, Editio Secunda auctior et correctior; with *fine portraits of Brahe and Copernicus by J. v. Meurs, and 2 woodcuts, sm. 4to. fine copy in old calf extra, with old armorial bookplate (RARE),* £1. 10s
Hagw-Com., A. Vlacy, 1655
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¹ Giving not only a masterly account of the lives of these men, but likewise a complete history of astronomy down to his own time.
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Bruzelles, 1867
- 6449 **BRAMER** (Benjamin) APOLLONIUS CATUS, oder Geometrischer Wegweiser. I. Theil, in welchem die FUNDAMENTA der allerlieb- und sinnreichsten CONISCHEN SECTIONEN . . . auss leichten Euclidischen Gründen erwiesen werden; neben angehenkten unterschiedenen Wegen, die drey Conische Linien, als Parabolam, Hyperbolam und Ellipsin in plano zu verzeichnen. II. Theil. De SECTIONE CYLINDRI, in welchem gewiesen wird ein neue leichte und sehr bequeme Weise allerhand SONNENUHREN . . . aussm Cylinder zu schneiden und aufzureissen; with *numerous folding plates, including the author's Universal Conic Instrument,* 2 vols. sm. 4to. in 1, *sewn (RARE),* £1. 10s
Cassel, 1646-7
- Containing the author's invention of an Instrument drawing conic figures—an improvement on that constructed by Christoph Scheiner, s.j. The above edition is rare and was unknown to Prof. Cantor, who erroneously gives that o. 1684 as the first printed edition. The latter only was known to Kästner and Graesse.
- ¹ Dans cet ouvrage Bramer développe quelques inventions ingénieuses de géométrie pratique.—*Montucla.*
- 6450 **BRANDE** (William Thomas, F.R.S.) MANUAL OF CHEMISTRY, third Ed., with *plates and numerous woodcuts,* 2 vols. 8vo. *boards (backs gone),* 5s
1830
¹ The text-book of the day.—*D. N. B.* It comprises a very full and interesting history of chemistry. The author succeeded Sir Humphry Davy as professor of chemistry at the Royal Institution, where Faraday acted as his assistant. One of the plates is a fine folding view of the unpretending Chemical Laboratory of the Royal Institution, where some of the most important discoveries by Faraday and Davy were made.
- 6451 **BRANDER** (Georg Friderich, *Mechanicus in Augspurg*) KURZE BESCHREIBUNG EINER NEUEN ART EINER CAMERAE OBSCURAE, INGLEICHEN EINES SONNEN MICROSCOPIS, WELCHES MAN BEQUEM ALLER ORTEN HINSTELLEN UND OHNE VERFINSTERUNG DES ZIMMERS GEBRAUCHEN KAN, WOMIT AUCH ALLERLEY OBJEKTE AUF EINE SEHR LEICHTE ART IN EINER SELBST BELIEBIGEN GRÖSSE GEZEICHNET UND ANGERISSEN WERDEN KÖNNEN; with *3 folding plates, 12mo. sewn (rare),* 10s 6d
Augspurg, 1767
¹ L'invention des micromètres sur verre appartient à Brander.—*Biogr. Gén.*
- 6452 **BRANSBY** (John) THE USE OF THE GLOBES, with New Methods of constructing Maps, the Use of the Astromennuma, and Gunter's Quadrant, and the Art of Dialling, 2nd Ed., enlarged, with *plates and map, 8vo. old calf (binding damaged),* 4s 6d
Ipswich, 1808
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EXPLI-

No. 6439 (page 330).

Tycho Brahe's Mural Quadrant.



