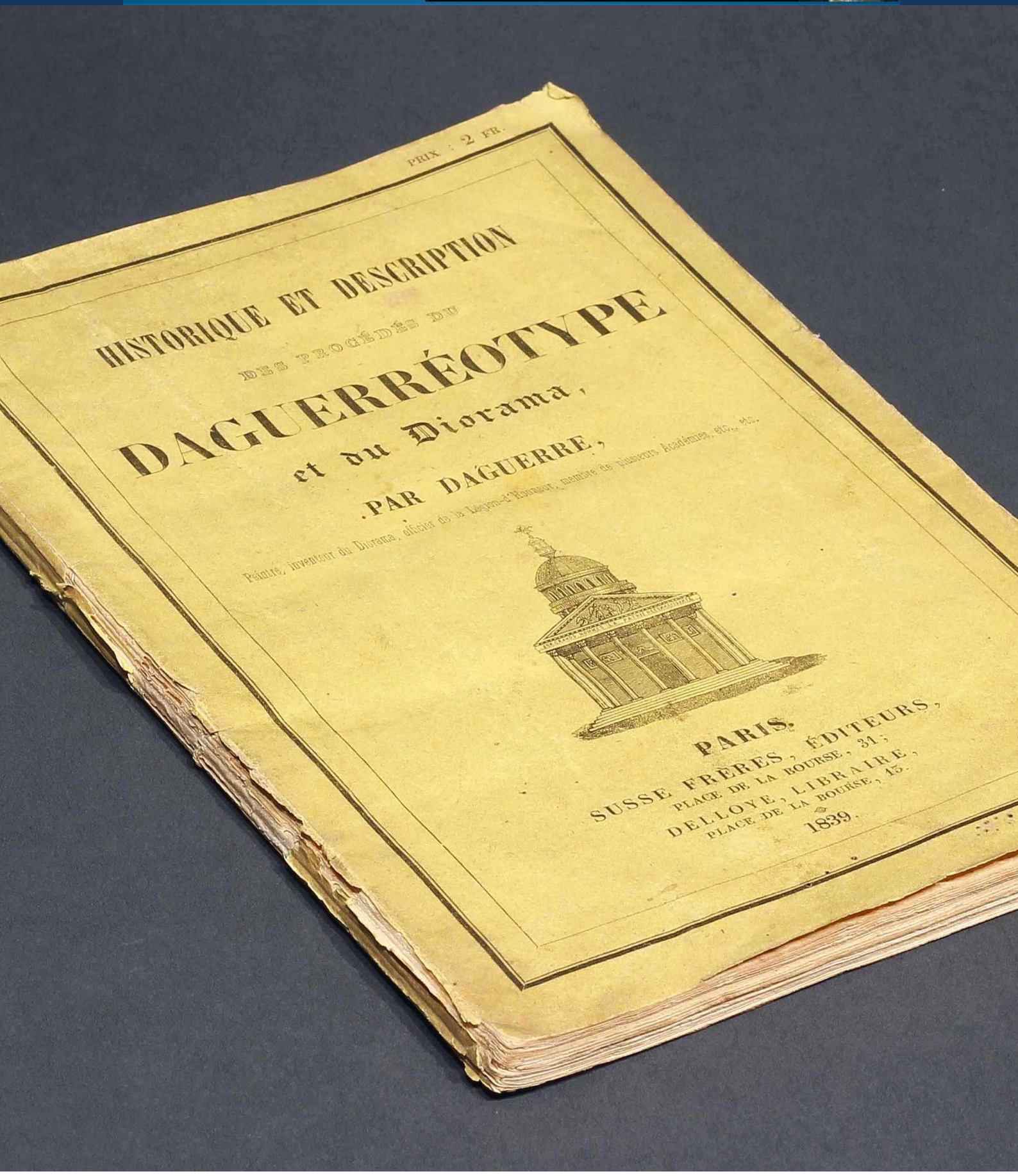
Milestones of Science Books



Catalogue 01-2019

Printing and the Mind of Man: 25 (mostly) new arrivals

Catalogue 01-2019

Printing and the Mind of Man: 25 (mostly) new arrivals

To access our website for more images, click on the author's name!

Milestones of Science Books

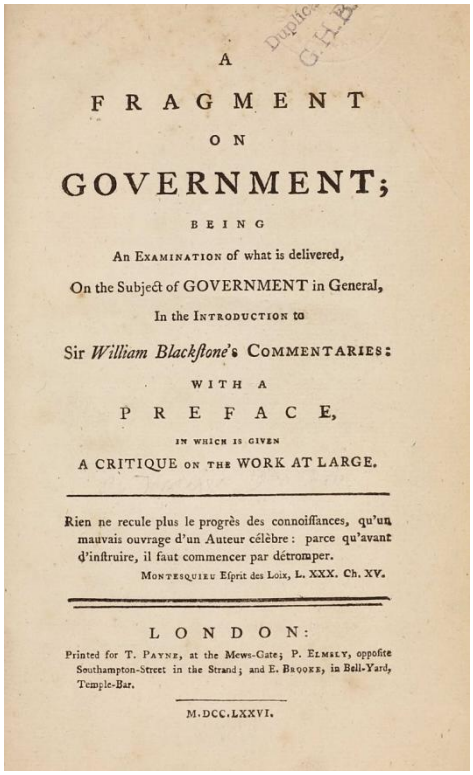
phone +49 (0) 421 1754235

www.milestone-books.de . info@milestone-books.de

Member of ILAB and VDA

The first statement of the principle of utility

1 **BENTHAM, Jeremy**. *A fragment on Government; being an examination of what is delivered, on the subject of government in general, in the introduction to William Blackstone's commentaries*. London: T. Payne, P. Elmsly, and E. Brooke, 1776. 8vo (198 x 126 mm). [4], lvii, [3], 208 pp. Including half-title. Bound in 19th-century green cloth, gilt-lettered spine (corners slightly bumbed, some wear to spine ends, extremeties rubbed). Text lightly browned, occasional minor spotting and dust-soiling, some pencil markings at fore margin. Provenance: Columbia College New York (blind stamp on title and p. 1, additional ink stamp "duplicate G.H.B" on title, number stamp to page i). Very good copy. (#003090) € 6,500



A

FRAGMENT

ON

GOVERNMENT;

BEING

An Examination of what is delivered,

On the Subject of GOVERNMENT in General,

In the Introduction to

Sir *William Blackstone's* Commentaries:

WITH A

PREFACE,

IN WHICH IS GIVEN

A CRITIQUE on the WORK AT LARGE.

Rien ne recule plus le progrès des connoissances, qu'un mauvais ouvrage d'un Auteur célèbre: parce qu'avant d'instruire, il faut commencer par détromper.

Montesquieu Esprit des Loix, L. XXX. Ch. XV.

LONDON:

Printed for T. Payne, at the Mews-Gate; P. Elmsly, opposite Southampton-Street in the Strand; and E. Brooke, in Bell-Yard, Temple-Bar.

M.DCC.LXXVI.

Kress 7191; Goldsmiths 11503; Sabin 25416; PMM 237 (rem.) - RARE FIRST EDITION of "Bentham's first published work, a radical critique of the theoretical foundations of Blackstone's *Commentaries* and the first statement of the principle of utility underlying Bentham's system of thought. The central idea was to invent laws so that people would act so as to bring about the greatest happiness. Men, that is, acting naturally, would be placed in such a system of regulation and sanctions that, following these natural courses, they would not only satify themselves but also produce the greatest happiness" (New Palgrave I, 226). While Bentham's own ideas were not developed at length, "he none the less gave the first formulation of the principle of utility as the foundation of his system' and some 'indication of the direction of his thought on themes such as sovereignty, the social contract, submission, resistance, and fictions" (ODNB).

The fore-runner of all modern mail-order catalogues

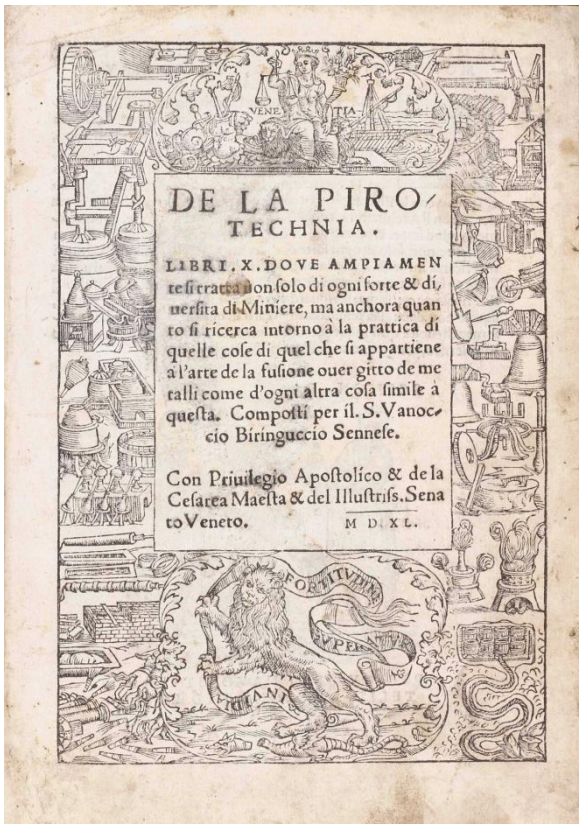
2 **BESTELMEIER, Georg Hieronimus**. *Systematisches Verzeichnis eines Magazins von verschiedenen Kunst- und andern nüzlichen Sachen, zur lehrreichen und angenehmen Unterhaltung der Jugend, als auch für Libhaber der Künste und Wissenschaften. . .* Nürnberg, [Bestelmeier], 1803. Oblong 4to (194 x 245 mm). General title, general introduction, and 8 installments, each with separate title page and pagination, plus a total of 70 engraved plates of items numbered 1 to 1111. Introduction and index: 32 pp.; part I: 10 pp., 7 pls.; part II: 15 [1] pp., 11 pls.; part III: 16 pp, 10 pls.; part IV: 12 pp., 7 pls.; part V: 12 pp., 6 pls.; part VI: 15 [1] pp., 8 pls.; part VII: 20 pp., 13 pls.; part VIII: 12 pp., 8 pls. Bound in contemporary half vellum over pastepaper boards (rubbing of boards and extremities, one corner bumped), red-sprinkled edges. Very minor even browning, little occasional faint spotting, old page markers to each part (partially torn), general title with repair of long tear (without loss of text), a few old paper repairs of closed tears elsewhere, plate 7 of part V partially split at gutter and somewhat frayed at upper margin, headline numbering of plates 5, 6 and 8 of part VIII partially shaved, plate 13 of part VII bound upside-down. A very good copy, collated complete. (#002994) € 9,500

FIRST GENERAL CATALOGUE, OR FIRST COLLECTED EDITION, of one of the fore-runners of all modern mail-order catalogues. Born into a family of brewers, Bestelmeier grew up in economically secure circumstances and completed a commercial education. As a young merchant, he established a business selling toys and fashionable accessories. In 1793 he bought a corner house at the Nuremberg fruit market, which he used as residential address and commercial operation. Here he set up his first shop, the much-known "Bestelmeierische Laden". In order to offer his products to a large group of buyers, he issued his first mail-order catalogue the same year under the title "Pädagogisches Magazin zur lehrreichen und angenehmen Unterhaltung für die Jugend" (Educational magazine for informative and enjoyable entertainment of the

youth). It included 97 illustrated items and was so well received that he produced six further catalogues between 1794 and 1801, each with new items listed. In 1803 Bestelmeier merged all previous catalogs into a single, first general catalog in which he listed 1111 items. Business was so good that Bestelmeier expanded his operation. In 1803 he received permission from the city council of Nuremberg to establish a furniture store, which led to year-long dispute with the local carpenters, who fiercely opposed Bestelmeier selling furniture fabricated outside the city limit. Although Bestelmeier is considered one of the first wholesalers in Germany, he was not the first person to retail using the mail-order catalogue format - that honour belongs to the Berlin toy retailer Peter Friedrich Catel (1747-1791) who published an illustrated catalogue as early as 1790. However, by 1800, Bestelmeier was the only toy retailer in the world to operate its mail order business with illustrated catalogues. About a quarter of the inventory consisted of magic tricks, and illustration no. 739 in Magazin VI, pl. 6, appears to be one of the earliest depictions of a magic box of tricks. The catalogues also offer a substantial number of scientific instruments, as well as terrestrial and celestial globes. See Monschein, *Aufklärung* p. 14; Rammensee p. 155.

One of the earliest printed books on metallurgy

3 **BIRINGUCCIO, Vanuccio**. *De la pirotechnia libri X. Dove ampiamente si tratta non solo di ogni sorte & diversita di miniere, ma anchora quanto si ricerca intorno à la prattica di quelle cose di quel che si appartiene a l'arte de la fusione ouer gitto de metalli come d'ogni altra cosa simile a questa*. Venice: Venturino Rossinello for Curzio Nav & Fratelli, 1540. 8vo (210 x 155 mm). [8], 168 leaves. Signatures: [+]^{8} A-X^{8}. Title with woodcut border illustrating pieces of machinery and with the figure of Venice in the upper part, the Nav lion device below, second Nav device on title verso, 84 fine woodcuts in text, woodcut historiated initials. Bound in 18th century carta rustica, spine titled and dated in manuscript (cover soiled and stained, extremities rubbed, two cords of binding internally broken but holding). Housed in custom slip case mimicking a half-leather-bound volume with marbled paper front and back boards with gilt-lettering to spine. Only little browned internally, light dampstaining to few leaves at beginning and end, minor occasional brown spotting, title-page stronger soiled and spotted and with 4 tiny holes, old repairs of tears at lower gutter of 3 leaves not affecting text**.** Provenance: Carlo Maria(?) Tadei (signature on rear pastedown, monogram C.T. dated 1785 on lower spine). A very good copy in untouched binding. (#002954) € 34,000

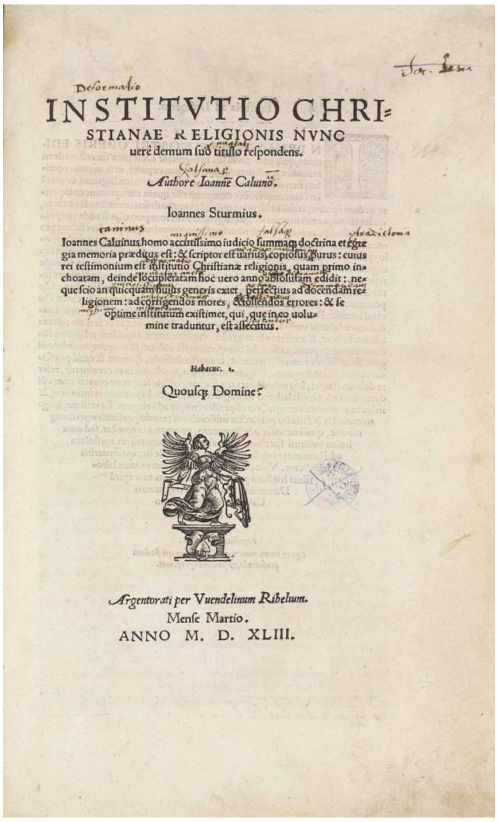


Dibner *Heralds* 38; Norman 238; Duveen p. 79; Cockle *Military Books* 931; Mortimer *Italian* 66; Wellcome 873. - **RARE FIRST EDITION OF ONE OF THE EARLIEST PRINTED BOOKS ON METALLURGY**. As Duveen and Dibner note, it contains the first mention of cobalt blue, manganese and the use of sodium chloride for separating gold and silver from baser metals. The sections on glass, steel and the purification of salts were adapted almost without alteration in Agricola's *De re metallica*, 1556. Among Birunguccio's many employments was that of director of the Sienese mint, and head of the papal foundry and munition works, and his work describes Renaissance methods of casting medallions, statues and bells; it is particularly remembered for containing the earliest known account of typecasting. The woodcuts show the use of various furnaces, pulleys and tools, and illustrate the making of bells, pottery and firearms.

The most important doctrinal work of the Reformation in the earliest accessible edition

4 **CALVIN, Jean**. *Institutio Christianae religionis : nunc uerè demum suo titulo respondens*. Strassburg: Wendelin Rihel, March 1543. Folio (327 x 202 mm). [44], 505, [3] pp. Signatures: [α]-[γ]^{6} [δ]^{4} A-Z^{6} a-s^{6} t-v^{4}. Includes title-page woodcut vignette (printer's device) and woodcut initials in text. Leaf [delta]4 and v4 are blanks. Title-page bears an encomium from Johannes Sturm: "*Ioannes Sturmius. Ioannes Caluinus homo accutissimo iudicio summaq[ue] doctrina et egregia memoria praeditus est ... ad corrigendos mores, & tollendos errores: & se optime institutum existimet, qui, qu[a]e in eo uolumine traduntur, est assecutus.*" With printed marginalia. Marks of contraction in encomium have been expanded. Includes index. Bound in contemporary blind-stamped polished calf over thin wooden boards, spine with 4 raised bands (boards somewhat warped, slight cracking of leather, upper corners heavily scuffed). Upper edge of book block with hand lettering. Only very little browning of text, light dust-soiling, occasional very minor spotting, paper repair to upper blank margin of first 7 leaves and flyleaf (not affecting text), faint ink smudges to p.321/22, several pages with extensive ink marginalia in contemporary hand. A very good, wide-margined copy in original binding. (#003097) € 15,000

EXCEPTIONALLY RARE THIRD EDITION in Latin, the second Strassburg (Argentorati) print by Rihel, edited by J. Sturm. The first edition of 1536 and the second of 1539 are both virtually unobtainable. "Calvin's *Institution of the Christian Religion* was the first systematic statement of a Reformed Church. It is the most important doctrinal work of the Reformation as a whole and provided a comprehensive theological system rivaling those of the Middle Ages". (*Printing and the Mind of Man* 65).


