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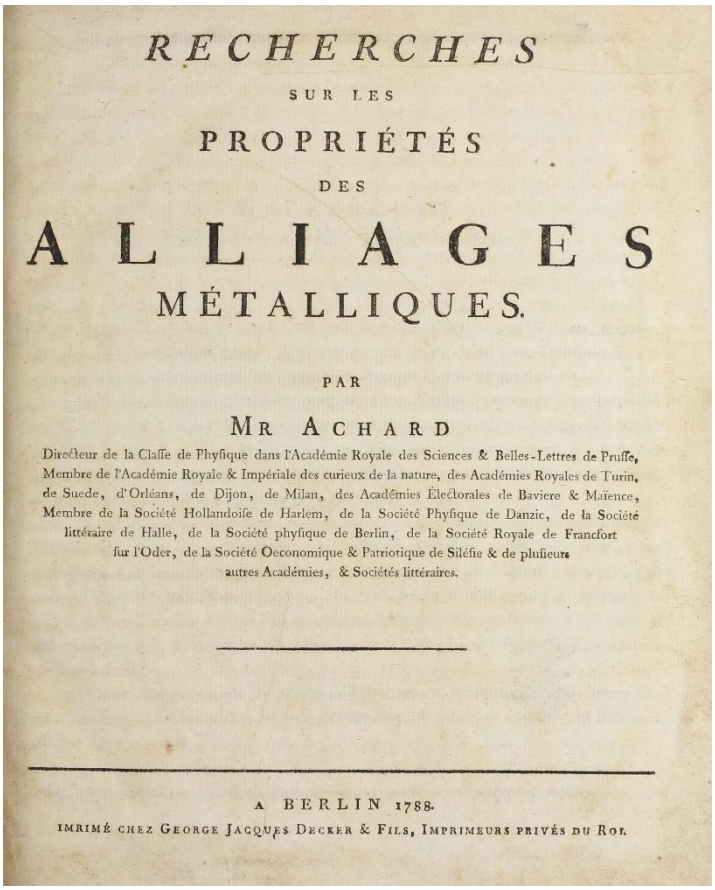
1 **ACHARD, FRANZ Carl**. *Recherches sur les propriétés des alliages métalliques*. Berlin: Imprimé chez George Jacques Decker, 1788. 4to (260 x 210 mm). xvi, 313 (i.e., 315) [1] pp, 1 folding letterpress table, errata on final page. Contemporary sprinkled calf, flat spine with gilt decoration and gilt-lettered label, red-dyed edges, original endpapers, remnant of shelf-mark label at foot of spine (leather over boards somewhat scratched, extremities rubbed, corners bumped and scuffed). Text crisp and clean throughout, the title slightly browned at outer margins from binders glue. Provenance: inner front board blindstamped "LAVY 1814", unidentified collectors ink stamp to title verso. A fine copy in untouched binding. (#003623) € 3800

RARE FIRST EDITION of this landmark work in metallurgy representing the first assembly of data on alloying systems, including the newly discovered platinum. "So far only the properties of relatively pure platinum had been studied, but in 1788 there appeared a remarkable book from the hands of Franz Karl Achard in Berlin. He will be remembered as the discoverer of the arsenic process for preparing malleable platinum [...], but he now published the results of a laborious and comprehensive programme on the alloys of eleven metals, including platinum, with each other. In this he pointed out that the properties of alloys are quite different from those of the pure metals and are unpredictable. All the alloys were in the as-cast condition and on these he carried out tests for density, hardness, resistance to impact and to the file and then on the effects of exposure to air, to hydrogen sulphide and to acids on polished surfaces. He attempted to alloy platinum in the proportions of 1:2 and 2:1 with cobalt, copper, iron, lead, tin, zinc, bismuth, antimony and arsenic, and finally produced a ternary alloy of equal parts of copper, iron and platinum which he found to give considerable hardness as measured by the diameter of the flat small impression made on a small sphere falling repeatedly from successively greater heights. Not all of the binary alloys were of course sufficiently sound to withstand his series of mechanical tests, while his specific gravity figures he admitted were so low as to indicate considerable porosity. These results were published in a book 'Recherches sur les Proprietes des Alliages Metalliqucs', written in the French language insisted upon by Frederick the Great, but unfortunately it was virtually ignored by metallurgists everywhere, while Achard himself turned to the development of the beet sugar industry in Germany. This rare work was brought to light only in recent years by Professor Cyril Stanley Smith" (McDonald & Hunt).



RECHERCHES

SUR LES

PROPRIÉTÉS

DES

ALLIAGES

MÉTALLIQUES.

PAR

MR ACHARD

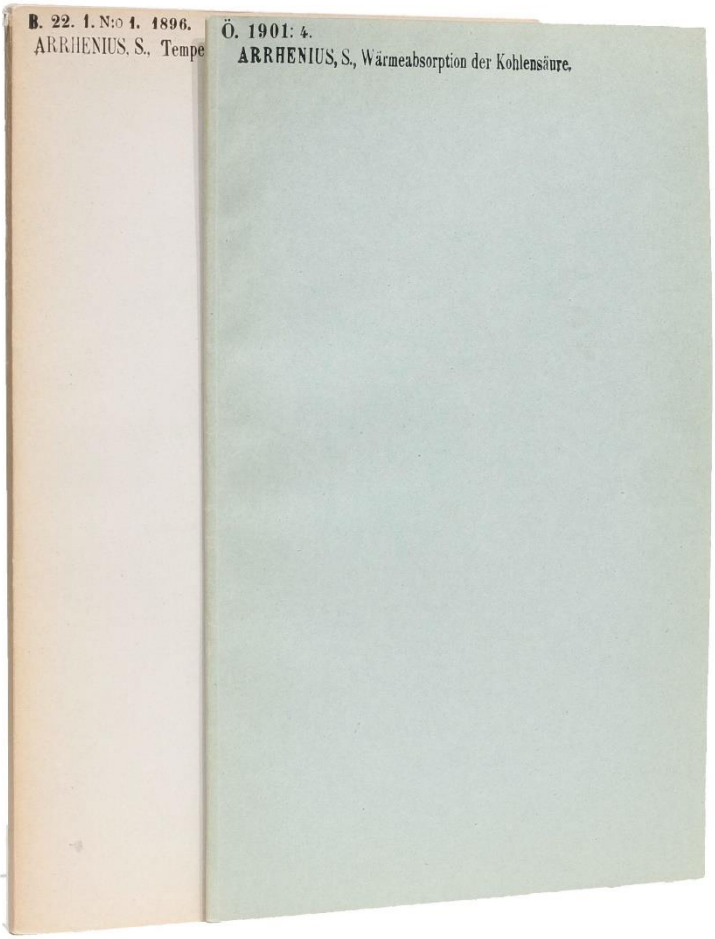
Directeur de la Classe de Physique dans l'Académie Royale des Sciences & Belles-Lettres de Prusse, Membre de l'Académie Royale & Impériale des curieux de la nature, des Académies Royales de Turin, de Suede, d'Orléans, de Dijon, de Milan, des Académies Électorales de Baviere & Maïence, Membre de la Société Hollandoise de Harlem, de la Société Physique de Danzic, de la Société littéraire de Halle, de la Société physique de Berlin, de la Société Royale de Francfort sur l'Oder, de la Société Oeconomique & Patriotique de Silésie & de plusieurs autres Académies, & Sociétés littéraires.

A BERLIN 1788.

IMRIMÉ CHEZ GEORGE JACQUES DECKER & FILS, IMPRIMEURS PRIVÉS DU ROI.

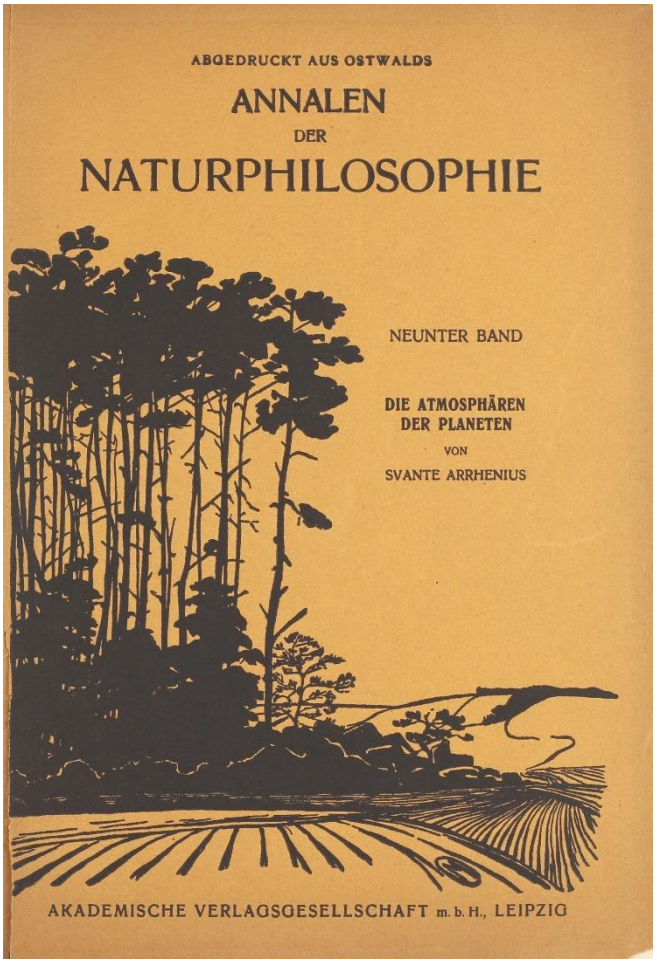
References: Partington III, 593; DSB I, pp. 44-45; McDonald & Hunt, *A History of Platinum and its Allied Metals*, 1982, pp. 120-21; Smith, *Four Outstanding Researches in Metallurgical History*, Philadelphia, A.S.T.M., 1963, pp.11-17.

2 **ARRHENIUS, Svante**. *Ueber den Einfluss des atmosphärischen Kohlensäuregehalts auf die Temperatur der Erdoberfläche*. Offprint: Bihang Till K. Svenska Vet.-Akad. Handlingar, Bd. XXII/I, 1. Stockholm: Kungl. Boktryckeriet P. A. Norstedt & Söner, 1896. 8vo (215 x 140 mm). 102 pp. Original wrappers with publisher's ink stamp at top margin (wrappers very lightly browned at margins, a tiny chip at head). Text generally clean and crisp. [WITH:] *Ueber die Wärmeabsorption durch Kohlensäure und ihren Einfluss auf die Temperatur der Erdoberfläche.* Offprint: Ofversigt af Kongl. Vetenskaps-Akademiens Förhandlingar 1901, no. 1. Stockholm, 1901. 8vo (215 x 140 mm). pp. 25-58. Original wrappers with publisher's ink stamp at top margin (wrappers very lightly browned at margins). A near pristine set. (#003624) € 3500



DSB I, p. 302; Poggendorff IV, 40. FIRST EDITION of Arrhenius' landmark works on global warmimg, exceptionally rare with the final part published in 1901 and in the offprint wrappers intended for private discribution (not to compare with the regular journal issues which have printed wrappers with price stated). That the true offprints are frequently mixed up in literature and sales catalogues is owned to the fact that the regular issues of this supplement series to the 'Proceedings of the Royal Swedish Academy of Sciences' were distributed in single numbers with printed wrappers. None of latter are offprints in the classical sense (i.e. copies given by the publisher to the author for distribution to colleagues and friends).

In developing a theory to explain the ice ages Arrhenius was the first to use basic principles of physical chemistry to calculate the extent to which increases in atmospheric carbon dioxide (CO2) will increase Earth's surface temperature through the greenhouse effect. These calculations led him to conclude that human-caused CO2 emissions, from fossil-fuel burning and other combustion processes, are large enough to cause global warming. This conclusion has been extensively tested, winning a place at the core of modern climate science. Arrhenius, in this work, built upon the prior work of other famous scientists, including Joseph Fourier, John Tyndall and Claude Pouillet. Arrhenius wanted to determine whether greenhouse gases could contribute to the explanation of the temperature variation between glacial and inter-glacial periods. (cf. H. Rodhe et al. *Svante Arrhenius and the Greenhouse Effect*. In: Ambio, vol. 26, no. 1, 1997, pp. 2-5). In the second and final part, Arrhenius also replies to the criticism of his global warming theory by Knut Ångström.