Effigies Tychoonis Brahe Ottonidis Dani, Domini de Knuds,
trugi et arcis Uranienburg in Insula Hællesponti Daniæ Insu-
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dispositorum inventaris et structoris. Ætatis sue anno 40.
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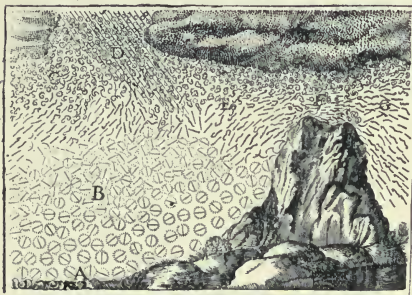
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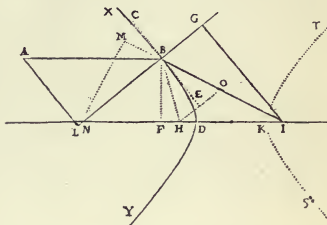


cercle NOPO, en telle sorte qu'on n'y pourra mettre aucun autre cors, qu'elle ne le frappe incontinent avec force, pour l'en chasser: au lieu que si vous la faites mouvoir plus lentement, elle s'entortillera de soy mesme autour de ce pluoit, & ainsi n'occupera plus tant d'espace.



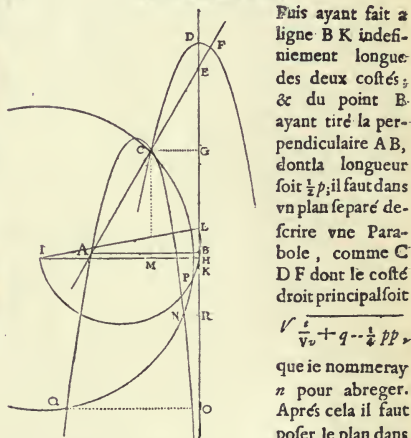
De plus il faut remarquer que ces vapeurs peuvent estre plus ou moins pressées ou estendues, & plus ou moins chaudes ou froides, & plus ou moins transparentes ou obscures, & plus ou moins humides ou seiches vnefois que lantre. Car premiere-

sont semblables. Enfin les deux angles EBH & EBI estans esgaus par la construction, & HO, qui est parallele a LG, couppant comme elle CE a angles droits, les deux triangles BEH & BEO sont entièrement esgaus. Et ainsi BH la baze de l'un estant esgale a BO la baze de l'autre, il reste OI pour la difference qui est entre BH & BI, laquelle nous auons dit estre esgale a DK. Sibienque AL est a IG, comme DK est a HI. D'où il suit que mettant tousiours entre les lignes DK & HI la proportion qui peut seruir a mesurer les refra-



ctions du verre ou autre matiere qu'on veut employer, ainsi que nous auons fait pour tracer les Ellipses, excepté que DK ne peut estre icy que la plus courte, au lieu qu'elle ne pouuoit estre aparauant que la plus longue: Si on trace vne portion d'hyperbole tant grande qu'on voudra comme DB, & que de B on face descendre a angles droits sur KD la ligne droite BQ, les deux lignes DB, & QB tournant au tour de l'aissieu

LA GEOMETRIE.



Fais ayant fait a ligne BK indefinitely longue des deux costés, & du point B ayant tiré la perpendiculaire AB, dont la longueur soit $\frac{1}{2} p$, il faut dans vn plan separé descrire vne Parabole, comme CDF dont le costé droit principal soit

$$\sqrt{\frac{e}{v} + q - \frac{1}{2} pp}$$

que ie nommeray n pour abregier. Apres cela il faut poser le plan dans

lequel est cete Parabole sur celuy ou sont les lignes AB & BK, en sorte que son aissieu DE se rencontre iustement au dessus de la ligne droite BK: Et ayant pris la partie de cet aissieu, qui est entre les points E & D, esgale à $\frac{2Vv}{pn}$, il faut appliquer sur ce point E vne longue regle, en telle façon qu'estant ainsi appliquée sur le point A du plan de dessous, elle demeure tousiours iointe a ces deux points, pendant qu'on haussera ou baissera la Parabole:

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- The second work, according to Donaldson, was 'the most valuable of the kind that was possessed by those times. Nothing seems to be known of the author (who is ignored by D. N. B.). The various books comprise: I. The Elements of Geometrie, with Theorems; II. The Use and Operation of the former Theorems; III. The Exact Operation of Instrumentall Dimensions by divers meanes; IV. The Legall Part of Survey. In the 3rd book the author describes 'the use of an Instrument of mine owne, which I call the *Peractor*, and of a Chayne, which I call the *Deimall Chayne*, with the diuisions and parts thereof: which rightly vnderstood and practised is farre more vusefull and absolute for speed and exactnesse, then any yet euer vsed.'
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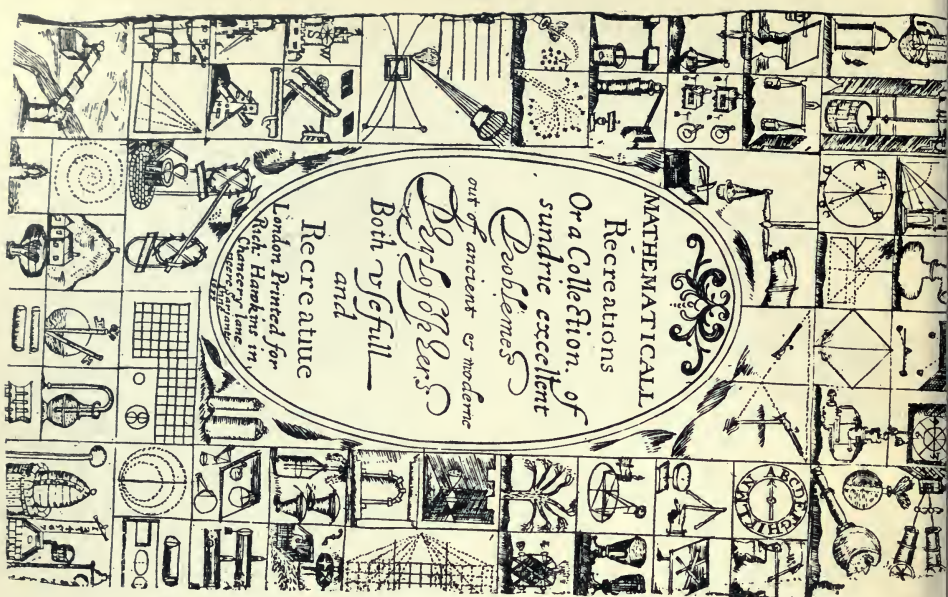
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Neither of the above editions was known to Brunet or Graesse, who mention however others of Rouen, 1629, and Lyon, 1680. A copy of the former was in M. Libri's Collection, who mentions in his Sale Catalogue: 'This work contains very curious problems, viz., 'Comment on peut charger un canon sans poudre' (by steam or heated air), and several arithmetical questions'.

7606 —: MATHEMATICAL RECREATIONS, or a Collection of sundrie Problemes, extracted out of the Ancient and Modern Philosophers, as secrets in nature, and experiments in Arithmetick, Geometrie, Cosmographie, Horologographie, Astronomie, Navigation, Musicke, Opticks, Architecture, Staticke, Mechanicks, Chymestrie, Waterworkes, Fireworks, etc. Not vulgarly made manifest untill this time . . . Most of which were written first in Greeke and Latine, lately compiled in French, by HENRY VAN ETTEN Gent. And now delivered in the English tongue, with the Examinations, Corrections, and Augmentations [by WILLIAM OUGHTRED], with curiously engraved title, and numerous engravings on copper, 12mo. *sewn, with AUTO. of THOMAS TANNER (1674-1735), Bp. of St. Asaph, antiquary, on title (engraved title and a few headlines slightly shorn, but a FINE COPY)*; VERY RARE, £3. 10s

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Among the more interesting problems are, in addition to the one mentioned above by M. Libri: 'How to make an instrument that helps to heare' (the speaking tube, the invention of which is ascribed to Sir Samuel Morland in 1671), 'a lampe which goeth not out, though one carries it in one's pocket', several magnetical problems, including 'a secreete in the Magnes, for discovering things farre remote', 'of the Thermometer', 'how to weigh the lightnesse of the ayre', 'of longitude and latitude', 'how to make a clocke with one wheel', 'how to inake a perpetual motion', etc. etc. etc.

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THE FIRST EDITION OF EUCLID'S CATOPTRICA, AND VERY RARE. It was reprinted in the *Propositiones Euclidæ* in 1564. Brunet had seen no copy of this edition, and only quotes it on the authority of Ebert.