INSTITVTIO CHRISTIANAE RELIGIONIS NVNC uerè demum suo titulo respondens.

Authore Ioanne Caluino.

Ioannes Sturmius.

Ioannes Caluinus homo acutissimo iudicio summaque doctrina et egregia memoria praeditus est: & scriptor est uarius, copiosus, purus: cuius rei testimonium est institutio Christianae religionis, quam primo inchoatam, deinde locupletatam hoc uero anno absolutam edidit: neque scio an quicquam huius generis extet, perfectius ad docendam religionem: ad corrigendos mores, & tollendos errores: & se optime institutum existimet, qui, quae in eo uolumine traduntur, est assecutus.

Habacuc. 1.

Quousque Domine?

Argentorati per Vuendelinum Ribelium. Mense Martio. ANNO M. D. XLIII.

Jean Calvin was a student of law and then classics at the University of Paris. Around 1533 he became involved in religious controversies and converted to Protestantism, a new Christian reform movement which was persecuted by the Catholic Church in France, forcing him to go into hiding. He moved to Basel, Switzerland, for safety in 1535, and around this time he must have begun writing a summary of theology which would become the *Institutes*. His Catholic opponents sought to tie him and his associates (known as Huguenots in France) to groups of radical Anabaptists, some of which had been put down by persecution. He decided to adapt the work he had been writing to the purpose of defending Protestants suffering from persecution from false accusations that they were espousing radical and heretical doctrines. The work, written in Latin, was published in Basel in March 1536 with a preface addressed to King Francis I of France, entreating him to give the Protestants a hearing rather than continue to persecute them. It is six chapters long, covering the basics of Christian creed using the familiar catechetical structure of the Ten Commandments, the Apostles' Creed, the Lord's Prayer, and the sacraments, as well as a chapter on Christian liberty and political theology. Soon after publishing it, Calvin began his ministry in Geneva, Switzerland. The *Institutes* proved instantly popular, with many asking for a revised edition. In 1539, Calvin published a much larger work, with seventeen chapters of about the same length as the six chapters of the first edition. It includes many references to classical authors and Church fathers, as well as many additional references to the Bible. Calvin's epistle to the reader indicates that the new work is intended for theological students preparing for ministry. Four chapters were added in a third edition in 1543, and a 1550 edition was published with only minor changes. The fifth and final edition with which Calvin was involved, and which is used by scholars as the authoritative text, is 80% larger than the previous edition and was published in Geneva in 1559. There is some speculation that Calvin may have translated the first edition into French soon after its publication, but the earliest edition which has survived is Calvin's 1541 translation. It was primarily intended for French-speaking Swiss, since very few copies were able to be smuggled into France. Some of these were publicly burned in front of Notre-Dame Cathedral soon after their publication. The *Institutes* overshadowed the earlier Protestant theologies such as Melanchthon's *Loci Communes* and Zwingli's *Commentary on the True and False Religion*. According to historian Philip Schaff, it is a classic of theology at the level of Origen's *On First Principles*, Augustine's *The City of God*, Thomas Aquinas's *Summa Theologica*, and Schleiermacher's *The Christian Faith*. (Wiki).

5 **CAYLEY, George.** On Aerial Navigation. In: *Journal of Natural Philosophy, Chemistry and Arts (Nicholson's).* Vol. **24**, 1809, pp. 164-174 and 1 engraved plate; vol. 25, 1810, pp. 81-87 and 161-173 and 2 engraved plates. London: W. Stratford for W. Nicholson. 8vo (205 x 130 mm). Entire volumes: viii, 384, [8] pp., 10 engraved plates (3 folding); viii, 384, [8] pp, 9 engraved plates (1 folding). Contemporary calf, rebacked, spines with gilt-lettered morocco labels (light rubbing, original endpapers browned in outer margins), red-dyed edges. Protected in custom-made clamshell box. Internally only very little browned, occasional very minor spotting. Provenance: Royal College of Physicians and Surgeons of Glasgow (bookplate "Faculty of Physicians and Surgeons" to each front pastedown). A fine set of these rare journal volumes. (#002687) € 11,000

PMM 263, Norman 423, Gibbs-Smith pp. 5-9, Hodgson pp. 345-349 - **FIRST EDITION, journal issue (part 1 of 2 only), OF THE FIRST AND GREATEST CLASSIC OF AVIATION HISTORY, LAYING THE FOUNDATIONS OF THE SCIENCE OF AERODYNAMICS**.

In 1799 Cayley made an important breakthrough in aerial navigation by separating the system of thrust from the system of lift. Earlier experiments with flight had been preoccupied with using flapping wings to give both thrust and lift, but in his research Cayley successfully experimented with a combination of rigid wings for lift and a paddle mechanism for thrust. In 1804, he flew successfully the first of his fixed-wing gliders. He has been called "the true inventor of the aeroplane and one of the most powerful geniuses in the history of aviation", and was motivated by the thought, as he put it himself, that "an uninterrupted navigable ocean, that comes to the threshold of every man's door, ought not to be neglected as a source of human gratification and advantage" (PMM 263)

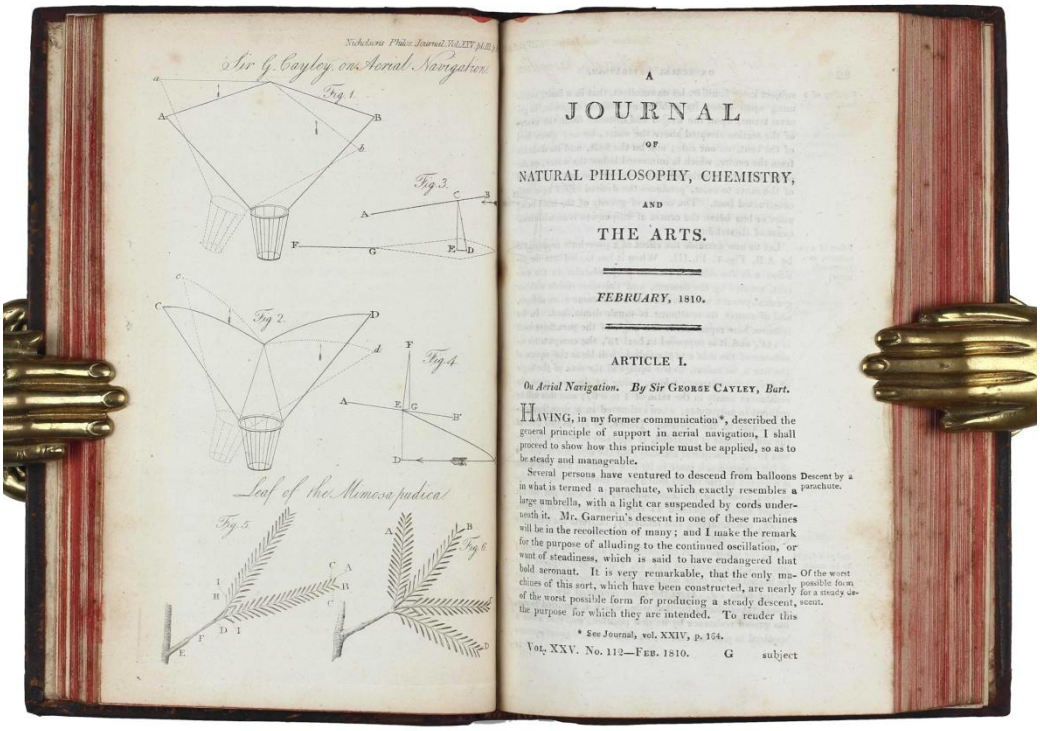

Sir G. Cayley on Aerial Navigation.

Fig. 1.

Fig. 3.

Fig. 2.

Fig. 4

Leaf of the Mimosa pudica.

Fig. 5.

Fig. 6.

A

JOURNAL

OF

NATURAL PHILOSOPHY, CHEMISTRY,

AND

THE ARTS.

FEBRUARY, 1810.

ARTICLE I.

On *Aerial Navigation*. *By Sir* GEORGE CAYLEY, *Bart.*

HAVING, in my former communication*, described the general principle of support in aerial navigation, I shall proceed to show how this principle must be applied, so as to be steady and manageable.

Several persons have ventured to descend from balloons in what is termed a parachute, which exactly resembles a large umbrella, with a light car suspended by cords underneath it. Mr. Garnerin's descent in one of these machines will be in the recollection of many; and I make the remark for the purpose of alluding to the continued oscillation, or want of steadiness, which is said to have endangered that bold aeronaut. It is very remarkable, that the only machines of this sort, which have been constructed, are nearly of the worst possible form for producing a steady descent, the purpose for which they are intended. To render this

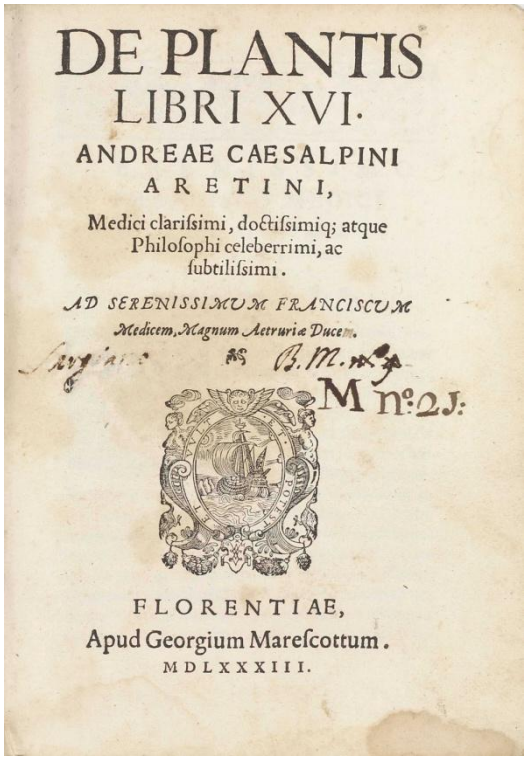
Descent by a parachute.

Of the worst possible form for a steady descent.

* See Journal, vol. XXIV, p. 164.

The first true textbook of botany

6 **CESALPINO, Andrea (CAESALPINUS, Andreas)**. *De plantis libri XVI*. Florence: Giorgio Marescotti, 1583. 4to (220 x 154 mm). [40], 621, [11] pp. Woodcut printer's device on title and at end, woodcut initials, some historiated. Variant title page with "Duce" in 9th line. Contemporary vellum (old remboitage binding), spine hand-lettered, faded blue edges. A few leaves with faint stains or mostly marginal spotting, fore edge with small ink stain affecting a few leaves to the end, title-page with small ink corrosion hole inside signature. Provenance: Savgiano(?) (early signature in ink on title); "B.M." (manuscript note on title); "M no. 2J" (early note in ink on title); Warren H. Corning, Library of the *Holden Arboretum* (bookplate to front pastedown). Very good copy, collated complete. (#001852) € 19,000

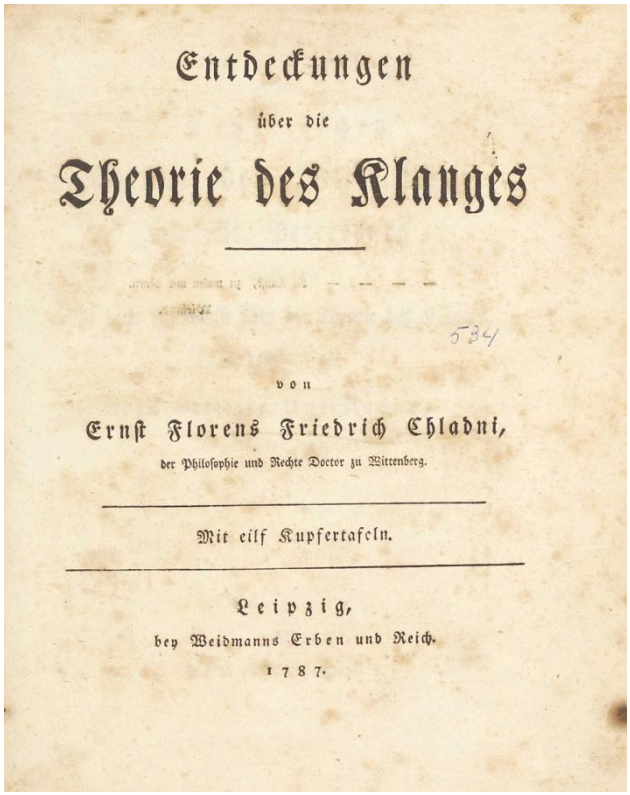

DE PLANTIS
LIBRI XVI.
ANDREAE CAESALPINI
ARETINI,
Medici clariſsimi, doctiſsimiq; atque
Philoſophi celeberrimi, ac
ſubtiliſsimi.
AD SERENISSIMVM FRANCISCVM
Medicem, Magnum Aetruriæ Ducem.
B.M.
M n°2J.
FLORENTIAE,
Apud Georgium Mareſcottum.
MDLXXXIII.

Dibner 20; PMM 97; Sparrow 34; Norman 432; Pritzel 1640; Adams C-20; BM/STC Italian p. 134; Cleveland Collections 122, Holden Arboretum Copy 2 (this copy). - **THE VERY RARE FIRST EDITION OF "THE FIRST TRUE TEXTBOOK OF BOTANY"** (DSB). The first book of this text is of outstanding historical importance. Here, in thirty pages of admirably clear Latin, Cesalpino presented the principles of botany, grouping a wealth of careful observations under broad categories, on the model of Aristotle and Theophrastus. "Caesalpinus's philosophy is Aristotelian: plants have a vegetable soul which is responsible for nutrition and for the reproduction of organisms. Nutrition was believed to come from the roots in the soil and to be carried up the stems to produce the fruit. Hence, the roots, stems and fruit are the main characteristics selected by Caesalpinus as the basis for his classification" (PMM).

Cesalpino was the first to elaborate a system of the plants based on a unified and coherent group of notions. By paying little attention to the medicinal uses of plants he raised botany to the level of an independent science. Our copy is an interesting example for an early re-used binding, recased in the 17th or 18th century, upside-down with the hand lettering of the former work still present at foot of the spine.

Establishing acoustics as a science

7 **CHLADNI, Ernst Florens Friedrich.** *Entdeckungen über die Theorie des Klanges.* Leipzig: Weidmanns Erben und Reich, 1787. 4to (212 x 176 mm). [4], 77 [1] pp.; 11 folding engraved plates bound at end. Contemporary quarter calf, rebacked spine lettered and decorated in gilt, remnant of paper sticker to front board. Text browned throughout, occasional minor brown spotting, tiny burnhole in p.3/4, upper inner hinge strenghtened, plates less browned and slightly foxed. Provenance: Dr. v.F. (armorial bookplate to front pastedown), illegible ink signature and pencil annotations on flyleaf. Still very good copy. (#001759) € 5,500

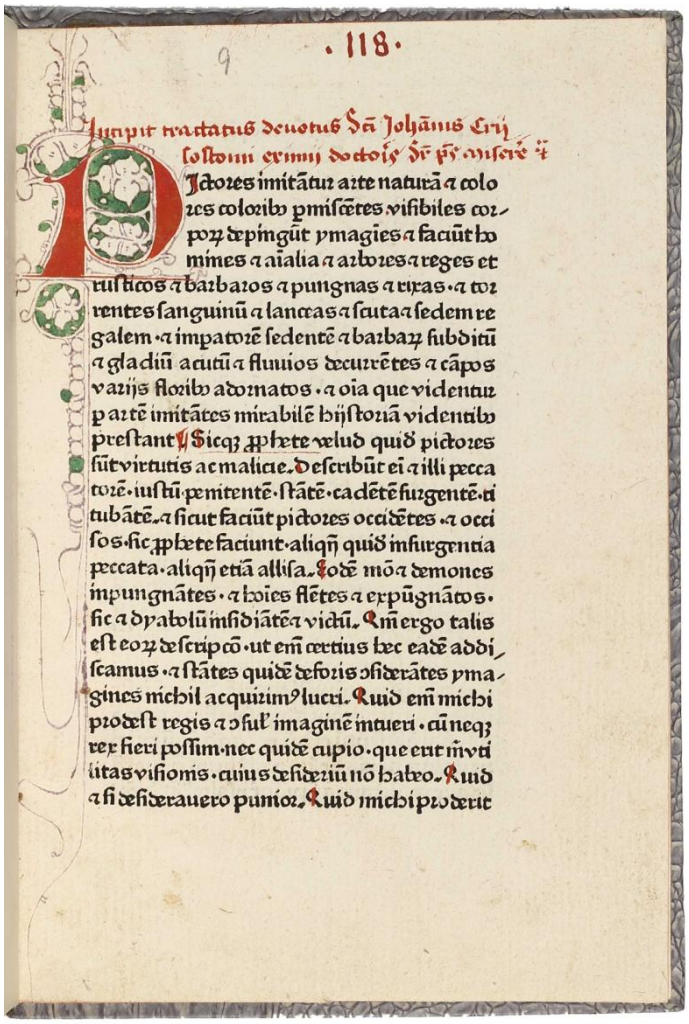

Entdeckungen
über die
Theorie des Klanges
von
Ernst Florens Friedrich Chladni,
der Philosophie und Rechte Doctor zu Wittenberg.
Mit eilf Kupfertafeln.
Leipzig,
bey Weidmanns Erben und Reich.
1787.