3 **ARRHENIUS, Svante**. *Die Atmosphären der Planeten*. Offprint from: Oswalts Annalen der Naturphilosophie, Vol. 9. Leipzig: Akademische Verlagsgesellschaft, [1910]. 8vo (224 x 157 mm). 12 pp. Contemporary green cloth, gilt lettered spine, original printed pictorial wrappers bound in. Minor dust soiling of wrappers, little age toning, but generally crisp and clean throughout. (#003650) € 600

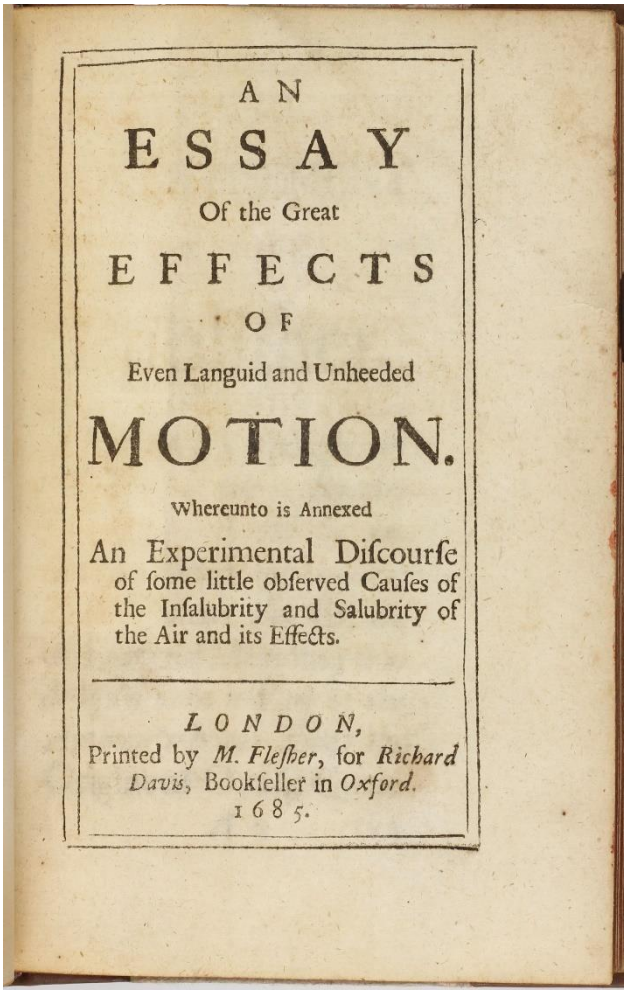
EXCEPTIONALLY RARE FIRST AND ONLY EDITION, offprint issue (or separate printing) of Arrhenius' paper on the atmospheres of the planets in our solar system, issued with new pagination and dated at end of text 'Februar 1910.' In this paper, Arrhenius discusses the composition and chemistry of the planets in our solar system and the changes over geological times due to physical effects and chemical action such as oxidation, carbonation and other forms of weathering of geological rocks.

4 **AUENBRUGGER, Leopold**. *Neue Erfindung mittelst des Anschlagens an den Brustkorb, als eines Zeichens, verborgene Brust-Krankheiten zu entdecken. Im lateinischen Original herausgegeben, übersetzt und mit Anmerkungen versehen von Dr. S. Ungar. Begleitet mit einem Vorworte von Joseph Skoda*. Vienna: J.B. Wallishausser, 1843. 8vo (225 x 145 mm). viii, 72 pp. Latin and German parallel text, printed in two columns. All pages uncut. Original printed wrappers (dust soiled, creased, upper wrapper and spine repaired, corners chipped, front wrapper working loose). Protected in custom-made half-morocco over cloth slip case. Text slightly browned, occasional foxing and dust soiling. Provenance: J. Desmonts J. Mac Donald Co., Norwalk, Conn. (bookbinder's stamp to slip-case). (#003558) € 800

PMM 514, Heirs of Hippocrates 954; Garrison-Morton 2672; Osler 1864; Waller 519; Wellcome II, p. 70 (all for 1st ed.), Norman 86, Waller 522. RARE FIRST GERMAN TRANSLATION of Auenbrugger's *Inventum novum* with an introduction by Joseph Skoda who was the author of *Abhandlungen über Perkussion und Auskultation*. A "milestone in the history of medicine" (Heirs 954). Auenbrugger (1722-1809) had already learned from Van Swieten that tapping the abdomen could detect certain diseases (e.g. ascites). For seven years he studied the various sound phenomena that arose when tapping the chest with his fingers before he published the results (*Inventum novum*, 1761). The scientific recognition of the importance of this discovery was denied to him until shortly before the end of his life; van Swieten in particular spurned his work and kept silent about it. Maximilian Stoll - then director of the medical clinic at the Spanish Hospital - tried the new method and praised it in one of his books, but this had no further consequences. Auenbrugger left the Spanish Hospital in Vienna disappointed and retired to a private practice; the percussion was forgotten. It was only through Jean Nicolas Corvisart (1755-1821) that the method received its well-deserved recognition; he discovered Stoll's remark and in 1808 published a French translation of the Inventum novum (see Heirs 955). Joseph Skoda (1805-1881) was one of the best clinicians of the younger Vienna Medical School and founded modern physical diagnostics after having studied the methods of percussion and auscultation. His own "Abhandlung über Perkussion und Auskultation" (Vienna 1839) became world famous.

5 **BOYLE, Robert**. *An essay of the great effects of even languid and unheeded motion : whereunto is annexed An experimental discourse of some little observed causes of the insalubrity and salubrity of the air and its effects*. London: Printed by M. Flesher, for Richard Davis, 1685. Two parts in one volume. 8vo (170 x 108 mm). [8], 123 [1], [4]; [8], 95 [1] pp. Each part with separate title and pagination, first title with double-ruled border, including two final blank leaves L7-8 in first part. Signatures: A^4 B-I^8; A^4 B-G^8. Early 20th-century three-quarter calf and marbled boards, spine with 4 raised bands, gilt decorated and with gilt-lettered red morocco label, red-dyed edges (light rubbing of extremities). Text quite crisp and clean with only very little even browning and minor spotting in places, fore edge with ink stains just encroaching into margin of some leaves. A very good+ and wide margined copy. (#003593) € 4500

FIRST EDITION, FIRST ISSUE (title-page printed without Boyle's name). "This oddly named tract, along with his earlier treatise on *'Cold'* ([Fulton] 70), gives Boyle a place in the early history of thermodynamic concepts, and it is among the most important of his later writings. His previous works were possibly richer in the record of experiment, but his interpretations were less mature; and after 1685 his writings bore evidence of the decline of his health and powers. Having studied the air for many years, and the force it exerts when compressed, he was now led to reconsider the nature of the ultimate units of which air is composed. He first draws attention to the


AN
ESSAY
Of the Great
EFFECTS
OF
Even Languid and Unheeded
MOTION.
Whereunto is Annexed
An Experimental Diſcourſe of ſome little obſerved Cauſes of the Inſalubrity and Salubrity of the Air and its Effects.
LONDON,
Printed by *M. Fleſher*, for *Richard Davis*, Bookſeller in *Oxford*.
1685.

'great effects' which can be propagated by the air (e.g. breaking of distant windows by cannon), and reiterates that any moving body, whether liquid, gaseous, or solid, evolves heat on encountering an impediment. Many passages indicate that he was thinking of a 'mechanical equivalent of heat' and that he regarded heat itself as probably due to small particles of matter in 'local motion'. He also asks himself, parenthetically, whether lodestones produce their influence through agitation of air particles, but he concluded in the negative on finding that iron filings are still affected when in a vacuum. There follows a remarkable passage which indicates how completely Boyle had anticipated the modern atomic theory (p. 39): I remember, that, to help some friends to conceive how such extreamly-minute particles as Magnetical *effluvia*, may, by pervading a hard and solid body, such as Iron, put its insensible Corpuscles into motion, and thereby range them in a new manner, I took filings of Steel or Iron freshly made, that the Magnetical virtue might not be diminished by any rust, and having laid them in a little heap upon a piece of paper held level, I applied to the lower side of the paper, just beneath the Heap, the pole of a vigorous Load-stone whose Emissions traversing the paper, and diffusing themselves through the incumbent metall, did in a trice manifestly alter the appearance of the Heap; *and, though each of the filings might probably contain a multitude of such small Martiall Corpuscles as Steel may be divided into by Oil of Vitriol or Spirit of Salt*; yet the Magnetical *effluvia*, immediately pervading our metalline heap, did so remove a good part of the filings that composed it, as to produce many erected aggregates, each of which consisted of several filings placed one above another, and appearing like little needles, or rather like the ends of needles broken off at some distance from the point. Later he says (p. 115), 'That there may be a considerable Commotion produced among the internal parts of bodies, by rubbing them even against soft bodies, I have divers times observed, by the sulphureous steams that I could smell, if, after having a little rubbed a lump of good Sulphur upon my Cloaths, I presently held it to my nose', and again (pp. 115-16), 'That Diamonds themselves will, by rubbing upon woollen cloath's be made Electrical, seems to argue, that even Their parts are set a moving.' The tract on the 'Salubrity of the Air' is of some medical interest for Boyle's observations on the causes of Plague (pp. 75-76) and for his conclusion that the bracing character of certain airs is due to the 'effluvia' emitted by subjacent subterraneal steams" (Fulton, pp. 107-8).

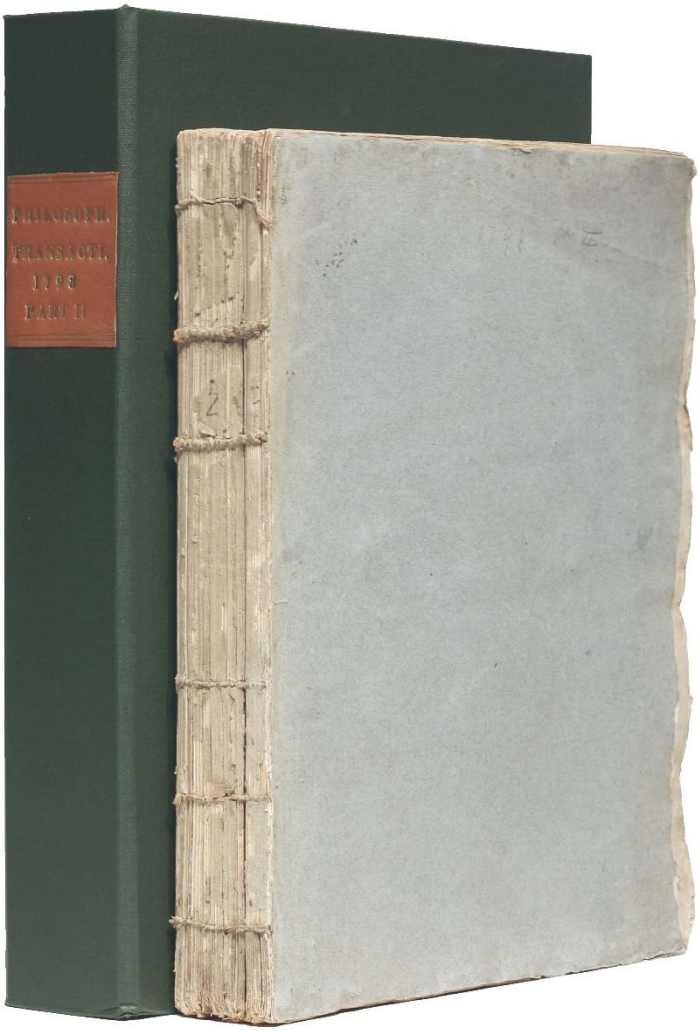
References: Wing B3948; Fulton, *A bibliography of the Honourable Robert Boyle*, 163.

6 **BOYLE, Robert**. *Medicinal Experiments: or, a Collection of Choice and Safe Remedies, For The Most Part Simple, And Easily Prepared*. London: Printed for W. Innys, 1712. Three parts in one volume. 12mo (152 x 89 mm). [24], 168; [22], 61 [1], [12] pp., engraved portrait frontispiece of Boyle, titles within double-ruled border, separate title and pagination to third part. Text somewhat browned throughout (title and portrait stronger), scattered minor spotting, lower outer corner of final leaf (catalogue of books) torn with some loss of text, portrait little frayed at fore-edge. (#003617) € 900

Fulton 184. FIFTH EDITION, corrected, of one of Boyle's rare works entirely devoted to medicine, consisting of the author's preface, where he gives a history of his own health, including his kidney troubles, and a short catalogue of various ailments and their remedies typical to Boyle's day. "There are numerous statements in this astonishing collection of nostrums which might shatter one's confidence in Boyle's judgment, but in charity it is perhaps better to look upon them as a commentary on the state of medicine in the 17th century . . ." (Fulton, *A Bibliography of the Honourable Robert Boyle*, 118). Boyle lists remedies such as "an amulet against agues," "a rare medicine to take away gouty and other arthritick pains," "a water for ulcers and sores," and "an experienc'd medicine for strengthning a weak sight."