7616 **EUCLIDIS ELEMENTA**, ex optimis Libris in Usum Tironum Graece edita ab ERNESTO FERDINANDO AUGUSTO, cum Appendicibus, etc.; with 11 *folding plates*, 2 vols. 8vo. in 1, *hf. calf neat*, 6s
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The text of this edition is based on that of the first Greek edition of 1533.

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MCCCCLXXXII. Octauis. Calen. | Juñ. Lestor. Vale. [1482]

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THE TRANSLATION is of great interest as having been made by an Englishman, ÆTHELHARD or ADELARD OF BATH, either from the Greek original, or, more probably, from an Arabic version. Æthelhard was a great traveller as well as one of the greatest philosophical writers of the Thirteenth Century, 'and seems to have passed through Spain, the North of Africa, Greece, and Asia Minor. He was one of those Englishmen who lived for a time in the Norman Kingdom of Sicily, and is known to have visited Syracuse and Salerno. That he knew Greek is almost certain; but it has not been determined whether the translation of Euclid (undoubtedly executed by him, though often ascribed to Campanus of Novara, with whose comments it was published at Venice in 1482 [supra]) was made from an Arabic version or from the original' (Professor Adamson). On either supposition the instance of English mediæval scholarship is a striking one, and Æthelhard is one more disproof of the theory of the blank ignorance and obscurantism of the Middle Ages with which the youth of England is still regaled by the timberheaded textbook-writer of British popular Protestantism.

7620 ——— EDITIO LATINA SECUNDA [incipit:] PRECLARISSIMUS LIBER ELEMENTORUM EUCLIDIS perspicua | cissimi: in artem Geometrie incipit quãfoelicissime; printed in Roman type, with woodcut border surrounding first page, ornamental initials, and geometrical designs throughout in margins, folio, boards (two water-stains on first l., otherwise a remarkably fine and tall copy, measuring 12½ × 8¾ inches), VERY RARE, £8. 8s [col.] *Vincentiã per Leonarduz de Basilea & Gulielmũ de Papiã Socios. Anno salutis MCCCCLXXXII. Vigesimo Calen. Juñ. [1491]*

This second edition is even rarer than the first, the two being the only editions of Euclid published during the Fifteenth Century.

7621 ——— EUCLIDIS megarensis . . . opa a CAMPANO interprete fidissimo tralata, que cum antea librorum detectanda culpa mēdis fedissimis adeo deformia ēent; ut vix Euclidem ipsum agnosceremus. LUCAS PACIOLUS [DE BURGO] . . . iudicio castigatissimo detersit: emendavit Figuras CXXIX que in aliis codicibus inverse z deformate erant: ad rectam symmetriam conuinavit: z multas necessarias addidit eundẽ quozq; plurimis locis intellectu difficilem cõmentariolis . . . aperuit: enarravit: illustravit, etc. etc.; handsomely printed (the title in red and black), partly in gothic letter; with numerous diagrams on margins, folio, contemporary limp vellum (back of binding damaged, and slightly waterstained, otherwise a fine and tall copy, measuring 11½ × 7¾ inches); excessively rare, £6. 6s

[col.] *Venetiis, Paganinus de Paganinis de Brixia, 1509*

THE RAREST OF ALL THE EDITIONS OF EUCLID, and moreover a beautiful specimen of early typography.

This is perhaps the scarcest of all the editions of Euclid, as is but too well known to mathematicians, who covet its possession. The version attributed to Campanus, but now known to have been made by Adelard of Bath, appears here to great advantage, owing to the important emendations and explanations of the celebrated Luca Pacioli di Burgo, the author of the *Summa de Arithmetica* [v. Nos. 3429-32, ante]. Pacioli was the intimate friend of Leonardo da Vinci, at whose instigation he appears to have published this work, as is apparent from the dedicatory letter of the editor himself to Francesco Soderini, Cardinal of Volterra, to whom, as well for his own favour as for the patronage of the great Florentine family of which the prelate was a member, he gratefully renders acknowledgment'.—*Libri Catalogue*.