PMM, 233a; Dibner Heralds of Science 150; Norman 480; Sparrow Milestones of Science 39; DSB III, 258ff - **EXCEPTIONALLY RARE FIRST EDITION** of this important work which established acoustics as a science. Chladni was the first to work out the quantitative relationships governing the transmission of sound and its velocity in different media. The vibrations of strings had been studied in the seventeenth century but not the vibrations of plates. Chladni devised a method of making the vibrations visible by spreading sand on the plate and running a violin bow across the edge. The study of 'Chladni figures', as they are now known, using plates of different sizes, shapes and materials and clamped in different places enabled Chladni to develop the principles of acoustics and advance the understanding of wave forms in general.

An outstanding copy of one of the first books printed in Germany

8 **CHRYSOSTOMUS, Johannes**. *Sermo super psalmum L: Miserere mei Deus*. [Cologne: Ulrich Zel, 1467]. Half-sheet 4to (201 x 140 mm). 30 unfoliated leaves including final blank. 27 lines, no printed signatures, 4 pinholes. Collation: [1-3^{8} 4^{6}] text, 4.5v explicit, 4.6 blank. Type 1B: 96G (leaded to 104). Two 4-line initial spaces, the first with purple and red pen-flourishing infilled with green. Two-line incipit opening text, initials, capital strokes, and underlining in red. Two pinholes visible at foot of each leaf (occasionally also present at head but mostly cut off). Bull's head with curved muzzle and cross watermark (WILC 60229) visible on several leaves, contemporary rubricated foliation (medieval numerals "118-147") at upper margin. 20th-century binding (dated '33), with embossed texture, new endpapers, earlier red-sprinkled edges. Text clean and bright with very light soiling or spotting in a few places. Provenances: Monasticon Fratrum Vitae Communis, Königstein im Taunus*; Georges Petit. An outstanding copy, internally in near-pristine condition with wide margins and strong impression on heavy paper. (#003085) € 28,000

EDITIO PRINCEPS OF JOHN CHRYSOSTOM'S SERMONS IN ITS ENTIRETY, closely following Zel's 1466 edition of the first part only. This tract is from the first Cologne press, established by Ulrich Zel (or Zell) in around 1464, when he matriculated from the University of Cologne, and which lasted until the end of the fifteenth century. Zel had worked in Mainz with Fust and Schoeffer and maintained his connections with them from Cologne. He produced mostly small texts for use by students, including numerous works by Cicero, St Augustine, Jean Gerson and John Chrysostom in his early years, as well as some classical and humanist texts. Most of Ulrich Zel's early editions are in quarto format and nearly all undated. They were part of an 'evidently well-defined publishing programme, aimed at sales to a primarily pastoral and monastic market, the center of gravity of the texts being some thirty treatises of Jean Gerson. In these early years, Zel possessed only a modest printing equipment, yet no other printing shop in the period of the later 1460s and very early 1470s had so prolific and



closely focused a programme' (Needham, p. 11). Needham lists this work as number 7 out of Zel's press. He dates it to 1467, in agreement with Jenkinson's findings, that are based on used type (1B), number of lines per page (27), number of pinholes (4), paper stock (BHX-F) and watermarking (see Needham, p. 44). Allan Stevenson dates the paper stock of Durch origin to 1466-67 (see *Watermarks in Incunabula printed in the Low Countries (WILC)*, WM I 60229/60230, The Koninklijke Bibliotheek in Den Haag). Needham designates the paper stock as BHX-F, which is marked with a Bull's Heads with eyes and nostrils, bearing a St Andrews cross on single-wire surmount (Needham, p.27). This work is rare. ISTC lists 26 locations, with 3 in the US (La Casa del Libro, Library of Congress, and Huntington Library). We can trace 4 copies that have sold at auction in the past 50+ years (Sothebys 1967, lot 56, $616; Christies 1981, lot 45, $6,500; Christies 2001, $28,200; Sothebys 2003, $16,800).

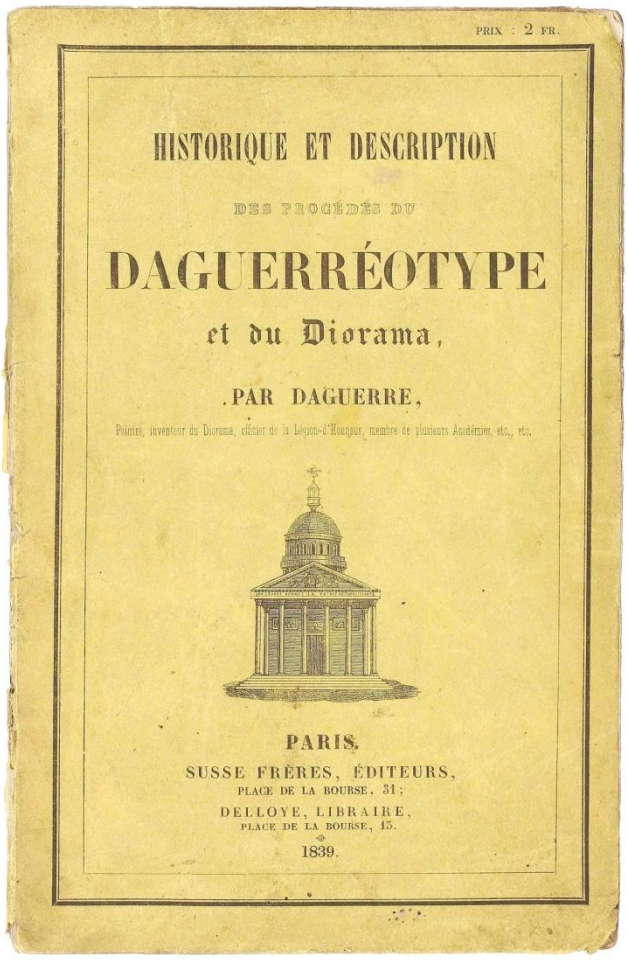
John Chrysostom (c. 349-407) was Archbishop of Constantinople and an important Early Church Father. He is best known for his preaching and public speaking, his denunciation of abuse of authority by both ecclesiastical and political leaders, the Divine Liturgy of Saint John Chrysostom, and his ascetic sensibilities. He was among the most prolific authors in the early Christian Church, exceeded only by Augustine of Hippo in the quantity of his surviving writings.

*Our copy has been part of a Sammelband of early Zell prints that was broken-up in the first half of the 20th century. The first tract of this former Sammelband is Chrysostom's *De reparatione lapsi*, [1467-72], now in Bridwell Library of Southern Methodist University, Dallas. Fortunately, the table of content of the Sammelband is preserved in that tract, listing our copy no 3 with folios 118-147. From this content list, we also know the original provenance of the Sammelband being the Monasticon Fratrum Vitae Communis at Koenigstein im Taunus. "Founded in 1466, this community of devout laypersons was affiliated with the 'Brethren of the Common Life,' whose precepts for simple Christian devotion are best known from the Imitatio Christi of Thomas à Kempis." (see https://www.smu.edu/Bridwell/SpecialCollectionsandArchives/Exhibitions/InventionDiscovery/Librarians/Sammelband).

References: ISTC ij00298000; Goff J-298; Hain 5031*; Polain 2266; Proctor 809; Voulliéme 649; CIBN J-192; BSB-Ink I-358; Stillwell 139b; F. Jenkinson, *Ulrich Zell's early quartos*, The Library, 4th ser., 7 (1926-7), p.46-66; S. Corsten, *Ulrich Zells früheste Produktion*, Gutenberg-Jahrbuch, 2007, p.68-76; P. Needham, *Ulrich Zel's early quartos revisited*, Trans. Cambridge Bibl. Soc., 2012, vol. 15, no. 1, p.44.

The first edition, first issue in untouched yellow wrappers as issued

9 **DAGUERRE, Louis-Jacques Mandé**. *Historique et description des procédés du daguerréotype et du diorama*. Paris: Béthune and Plon for Susse frères and Delloye. 1839. 8vo (212 x 138 mm). [4], 79 [1], [4] pp., including half-title, 6 lithographed plates and 2 advertisement leaves at end. Original printed yellow wrappers (dust-soiled, some chipping of blank paper over spine with loss, small hole in rear cover), protected in custom slipcase. Text very little toned, half-title somewhat spotted, p.63 and facing plate III slightly dust-soiled, a little dust-soiling to outer margins elsewhere, faint dampstain to blank upper gutter of a few pages, two leaves with short tear without loss, some dog-earing to corners. A fine, completely unsophisticated copy. (#003106) € 95,000


PRIX : 2 FR.

HISTORIQUE ET DESCRIPTION

DES PROCÉDÉS DU

DAGUERRÉOTYPE

et du Diorama,

PAR DAGUERRE,

Peintre, inventeur du Diorama, officier de la Légion-d'Honneur, membre de plusieurs Académies, etc., etc.

PARIS,

SUSSE FRÈRES, ÉDITEURS,

PLACE DE LA BOURSE, 31;

DELLOYE, LIBRAIRE,

PLACE DE LA BOURSE, 15.

1839.

"THE BEGINNINGS OF PHOTOGRAPHY" (Horblit). "PERHAPS NO OTHER INVENTION EVER CAPTURED THE IMAGINATION OF THE PUBLIC TO SUCH A DEGREE AND CONQUERED THE WORLD WITH SUCH LIGHTENING RAPIDITY AS THE DAGUERREOTYPE" (Gernsheim).

FIRST EDITION, FIRST ISSUE, second imprint of Daguerre's exposition of his photographic process.

AN ATTRACTIVE COPY IN ITS ORIGINAL PRINTED WRAPPERS OF THIS GREAT RARITY. Dibner 183; *En français dans le texte* 255; H. & A. Gernsheim, *The History of Photography*, chapter 6; Horblit/Grolier 21a (reproducing the 4th issue); Norman 569 (same issue); PMM 318b.

We know of only three other unsophisticated copies of the first issue in its original wrappers that have appeared at auction in the past 40 years: the Honeyman copy (Sothebys 1979, lot 802, GBP 1400), the Meyer Friedmann copy (Sothebys 2001, lot 40, $55375) and finally the Richard Green copy (Christies 2008, lot 66, $122500). In contrast to ours, which is completely unrestored, the Richard Green copy featured the yellow wrappers in a cleaned and repaired state.

Daguerre's manual, published by order of the government, was quickly sold out. A total of 39 reprints, new editions, and translations appeared in the following 18 months. The great demand accounts for the profusion of issues of the first edition: 7 are recorded, all from the same basic setting of type. Of these the first four differ in the booksellers' names alone. The present copy is of the first Susse issue which was released on 14 September 1939. It is the second to appear, preceded only by the Alphonse Giroux issue, published shortly after Arago's 19 August announcement, of which only two copies are known (see Honeyman 802), both preserved in the George Eastman Museum, Rochester.

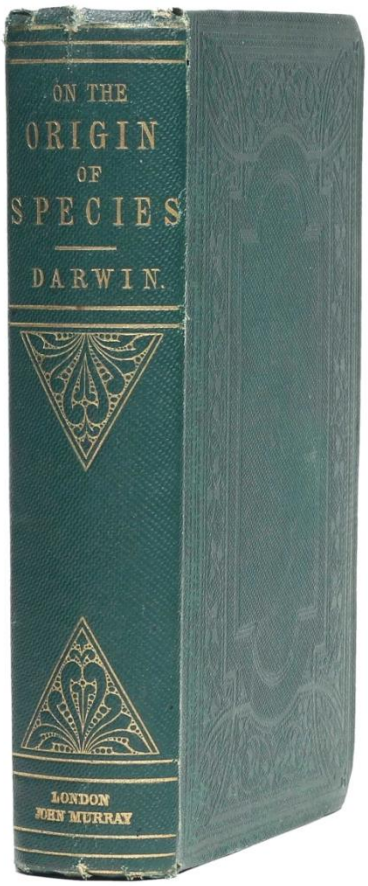
"At a joint meeting of the French Academies of Arts and Sciences, Count François Arago announced the miraculous invention of Daguerre, a method for making faithful impressions of objects on sheets of copper, coated with light-sensitive silver salts. Arago's announcement trumped the efforts of Talbot, much to the Englishman's chagrin" (Parr-Badger vol. 1, p. 13).

Louis-Jacques-Mandé Daguerre, inventor of the Diorama, a picture show based on lighting effects, started experiments in the 1820s with fixing the images of the camera obscura on silver chloride paper. His lack of success using this method stimulated his interest in the heliographic method invented by Nicephore Nièpce, who had produced the first successful photographic image in 1826 or 1827 on a pewter plate coated with bitumen of Judea dissolved in oil of lavender. In 1829 Daguerre succeeded in persuading the reluctant Nièpce to become his partner. However, it was only after Nièpce's death, in the spring of 1835, that Daguerre accidentally discovered a quicker method of exposing and developing the Niècian image through the application of mercury vapor. Using this method, with common table salt as the fixative, he produced his first

successful permanent photographic image in 1837. Still under contract with Nièpce's son Isidore, Daguerre agreed to split the profits from the new invention in exchange for calling it by his name alone. He then proceeded to launch a publicity campaign with the goal of attracting 400 subscribers at 1,000 francs each, stipulating that the processes of heliography and 'daguerrotype' would not be revealed until 100 subscribers were enrolled. This failed, and the resourceful Daguerre turned to other methods, privately approaching a number of leading scientists with the goal of interesting the government. "He was fortunate in finding in François Dominique Arago an influential ally, for he was a member of the Chamber of Deputies as well as a distinguished physicist and astronomer. Soon afterwards, Arago gave the discovery official status by a brief announcement at the Acadmie des Sciences, on 7 January 1839" (H. & A. Gernsheim, *The History of Photography*, p. 68). Arago energetically promoted the invention and succeeded in obtaining government funding for the two partners, although in the course of his arguments he gradually shifted credit for the invention to Daguerre, at the expense of Nièpce's pioneering work. By the summer, Daguerre was finally obliged to divulge the details of "his" process (though not before Fox Talbot, in reaction to the news of Daguerre' invention, had published his own announcement of his independent invention of a photographic process). On August 19 Arago made a full announcement to a packed house at a joint meeting of the Académies des Sciences and des Beaux-Arts at the Institut de France. The excitement was palpable. "Perhaps no other invention ever captured the imagination of the public to such a degree and conquered the world with such lightening rapidity as the daguerreotype" (H. & A. Gernsheim, *The History of Photography*, p. 71). Along with the official documents relating to the government's review of the procedure, Daguerre's manual includes details of its genesis, including a transcription of Nièpce's own description of his heliographic process, submitted to Daguerre in 1839, and a full illustrated description of his daguerreotype process - presented as an independent invention, superior to Nièpce's.

The most influential scientific work of the 19th century

10 **DARWIN, Charles**. *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. Second edition, second issue ('fifth thousand'). London: John Murray, 1860. 8vo (196 x 125 mm). ix [1], 502, 32 pp., including half-title, publisher's advertisements at end dated 'January 1860', and folding lithographed table facing p.117. Original publisher's green blind-stamped cloth (spine ends slightly frayed, corners bumped, extremities little rubbed), original brown endpapers, Edmonds & Remnants ticket to rear pastedown, inner hinges partially cracked. Pages untrimmed, publishers advert pages still unopened. Text little age-toned, occasional light foxing mostly to upper margin of first pages, minor dust-soiling to some leaf edges. Provenance: illegible contemporary signature to half-title. A very good+, clean, unmarked and unstained copy. (#003101) € 8,500



Freeman 376; Norman 594. - **SECOND EDITION, second printing OF "THE MOST INFLUENTIAL SCIENTIFIC WORK OF THE NINETEENTH CENTURY**. Its publication aroused world-wide criticism and controversy, both religious and scientific" (Grolier/Horblit). The whole edition of 1250 copies was sold on the day of publication. Though the work was initially prompted by observations, made during his travels aboard the Beagle from 1831 to 1836, of the biology and geology of isolated islands, Darwin spent nearly 25 years after his return to England accumulating evidence and considering his theory before publishing. "Although the theory of evolution can be traced to the ancient Greek belief in the 'great chain of being,' Darwin's greatest achievement was to make this centuries-old 'underground' concept acceptable to the scientific community by cogently arguing for the existence of a viable mechanism -- natural selection -- by which new species evolve over vast periods of time. Darwin's influence on biology was fundamental and continues to be felt today" (Garrison-Morton 220).