Uncut and in the original wrappers

7 **CAVENDISH, Henry.** Experiments to determine the Density of the Earth. In: *Philosophical Transactions of the Royal Society of London*, vol. 88, Part II, for the year 1798, pp. 469-526, 2 folding engraved plates. London: Peter Elmsly, 1798. 4to (292 x 235 mm). Entire volume (part II) offered: v [1], [1] 202-598, [8] pp., 17 folding engraved plates, folding table. All pages uncut and mostly unopened. Original blue wrappers (paper dust-soiled, paper over spine mostly gone, edges slightly frayed). Text and plates with light even browning, some dust-soiling to outer margins, p. 495/6 creased at lower corner. Provenance: Benjamin Hyett Esq. A very good, completely unsophisticated copy. (#003562) € 3500



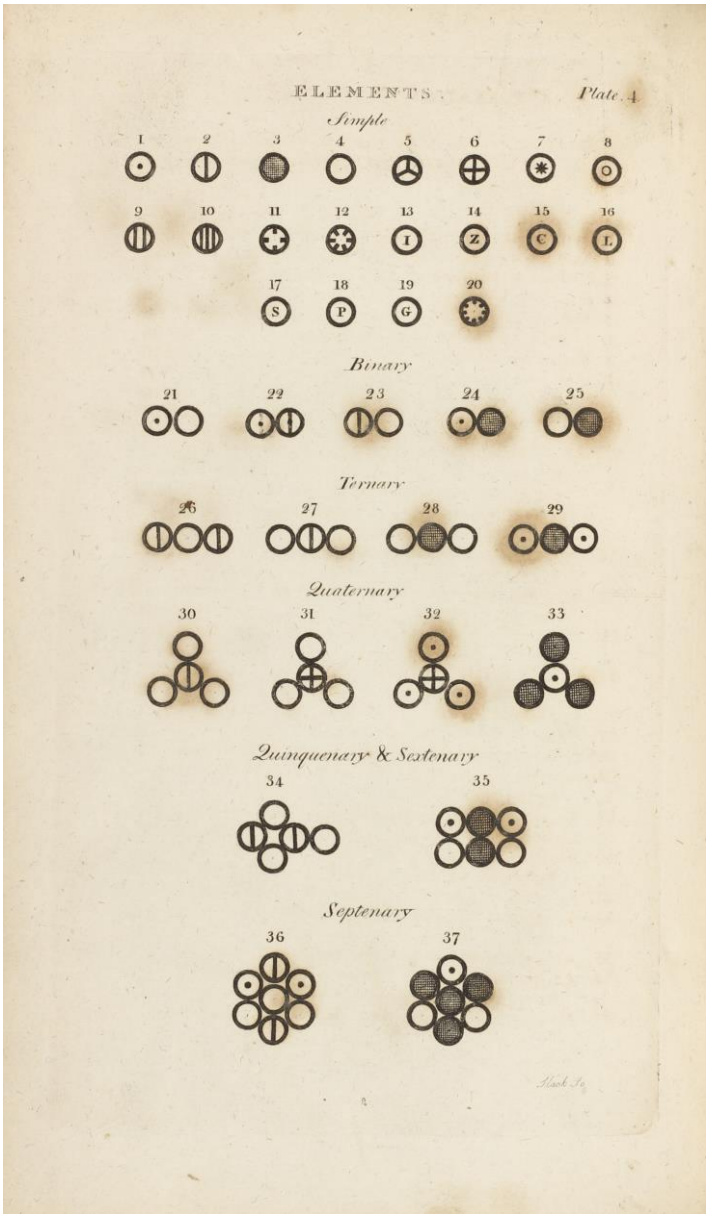
Norman 422, DSB III, p.158. - First Edition of Cavendish's account of the celebrated experiment in which he determined the density of the earth on the basis of the gravitational attraction between the movable and stationary lead balls in John Michell's torsion balance, and attained the first laboratory measurement of "G," the Newtonian constant of gravitation. "By weighing the world he rendered the law of gravitation complete. The law was no longer a proportionality statement but a quantitatively exact one; this was the most important addition to the science of gravitation since Newton" (DSB III,p.158).

"Cavendish was the first to observe gravitational motions induced by comparatively minuted portions of ordinary matter. The attractions that he measured were unprecedentedly small, being only 1/500,000,000 times as great as the weight of the bodies. By weighing the world he rendered the law of gravitation complete. The law was no longer a proportionality statement but a quantitatively exact one; THIS WAS THE MOST IMPORTANT ADDITION TO THE SCIENCE OF GRAVITATION SINCE NEWTON" (DSB emphasis added).

Also in this volume: PREVOST, *Quelques Remarques d'Optique, principalement*, pp. 311-331, 1 plate.

8 **DALTON, John.** *A New System of Chemical Philosophy*. Part I. ... [Part II.]. Manchester: S. Russell for R. Bickerstaff, 1808 [vol. 1, part I]; Russell and Allen for R. Bickerstaff, 1810 [vol. 1, part II]. 8vo (204 x 125 mm), vi, [2], 220 pp., with four leaves of plates; [8], 221-560 pp., with four leaves of plates. Contemporary quarter calf (hinges repaired, some wear to spine ends, rubbed), internally little browned, occasional light spotting and staining. A very good copy. (#001757) € 8500

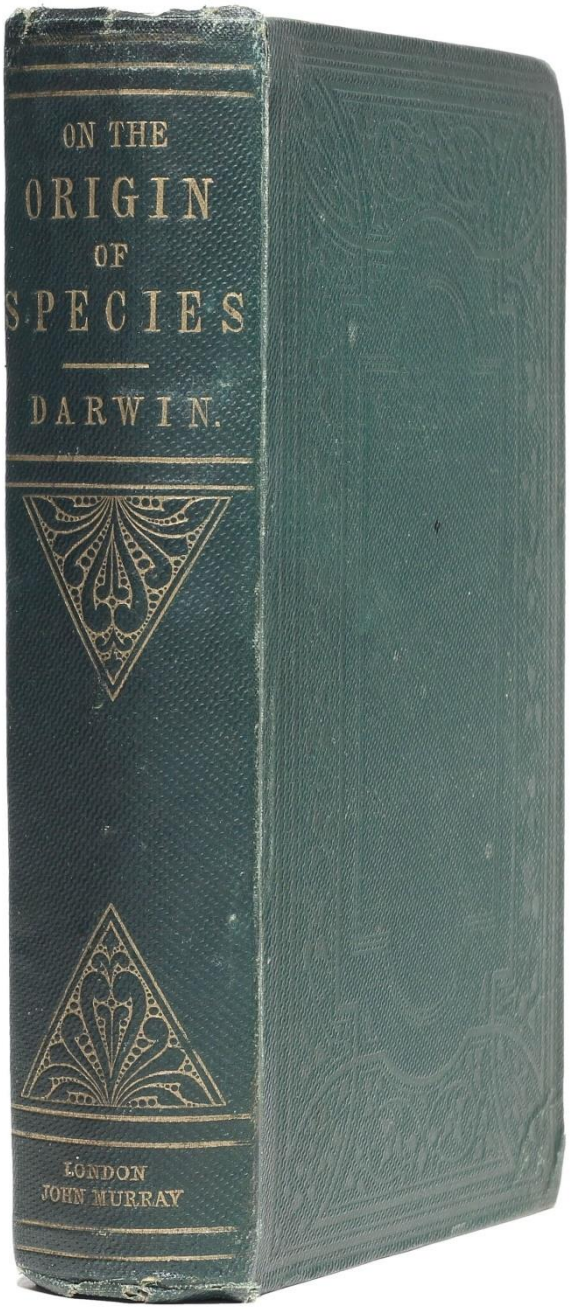
Dibner 44; Horblit 22; PMM 26; Sparrow 47, Norman 575. - First edition of the two parts of the first volume (the second volume was published 17 years later in 1827). While the idea that all matter is composed of singular, indestructible particles goes back to speculative philosophers and scientists (Democritus and Lucretius among the ancients, Newton among the moderns), the great exposition of such a theory and its physical implications is by John Dalton (1766-1844), as presented in his *New System of Chemical Philosophy*. Here, for the first time, Dalton argued that each of the éléments of Lavoisier - as defined in 1789 - "is composed of atoms all alike ... the composition of each being constant" (PMM 261), the identity of each atom being established by its particular weight. Taking the lightest atom (hydrogen) as his integer, Dalton found that oxygen weighed 6.5 times as much, sulphur thirteen times as much, and so on, providing here (also for the first time) a 'periodic table' of the then-known elements: see pp. 213-15, and p. 219 and the facing plate. He proposed to express the age-old problem of chemical composition in terms of the number of atoms of each contributing element that combined into the smallest unit (later termed a 'molecule') of any compound substance; this model of all physical matter proved confirmable through experiment, and has dominated chemical theory (with modifications) ever since. Dalton's emphasis on the indestuctablity of matter was also 'new' in 1808: "we might as well attempt to introduce a new planet into the solar system, or to annihilate one already in existence, as to create or destroy a particle of hydrogen" (p.212, see DSB III, p.537ff).



Dalton explains the publication strategy of his New System in his Preface: he first intended "to publish it intire in one volume', but changed his mind in order to 'exhibit and elucidate . . . those primary Laws, which seem to obtain in regard to heat, and to chemical combinations' as swiftly as possible, being warned by colleagues that 'the interests of science, and his own reputation might suffer by delay". Since his exposition of "the doctrine of heat, and the general principles of Chemical Synthesis, are in a good degree independent of the future details, there can no detriment arise to the author, or inconvenience to his readers, in submitting what is already prepared, to the inspection of the public". Hence Dalton put into print the essential 'Part I' of his New System in May 1808, reserving the 'details' of his experiments and analysis for two years: that supplement, entitled 'Part II', appeared in 1810, with a prefatory apology for its two-and-a-half year delay, and with its pagination continued from that of Part I. A very belated third part (described as 'Volume II, Part I', but effectively a new work under the old title) saw print only in 1827, by which time "the theory had borne such widespread fruit that Dalton's own conclusions were almost all out-of-date" (PMM 261).

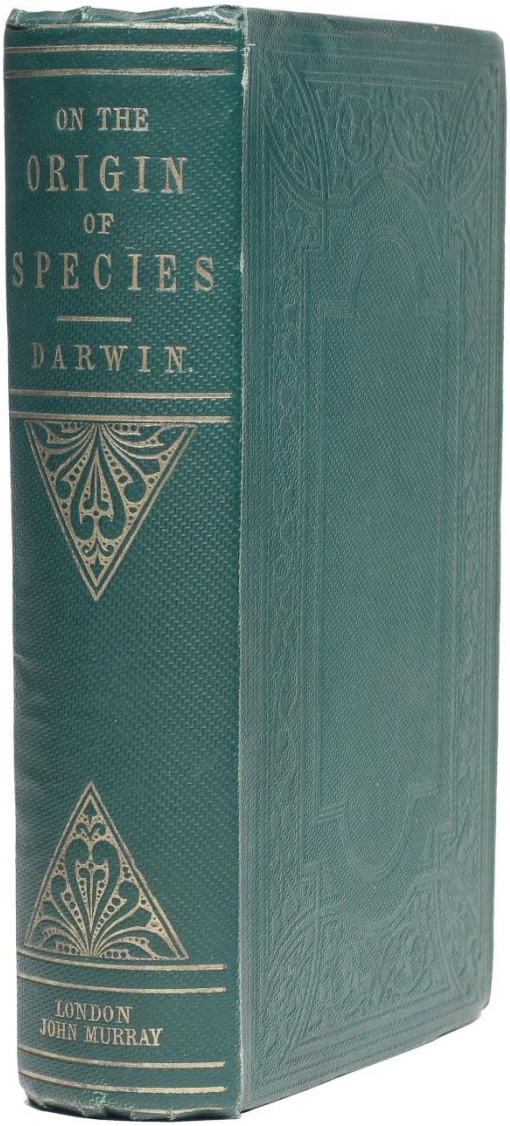
The rare binding variant "c" of the second edition

9 **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, binding variant c (spine ends slightly frayed, corners bumped, extremities little rubbed), original brown endpapers, Edmonds & Remnants ticket to rear pastedown, inner hinges partially cracked and repaired. Half-title with light finger soiling, traces of erased pencil markings and repaired tear at upper margin, dog ear to p. 171, p. 457/8 with short clean tear at blank fore-margin (repaired on verso), little age toning mostly to outer margins, page edges a bit dust soiled, but generally clean and unfoxed. Still very good, clean and unstained copy. (#003576) € 10,500



Freeman 376 (binding variant c); 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).