7622 ——— ELEMENTORUM Libri XV breuiter demonstrati, Operã ISAACI BARROW, D.D.; with numerous figures: DATA succinetè demonstrata: unã cum Emendationibus quibusdam et Additionibus ad Elementa, Operã IS. BARROW; with diagrams—2 vols. 12mo. in 1, editiones principes; interleaved throughout; rough calf (RARE), £1. 5s

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The above copy belonged to WILLIAM MUSGRAVE, M.D., F.R.S., Secretary of the Royal Society, and author of 'Antiquitates Britanno-Belgiæ' (1655-1721), who has added his auto. 'Wm. Musgrave, Novi Coll.; Socius' on flyleaf, and numerous MS. additions.

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In spite of his protests Dr. Dee (who died Warden of Manchester Collegiate Church, now the Cathedral) was notorious as a consulting sorcerer in large practice all his life. But in connexion with the above book it well deserves to be noted that in 1550, at the College of Rheims at Paris, he lectured publicly on Euclid's Elements, mathematic, physics, et Pythagore, which had never before been done in any University in Christendom.

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Nos. 7793-4 (page 398).

Portrait of Michael Faraday, F.R.S.



DE MARTIS, ET IOVIS OBSERVAT.] 405
OBSERVATIO I. MARTIS.

Anno 1636.

Martis figura perfectè spherica distinctè, atque clarè cõspici-
ebatur. Item in medio atrum habebat conum instar
nigerrimæ pilulæ.

Martis circulus discolor, sed in concava parte igneus; de-
prehendebatur.

Sole excepto, reliquis alijs Planetis, semper Mars can-
dentiõs demonstratur.

TRACTATVS OCTAVVS^{us} DE MICROSCOPIO,

Quo minutissima, & quasi inuisibilia, sic au-
gentur, vt clarè, distinctèq; con-
spiciantur.

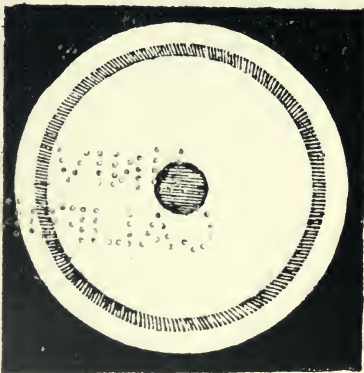
Quarta Authoris inuentio.

Oculus, corporeus cum sit, corporeum exposcit oblectum:
hoc autem in paritate intrinsicè terminatur mimio,
ita ut non in quavis parva quantitate visibile sit. Reperitun-
tur verò in vniuerso aliqua, quæ sicut artificiosa, & miràbi-
lia sunt, ita parua existunt, quasi Natura indignabunda: hu-
mano oculo discerni, intra quantitatris punctum, vt ita dicã,
ca abdidit; aliorum horum nouas obseruationes, exem-
pligratia, infra in cap 3. referam.

CAPVT I.

De inuentore huius specilli.

Inventionem hanc reperi in anno 1618. duo asse-
ro. Primò, dictum specillum antiquius non esse
dicto anno. Secundo, me fuisse inuentorem in hac Cui-
tate Neapolitana, in qua hæc publici iuris sunt, limbo di-
ctum, quia vt etiam supra in alijs mea inuentione telosco-
pij dæcorum lecturam conuexarum insinuat, omnes intellectu,
&