The first bilingual dictionary

11 **ESTIENNE, Robert**. *Dictionarium Latinogallicum*. Paris: R. Estienne, 4 September 1538. Folio (278 x 189 mm). [4], 757 [1] pp. Printer's woodcut device on title-page, large criblé floral woodcut initials, text in double column, Latin text in roman type and French text in italic, colophon on final leaf BB3v, bound without the final blank. Signatures: [alpa]^{2} a-z^{8} A-Z^{8} AA^{8} BB^{4} (-BB4 blank). Date from colophon. Bound in restored early 19th-century sheep, spine with later red morocco label titled in gilt (spine, extremities and board margins heavily rubbed, corners bumped), red-dyed edges, marbled endpapers (upper inner hinge split). Light even browning of text, occasional minor spotting, faint contemporary annotations in ink to p.376, upper margins trimmed close (but not touching headline), leaf P1 with expertly restored torn upper portion (text supplied in neat manuscript), 2 tiny burn holes in leaf S4. Provenance: Vicomte Courtat (inscribed on final final free endpaper). A very good, clean and unstained copy. (#003100) € 6,500


Dictionarium Latinogallicum,
THESAVRO NOSTRO ITA EX ADVERSO RESPON-
dens, vt extra pauca quædam aut obsoleta, aut minus in vsu necessaria voca-
bula, & quas consulto prætermisimus, authorum appellationes, in hoc eadem
sint omnia, eodem ordine, sermone patrio explicata.
Cum gratia & priuilegio Regis.
PARISIIS.
EX OFFICINA ROBERTI STEPHANI.
M.D.XXXVIII.

PMM 62; STC 156; Adams S 1803; Renouard 46,4. **RARE FIRST EDITION OF ROBERT ESTIENNE'S FIRST BILINGUAL DICTIONARY**, based on the *Thesaurus* (1531, augmented in 1536). "The *Dictionarium latino-gallicum*, which appeared in 1538 and was twice reissued, was more than an abridgment of the 1536 *Thesaurus*, the existing French translations being in many cases revised and others added. The idea of a bilingual dictionary was not his own . . . It seems, however, that Estienne's work was recognized as an improvement on anything else available" (Armstrong, p. 88). "The *Dictionarium latino-gallicum* ... of 1538 ... received, understandably, an even greater acclaim [than the *Thesaurus*], was reprinted in 1543 and 1546, and served as the acknowledged model of the Latin-German (Zürich, 1568) and Latin-Flemish (Antwerp, Plantin, 1573) dictionaries." (PMM). Estienne's "main innovations were threefold: contrary to the practice of his predecessors, [Estienne] based his vocabulary exclusively on classical authors . . . he clarified the meaning of the words by citing reputable authorities . . . and he illustrated the correct usage of words and phrases by ample quotations from classical sources." (PMM).

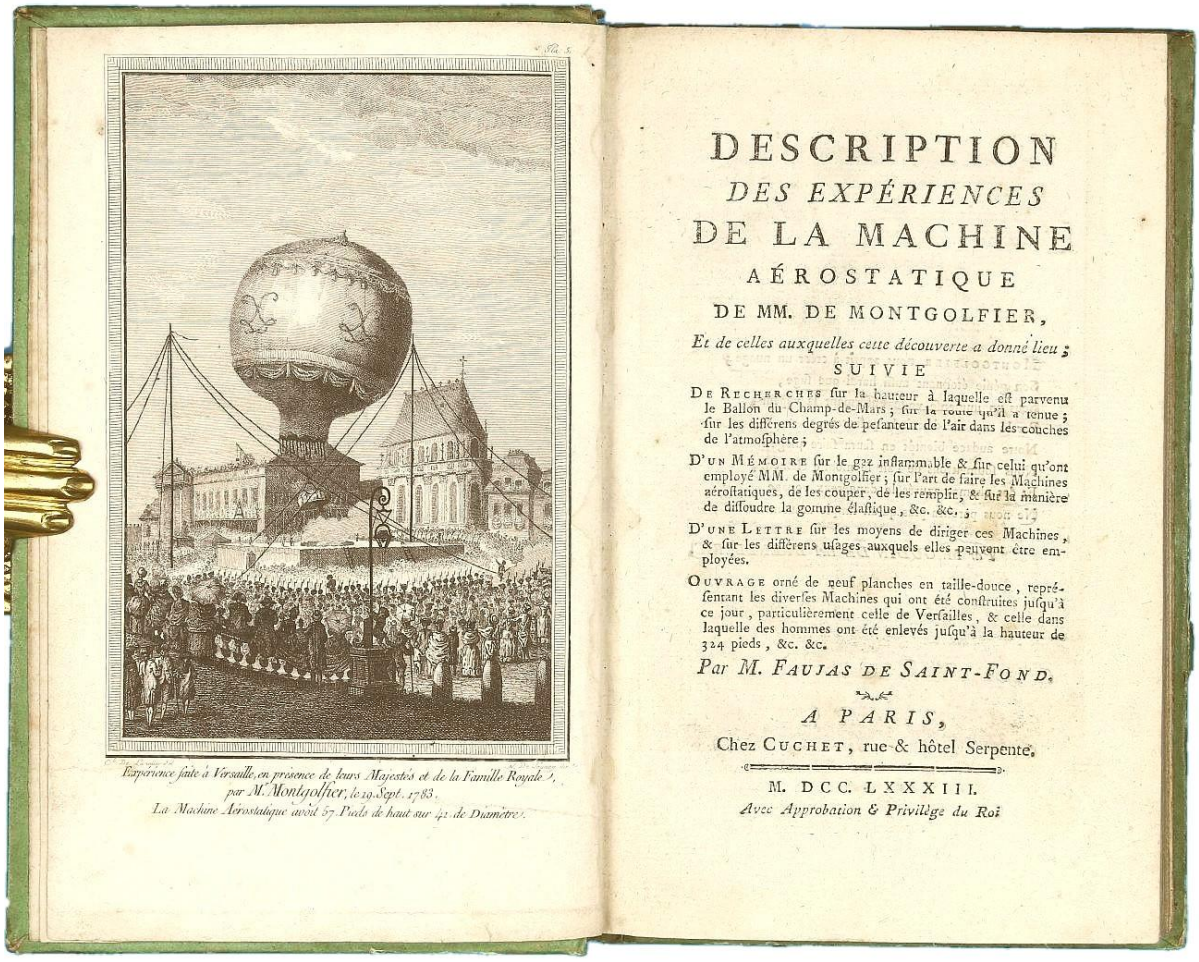
Tissandier's copy of the account of Montgolfier's first balloon flights

12 **FAUJAS DE SAINT-FOND, Barthelemy de**. *Description des experiences de la machine aerostatique de MM. de Montgolfier et de celles auxquelles cette decouverte a donne lieu*. Paris: [Chardon for] Cuchet, 1783-1784. 2 volumes, 8vo (204x127 mm). Vol. 1: [i-iii] iv-xl, [1] 2-299, [3], [4] pp., 9 engraved plates (plate v as frontispiece), folding table; Vol. 2: [2], [1] 2-24, *24-24*, 25-62, [67] 68-366, [2] pp., 5 engraved plates (plate I as frontispiece). Contemporary green paste paper boards (light chipping along spine and edges). Internally crisp, with only very minor occasional spotting and toning, offsetting to a few plates, title and frontispiece of vol. 2 slightly soiled, leaves partially untrimmed. Provenance: Gaston Tissandier (ex-libris to front paste-downs); Aéro-club de France (ex-libris stamp and affixed deaccession card to first fly-leaves). A fine, wide margined set with interesting provenance. (#001996) € 6,500

PMM 229; Dibner, Heralds of Science 179; Norman 769; Sparrow, Milestones of Science 179; Tissandier p.21 (this copy). - FIRST EDITION, second issue, with the four page supplement. "**THE FIRST SERIOUS TREATISE ON AEROSTATION AS A PRACTICAL POSSIBILITY**" (Printing and the Mind of Man), a detailed historical and technical account of the first balloon flights carried out in 1783 by the brothers Etienne and Joseph de Montgolfier, written by one of their principal sponsors, the geologist Faujas de Saint-Fond. The first successful balloon ascent took place in Annonay on June 5, 1783 using the Montgolfiere' technique of heating air with a straw fire sufficiently to make the balloons rise. Although subscribers preferred the hydrogen balloons invented by the physicist Jacques-A.-C. Charles, whose first launch was a 13-foot balloon from the Champ-de-Mars in

August 1783, the Montgolfiers created a sensation by sending up ever more populated hot-air balloons; a trio of farm animals were the first mammals to fly, on September 19, and the first manned ascent followed two months later, on November 20, when Pilâtre de Rozier and the Marquis d'Arlandes ascended from the Bois de Boulogne and crossed Paris, covering a total distance of 5 1/2 miles in approximately 20 minutes. (Rozier was later killed in an attempted balloon crossing of the English Channel.) The second volume contains accounts of later balloon flights, all inspired by the Montgolfiers' initial successes - "their experiments were so successful, and so decisive, that it is inarguably to them that we owe all of the experiments that followed" (vol. 2, pp. 1-2) - including the first flight of a passenger-carrying hydrogen balloon, designed and manned by Jacques Charles, who on December 1, 1783 made a two-hour ascent from Paris, landing near a village 27 miles distant (this trip was also largely underwritten by Faujas de Saint-Fond). Charles's hydrogen balloon, constructed with the aid of the celebrated artisans the Robert brothers, formed the prototype for later modern balloon construction.

The copy of Gaston Tissandier (1843-1899), French chemist, meteorologist and aviaton pioneer. He founded and edited the scientific magazine La Nature and wrote several books, including the important bibliography on aeronautics in 1887 ("Bibliographie aéronautique: Catalogue de livres d'histoire, de science, de voyages et de fantaisie, traitant de la navigation aérienne ou des aérostats"). His interest in meteorology led him to take up aviation. His first trip in the air was conducted at Calais in 1868 together with Claude-Jules Dufour, where his balloon drifted out over the sea and was brought back by an air stream of opposite direction in a higher layer of air. In September 1870, during the Franco-Prussian War, he managed to leave the besieged Paris by balloon. His most adventurous airtrip took place in April 1875. Together with Joseph Croce-Spinelli and Théodore Sivel, he was able to reach in a balloon the unheard-of altitude of 8,600 metres. Both of his companions died from breathing the thin air. Tissandier survived, but became deaf. In 1883, Tissandier fit a Siemens electric motor to an airship, thus creating the first electric-powered flight. The technical problems encountered by the Montgolfiers and those who followed them are discussed by Tissandier in *Histoire des ballons et des aéronautes célèbres* (1887-89).



Expérience faite à Versailles, en présence de leurs Majestés et de la Famille Royale, par M. Montgolfier, le 19 Sept. 1783.
La Machine Aérostatique avoit 57 Pieds de haut sur 41 de Diamètre.

DESCRIPTION
DES EXPÉRIENCES
DE LA MACHINE
AÉROSTATIQUE
DE MM. DE MONTGOLFIER,
Et de celles auxquelles cette découverte a donné lieu ;
SUIVIE

De Recherches sur la hauteur à laquelle eſt parvenu le Ballon du Champ-de-Mars ; ſur la route qu'il a tenue ; ſur les différens degrés de peſanteur de l'air dans les couches de l'atmoſphère ;

D'un Mémoire ſur le gaz inflammable & ſur celui qu'ont employé MM. de Montgolfier ; ſur l'art de faire les Machines aéroſtatiques, de les couper, de les remplir, & ſur la manière de diſſoudre la gomme élaſtique, &c. &c. ;

D'une Lettre ſur les moyens de diriger ces Machines, & ſur les différens uſages auxquels elles peuvent être employées.

Ouvrage orné de neuf planches en taille-douce, repréſentant les diverſes Machines qui ont été conſtruites juſqu'à ce jour, particulièrement celle de Verſailles, & celle dans laquelle des hommes ont été enlevés juſqu'à la hauteur de 324 pieds, &c. &c.

Par M. Faujas de Saint-Fond.

A PARIS,
Chez Cuchet, rue & hôtel Serpente.

M. DCC. LXXXIII.
Avec Approbation & Privilège du Roi

Galilei's Dialogo in untouched and well preserved original binding

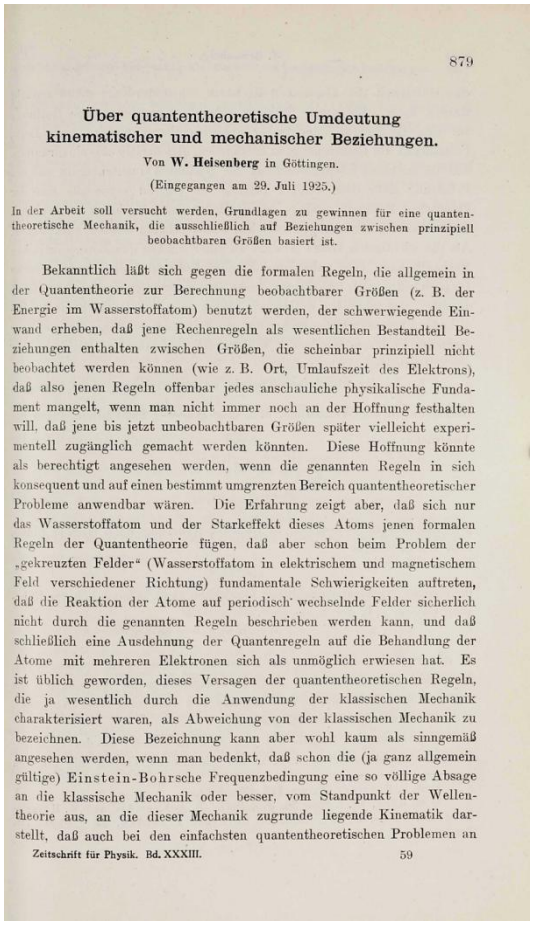
13 **GALILEI, Galileo.** *Systema cosmicum . . . in quo quatuor dialogis, de duobus maximis mundi systematibus, Ptolemaico et Copernicano*, translated from Italian by Matthias Bernegger (1582-1640). Strassburg: D. Hauttius for the Elzevirs [at Leiden], 1635. 8vo (194 x 150 mm), [xvi], 495 [1], [24] pp.

Engraved frontispiece, full-page engraved portrait by Jacob van der Heyden, woodcut diagrams, final leaf of errata. Text browned throughout as usual, leaves O3 and 3Q2 with small paper flaw at top blank margin, a few small marginal dampstains and occasional minor spotting. Bound in contemporary vellum, spine lettered in manuscript, ties still present (light browning and spotting of vellum), original endpapers. Provenance: illegible 19th-century ownership slip laid in. Very good unsophisticated copy in completely untouched original binding with old (original?) leather ties still present. (#003125) € 26,000

Honeyman IV 1409; Horblit 18c, Dibner 8; Carli-Favaro 32 (148); Caspar 11 (88); Cinti 196 (96); Riccardi I 512. - FIRST LATIN AND FIRST INTERNATIONAL EDITION of Galileo's enormously influential *Dialogo*, demonstrating the validity of the Copernican heliocentric theory over the Ptolemaic theory of the solar system. It was the only major work of Galileo published outside Italy during his lifetime and made a huge impact outside professional scientific circles. If ordinary educated non-Italians read no other Galileo, they read this edition of this text. This edition also influenced generations of scientists outside Italy, among them Mersenne and Gassendi in France, Kepler in Germany and Wilkins and Wallis in England. Galileo's *Dialogo* is the summation of his ideas, presented in a didactic dialogue. It is a philosophical debate that takes place over four days between three speakers, Salviati (ie. Galileo), Sagredo and Simplicio (both Simplicius the commentator on Aristotle, and 'simplicio' ie. simple or naïve). Salivati puts forward the case for the heliocentric Copernican system and Simplicio puts forward the Aristotelian view. Sagrado, a Venetian nobleman, is the layman who is willing to learn from the other two (but who always agrees with Salivati in the end). The first day is concerned with the principles of motion, which in the second day is extended to include the earth's motion on a daily basis and the principle of relativity in observed motion. The third day treats of the sun's annual motion around the earth, which contains some pro-Copernican arguments, and the fourth gives us Galileo's idea that the ebb and flow of tides is due to the motion of the earth. The text closes with the editio princeps of Kepler's *Perioche* and a long letter of Foscarini on the opinions of Pittagorichi and Copernicus.' The *Dialogue* has been described as "the story of the mind of Galileo." The book reveals Galileo as physicist and astronomer, sophisticate and sophist, polemicist and polished writer. Unlike the works of Copernicus and Kepler, the *Dialogue* was a book for the educated public not just specialists, hence this edition's huge importance. In 1616 the Vatican declared the theories of Copernicus to be "foolish and absurd" and "formally heretical." *De Revolutionibus* was not banned but changes had to be made to the text, notably the removal of references to the compatibility of the ideas of Copernicus with scripture. Galileo was warned by the Pope not to continue defending the views of Copernicus, to which he acquiesced. In 1623 Maffeo Barberini became Pope. He had written a poem in praise of Galileo's telescopic discoveries and Galileo felt he might now be more receptive to his ideas. Galileo presented a copy of his *Il Saggiatore* to the Pope in which he ridiculed the Aristotelian views of Horatio Grassi and argued that scientific investigation should not be hindered by reliance on authority. The

Pope enjoyed the book and this emboldened Galileo to ask for permission to publish his theories about tides. The Pope agreed on certain conditions. First, no mention was to be made to tides in the title as this would give too much prominence to a phenomenum which was used as evidence that the Earth moved. Second, Galileo was to state that this was only one of the ways in which the tides could have been created. The *Dialogo* was the result. The Pope felt that he had been misled. Permission had been given for a balanced discussion of the two theories but Galileo had written a barely disguised attempt to demolish the Aristotelian system and to establish the Copernican system as fact. The Pope seemed especially embittered by Galileo's decision to put the Pope's own arguments concerning the tides into the mouth of the simple-minded Simplico, an attempt, as he saw it, to ridicule him. Galileo was summoned to Rome. After interrogation he was told to abjure his Copernican theories and was sentenced to house arrest for life. This Latin translation, through which the *Dialogo* was to reach the widest audience, is by Matthias Bernegger (1582-1640), an Austrian from Hallstatt, who had studied in Strassburg, where he settled in 1603. In his preface he explains how he came to translate it, how he had taught himself Italian, and how eventually the Elzeviers, at the urging of the Hebraist Marcus Zuerius Boxhorn and others, persuaded him to undertake the work and agreed to publish it. "It is a masterly polemic for the new science. It displays all the great discoveries in the heavens which the ancients had ignored ... The *Dialogo*, far more than any work, made the heliocentric system a commonplace." *Printing and the Mind of Man* 128 (of the first Italian edition).