10 **DARWIN, Charles**. *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life. Third edition, with additions and corrections ('Seventh Thousand')*. London: John Murray, 1861. 8vo (198 x 124 mm). xix [1], 538 pp., including half-title, single leaf of "Mr. Murray's General List of Works" and 32 pp. publisher's advertisements at end, dated 'January 1865', folding lithographed table facing p.123. Original publisher's green blind-stamped cloth (extremities very little rubbed, corners very little bumped), original brown endpapers, Edmonds & Remnants ticket to rear pastedown, inner hinges sound. Text very clean and bright throughout, light occasional dust soiling to fore-margin of few leaves, occasional very minor spotting. Pages untrimmed. Provenance: Stassin et Xavier (small ticket to first flyleaf). A very good+, clean, unmarked and unstained copy in untouched binding. (#003577) € 5000



Freeman 381 (binding variant b). THIRD EDITION OF "THE MOST INFLUENTIAL SCIENTIFIC WORK OF THE NINETEENTH CENTURY. Published April 1861 in an edition of 2000 copies. Its publication aroused world-wide criticism and controversy, both religious and scientific" (Grolier/Horblit). 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).

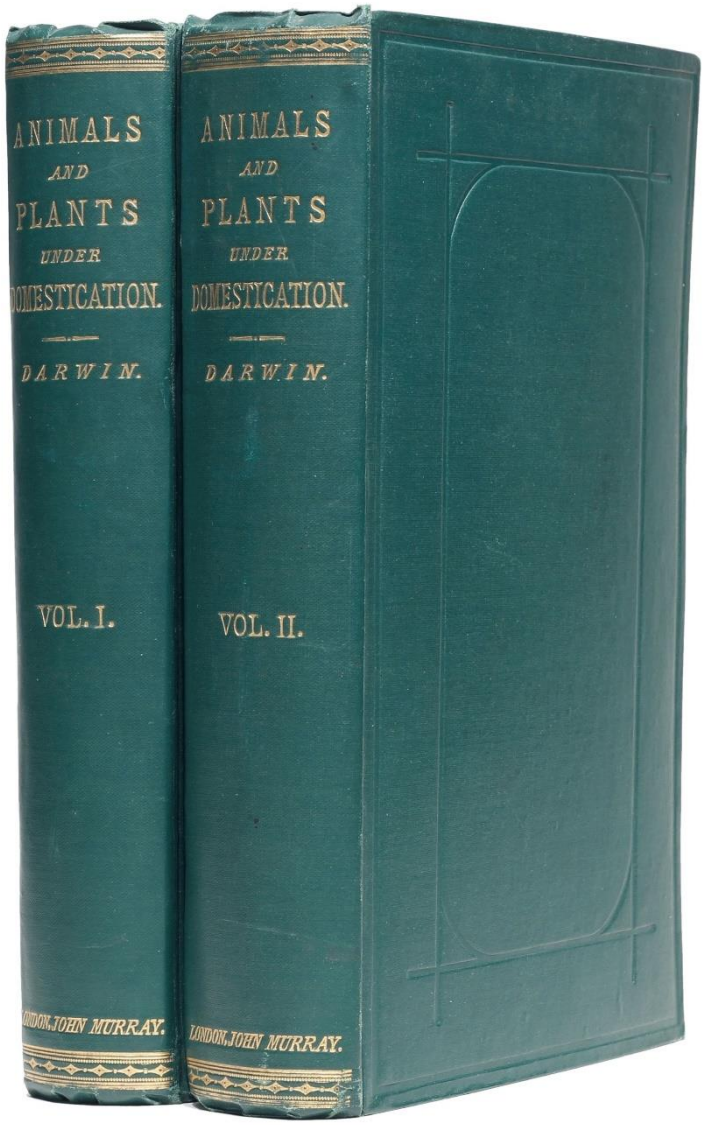
11 **DARWIN, Charles.** *The Origin of Species by Means of Natural Selection... Sixth edition (Thirteenth Thousand), with Additions & Corrections.* London: John Murray, 1873. 8vo (182 x 117 mm). xxi [1], 458 pp. Includes half-title and one folding lithographed plate facing p.91. Original publisher's green cloth, gilt-lettered spine, blind-stamped boards, original brown endpapers, inner hinges sound (spine ends a trifle bumped, minor wear to corners). Occasional minor foxing to outer blank margins (the folding table and adjoining pages stronger), a few pencil markings to final pages, else bright and clean. A very good+ copy. (#003578) € 900

SIXTH EDITION, fourth printing. It is again extensively revised and contains a new chapter, VII. This was inserted to confute the views of the Roman Catholic biologist St George Mivart. The edition was aimed at a wider public and printed in smaller type, the volume shorter again and giving the general impression of a cheap edition, which at 7s. 6d. it was. The title changes to *The origin of species*, and a glossary, compiled by W. S. Dallas, appears. It is in this edition that the word 'evolution' occurs for the first time. It had been used in the first edition of *The descent of man* in the previous year, but not before in this work. 'Evolved' had been the last word of the text in all previous editions, but 'evolution' had been omitted, perhaps to avoid confusion with the use of the word by Herbert Spencer or with its more particular embryological meaning. The word had however been used in its transformist sense by Lyell as early as 1832 (*Principles of geology*, Vol. II, p. 11). In this edition it occurs twice on page 201 and three times on page 424." (John van Wyhe, ed. 2002-. *The Complete Work of Charles Darwin Online*).

The first appearance of the phrase "survival of the fittest"

12 **DARWIN, Charles.** *The Variation of Animals and Plants under Domestication.* London: John Murray, 1868. Two volumes. 8vo (221 x 142 mm). viii, 411 [1]; viii, 486 pp. With 32 pp. of publisher's catalogue dated April 1867 in vol. I and [2] pp. ads dated February 1868 in vol. II; 5 errata on 6 lines in vol. I and 9 errata on 7 lines in vol. II as called for. Original publishers green cloth with gilt-lettered and decorated spines including the one-line imprint to each tail, dark-blue-coated endpapers and binder's ticket (Edmonds & Remnants) to the rear paste-down of vol. I (bindings sound and tight, very minor rubbing to cloth and extremities, corners with some minor wear but free of bumping). All pages uncut and partly unopened. Except for light foxing of edges and endpapers and a few occasional faint spots, bright and clean throughout (including titles and preliminaries); a few light pencil annotations and markings in places. A very good+ set. (#003579) € 5500

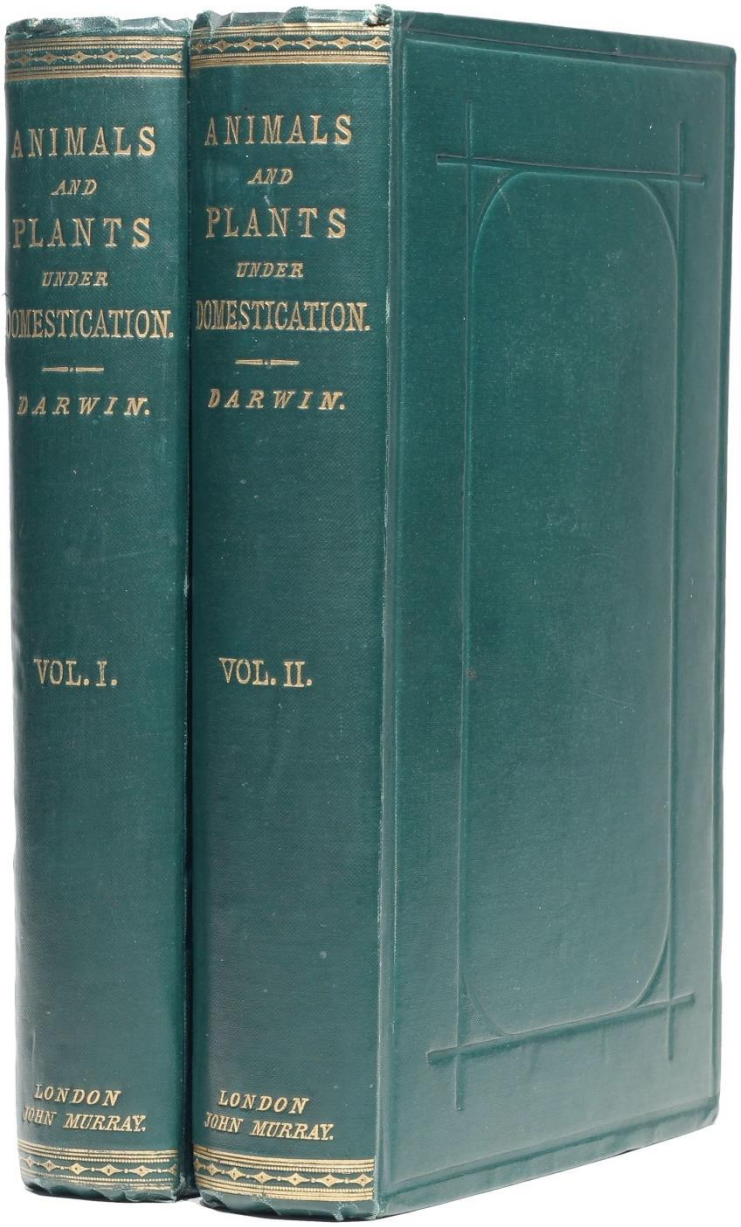
FIRST EDITION, FIRST ISSUE. Includes the first appearance of the phrase "survival of the fittest" in any of Darwin's works (p. 6 of 1st volume). The present text provides a "full statement of the facts on which the theories of the '*Origin*' were based" (ODNB). A large part of the book contains details and discussion about artificial selection, and it also contains Darwin's provisional hypothesis of pangenesis - one which he thought was new but was in fact not. It is his longest, most substantial work. "This represents the only section of Darwin's big book on the origin of species which was printed in his lifetime and corresponds to its first two intended chapters" (Freeman).



The *Variation* "represents the only section of Darwin's big book on the origin of species which was printed in his lifetime and corresponds to its first two intended chapters" (Freeman, p.122). The gestation of Darwin's theories was extremely long, starting with his observations and findings on the Beagle voyage, culminating over many years of painstaking research with an unwieldy 250,000 word treatise entitled 'Natural Selection' that was far from complete. Wallace's letter of June 1858 forced Darwin into writing an abstract of this work called *On the Origin of Species*. However, Darwin was determined to publish the research that had led him to the *Origin*, and work on *Variation* began two days after the second edition of the *Origin* appeared on 7 January 1860. Along with the ascertainable facts of artificial selection, it contained Darwin's hypothesis of pangenesis. Francis Darwin recorded that "about half of the eight years that elapsed between its commencement and completion were spent on it. The book did not escape adverse criticism: it was said, for instance, that the public had been patiently waiting for Mr. Darwin's pièces justicatives, and that after eight years of expectation all they got was a mass of detail about pigeons, rabbits and silk worms. But the true critics welcomed it as an expansion with unrivalled wealth of illustration of a section of the *Origin*" (*The Autobiography of Charles Darwin and Selected Letters*, ed. F. Darwin, New York, 1958, p. 281). The book's slow progress towards publication was due not only to its size, but also the author's ill health. It was finally published on 30 January 1868, the first issue consisting of 1500 copies.