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PLATE 9

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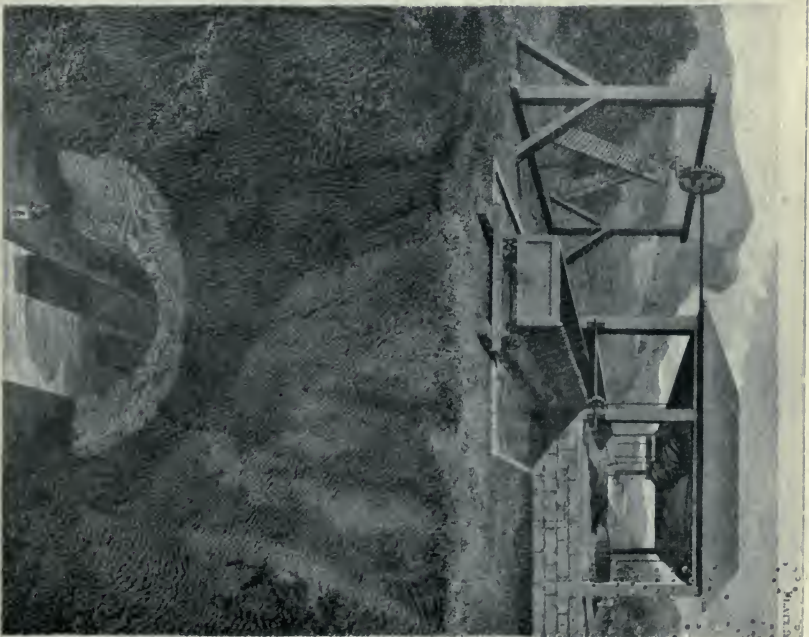


PLATE 10

Nos. 8181-2 (page 416).

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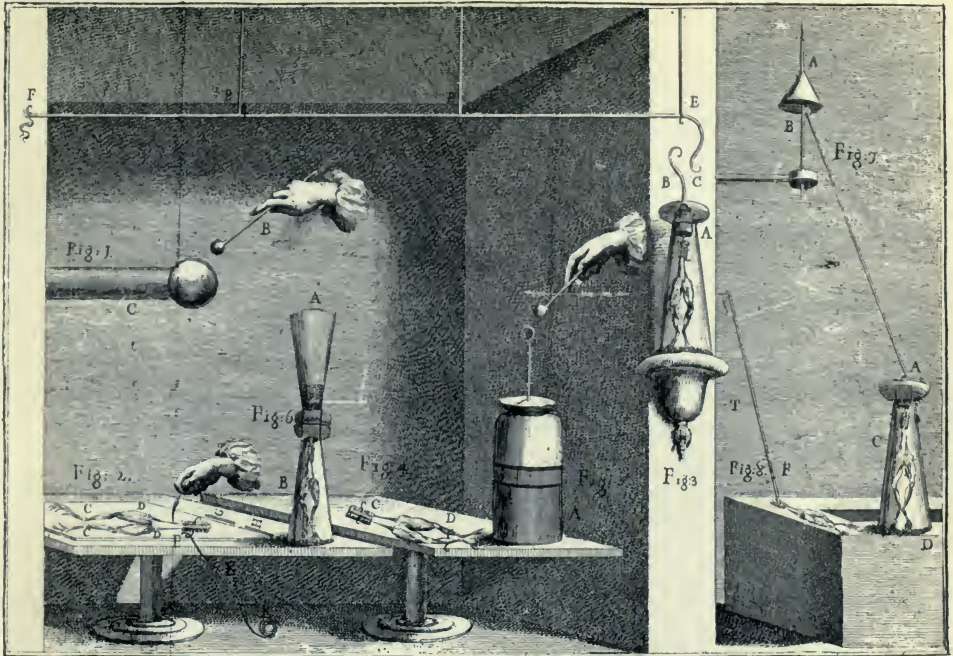
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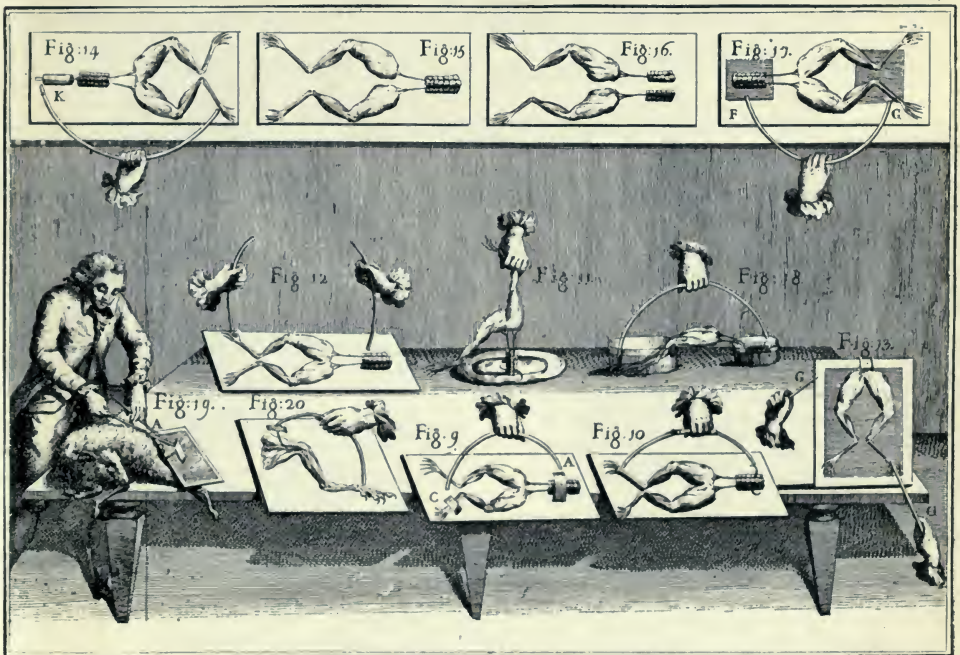
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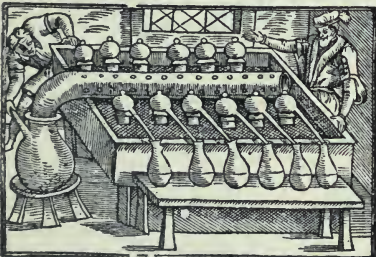