Announcing the invention of quantum mechanics



879

Über quantentheoretische Umdeutung kinematischer und mechanischer Beziehungen.

Von **W. Heisenberg** in Göttingen.

(Eingegangen am 29. Juli 1925.)

In der Arbeit soll versucht werden, Grundlagen zu gewinnen für eine quantentheoretische Mechanik, die ausschließlich auf Beziehungen zwischen prinzipiell beobachtbaren Größen basiert ist.

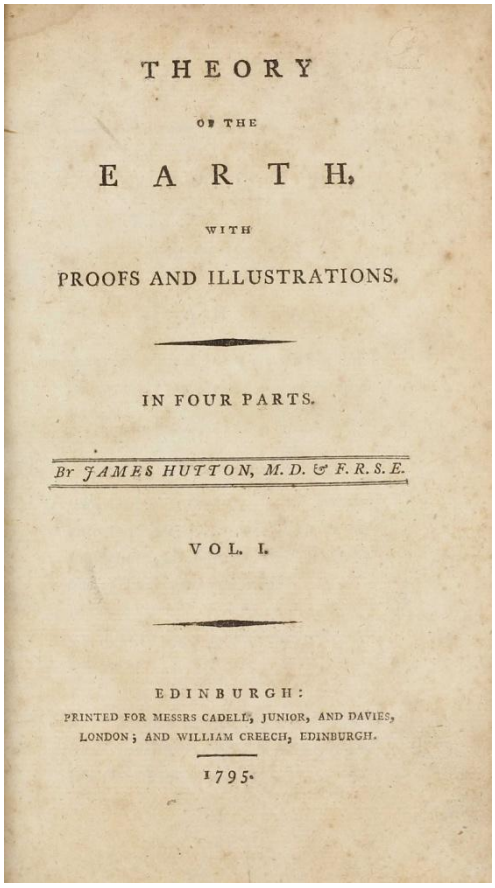
Bekanntlich läßt sich gegen die formalen Regeln, die allgemein in der Quantentheorie zur Berechnung beobachtbarer Größen (z. B. der Energie im Wasserstoffatom) benutzt werden, der schwerwiegende Einwand erheben, daß jene Rechenregeln als wesentlichen Bestandteil Beziehungen enthalten zwischen Größen, die scheinbar prinzipiell nicht beobachtet werden können (wie z. B. Ort, Umlaufszeit des Elektrons), daß also jenen Regeln offenbar jedes anschauliche physikalische Fundament mangelt, wenn man nicht immer noch an der Hoffnung festhalten will, daß jene bis jetzt unbeobachtbaren Größen später vielleicht experimentell zugänglich gemacht werden könnten. Diese Hoffnung könnte als berechtigt angesehen werden, wenn die genannten Regeln in sich konsequent und auf einen bestimmt umgrenzten Bereich quantentheoretischer Probleme anwendbar wären. Die Erfahrung zeigt aber, daß sich nur das Wasserstoffatom und der Starkeffekt dieses Atoms jenen formalen Regeln der Quantentheorie fügen, daß aber schon beim Problem der „gekreuzten Felder“ (Wasserstoffatom in elektrischem und magnetischem Feld verschiedener Richtung) fundamentale Schwierigkeiten auftreten, daß die Reaktion der Atome auf periodisch wechselnde Felder sicherlich nicht durch die genannten Regeln beschrieben werden kann, und daß schließlich eine Ausdehnung der Quantenregeln auf die Behandlung der Atome mit mehreren Elektronen sich als unmöglich erwiesen hat. Es ist üblich geworden, dieses Versagen der quantentheoretischen Regeln, die ja wesentlich durch die Anwendung der klassischen Mechanik charakterisiert waren, als Abweichung von der klassischen Mechanik zu bezeichnen. Diese Bezeichnung kann aber wohl kaum als sinngemäß angesehen werden, wenn man bedenkt, daß schon die (ja ganz allgemein gültige) Einstein-Bohrsche Frequenzbedingung eine so völlige Absage an die klassische Mechanik oder besser, vom Standpunkt der Wellentheorie aus, an die dieser Mechanik zugrunde liegende Kinematik darstellt, daß auch bei den einfachsten quantentheoretischen Problemen an

Zeitschrift für Physik. Bd. XXXIII. 59

14 **HEISENBERG, Werner**. *Über quantentheoretische Umdeutung kinematischer und mechanischer Beziehungen.* In: *Zeitschrift für Physik*. Vol. 33, pp. 879-893. Berlin: Julius Springer, 1925. 8vo (220 x 151 mm). Entire volume offered, with 256 text illustr. and vii [1], 950 pp. Contemporary half black library cloth with gilt-lettered spine (rebacked preserving the original spine), sprinkled edges. Text with very light age toning, but generally crisp, clean and free of markings. Provenance: TU Vienna (volume general title with library deaccession stamp). A very good copy. (#002926) € 2,500

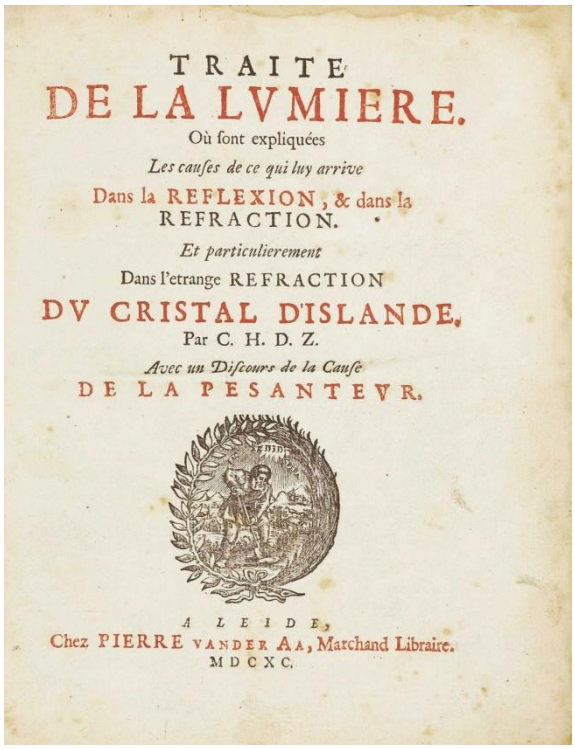
PMM 417b; Poggendorff VI, 1070 - First edition of Heisenberg's groundbreaking paper announcing the invention of quantum mechanics, published in the "Zeitschrift für Physik" on July 25, 1925. - Entire volume, also includes two papers on quantum theory by Max Born and Pascal Jordan: *Zur Quantentheorie aperiodischer Vorgänge*, pp. 479-508. (cf. DSB XV, 41).

15 **HUTTON, James.** *Theory of the Earth, with Proofs and Illustrations.* Edinburgh: printed for Cadell and Davies, London, and William Creech, 1795 (Vol. I and II); London: Geological Society, 1899 (Vol. III). Bound in three volumes, including the posthumous third part edited by Sir Archibald Geikie for the Geological Society. 4to (211 x 129 mm). viii, 620; viii, [103] 4-567 [1], xvi, 278, xiii [1] pp., including half-title in each volume and 6 folding engraved plates. Uniformly bound in fine 20th-century half calf, by Bayntun of Bath, spines ruled in gilt and with gilt-lettered morocco labels, original printed green wrappers of vol. III laid down and bound in at end (very slight fading to spines and light rubbing of extremities), brown sprinkled edges. Text and plates of first two volumes somewhat browned and foxed as usual (plate 2 in vol. II stronger), large folding plate of Mont Blanc with small defect in sky area (skilfully repaired and fairly unobtrusive with c. 4 x 3 cm section supplied in pen and ink like clouds). Provenance: Robert Dalley-Scarlett (1887-1959); David Branagan (ownership inscription to flyleaf of vol. I); small embossed stamp to upper outer corner of title and a few other leaves in vols. I and II). Still a very good set, collated complete. (#001667) € 15,000


THEORY
OF THE
EARTH,
WITH
PROOFS AND ILLUSTRATIONS.
IN FOUR PARTS.
By JAMES HUTTON, M. D. & F. R. S. E.
VOL. I.
EDINBURGH:
PRINTED FOR MESSRS CADELL, JUNIOR, AND DAVIES,
LONDON; AND WILLIAM CREECH, EDINBURGH.
1795.

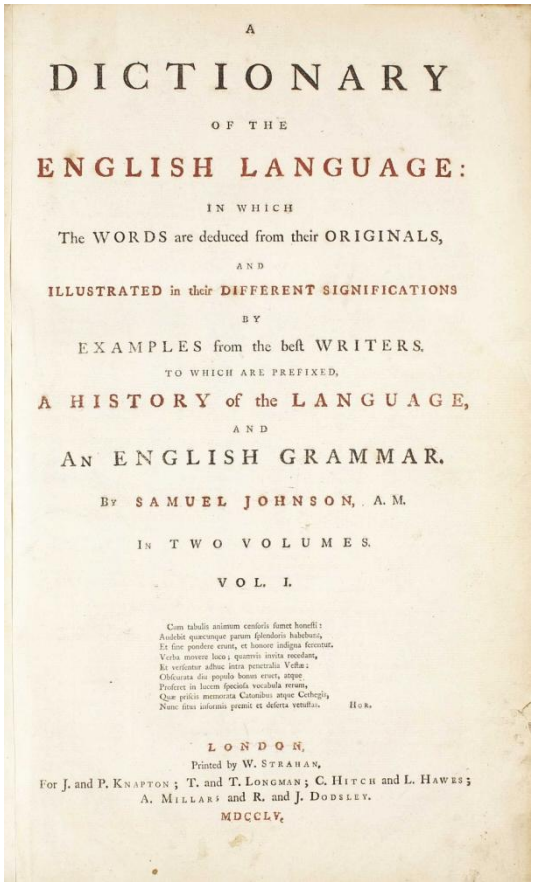
PMM 247; Horblit 52a, Norman 1131 - **EXCEPTIONALLY RARE FIRST EDITION** of this classic work on geology. "His fundamental conception - now accepted as a matter of course, but then entirely new - was the doctrine of uniformatarianism. The formation of the surface of the earth is one continuous process which can be studied entirely from terrestrial materials without cosmological or supernatural intervention ... Hutton had no clear idea of the significance of fossils for the theory of gradual evolution and not all his theories are now accepted, but his central ideas of uniformatarianism and of the effect of small changes in nature leading eventually to gigantic transformations have had far-reaching consequences in their influence on Charles Lyell and Darwin." (PMM).

16 **HUYGENS, Christiaan**. *Traité de la lumière. Ou sont expliquees les causes de ce qui luy arrive dans la réflexion, & dans la refraction. . . Avec un discours de la cause de la pesanteur*. Leiden: Pieter van der Aa, 1690. 4to (198 x 158 mm). [8], 1-124 [2] 125-128 [2] 129-180 pp. Signatures: $*^4$ A-P^4 Q^2 R^4 S^2 T-Z^4 Aa^2. Two parts in one, separate title to part two, continuous pagination, general title printed in red and black, both titles with printer's woodcut device, woodcut head-pieces and initials, 89 woodcut diagrams in text. Bound in contemporary calf, spine rebacked and with gilt-lettered morocco label (little rubbing to board sand extremities, corners bumped), red-spinkled edges. Text little browned, marginal light dust soiling, first four leaves with just a few mm of light dampstaining at top edge, very minor occasional spotting, a few short tears not affecting text. A fine, unsophisticated, wide-margined and unmarked copy. (#002708) € 25,000


TRAITE
DE LA LVMIERE.
Où sont expliquées
Les causes de ce qui luy arrive
Dans la REFLEXION, & dans la
REFRACTION.
Et particulierement
Dans l'etrange REFRACTION
DV CRISTAL D'ISLANDE.
Par C. H. D. Z.
Avec un Discours de la Cause
DE LA PESANTEVR.
A LEIDE,
Chez PIERRE VANDER AA, Marchand Libraire.
MDCXC.

Dibner 145; Horblit 54; Norman 1139; Sparrow 111; Evans 32; D.S.B. VI, p.609-10; *En francais dans le texte* 25. **FIRST EDITION of Huygens' pathbreaking exposition of his wave theory of light**. Huygens had developed his theory in 1676 and 1677, and completed his *Traite de la lumière* in 1678. He read portions of the treatise to the Academy during the following year but left it unpublished, until Newton's *Principia* (1687) and a visit with Newton in 1689 stimulated him to have it printed at last. "Light, according to Huygens, is an irregular series of shock waves which proceeds with very great, but finite, velocity through the ether. This ether consists of uniformly minute, elastic particles compressed very close together. Light, therefore, is not an actual transference of matter but rather of a 'tendency to move,' a serial displacement similar to a collision which proceeds through a row of balls [...] Huygens therefore concluded that new wave fronts originate around each particle that is touched by light and extend outward from the particle in the form of hemispheres." (D.S.B.). Huygens was able to explain reflection and refraction using this theory, of which he became completely convinced in August 6, 1677, when he found that it explained the double refraction in Iceland spar. His view of light was opposed to the corpuscular theory of light advanced by Newton. In the second part of the work, the *Discours de la cause de la pesanteur*, written in 1669, Huygens expounded his vortex theory of gravity, a purely mechanistic theory that also contrasted markedly with Newton's notion of a universal attractional force intrinsic to matter. Indeed, Huygens added to the original treatise of 1669 a review of Newton's theory, rejecting it out of hand because of the impossibility of explaining it by any mechanical principle or law of motion. Huygens' work fell into oblivion during the following century, but his theory of light was confirmed at the beginning of the 19th century by Thomas Young, who used it to explain optical interference, and by Augustin-Jean Fresnel a few years later. Modern physics has reconciled Newton's and Huygens' theories in discerning both corpuscular and wave characteristics in the properties of light. There are two states of the two title leaves known. Our copy is with the author's initials only on both titles (no priority established).

17 **JOHNSON, Samuel**. *A Dictionary of the English Language in which the words are deduced from their originals, and illustrated in their different significations by examples from the best writers*. London: Printed by W. Strahan for J. and P. Knapton; T. and T. Longman; C. Hitch and L. Hawes; A. Millar; and R. and J. Dodsley, 1755. Two parts in two volumes. Folio (400 x 254 mm). Unpaginated. Collation: vol. I: $[A]^2$ B-K^2 a-d^2 (-d2) 2B-13A^2, with terminal singleton 13B-14Z (12O and P missigned); vol. II: $*^2$ (-*1, blank) 15A-31C^2, with singletons at the end of alphabetical sections as follows: 17A-17Z, 22F-Z and 27E-28Z. Bound without the blank leaves *1 and d2 as usual. Title-pages printed in red and black, main text in double columns, ornamental woodcut tailpieces. Modern full brown calf, covers with gilt rules and floral cornerpieces, spines with raised bands in six compartments, gilt-lettered red and green morocco labels to second and third, all with gilt rules, marbled endpapers. Cream cloth-covered board clamshell cases, gilt-lettered brown morocco labels to spines. Text little browned mostly at outer margins, scattered light foxing mostly to margins of a minority of pages, a few dog-ears. In vol. I the title-leaf soiled at margins and mounted on stub, leaf d1 with wedge-shaped cut-off at blank fore-margin outside text area; in vol. II old repair repair at fore-margin of one leaf, minor dampstaining to lower corner of a few leaves, title creased at lower corner. Provenance: the late Robin Williams, American actor and comedian (1951-2014), and his wife Marsha. Attached to this set is a copy of the auction catalogue by Sotheby's, *Creating a Stage: The Collection of Marsha and Robin Williams*, 4 October 2018. This is lot 304 of this single owner sale. (#003081) € 11,000



A

DICTIONARY

OF THE

ENGLISH LANGUAGE:

IN WHICH

The WORDS are deduced from their ORIGINALS,

AND

ILLUSTRATED in their DIFFERENT SIGNIFICATIONS

BY

EXAMPLES from the best WRITERS.