References: Norman 597 (2nd issue only); Freeman 877; Garrison-Morton 224.1

13 **DARWIN, Charles.** *The Variation of Animals and Plants under Domestication.* London: John Murray, 1868. Two volumes. 8vo (221 x 142 mm). viii, 411 [1]; viii, 486 pp. With 32 pp. of publisher's catalogue dated April 1867 in vol. I and [2] pp. ads dated February 1868 in vol. II; 1 erratum on 2 lines in vol. I as called for. Original publishers dark-green cloth with gilt-lettered and decorated spines including two-line imprint to each tail, dark-blue-coated endpapers and binder's ticket (Edmonds & Remnants) to the rear paste-down of vol. I (bindings sound, minor rubbing to cloth and extremities, corners with some minor wear and very little bumping, about 1 inch long split of cloth at lower joint). All pages uncut. Bright and clean throughout, p. viii with small hole at inner blank margin from unsticking (well away from text area). Provenance: John Flower (armorial bookplate to each front pastedown). A very good+ set. (#003580) € 1200

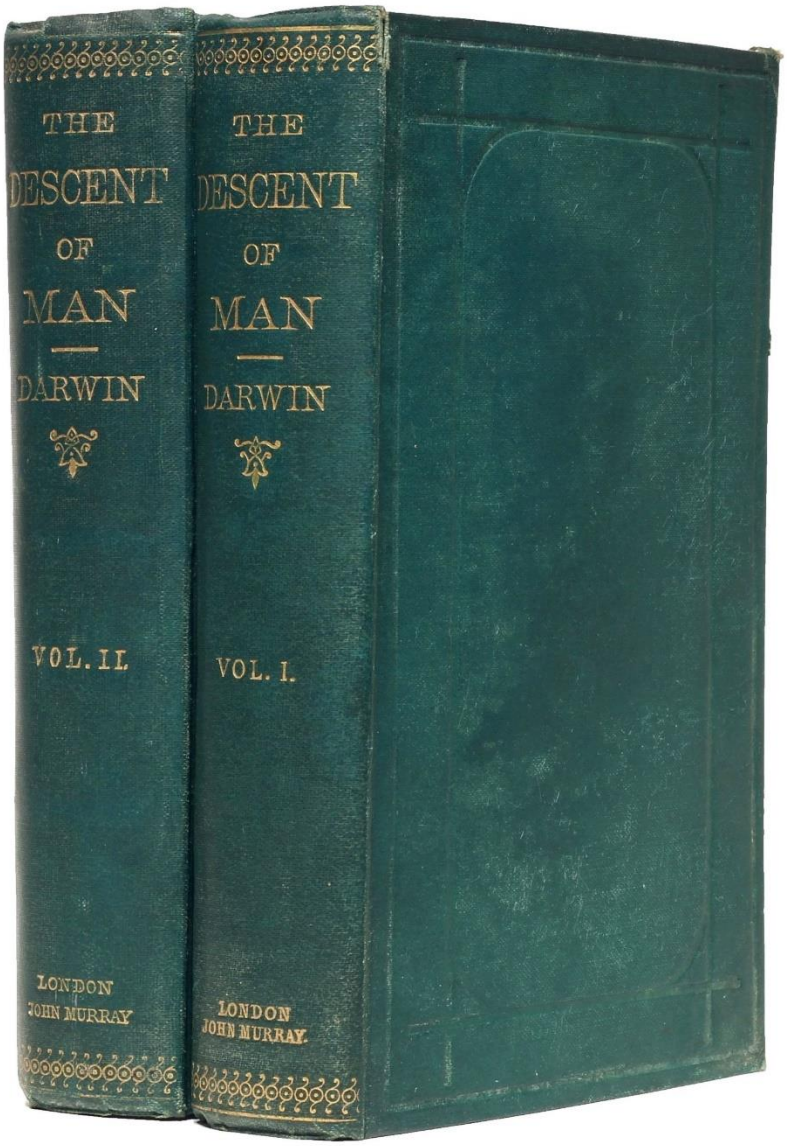


FIRST EDITION, SECOND ISSUE. Includes the first appearance of the phrase "survival of the fittest" in any of Darwin's works (p. 6 of 1st volume). The present text provides a "full statement of the facts on which the theories of the '*Origin*' were based" (ODNB). A large part of the book contains details and discussion about artificial selection, and it also contains Darwin's provisional hypothesis of pangenesis - one which he thought was new but was in fact not. It is his longest, most substantial work. "This represents the only section of Darwin's big book on the origin of species which was printed in his lifetime and corresponds to its first two intended chapters" (Freeman).

"About half of the eight years that elapsed between its commencement and completion were spent on it. The book did not escape adverse criticism: it was said, for instance, that the public had been patiently waiting for Mr. Darwin's pièces justicatives, and that after eight years of expectation all they got was a mass of detail about pigeons, rabbits and silkworms. But the true critics welcomed it as an expansion with unrivalled wealth of illustration of a section of the Origin" (*The Autobiography of Charles Darwin and Selected Letters*, F. Darwin, editor, NY, 1958, p. 281).

References: Norman 597; Freeman 878; Garrison-Morton 224.1

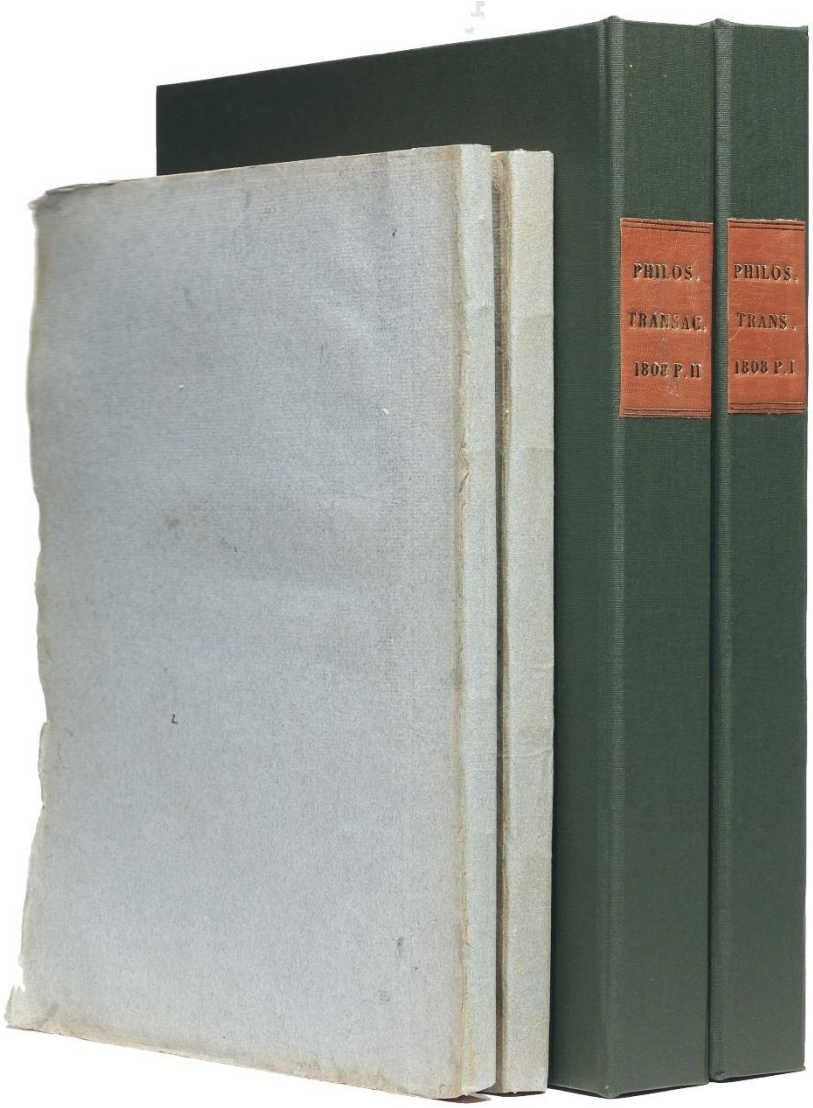
14 **DARWIN, Charles.** *The Descent of Man, and Selection in Relation to Sex*. 2 volumes. London: John Murray, 1871. 8vo (189 x 129 mm). viii, 423 [1], 16; viii, [2], 475 [1], 16 pp., including half-titles, publisher's catalogue dated January 1871 at end of each volume, and several woodcut illustrations in text. Untrimmed and partially unopened. Original publishers green cloth (cloth little rubbed, spotted and soiled, corners bumped and frayed, slight wear to extremities), inner hinges cracked but holding. Internally very little age-toned, little foxing to endpapers, half-titles and adverts at end (else virtually unfoxed), short tear in blank fore-margin of vol. I, p.21/22. Provenance: Charles Robertson (inscribed on half-title and first flyleaf of vol. I). Still very good, unsophisticated set. (#002676) € 5900



Freeman 245, Norman 599, Sparrow 48; Garrison-M. 170 - FIRST EDITION, FIRST ISSUE of both volumes (with the errata on verso of title-leaf in vol. II and with the first word of p.297 "transmitted" in vol. I). Twelve years after the publication of the Origin, Darwin made good his promise to "throw light on the origin of man and his history" by publishing the present work, in which he compared man's physical and psychological traits to similar ones in apes and other animals, and showed how even man's mind and moral sense could have evolved through processes of natural selection. In discussing man's ancestry, Darwin did not claim that man was directly descended from apes as we know them today, but stated simply that the extinct ancestors of Homo sapiens would have to be classed among the primates. This statement was (and is) widely misinterpreted by the popular press, however, and caused a furor second only to that raised by the Origin. Darwin also added an essay on sexual selection, i.e. the preferential chances of mating that some individuals of one sex have over their rivals because of special characteristics, leading to the accentuation and transmission of those characteristics (Norman). 2500 copies of the first issue were published on February 24. The second issue was published the following month.

Uncut and in the original wrappers

15 **DAVY, Humphry.** *The Bakerian Lecture, on some New Phenomena of Chemical Changes produced by Electricity, particularly the Decomposition of the Fixed Alkalies, and the Exhibition of the New Substances which constitute their Bases; and on the General Nature of Alkaline Bodies. / Electro-Chemical Researches, on the Decomposition of the Earths; with Observations on the Metals obtained from the alkaline Earths, and on the Amalgam produced from Ammonia*. In: *Philosophical Transactions of the Royal Society of London for the Year 1808,* Vol. 98, part I and II, pp. 1-44, 333-370. Two parts in two volumes. London: W. Bulmer, 1808. 4to (295 x 235 mm). vi, [2], 1-142, 26; iv, 145-376, [6] pp., part titles, index bound at end, and 9 engraved plates (2 folding). Original blue simple paper wrappers, all pages untrimmed and partially unopened (wrappers soiled and spotted, spine repaired using the original paper). Protected in custom-made clamshell boxes. Text and plates generally crisp and clean with only very little age-toning, some dust soiling mostly to edges and outer margins. Provenance: Benjamin Hyett Esq. A fine, unsophisticated set in original wrappers, in this state rarely found on the market. (#003569) € 4000



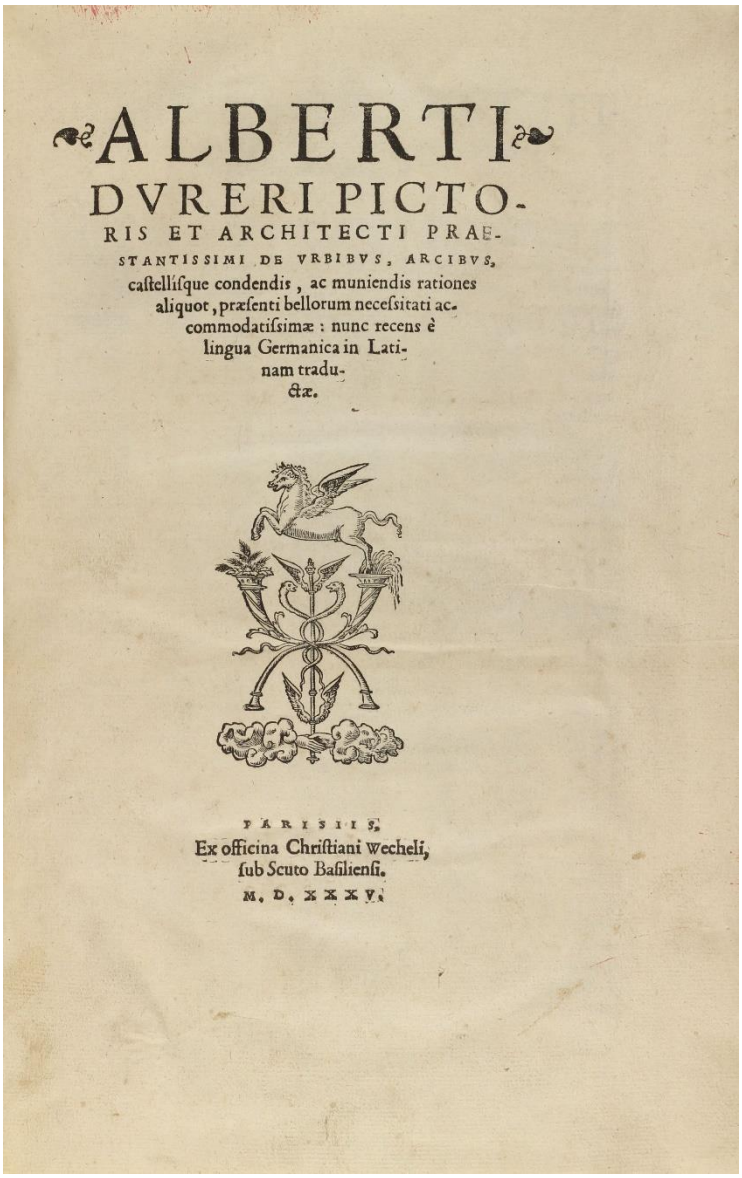
FIRST EDITION, journal issue. "In his second Bakerian lecture, Davy reported his isolation by electrolysis of the elements sodium and potassium from the 'fixed' alkalies soda and potash. Classifying them as metals, he gave them their present names (the Latin '-ium' suffix denoting metallic status) and described many of their properties, including their extreme lightness and combustability. Davy's experiments also demonstrated the then-puzzling fact that the two alkalinic compounds contained oxygen; according to Lavoisier, oxygen was 'the principle of acidity,' but Davy showed that with equal justice it might be called 'the principle of alkalescense'" (Norman). Reference: Norman 608 (first separate printing).