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of Distillations. 28



There is also another fashon and maner of di-
 stilling (saith certaine Autho:) much vied of
 the Chymistes, which is wrought in Hesse-
 burg, whose heate is to be increased by the
 same or vapour of Boiling water: after
 this order. Let a wooden Chest or Cest
 be made, of six Flemish Elles in length,
 or not above foure pards and a halfe of
 our measure) and of such a breadth, that the same may com-
 modiously containe of either side the vj small bodies of Glasse: and
 that there be no more left, than a space, by which the Pipe may
 passe and retch betwene the rottes of the Glasses, standing on
 either side. This long Chest fill with dyebung, mixed with some
 chopped straw: after lift vp and set the same on a wooden forme
 or Benche, to the ende, that it may stand the higher and commodi-
 ouster, for the performance of the worke. These done, it be ha-



eth you orderite to bestowe the vj small bodies, or Cucurbites of
 Glasse in the Dung, with their heades above it, and regarding
 (by their height) ouer the edge of the Chest on either side: to the
 ende the spots of the Tymberkes, may the handfomer be led to
 the receiuing vessels: In the middle betwene these vessels
 must

of Distillations. 14

ning about the Grate, and the Grate figured with the letter D,
 on which the Coales ought to lye, and the entrance of this house
 needeth to bee no larger, than that a man maye hardlie thrust in
 his hande. About this, that two small barres of Iron (marked
 with E) bee fixed a crosse: but one onlie, and these to serue for
 the stronger staying of the Panne or Potte. Toward the toppe
 in each corner about (marked with F) that foure vents or breas-
 thing holes be made, and into the largest hole in the middle (mar-
 ked with H) a Panne set (being hoate above and narrowe be-
 neath) reaching to the crosse barre, and the edge about moete red
 stronglie, that no heate of fire passe forth, betwene the brade of
 the Panne and
 furnace: after to
 poure into it wa-
 ter, if a man mix-
 eth to distill her-
 bes, Rotes, or
 other tender thyn-
 ges. But contra-
 rwise, if yles or
 other matters, y
 require a night-
 tier heate: then to
 put in fire stee-
 dente or Ashes,
 and to beginne
 pour Distilling.
 The forme of this
 Furnace seruing
 for one cucurbite
 or Glasse body, is
 here liuelie de-



scribed.

Also if a man will build a rounde Furnace, it behooveth him
 to place the vent holes about, to rise from the bottom of the
 Panne, and the Cucurbite, of Glasse, Tinne, or thinne Copper
 well tinued within, to bee set full of steure into the panne, about

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