TO WHICH ARE PREFIXED,

A HISTORY of the LANGUAGE,

AND

AN ENGLISH GRAMMAR.

By SAMUEL JOHNSON, A. M.

IN TWO VOLUMES.

VOL. I.

Cum tabulis animum censoris sumet honesti:
Audebit quæcunque parum splendoris habebunt,
Et sine pondere erunt, et honore indigna ferentur.
Verba movere loco; quamvis invita recedant,
Et versentur adhuc intra penetralia Vestæ:
Obscurata diu populo bonus eruet, atque
Proferet in lucem speciosa vocabula rerum,
Quæ prisci memorint Catonibus atque Cethegis,
Nunc situs informis premit et deserta vetustas. HOR.

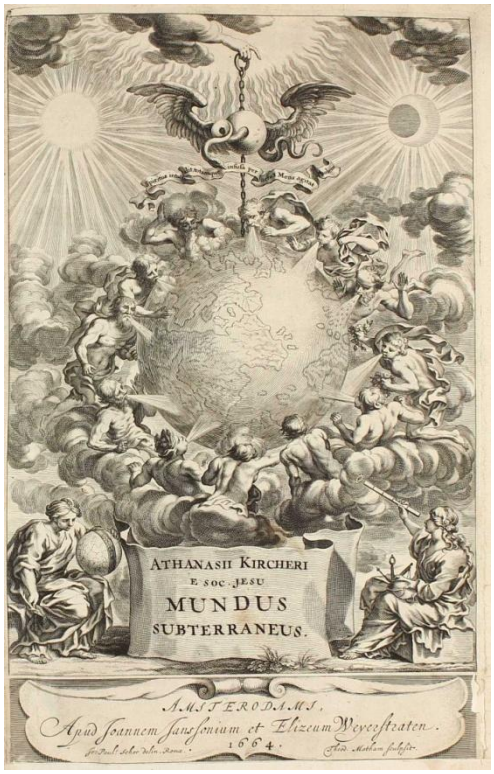
LONDON,
Printed by W. STRAHAN,
For J. and P. KNAPTON; T. and T. LONGMAN; C. HITCH and L. HAWES;
A. MILLAR; and R. and J. DODSLEY.
MDCCLV.

PMM 201; Chapman and Hazen p.137; Fleeman I, p.410; Rothschild 1237; Grolier, 100 English, 50. **FIRST EDITION of Johnson's greatest literary achievement and "the most amazing, enduring and endearing one-man feat in the field of lexicography**. Adam Smith in one of the earliest reviews of the book in the *Edinburgh Review*, 1755, compared it favourably with the best international dictionaries of modern languages then available, those of the French Academy and of the Accademia della Crusca, both of which 'were composed by a numerous society of learned men and took up a longer time in the composition than the life of a single person could well have afforded'; whereas the English dictionary was 'the work of a single person and composed in a period of time very inconsiderable when compared with the extent of the work'. In fact, it took Johnson less than ten years from writing his first prospectus in 1746 to publication day, 14 June 1755, when the two folios went on sale at £4.10s. The *Dictionary* was originally the project of a group of publishers and booksellers and the great Scottish printer, William Strahan. They recognized that the time was ripe to bring to fruition the idea of a standard English dictionary which the Royal Society had entertained as far back as 1664. In that year it appointed a committee for the improvement of the English language... Johnson's Dictionary is divided into four parts: the preface, in which he expounds ... the aims and problems of lexicography; a history and a grammar of the English language, both sections being of interest only in that they show the vast ignorance of eighteenth-century philologists before Sir William Jones and his successors in this field; and finally the dictionary proper. The preface ranks among Johnson's finest writings; the history and the grammar, which did not interest him in the least, are dull rehashes of older compilations. It is the dictionary itself which justifies Noah Webster's statement that 'Johnson's writings had, in philology, the effect which Newton's discoveries had in mathematics'. Johnson introduced into English lexicography principles which had already been accepted in Europe but were quite novel in mid-eighteenth-century England. He codified the spelling of English words; he gave full and lucid definitions of their meanings; and he adduced extensive and apt illustrations from a wide range of authoritative writers." (PMM 201). Johnson and his successive amanuenses took just over eight years to list the 40,000 words found in the Dictionary. He illustrated his definitions with over 114,000 quotations

sourced from the classics of English literature, even rewriting some to fit his purposes. This first edition of the complete Dictionary was published on 15 April, 1755, in a print run of 2000 copies.

The first effort to describe the earth from a physical standpoint

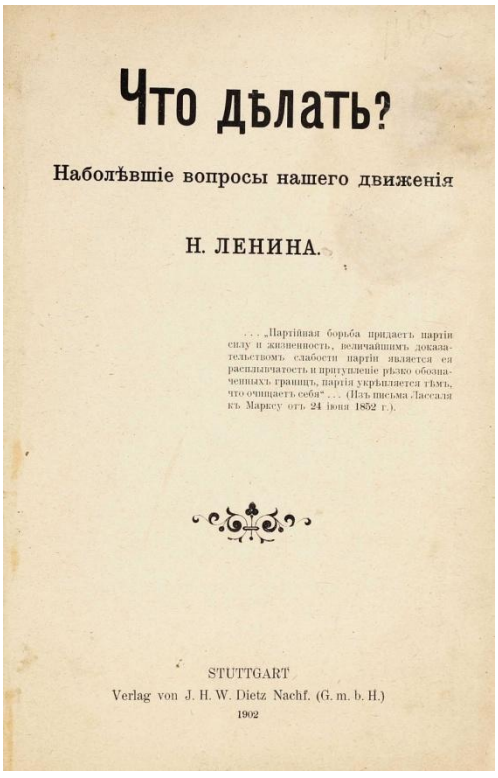
18 **KIRCHER, Athanasius**. *Mundus subterraneus, in XII libros digestus . . .* Two parts in one volume. Amsterdam: Janssonius-Waesberge, 1664-1665. Folio (393 x 238 mm). [28], 346, [6]; [12], 487 [1], [10] pp., including allegorical additional title to each part (both dated 1664), engraved portrait of Kircher and dedicatee Pope Alexander VII, engraved device on title of part 1, 21 (12 double-page, one folding) engraved maps and plates, 7 (6 double-page) letterpress tables, 61 engraved illustrations and maps in text, 3 intact volvelles on pp. 132, 154 and 156; numerous woodcut illustrations throughout, woodcut initials and tailpieces, text in double column. Signatures: *^{4}(*2+[chi]1) **^{6} ***^{4} A-Xx^{4}; (*)^{6} A-Qqq^{4}. Engraved titles part of signature, previlegium leaf [chi]1 of part 1 bound at end of book. Near contemporary brown-dyed vellum with yapp edges, earlier, richly gilt leather spine with gilt lettering piece laid down, blue-dyed edges (boards spotted and soiled, ties gone, extremities worn). Little browning of text and plates, occasional minor spotting, some minor dampstaining mostly to lower blank margin, little worming to front endpapers, engraved title and portrait; lower margin of engraved title and a few leaves elsewhere with old paper repair, repaired tear to worldmap; occasional old marginal ink inscriptions and light pencil markings in part II. Provenance: Inscription on first engraved title "P. M. Octaviani Riess. D.P. a(nn)o 1773". Collated complete. (#003102) € 15,000



Norman 1218; Merrill 17; de Backer-S. IV, 1060 f.; Caillet 5738; Ferguson 1:467; Nissen ZBI 219; Sinkankas 3419; Honeyman 1823; Hoover 483; Ward-Carozzi 1257; Sabin 37967; Alden-L. 665/114. - **RARE FIRST EDITION, FIRST ISSUE of both parts**, with the engraved titles dated 1664. Kircher's encyclopedic compilation describes the physical characteristics of the subterranean or 'hidden' world, which, as such, "must always command a high place in the literature as the first effort to describe the earth from a physical standpoint" (Zittel). His speculations on the existence of a vast underground network of springs and reservoirs, as well his attribution of volcanic eruptions and hot springs to fiery, subterranean regions, stem from his observations of the eruptions of Stromboli, Aetna and Vesuvius and of the violent earthquakes that rocked Calabria between 1637 and 1638, all of which he describes in his preface. He also theorized that volcanoes functioned as 'safety valves' for the inner core of the earth. While some of his notions were fanciful (such as the existence of subterranean monsters), others embraced various branches of science, including physics, geography, geology and chemistry. Although largely critical of alchemy and alchemists (whom he called swindlers: 'homines ad omne fraudis genus fictos'), Kircher did support the transmutations of metals, particularly of iron into copper. His views on the influence of weathering, which he attributed to a chemical process and to cold, were reasonably sound, as was that of the geological action of water and wind, and his interpretation of fossils remained popular until the beginning of the 18th century. The illustrations range from the utterly realistic to the utterly fantastic, such as the crystals copied from from Imperato's *Historia naturale* and a collection of images on stone allegedly formed by nature - including a Madonna - derived from Aldrovandi's *Musaeum metallicum* (1648). In addition to minerals and fossils, Kircher also covers such topics as metallurgy and mining, mines in Spain, Hungary, Peru, and America, pyrotechnic arts, the analysis of mineral waters, poisons, hydraulics, meteorology, distillation, etc. "The most popular of Kircher's works in his day and the best known in ours. The work is not solely geologic. Kircher continues with fantastic speculations about the interior of the earth, its hidden lakes, its rivers of fire and its strange inhabitants. Major topics include gravity, the moon, the sun, eclipses, ocean currents, subterranean waters and fires, meteorology... metallurgy and mining (etc.)" (Merrill). Copies of this voluminous work are almost always found incomplete, lacking either the portraits, the privilege leaf or parts of the 3 volvelles.

The ideological keystone of the Bolshevik Party

19 **LENIN, Vladimir Ilyich (Ulianov).** *Shto Delatch? Nabolevchye Voprosy Nashevo Dvishenija [What is to be Done? Burning Questions of Our Movement].* Что дЪлать? НаболЪвипе вопросы нашего движеяхй. Stuttgart: Nachfolger J. H. W. Dietz, 1902. 8vo (220 x 149 mm). vii [1], 144 pp. Bound in contemporary half moiré-cloth (extremities rubbed, boards scratched, lower corner of upper board bumped). Light even browning of text, small patch shaved and repaired on title-page and on the following two sheets (not affecting any text), faint illegible oval stamp on p.v, minor faint spotting in places, small tear to blank inner margin of one leaf, but generally a clean and well preserved copy. (#003091) € 15,000


Что дѣлать?

Наболѣвшіе вопросы нашего движенія

Н. ЛЕНИНА.

. . . „Партійная борьба придаетъ партіи силу и жизненность, величайшимъ доказательствомъ слабости партіи является ея расплывчатость и притупленіе рѣзко обозначенныхъ границъ, партія укрѣпляется тѣмъ, что очищаетъ себя" . . . (Изъ письма Лассаля къ Марксу отъ 24 іюня 1852 г.).

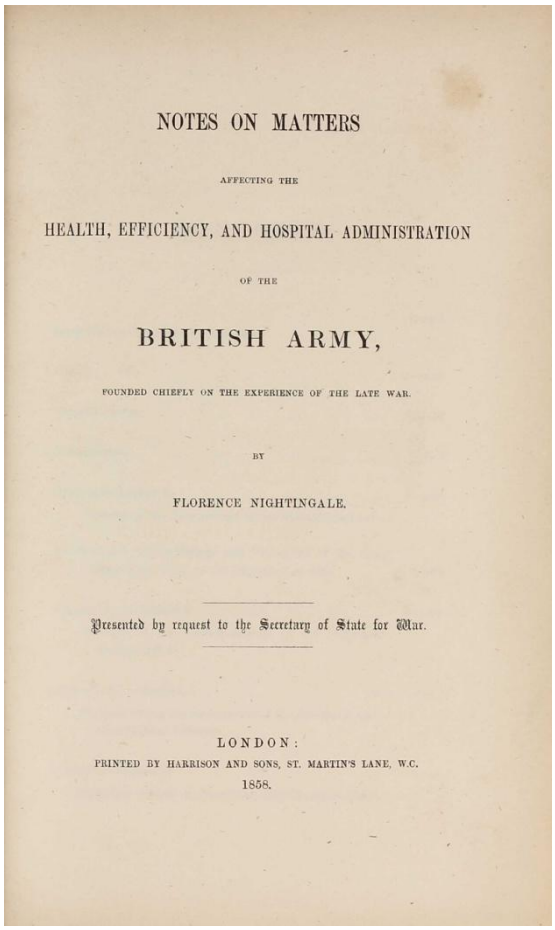
STUTTGART
Verlag von J. H. W. Dietz Nachf. (G. m. b. H.)
1902

PMM 392; Kindler X, 198. - **EXTREMELY RARE FIRST EDITION** of Lenin's ideological keystone of the Bolshevik Party. "Written between the autumn of 1901 and February 1902, while Lenin and his wife, N. K. Krupskaya, were in exile in Munich (with Zürich the main centre of Russian revolutionary emigration at that time) *'What is to be done?*' was the ideological keystone of the Bolshevik Party. It was published, with the subtitle '*Burning Questions of Our Movement*', by the official publishers of the German Social-Democratic Party, Dietz of Stuttgart. The title-page bore the significant quotation from Lassalle: 'Party struggles give a party strength and life. . . A party becomes stronger by purging itself'. Of the book's first appearance

Krupskaya wrote: 'Later the Mensheviks vehemently attacked '*What is to be done?*' but at this juncture the book captivated everyone, especially those more closely in touch with Russian work.' This was because it 'provided a plan for extensive revolutionary work. It pointed out definite jobs to be done. But though the book's appeal for better organization was of central importance, particularly in the haphazard Russian movement of those days, this was not separated from the general argument on the political necessity to build a strong, centralized party (a 'party of a new type'), fighting constantly for the purity of its doctrine, and led by professionals 'who shall devote to the revolution not only their spare evenings, but the whole of their lives'. Lenin contended for conscious leadership as against reliance on 'spontaneous' reactions among the people and stressed the great value of a party newspaper as a collective organizer, drawing on the experience of the recently-founded *Iskra*: it was in no. 4 (May 1901) of that journal that Lenin, in an article headed '*Where to begin?*', had sketched the ideas fully developed in *'What is to be done?*'. The boot presented Lenin's most searching criticism of the 'economist' tendency; the view that the purely economic, trade union struggle was all that concerned the workers. On the contrary, he said, 'the workers can acquire class political consciousness *only from without*, that it is only outside of the economic struggle'. The revolutionary socialist's ideal, he added, 'should not be a trade union secretary, but a tribune of the people'." (PMM).

The military nursing reform: two rare works in first edition

20 **NIGHTINGALE, Florence**. *Notes on Matters Affecting the Health, Efficiency, and Hospital Administration of the British Army.* [**bound with:**] *Subsidiary Notes as to the Introduction of Female Nursing into Military Hospitals in Peace and in War*. London: Harrison and Sons, 1858. Two works in one volume. 8vo (222 x 141mm). [4], iv, [9], vi-xix, [2] 2-12, 2, xxx, 66, xlvii [1], iv, 67-80, xxxiv [2], 81-176, [2], 177-234, xliv, 235-332, xxvii [1], 333-556, lviii, 557-567 [1] pp; iv [2] v-x, 28, 133 [1], 23 [1] pp. First work with 6 plates (5 folding, 1 coloured), second work with 1 folding plate. Contemporary red half calf, plain spine titled in gilt, upper board with Lord Houghton's stamp in gilt, powder blue endpapers (extremities slightly rubbed). Several leaves unopened. Text quite crisp and clean, little spotting to a few pages only, folding plate 'Diagram of the Causes of Mortality' a few mm proud of the book block resulting in slight soiling and short closed tearing at fore-edge. Provenance: Richard Monckton Milnes, first baron Houghton (1809-1885, stamp on binding); Robert Offley Ashburton Crewe-Milnes, 1st marquess of Crewe (The Lord Houghton), 1858-1945, British Liberal politician, statesman and writer (engraved armorial bookplate 'Roberti Comitis de Crewe' to front pastedown); by descent to his daughter Mary, duchess of Roxburghe. A fine copy in untouched binding. (#002992) € 27,500


NOTES ON MATTERS

AFFECTING THE

HEALTH, EFFICIENCY, AND HOSPITAL ADMINISTRATION

OF THE

BRITISH ARMY,

FOUNDED CHIEFLY ON THE EXPERIENCE OF THE LATE WAR.

BY

FLORENCE NIGHTINGALE.

Presented by request to the Secretary of State for War.