Also contained in this journal issue are papers by William Herschel, *Observations of a Comet*, and William Henry, *Description of an Apparatus for the Analysis of the Compound Inflammable Gases by slow Combustion*.

16 **DIRAC, Paul**. The Quantum Theory of the Electron. In: *Proceedings of the Royal Society of London*, vol. 97, pp. 610-624. London: Printed for the Royal Society, February 1928. Entire volume, 8vo 243 x 170 (mm), vi, 720, [2], xxxvi pp., 24 plates, text illustrations and diagrams. Bound in three-quarter dark-red morocco over cloth (extremities rubbed, joints and spine ends slightly chipped, corners bumped and scuffed). Text with some even age-toning. Provenance: The British Electrical and Allied Industries Research Association (institutional ink library stamp to upper margin of title and front free endpaper). A very good, clean and bright copy internally. (#003619) € 2000

Dirac's landmark paper, one of the most important in the history of particle physics, where he proposed the Dirac equation, as a relativistic equation of motion for the wave function of the electron, or the unification of quantum mechanics and special relativity.

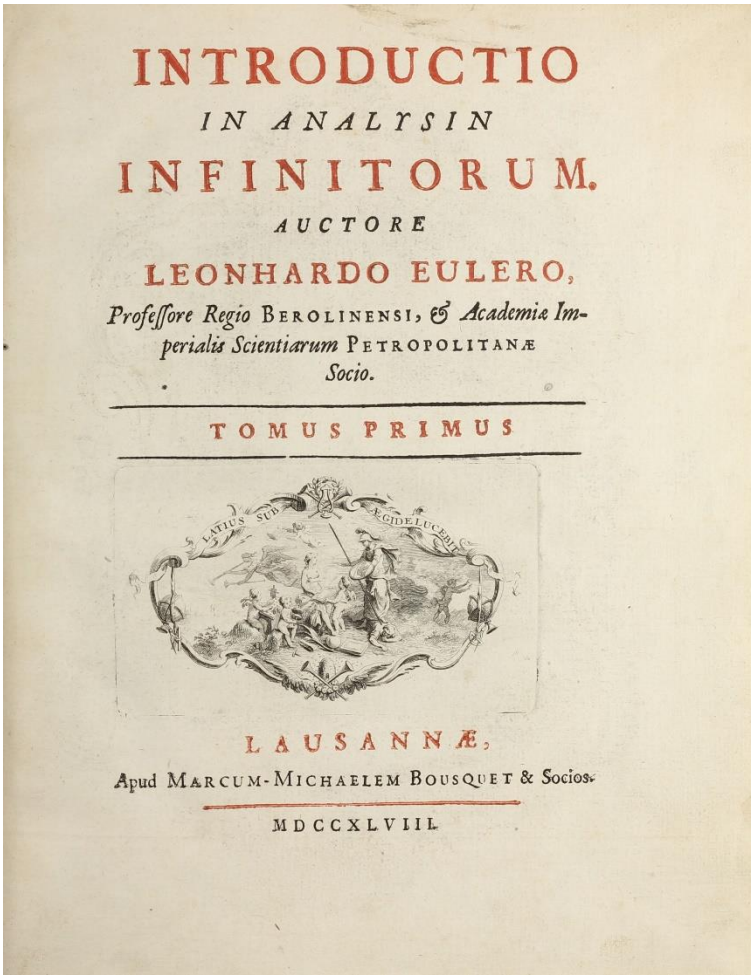
17 **DÜRER, Albrecht**. *De urbibus, arcibus, castellisque condensis, ac muniendis rationes aliquot, praesenti bellorum neccessitati accommodatissimae: nunc recens e lingua Germanica in Latinam traductae*. Paris: Christian Wechel, 1535. Folio (318 x 210 mm). 40 unnumbered leaves (of which 10 folding), woodcut printer's device on title-page and final leaf h6 verso, 21 woodcut illustrations and diagrams, historiated initials, errata on h5v. Signatures: a^6 b^4 c^4+chi1 d^4 e^6 f^4+chi1 g^4 h^6, with extensions to b1, b4, c2, d1, d4, f2, g2, g4, h2 and h4. b4 bound before b3. Long clean tear in d4 without loss, c3 finger soliled, closed worm hole at head of final 16 leaves affecting one to three letters of headlines on 9 leaves, final 6 leaves with brown staining at top margin, otherwise very fresh, crisp and clean. Bound in its first, contemporary limp vellum, spine ink lettered, original laces gone, re-sprinkled edges, new endpapers (vellum somewhat soiled and spotted). A very good, tall copy. (#003637) € 7500


ALBERTI
DVRERI PICTO-
RIS ET ARCHITECTI PRAE-
STANTISSIMI DE VRBIBVS, ARCIBVS,
caſtelliſque condendis, ac muniendis rationes
aliquot, præſenti bellorum neceſsitati ac-
commodatiſsimæ: nunc recens è
lingua Germanica in Lati-
nam tradu-
ctæ.
PARISIIS,
Ex officina Chriſtiani Wecheli,
ſub Scuto Baſilienſi.
M. D. XXXV.

FIRST LATIN EDITION of Albrecht Dürer's important work on fortification, translated from the original German edition (*Ettliche Unterricht zu Befestigung der Stett*) of 1527 by Joachim Camerarius. "Dürer is the earliest writer on the modern science of fortification" (Cockle). This work was probably created under the impression of the threat to Central Europe by the Turks and is the first systematic work on the art of fortifications of cities, castles and market-places, taking fire artillery into account.

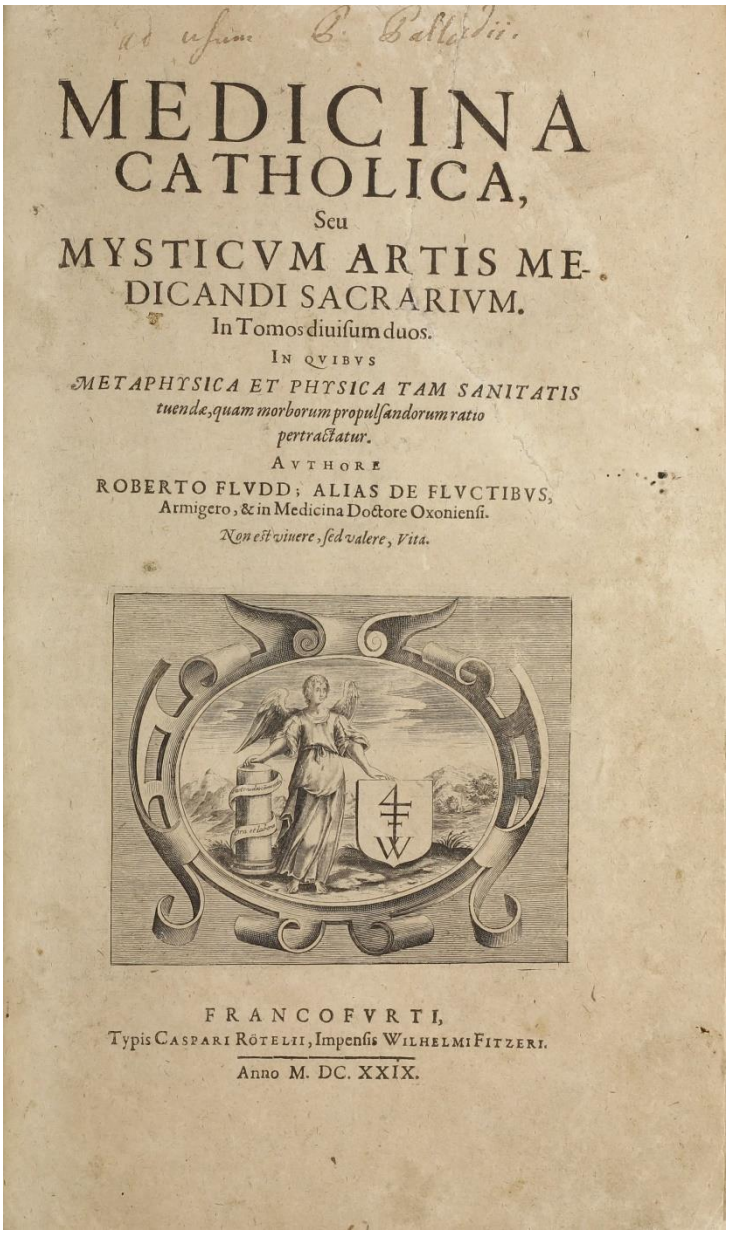
Literature and references: STC 143; Adams D 1056; Cockle 766 (rem.); Panzer VIII, I88, 2476; Berliner Ornamentstich-Kat. 3507; Meder 287; Bohatta 16a; Mortimer, *French books*, 184; Shaaber 319; Brunet II, 913f; Singer A36.

18 **EULER, Leonhard.** *Introductio in analysin infinitorum. Tomus primus ... -secundus.* Lausanne: M.-M. Bousquet, 1748. Two parts in one volume. 4to (243 x 197 mm). [4], xvi, 320; [2], 398, [2] pp. Title to each part printed in red and black and with engraved vignette, engraved frontispiece by Soubeyran after De la Monce, engraved folding portrait of dedicatee Jean Jacques Dortous de Mairan by Frequet after Tocquet (supplied), 40 engraved folding plates bound at end, folding letterpress table bound after p. 274 of part I, leaf of directions to binder, woodcut head-pieces and initials. Bound without initial blank leaf to second part. Signatures: [pi]^{2} *-2*^{4} A-2R^{4}, [pi]^{2} (-[pi]1) A-3D^{4}. Contemporary half calf over marbled boards, spine with 6 raised bands, ruled in gilt and with gilt-lettered morocco label (outer joints and corners repaired, some minor paper chipping along board edges, inner hinges reinforced). Crisp and clean internally, with ligt even age-toning, very minor occasional spotting, leaves Hh1-2 of part I with uneven trimming of top blank margin not affecting headlines, the portrait remargined, fore-margin of plates uncut with edges slightly dust-soiled, plate XVI misbound before plate XV, 4 plates with pale dampstaining, tiny hole in leaf Aa1 of part I affecting one letter each side. Provenance; illegible signature on front-pastedown. A very good, wide-margined and unmarked copy. (#003628) € 7500


INTRODUCTIO
IN ANALYSIN
INFINITORUM.
AUCTORE
LEONHARDO EULERO,
Professore Regio BEROLINENSI, & Academiæ Imperialis Scientiarum PETROPOLITANÆ Socio.
TOMUS PRIMUS
LAUSANNÆ,
Apud MARCUM-MICHAELEM BOUSQUET & Socios.
MDCCXLVIII.

PMM 196, Norman 732. - FIRST EDITION. The first in a triology of works summarizing Euler's own and other discoveries in the mid-l8th century. 'In his Introduction to Mathematical Analysis Euler did for modern analysis what Euclid had done for ancient geometry. It contains an exposition of algebra, trigonometry and analytical geometry, both plane and solid, a definition of logarithms as exponents, and important contributions to the theory of equations. He evolved the modern exponential treatment of logarithms, including the fact that each number has an infinity of natural logarithms. In the early chapters there appears for the first time the definition of mathematical function, one of the fundamental concepts of modern mathematics. From Euler's time mathematics and physics tended to be treated algebraically, and many of his principles are still used in teaching mathematics' (PMM 196).

19 **FLUDD, Robert**. *Medicina catholica, seu mysticum artis medicandi sacrarium. [Tomus I, tractatus I] / Sophiae cum moria certamen, in quo: lapis Lydius a falso structore, Fr. Marino Mersenno . . . reprobatus, examinat*. Two parts in two volumes. Frankfurt am Main: C. Rötel for W. Fitzner, 1629. Folio (313 x 194 mm). [20], 241 [1]; [6], 118, [2] pp., including engraved printer's device on first title, 24 engraved illustrations in text (22 in first and 2 in second part, some full-page), woodcut initials, head- and tailpieces. Bound without the two initial blanks, the *Sophiae* as often without the table (found bound in between p.18 and 19). Signatures: §²)(⁴ 2):(⁶ A-2H⁴, a-p⁴. Modern bindings re-using antiphonary manuscript on vellum with finely painted Fleuronné initials as cover material, modern endpapers. The paper somewhat browned as usual due to inferior paper stock used, repaired clean tear to first title, A1 with minor fraying of fore-edge. Provenance: inscribed on first title "ad usum P. Palladii". A very good copy. (#003473) € 8500


ad usum P. Palladii.

MEDICINA
CATHOLICA,
Seu
MYSTICVM ARTIS ME-
DICANDI SACRARIVM.
In Tomos diuisum duos.
In qvibvs
METAPHYSICA ET PHYSICA TAM SANITATIS
tuendæ, quam morborum propulsandorum ratio
pertractatur.
Avthore
ROBERTO FLVDD; ALIAS DE FLVCTIBVS,
Armigero, & in Medicina Doctore Oxonienſi.
Non eſt viuere, ſed valere, Vita.

FRANCOFVRTI,
Typis Caspari Rötelii, Impenſis Wilhelmi Fitzeri.
Anno M. DC. XXIX.

I. FIRST EDITION of the first part of Fludd's *Medicina Catholica* and complete in its own right (the other parts were published separately in 1631). In 1629 and 1631, Fludd had his four treatises on medicine printed, which constituted the first and only volume (the publication of the second was aborted) of the *Medicina catholica*: 1. *Medicina catholica, Sanitatis mysterium* (1629), 2. *Pulsus* (1631?), 3. *Integrum morborum mysterium* (1631), 4. *Katholicon medicorum katoptron* (1631). In these works, Fludd evokes the vital role of the sun and its central place within the universe, and insists at length on the parallel between the solar star and the human heart. According to him, the movement of blood in the human body mimics that of the sun in the macrocosm. He exposes his mystical theories on blood circulation in his treatise *Anatomiae amphitheatrum*, which prefigure the experiments of William Harvey published in 1628 in *De Motu cordis*. A few years later, Fludd published his *Pulsus* and became the first to ardently defend his colleague's ideas: Fludd was trained anatomist and had watched Harvey carry out dissections at the Royal College of Physicians. In his later writings he referred to those dissections, and he was the first to support Harvey's *De motu cordis* in print, thinking that the views of his friend confirmed his own cosmological concept of the circulation of the blood (see DSB).

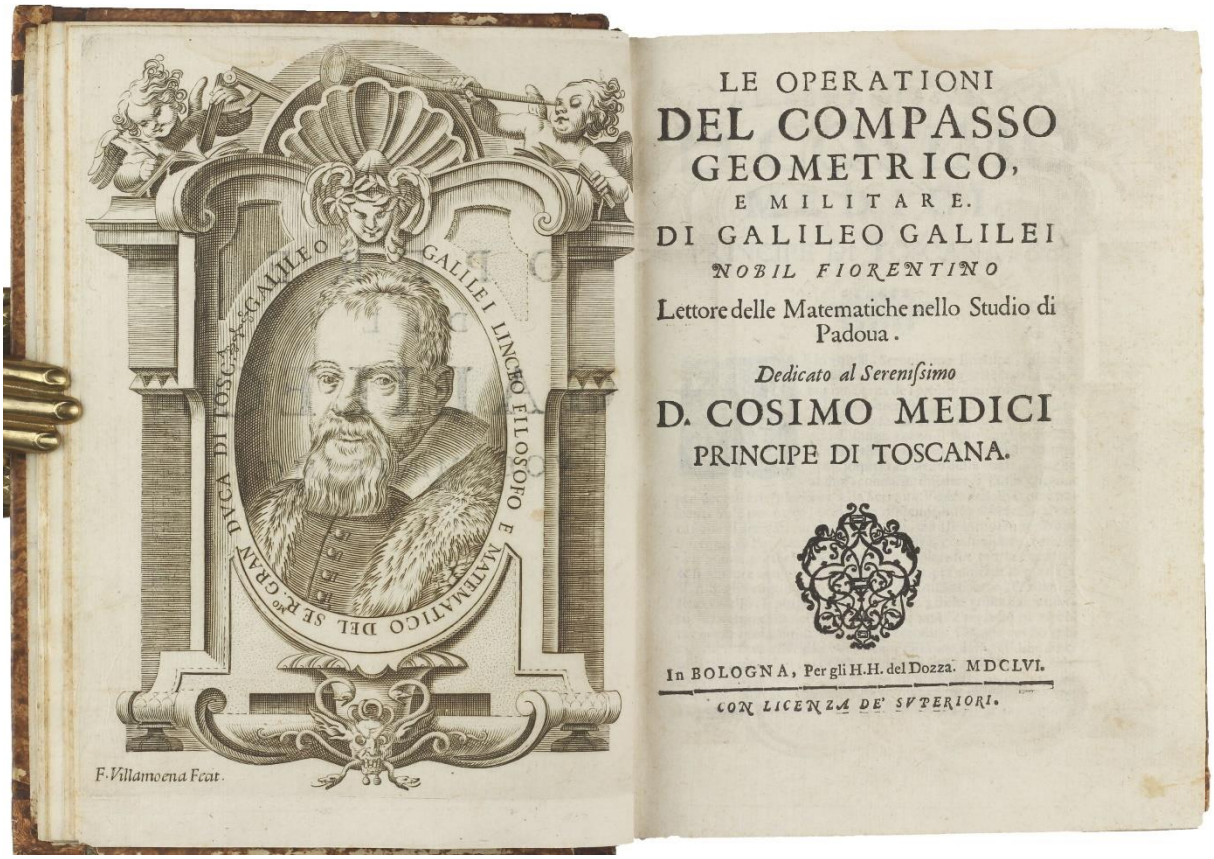
Bibliography: VD 17, 12:167343Z; NLM/Krivatsy 4139; Osler 2627; Gardner 227; DSB V, p.48.

II. FIRST EDITION. The *Sophiae cum moria certamen* can be regarded as an appendix to the *Medicina catholica*. "Fludd and the Hermeticists were attacked by Mersenne in the '*Quaestiones celeberrimae in Genesim...*' (Paris 1623) to which he replied in the '*Sophiae cum moria certamen*'" (DSB). Another appendix to the Medicina catholica, the *Summum bonum*, separately pulished in 1629 and of which Fludd denied authorship, is not included here.

Bibliography: VD 17 12:167461C; NLM/ Krivatsy 4139; Gardner 232, DSB V, p.48.

20 **GALILEI, Galileo.** *Opere. In questa nuova editione insieme raccolte, e di varii Trattati dell'istesso Autore non piu Stampati accresciute*. Bologna: heirs of Evangelist Dozza, 1655-1656. 4to (220 x 160 mm). [24], 29-32, 1-48; [2] 3-48; [8], 1-160; [4], 1-68; [2] 3-127 [1]; [4], 1-264; [2] 3-43 [1] pp.; [4], [2] 3-60; [3] 4-7 [1], 1-105, [3], 105-156; [1] 2-48, [2], 53-106, [2], 103-126; [8], 179 [1]; [8], 238 [i.e. 242], [6] pp. Including the first blank in vol. II, half-title to each vol., divisional titles to each part; allegorical frontispiece by Stefano Della Bella, engraved portrait of Galileo by F. Villamoena and folding engraved plate in vol. I, numerous woodcut initials, illustrations and diagrams in text. Bound in uniform 18th century half calf over marbled boards, flat spines with gilt ruling and gilt-lettered red morocco labels, red-sprinkled edges (rebacked preserving original spine leather, some rubbing, edge wear with paper chipping). Minor uneven browning of text with extent depending of paper used in gatherings, vol. II with light waterstaining to fore-margin, occasional minor spotting; *Risposta* with small hole in leaf A1 affecting few letters, two repaired clean tears in leaf H2 obscuring page number recto, repaired clean tear and a hole in upper blank margin of 2F3; leaf P1 of *Istoria* trimmed close at top just touching headline; *Il Saggiatore* with paper repair to lower corner of leaf E1 affecting catchword on recto and small hole in P1 costing two letters verso; lower corner of leaf T2 of *discorsi* brown-stained and chipped without loss of text. Provenance: Congregazione dell'Oratorio di San Filippo Neri Bologna (partly cancelled ink stamp on title and a few further pages), blind stamps to a few text pages and plate. The set is collated and complete. (#002738) € 13,500

Cinti 132; Riccardi I, 518; Houzeau -Lancaster I, 3386; Honeyman 1418; Roller -G. I, 433; Wellcome III, 83. FIRST EDITION of Galileo's collected works, edited by Carlo Manolessi and dedicated to Grand Duke Ferdinand II. According to Riccardi it contains a number of pieces here published for the first time. Most of these are letters to various friends and opponents, discussing questions raised by his published works. Both *The Dialogo* and Letter to Christiana are listed on the index 'librorum prohibitorum' and were thus not included in the *Opere*. Copies as here with all parts listed by Cinti, are quite rare, because the first buyer arranged the selection of parts as he desired.



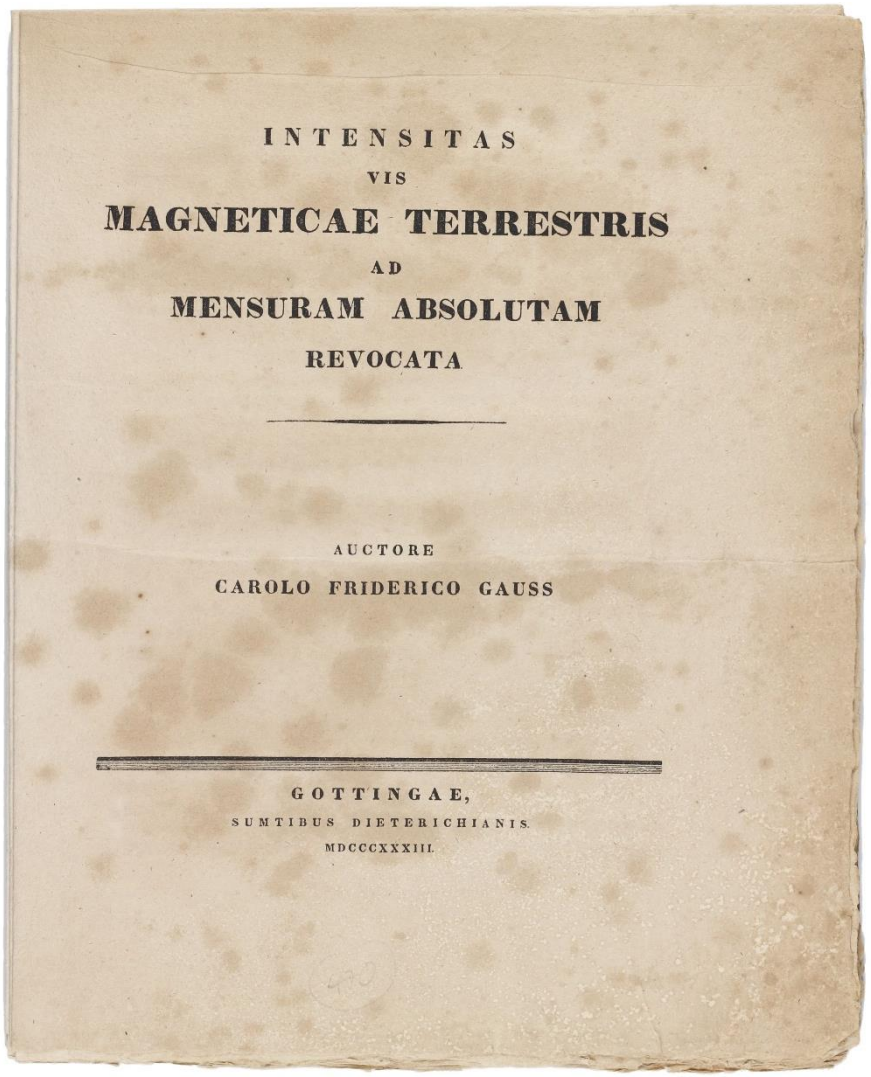
Content: Vol. I: 1. *Lettera di Maffeo Barberini sequita dalla Advlatio perniciosa; Le operationi, del compasso geometrico e militare di Galileo Galilei*; 2. *Annotationi di Mattia Bernaggeri [sic] soptrˆnstrumento delle proportioni del sig. Galileo Galilei*; 3. *Usus et fabrica circini cuiusdam proportionis, per quem omnia . . . problemata facili negotio resoluuntur. Ppera et studio Balthasaris Capre . . . explicata*; 4. *Difesa di Galileo Galilei . . . Contro alle calunie & imposture di Baldessar Capra. . .*; 5. *Discorso. . . intorno alle cose, che stanno sù l'acqua, ò che in*

quella si muouono. Di Galileo Galilei. . .; 6. *Discorso apologetico di Lodovico dell Colombe, d'intorno al Discorso del S. Galileo Gallei, circa le cose, che stanno sù l'acqua. . .*; 7. *Risposta alle oppositioni del sig. Lodovico delle Columbe e del sig. Vincenzo di Gratia, contro al trattato del. sig. Galileo, Galelei, dell cose che stanno sù l'acqua. . .*; 8. *Della scienza mechanic . . . o[n]pera del signor Galileo Galilei . . . La bilancetta del signore Galileo Galilei. . .*

Vol. II: 9. *Sydereus nuncius magna, longeque admirabilia specula pandens. . .*; 10. *Continuatione del Nuntio sidereo di Galileo Galilei linceo. . .*; 11. *Istoria e dimostrationi intorno alle macchie solari e loro accidenti. . .*; 12. *De tribus cometis anni M. DC. XVIII, disputatio astronomica. . .*; 13. *Discorso delle comete di Mario Guiducci*; 14. *Lettera al. . . Tarquinio Galluzzi, . . . di Mario Guiducci. . .*; 15. *Lettere del sig. Galileo Galilei al padre Christoforo Grienberger, . . .*; 16. *Il Saggiatore. . . dal signor Galileo Galilei; Discorsi e Dimostrationi matematiche. . .*; 17. *Discorsi, e dimostrationi matematiche . . . del signor Galileo Galilei*.