LONDON:
PRINTED BY HARRISON AND SONS, ST. MARTIN'S LANE, W.C.
1858.

PMM 343 (first work); Bishop and Goldie, *Florence Nightingale*, no. 3 (second work) and no. 50 (first work), not in Norman. **FIRST EDITIONS AND EXCEPTIONALLY RARE; FOR PRIVATE CIRCULATION ONLY, AND RARELY FOUND TOGETHER AS HERE**. The rather complex collation of our set conforms with those given in Bishop and Goldie.

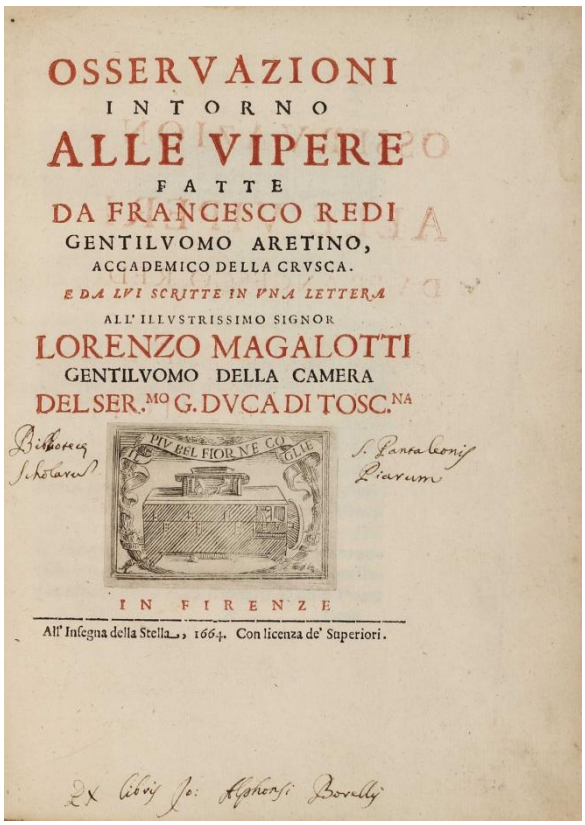
These works formed the foundation for all the administrative, sanitary and nursing reforms in the Army, which followed the report by the Royal Commission which Nightingale persuaded Lord Panmure to set up when she met him at Balmoral in October 1856. Panmure officially requested that Nightingale give evidence based on her own experience and observations, and by August 1857 she had the main body of the work ready for the press. However, it was not published at once, as it wasn't considered appropriate to appear before the Report of the Royal Commission itself. When the latter appeared the following January, it contained an appendix with a mass of official correspondence on the care of the sick and wounded during the Crimean War which Nightingale

immediately incorporated in her own *Notes* 'while the proof sheets ... were passing through the press.' The last-minute incorporation of this material explains the erratic pagination of the work, the additions being on pages with Roman numerals. Nightingale's biographer, Sir Edward Cook, calls this book 'the least known, but ... the most remarkable of her works. It is little known because it was never published.' The *Notes* were compiled and printed within nine months of her first meeting with Panmure and at her own expense for private circulation among influential people, and they show her as a major innovator in the collection, tabulation, and interpretation of descriptive statistics; someone who recognized the value of the idea that social phenomena could be objectively measured and subjected to mathematical analysis. "There is not a grievance, nor a defect of the system (or lack of it), not a remedy that is overlooked. An introduction deals with army health in earlier campaigns. The first six chapters are concerned with the ghastly medical history of the Crimean War. This is followed by extensive and detailed recommendations on hospital organization. The rest of the book ranges far and wide over matters of army life, from sanitary requirements to the pay of private soldiers." (PMM).

Subsidiary Notes is developed and expanded from the 'tentative and experimental Memorandum' on *Female Nurses in Military Hospitals* (1857), and really constitutes a treatise on nursing at large. Her much better known *Notes on Nursing*, published two years later, was an abridged version of the detailed study which had gone into this earlier, privately printed book.

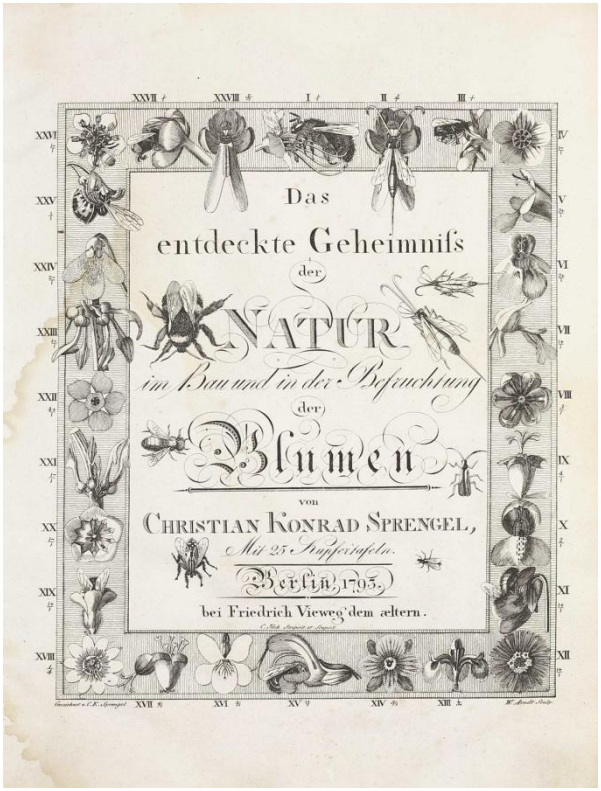
Giovanni Alfonso Borelli's copy of a milestone work of experimental toxicology

21 REDI, Francesco. *Osservazioni intorno alle vipere*. Florence: All'Insegna della Stella, 1664. 4to (233 x 171 mm). [4], 5-91, [5] pp. Half-title, title printed in red and black and with engraved device of the Accademia della Crusca and woodcut printer's device on verso of L4, errata leaf at end. 18th-century half vellum over pasteboards with decorated xylographic paper covers (light soiling, a few smaller chips of paper at extremities). Text generally quite crisp and clean with little occasional spotting and faint dampstaining to final 3 leaves, half-title somewhat dust-soiled. Provenance: Giovanni Alfonso Borelli (inscribed "Biblioteca Scholaris Piarum S. Pantaleonis" and signed "Ex libri Jo. Alphonsi Borelli" on title-page*). A fine, wide-margined copy with important provenance. (#002962) € 9,500


OSSERVAZIONI
INTORNO
ALLE VIPERE
FATTE
DA FRANCESCO REDI
GENTILVOMO ARETINO,
ACCADEMICO DELLA CRVSCA.
E DA LVI SCRITTE IN VNA LETTERA
ALL' ILLVSTRISSIMO SIGNOR
LORENZO MAGALOTTI
GENTILVOMO DELLA CAMERA
DEL SER.MO G. DVCA DI TOSC.NA
IN FIRENZE
All' Insegna della Stella, 1664. Con licenza de' Superiori.

Norman 1810; Garrison-Morton 102; Osler 3774. **FIRST EDITION OF THE AUTHOR'S FIRST PUBLICATION. 'THIS FIRST METHODICAL STUDY OF SNAKE VENOM MARKS THE BEGINNING OF EXPERIMENTAL TOXICOLOGY**. Redi determined experimentally that, contrary to popular belief, a viper's venom has nothing to do with its bile but was manufactured in two glands and stored in the sheaths concealing the snake's fangs. He studied the effects of snake poison, discovering that it was effective only if injected into the bloodstream, and recommended making a tight ligature above the wound in cases of snakebite to prevent the poison from flowing to the heart' (Norman 1810). * We have compared our copy with a copy at the Lilly Library of Benedetto Castelli's *Della misura dell'acque*, which is almost identically inscribed by Borelli (see www.indiana.edu/~liblilly/anatomia/mech/castelli.html).

22 **SPRENGEL, Christian Konrad.** *Das entdeckte Geheimniss der Natur im Bau und in der Befruchtung der Blumen.* Berlin: Friedrich Vieweg, 1793. 4to (267 x 210 mm). [6] pp., 444 columns, [4] pp. Fine engraved title by W. Arndt and C. Jack after Sprengel and Jack, and 25 engraved plates by J.S. Capieux, A. Wohlgemuth and J.D.H. after Sprengel. 20th-century half calf over marbled boards, spine ruled and lettered in gilt, red-dyed edges (little rubbing of extremities). Text generally quite clean and bright, faint dampstaining to first 4 leaves including title, three gatherings M-O, and a few plates; minor occasional foxing. Provenance: long inscription* in ink on first free endpaper, dated 11 September 1794. (#001676) € 5,500

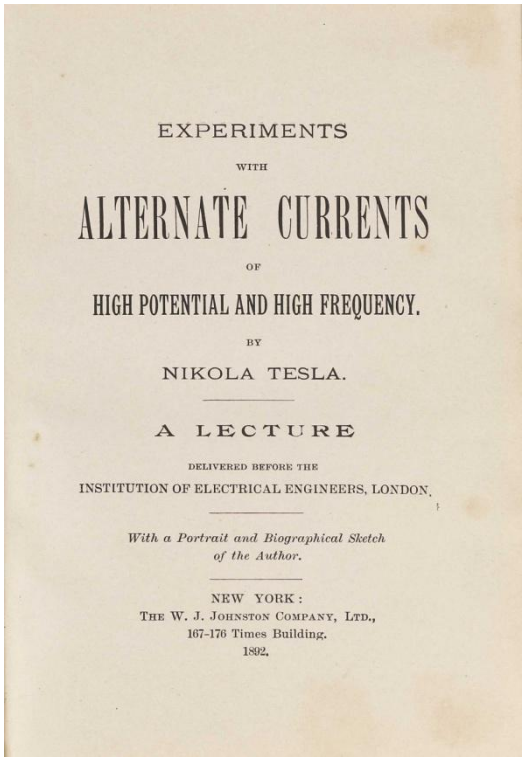


Dibner 30; Sparrow 184; Nissen, BBI 1883; Stafleu-C. 12.672; DSB XII, p.588; Norman 1990. - RARE FIRST EDITION. AN IMPORTANT WORK THAT FIRST DEFINED THE FUNCTION OF INSECTS IN PLANT POLLINATION, AND 'PROVIDED DARWIN WITH EVIDENCE FOR HIS THEORY OF EVOLUTION' (DSB XII, p.588). A student of Ernst Ludwig Heim (who also taught Alexander von Humboldt), Sprengel commenced his study of pollination in geraniums in 1787, and the function of insects and the flower's structures in the process, leading him to interpret the 'mystery' of the flower's botanical attributes through pollination and hence reproduction. 'His rediscovery of dichogamy ... led him to one of his major conclusions: "Nature appears not to have intended that any flower should be fertilized by its own pollen". This doctrine, together with the even more important view of the close integration of floral structures with insect visitation, was the first attempt to explain the origin of organic forms from definite relations to the environment' (DSB). However, Sprengel's ideas were not understood or appreciated at the time of publication, and his work remained little-known in his lifetime. It was only when a later generation of botanists investigated the field that the significance of Sprengel's work was understood, as Darwin acknowledged in *The Effects of Cross and Self Fertilization in the Vegetable Kingdom*: 'Long before I had attended to the fertilisation of flowers, a remarkable book appeared in 1793 in Germany ... by C.K. Sprengel, in which he clearly proved by innumerable observations, how essential a part insects play in the fertilisation of many plants. But he was in advance of his age, and his discoveries were for a long time neglected.

*The inscription reads: "Seit der Zeit da ich Hedwig's *Befruchtungs System der Moose* las, welches an 14 Jahre her ist, hab ich nicht ein so großes und inniges Vergnügen gehabt als heute. Ich kann den Scharfsinn, den genauen Beobachtungsgeist und den unermüdeten Fleiß, und die richtige Darstellung der Dinge, von denen er spricht, garnicht genug bewundern. Sein Werk ist ein Meisterstück, ein Original, welches ihm Ehre macht, u worauf ganz Deutschland stolz sei(n) ka(nn) / Ernst Heim / über das Buch des Rector Sprengel / Den 11 September 1794."

Proposing alternating currents for electric power transmission

23 **TESLA, Nikola**. *Experiments with Alternate Currents of High Potential and High Frequency. A Lecture delivered before the Institution of Electrical Engineers, London*. New York: W. J. Johnston, 1892. 8vo (173 x 123 mm). ix [1], 146, [4] pp., including frontispiece portrait of Tesla, tissue guard with tear, several text illustrations, and 2 leaves of adverts at end. Original publisher's green cloth, gilt-lettered spine (extremities slightly rubbed, lower corners bumped). Text little age-toned, very minor occasional spotting, light foxing to tissue guards and edges. Provenance: Ulrico Hoepli, Milan (small sticker to front pastedown). A near fine copy. (#003093) € 4,500


EXPERIMENTS
WITH
ALTERNATE CURRENTS
OF
HIGH POTENTIAL AND HIGH FREQUENCY.
BY
NIKOLA TESLA.
A LECTURE
DELIVERED BEFORE THE
INSTITUTION OF ELECTRICAL ENGINEERS, LONDON.
With a Portrait and Biographical Sketch of the Author.
NEW YORK:
THE W. J. JOHNSTON COMPANY, LTD.,
167-176 Times Building.
1892.

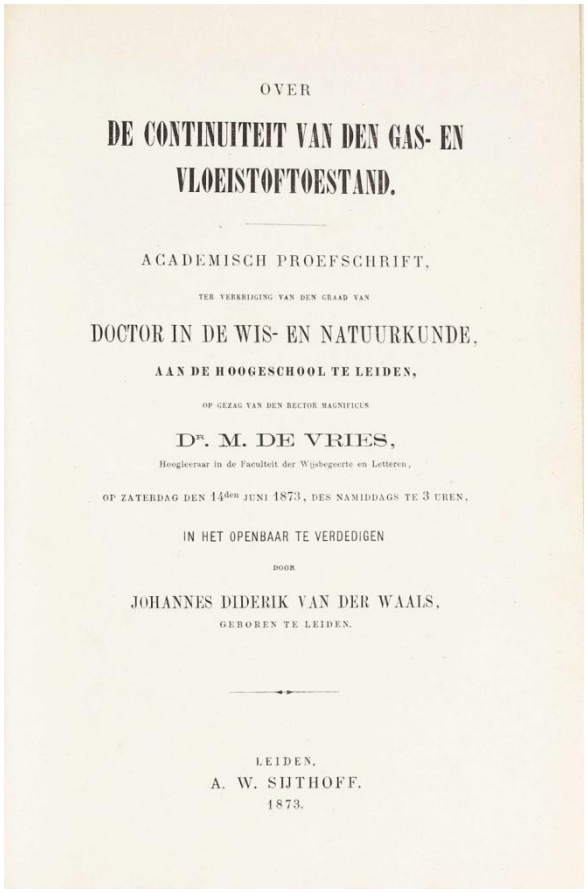
DSB XIII, p.287. - RARE FIRST EDITION IN BOOK FORM of Tesla's most celebrated lecture, explaining and promoting the benefits and uses of alternating current. After having worked a few years for Edison's company, Tesla left in order to develop and promote his own industrial arc lamp. Edison dismissed Tesla's idea of an alternating-current system of electric power transmission, instead promoting his simpler, but less efficient, direct-current system. "By 1888 Tesla had obtained patents on a whole polyphase system of alternating-current dynamos, transformers, and motors; the rights to these were bought in that year by George Westinghouse, and the 'battle of the currents' was begun. Although Edison continued to espouse direct current, Tesla's system triumphed to make possible the first large-scale harnessing of Niagara Falls and to provide the basis for the whole modern electric-power industry ... During the next few years Tesla worked in his New York laboratories on a wide variety of projects. He was very successful, particularly in his invention of the Tesla coil, an air-core transformer, and in his further research on high-frequency currents. In 1891 he lectured on his high-frequency devices to the American Institute of Electrical Engineers, and this lecture, coupled with a spectacular demonstration of these apparatuses, made him famous. He repeated his performance in Europe, to great acclaim, and enjoyed international celebrity." (DSB).

A foundation work of modern molecular physics

24 **VAN DER WAALS, Johannes Diderik**. *Over de continuiteit van de gas- en vloeistoftoestand. Academisch Proefschrift . . . aan de Hoogeschool te Leiden*. Leiden: A. W. Sijthoff, 1873. 8vo (220 x 155 mm). viii, 134, [2] pp., including half-title, one folding lithographed plate, and errata leaf. 20th-century half calf over marbled boards, spine lettered and decorated in gilt (light rubbing to extremities). Original printed wrappers bound in. Faint spotting on the plate, wrappers slightly dust-soiled, but otherwise a fresh and bright copy. Provenance: Torsten Malmberg (bookplate to front pastedown); illegible inscription on half-title. (#003104) € 8,000

DSB XIV, p.109-11; Stanitz 80; not in Norman. **EXCEPTIONALLY RARE FIRST EDITION** of Van der Waals' doctoral dissertation on gas and fluid states which laid the foundations for modern molecular physics, a work which, in the words of James Clerk Maxwell, "at once put his name among the foremost in science." Van der Waals, the son of a carpenter, was because of his modest circumstances a relatively slow developer as a professional scientist: he returned to university at the age of thirty, after years spent as a primary and secondary-school teacher. Shortly after the appearance of his dissertation, however, he was promoted to the chair in physics at the newly founded university of Amsterdam, where he was succeeded, on his retirement in 1907, by his son. In 1910 he was awarded the Nobel Prize in Physics. "On the basis of his knowledge of the work of Clausius and other molecular theorists, he wrote his dissertation, *'Over de continuiteit'* ... Using rather simple mathematics, the dissertation gave a satisfactory molecular explanation for the phenomena observed in vapors and liquids by Thomas Andrews and other experimenters... This was one of the first descriptions of a collective molecular effect" (DSB). At the time van der Waals wrote his thesis, the molecular structure of fluids had not been

accepted by most physicists, and liquid and vapor were often considered as chemically distinct. It was this thesis that affirmed the reality of molecules and allowed an assessment of their size and attractive strength. His new formula revolutionized the study of equations of state. By comparing his equation of state with experimental data, Van der Waals was able to obtain estimates for actual molecule sizes and the strength of their mutual attraction. The effect of Van der Waals' work on molecular physics in the 20th century was direct and fundamental. By introducing parameters characterizing molecular size and attraction in constructing his equation of state, Van der Waals set the tone for modern molecular science. This work is a great rarity with no copy recorded at auction in the past 20 years.



OVER

DE CONTINUITEIT VAN DEN GAS- EN VLOEISTOFTOESTAND.

ACADEMISCH PROEFSCHRIFT,

TER VERKRIJGING VAN DEN GRAAD VAN

DOCTOR IN DE WIS- EN NATUURKUNDE,

AAN DE HOOGESCHOOL TE LEIDEN,

OP GEZAG VAN DEN RECTOR MAGNIFICUS

Dr. M. DE VRIES,

Hoogleeraar in de Faculteit der Wijsbegeerte en Letteren,

OP ZATERDAG DEN 14den JUNI 1873, DES NAMIDDAGS TE 3 UREN,

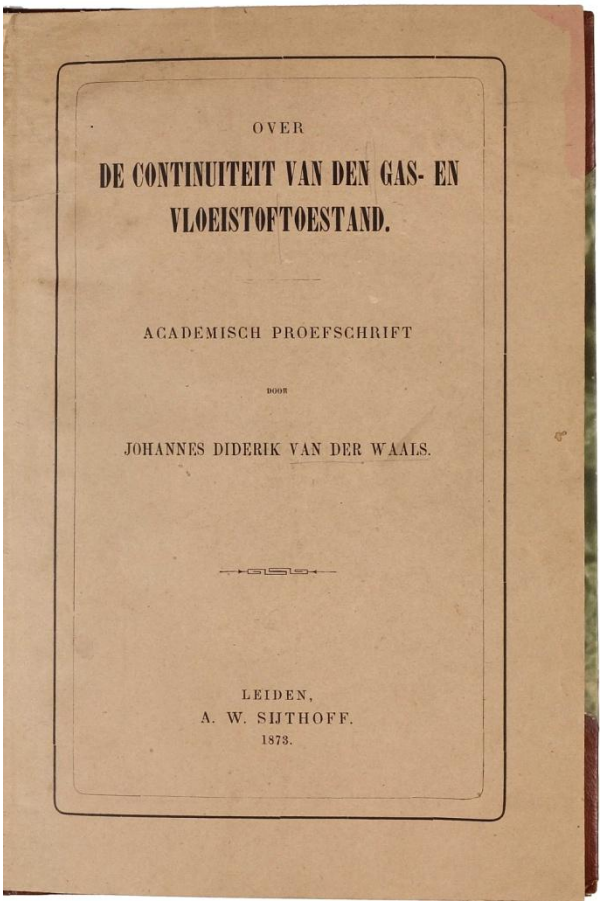
IN HET OPENBAAR TE VERDEDIGEN

DOOR

JOHANNES DIDERIK VAN DER WAALS,

GEBOREN TE LEIDEN.

LEIDEN,
A. W. SIJTHOFF.
1873.



OVER

DE CONTINUITEIT VAN DEN GAS- EN VLOEISTOFTOESTAND.

ACADEMISCH PROEFSCHRIFT

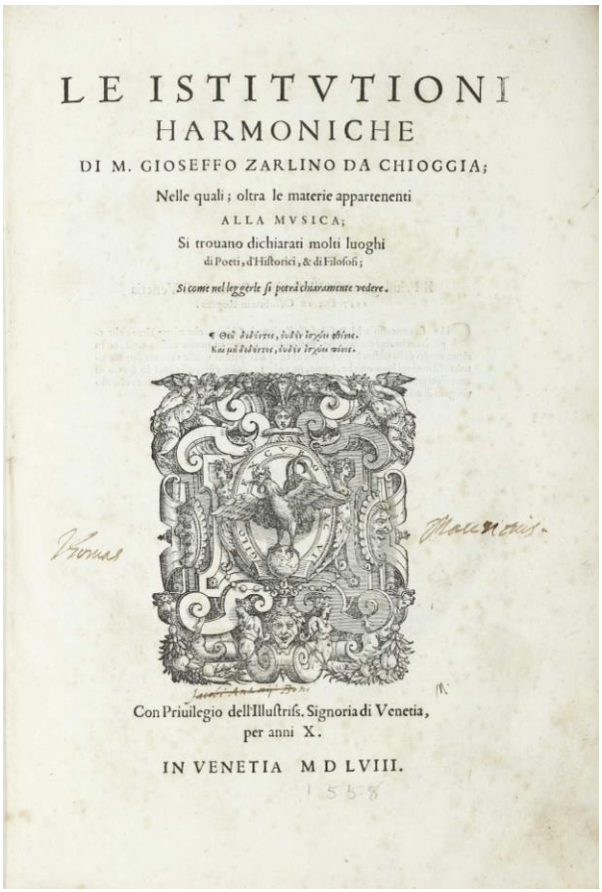
DOOR

JOHANNES DIDERIK VAN DER WAALS.

LEIDEN,
A. W. SIJTHOFF.
1873.

The most important book in the history of music theory

25 **ZARLINO, Gioseffo**. *Le Istitutioni Harmoniche*. Venice: Francesco Senese, 1558. 4to (306 x 207 mm), [12], 347 [1] pp., including numerous woodcut diagrams (many full page), including a keyboard instrument, extensive type-set music (including pieces illustrating imitative counterpoint), and historiated 5- & 8-line initials, italic letter. Early 19th-century half vellum (soiled, spine darkened with short crack at top of front joint), red morocco lettering piece to spine. Internally only very little age-toned, a few annotation in contemporary hand, ink stain on fore edge slightly showing internally, faint marginal dampstains to a few pages, contents otherwise bright and clean. Provenance: Thomas Mauritus(?), signature on title-page, modern ownership inscriptions on front pastedown. An outstanding, wide-margined copy. (#002320) € 38,000


LE ISTITVTIONI
HARMONICHE
DI M. GIOSEFFO ZARLINO DA CHIOGGIA;
Nelle quali; oltra le materie appartenenti
ALLA MVSICA;
Si trouano dichiarati molti luoghi
di Poeti, d'Historici, & di Filosofi;
Si come nel leggerle si potrà chiaramente vedere.
Con Priuilegio dell'Illustriss. Signoria di Venetia,
per anni X.
IN VENETIA M D LVIII.

PMM 81; RISM Écrits, p.907; Censimento 16 CNCE 25277; Gregory & Bartlett, i, 296; Ricardi II, 661; Hirsch, i 623; not in Adams. - **RARE FIRST EDITION, FIRST ISSUE** of arguably the most important and influentual book in the history of music theory. Gioseffo Zarlino (1517-1590) laid down the theoretical basis for almost all aspects of modern music, for which he was cited as the ultimate authority for the next two hundred years. He codified the contrapuntal techniques of the great composers of his time and was the first to explain the modern tonal system of major and minor modes. In the terza parte Zarlino treats counterpoint in a conservative manner, particularly regarding the treatment of dissonances, provoking widespread attacks by Vincenzo Galilei and others. Artusi cited Zarlino in his attacks on Monteverdi and brought forth the latter's distinction between the prima prattica and his own seconda pratica. The Istitutioni "opened the way for the new tonality which has governed music from the seventeenth century to the present day" (PMM). This is the first issue of the *Istitutioni*, with the privilege and errata list both placed on recto of final leaf of preliminaires, and with its verso blank.

The *Istitutioni harmoniche* fully approved of the practise of composition, as Willaert had taught. It is explained in the third part and is the central theme of the book. However, Zarlino was too much the Philosopher and Theologian, to confine himself to the reproduction of rules of composition. The first two parts of the book are devoted to practical theories of cosmology, philosophy and acoustics, as interpreted at that time. The most important humanist sources on which Zarlino based his thoughts were those of M. Ficino's translation and commentary of Plato's *Timaios* and the *Harmonika* of Ptolomy. He borrowed his ideas on harmony of the worlds from Plato. Zarlino's rules of composition are far more detailed and fully developed than those of his predecessors. The most prominent characteristic of his method is the idea of the harmonia perfetta. Zarlino objected strongly and loudly to those who did not respect modern music as much as that of the ancient Greeks or believed that it could not be as expressive without imitating the antique chromatic and enharmonic modes. He insisted, rather, on the integration of four elements: harmony, metre, text and a receptive audience.

Very rare, only 3 copies of the first edition recorded at auction in the past 50 years.

TERMS of SALE

1. Prices and tax

All listed prices are in Euro currency and include 7% German value-added tax (VAT, Mwst.) for private end-consumers within Germany and the European Union. The shipping is free of charge.

Listed items are subject to prior sale.

2. Revocation

2.1 Right of Revocation

You have the right to withdraw from this agreement within fourteen days without stating a reason. The period of revocation is fourteen days from the date on which the goods were accepted by you or by a third person appointed by you, who is not the carrier.

In order to exercise your right of revocation, you must notify us

Milestones of Science Books
Jörn Koblitz
Schulstrasse 18A
27721 Ritterhude, Germany
Phone: +49 (0) 421 1754235
E-Mail: info@milestone-books.de

accordingly in an unequivocal statement (e.g. letter sent by post, telefax or e-mail) of your decision to withdraw from the agreement. You may use the attached sample revocation form for this purpose, however this is not mandatory. Sending notification of your intention to exercise your right of revocation prior to expiry of the period of revocation shall be sufficient to comply with the period of revocation.

2.2 Consequences of Revocation

If you withdraw from this agreement, we shall refund all payments that we have received from you, including delivery costs (with the exception of additional costs that arise if you have selected a form of delivery other than the cheapest form of standard delivery offered by us) without undue delay and within fourteen days at the latest from the date on which we received the notice of revocation. For this refund we use the same method of payment that you used for the original transaction, unless expressly agreed otherwise with you; in no event will you be charged any fees for this refund.

We may refuse the refund until the goods have been returned to us or until such time as you have provided evidence that you have returned the goods, whichever is the earlier.

You must return or hand over the goods to us without undue delay and, at all events, within fourteen days at the latest from the date on which you notified us of your withdrawal from the agreement. The deadline shall be deemed to have been complied with if the goods are dispatched prior to expiry of the deadline.

The immediate costs of returning the goods shall be borne by you.

You shall only be required to compensate any loss of value if said loss of value can be attributed to any unnecessary handling of the goods for the purpose of testing the condition, properties and functionality of said goods.

2.3 Exclusion of the right of revocation.

There is no right of revocation for agreements on the delivery of goods that are not prefabricated and for the manufacture of which the consumer has made an individual selection or stipulation, or that have been clearly tailored to meet the personal requirements of the consumer.

Revocation form

If you wish to withdraw from the agreement, please fill in this form and send it back to:

Milestones of Science Books
Joern Koblitz
Schulstrasse 18A
27721 Ritterhude, Germany
Phone: +49 (0) 421 1754235
E-Mail: info@milestone-books.de

I / we(*)
hereby withdraw from the agreement signed by me / us (*) for the purchase of the

following goods:_____

_____

Ordered on ( ) Received on ( )

Name of consumer(s): _____

Address of consumer(s):

_____

_____

_____

_____ _____

Signature of consumer(s): Date:

(*) delete as appropriate

Widerrufsbelehrung für Verbraucher

Widerrufsrecht

Sie haben das Recht, binnen vierzehn Tagen ohne Angabe von Gründen diesen Vertrag zu widerrufen. Die Widerrufsfrist beträgt vierzehn Tage ab dem Tag, an dem Sie oder ein von Ihnen benannter Dritter, der nicht der Beförderer ist, die Waren in Besitz genommen haben bzw. hat.

Um Ihr Widerrufsrecht auszuüben, müssen Sie uns

Milestones of Science Books
Jörn Koblitz
Schulstrasse 18A
27721 Ritterhude, Deutschland
Tel.: +49 (0) 421 1754235
E-Mail: info@milestone-books.de

mittels einer eindeutigen Erklärung (z.B. ein mit der Post versandter Brief, Telefax oder E-Mail) über Ihren Entschluss, diesen Vertrag zu widerrufen, informieren. Sie können dafür das beigefügte Muster-Widerrufsformular verwenden, das jedoch nicht vorgeschrieben ist. Sie können das Muster-Widerrufsformular oder eine andere eindeutige Erklärung auch auf unserer Webseite [http://www.milestone-books.de/terms.php] elektronisch ausfüllen und übermitteln. Machen Sie von dieser Möglichkeit Gebrauch, so werden wir Ihnen unverzüglich (z. B. per E-Mail) eine Bestätigung über den Eingang eines solchen Widerrufs übermitteln.

Zur Wahrung der Widerrufsfrist reicht es aus, dass Sie die Mitteilung über die Ausübung des Widerrufsrechts vor Ablauf der Widerrufsfrist absenden.

Folgen des Widerrufs

Wenn Sie diesen Vertrag widerrufen, haben wir Ihnen alle Zahlungen, die wir von Ihnen erhalten haben, einschließlich der Lieferkosten (mit Ausnahme der zusätzlichen Kosten, die sich daraus ergeben, dass Sie eine andere Art der Lieferung als die von uns angebotene, günstigste Standardlieferung gewählt haben), unverzüglich und spätestens binnen vierzehn Tagen ab dem Tag zurückzuzahlen, an dem die Mitteilung über Ihren Widerruf dieses Vertrags bei uns eingegangen ist. Für diese Rückzahlung verwenden wir dasselbe Zahlungsmittel, das Sie bei der ursprünglichen Transaktion eingesetzt haben, es sei denn, mit Ihnen wurde ausdrücklich etwas anderes vereinbart; in keinem Fall werden Ihnen wegen dieser Rückzahlung Entgelte berechnet. Wir können die Rückzahlung verweigern, bis wir die Waren wieder zurückerhalten haben oder bis Sie den Nachweis erbracht haben, dass Sie die Waren zurückgesandt haben, je nachdem, welches der frühere Zeitpunkt ist.

Sie haben die Waren unverzüglich und in jedem Fall spätestens binnen vierzehn Tagen ab dem Tag, an dem Sie uns über den Widerruf dieses Vertrags unterrichten, an uns oder an zurück zusenden oder zu übergeben. Die Frist ist gewahrt, wenn Sie die Waren vor Ablauf der Frist von vierzehn Tagen absenden. Sie tragen die unmittelbaren Kosten der Rücksendung der Waren.

Sie müssen für einen etwaigen Wertverlust der Waren nur aufkommen, wenn dieser Wertverlust auf einen zur Prüfung der Beschaffenheit, Eigenschaften und Funktionsweise der Waren nicht notwendigen Umgang mit ihnen zurückzuführen ist.

Ausnahmen vom Widerrufsrecht

Das Widerrufsrecht besteht nicht bzw. erlischt bei folgenden Verträgen:

- Zur Lieferung von Zeitungen und Zeitschriften oder Illustrierten, mit Ausnahme von Abonnement Verträgen;

- Bei der Lieferung digitaler Inhalte (ebooks), die nicht auf einem körperlichen Datenträger (z.B. einer CD oder DVD) geliefert werden, wenn Sie dem Beginn der Ausführung vor der Bestellung ausdrücklich zugestimmt und zur selben Zeit bestätigt haben, dass mit der Ausführung begonnen werden kann und Sie Ihr Widerrufsrecht verlieren, sobald die Ausführung begonnen hat.

Ende der Widerrufsbelehrung

Muster-Widerrufsformular

(Wenn Sie den Vertrag widerrufen wollen, dann füllen Sie bitte dieses Formular aus und senden Sie es zurück.)

— An:
Milestones of Science Books
Jörn Koblitz
Schulstrasse 18A
27721 Ritterhude, Deutschland
Tel.: +49 (0) 421 1754235
E-Mail: info@milestone-books.de

— Hiermit widerrufe(n) ich/wir den von mir/uns abgeschlossenen Vertrag über den Kauf der folgenden Waren:

— Bestellt am ( ) / erhalten am ( )

— Name des / der Verbraucher(s)

— Anschrift des / der Verbraucher(s)

— Unterschrift des / der Verbraucher(s) (nur bei Mitteilung auf Papier)

— Datum