Gauss' most important geomagnetic work

21 **GAUSS, Carl Friedrich.** *Intensitas vis magneticae terrestris ad mensuram absolutam revocata*. Göttingen: Dieterich, 1833. 4to (271 x 216 mm). 44 pages on 6 folding sheets, unopened and uncut as issued. Somewhat browned and spotted throughout. A very good, completely unsophisticated copy.



INTENSITAS
VIS
MAGNETICAE TERRESTRIS
AD
MENSURAM ABSOLUTAM
REVOCATA

AUCTORE
CAROLO FRIDERICO GAUSS

GOTTINGAE,
SUMTIBUS DIETERICHIANIS.
MDCCCXXXIII.

This copy is in an original state as issued without showing any sewing holes. (#003604) € 1800

Norman 881; Honeyman 1455; Roller-Goodman I, 447; Ekelöf 892; Wheeler-Gift 867; Gausskatalog (Göttingen 2005) p. 14 & 192; DSB V, p. 305 - FIRST EDITION of Gauss's most important geomagnetic treatise and the first collaborative work between Gauss and Weber, "with whom, from 1831-1837, he performed a series of studies on the nature and intensity of the earth's magnetism. Their first collaborative work, *Intensitas vis magneticae terrestris*, is an account of the measurement of magnetic force, containing the first systematic use of absolute units (distance, mass, time) to measure a non-mechanical quantity. Weber's name does not appear on the title, but his contributions are acknowledged in the text. (Norman 881).

22 **GERSDORFF, Hans von**. *Feldtbuch der Wundtartzney*. Augsburg: Heinrich Stayner, 1542. Folio (285 x 190 mm). 88 leaves, ff. [4], LXXXIIII. Double column text in Fraktur type. 24 large woodcut illustrations, mostly full page, attributed to Hans Wechtlin, the first on the title-page, one inserted woodcut plate printed as broadside on full sheet and bound in as folding plate after f. a4. Signatures: a^4 A-O^6. Bound in 17th-century restored vellum, spine with later hand-lettering (vellum soiled and spotted, slight wear to corners). Minor browning and spotting internally, some occational finger soiling, short marginal tears, f. A1 with clean tear at upper margin repaired, ink smudge to f. C3. A few old ink annotations. A very good copy. (#003596) € 28,000

EXCEPTIONALLY RARE THIRD Augsburg edition (the others undated around 1530 and 1532 after VD 16). The original edition was published in 1517 by Johann Schott in Strassburg, who also published the two following prints (1526 and 1528). The work went through at least twelve editions between the time of its first publication and the early seventeenth century. VD16 lists 14 editions in the 16th century.

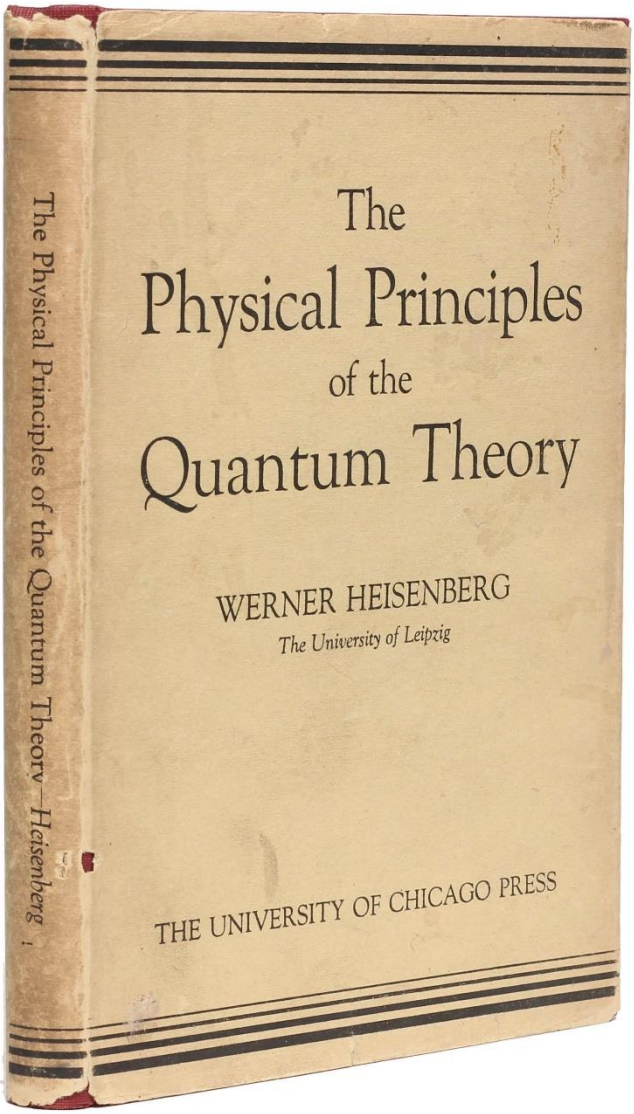
The book is written on the basis of Gersdorff's 40 years experience as a military surgeon. A summary of the available knowledge of human anatomy derived from old Arabic writings, Guy de Chauliac, and other sources is followed by a guide to the surgical treatment of wounds, with a subsidiary part on the treatment of leprosy, followed by three Latin-German glossaries at the end - one of anatomic terms, one of diseases, and one of simples. "The book [. . .] was translated into Latin and Dutch, and was widely quoted, referred to, and plagiarised in subsequent medical texts. Eminently practical in its instructions on the care and treatment of the wounded, it had admirably graphic wood engravings. The twenty-seven illustrations show clear diagrams of instruments and protheses, such as a mechanical iron-hand, in addition to scenes of operations, including the first printed picture of an amputation. Several illustrations, such as of the ambe, became standard in subsequent German surgical texts. The full-sheet anatomical skeleton existed in its own right as a broadside print and is often missing. (William Lefanu, *Notable Medical Books from the Lilly Library*, p. 19, for the 1st ed.). Herrlinger comments that "The illustrations . . . belong to the early phase of 16th-century medical illustration and represent one of its high points" (*History of medical illustration*, London, 1970. p. 142).

"Gersdorff [. . .] had gained wide experience during the course... of campaigning and was an expert in the care and treatment of battlefield injuries [. . .] [He] emphasized a well-founded knowledge of anatomy because the surgeon was frequently called upon to deal with extensive bodily trauma [. . .] The surgical portion of the work was devoted to wound surgery and covers in some detail the methods he employed for extracting foreign objects and amputating limbs. He used a tourniquet to control bleeding when amputating and covered the stump with the bladder of a bovine or swine to help control postoperative hemorrhaging. He also included information on

various remedies and medications that might be employed by the surgeon. Of special interest are the sedatives and analgesics, although he appears not to have employed them in his practice. The section on leprosy is given over largely to remedies for a disease he did not believe could be cured" (Heirs of Hippocrates 149).

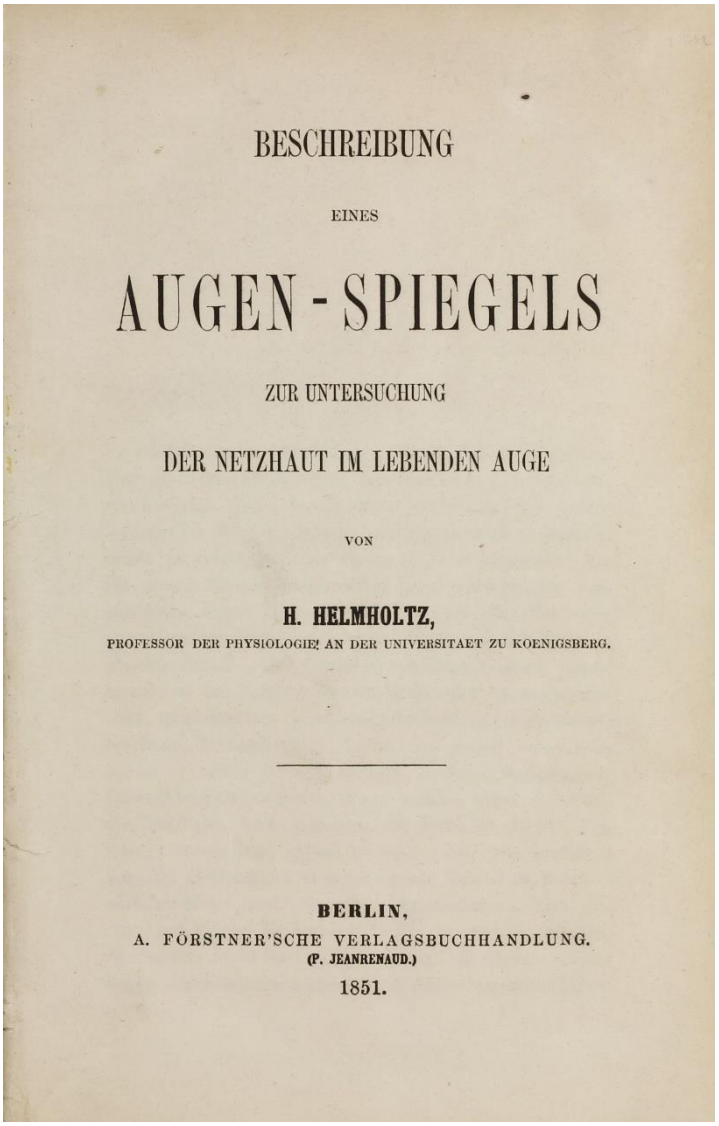
Bibliography: VD 16, G 1626 (two locs only); this edition not in NLM/Durling, Wellcome or Waller; for 1st edition see Grolier/Norman Medicine 14; NLM/Durling 2059 (incomplete); VD-16 G-1618; Choulant, pp. 162-66; Garrison & Morton 5560; Stillwell 387; Lilly Library, p.19; Herrlinger, *History of Medical Illustration*, pp. 140-43; Waller 3506. Heirs of Hippocrates 149 (1530 edition).

23 **HEISENBERG, Werner.** *The Physical Principles of the Quantum Theory*. Translated by Carl Eckart and Frank C. Hoyt. Chicago: University of Chicago Press, 1930. 8vo (188 x 126 mm). viii, 186 pp., text diagrams. Publisher's burgundy cloth, spine and front board lettered in gilt, in publisher's original dust jacket, protected in mylar foil (toned and somewhat dust-soiled, some short tears and corner wear to jacket, small white sticker over price inside front board). Text bright and clean throughout, only very minor age-toning. Provenance: illegible signature, dated Oct. 4, 1930 on first flyleaf). (#003584) € 950



FIRST EDITION, and in the very rare dust jacket, of Heisenberg's first book in English. In these collected lectures, Heisenberg discussed the significance of the uncertainty principle and other aspects of quantum mechanics. Werner Heisenberg (1901-1976) was a German theoretical physicist and one of the key pioneers of quantum mechanics. He published his seminal paper "Über quantentheoretische Umdeutung kinematischer und mechanischer Beziehungen" in 1925. In the subsequent series of papers with Max Born and Pascual Jordan, during the same year, this matrix formulation of quantum mechanics was substantially elaborated. He is known for the uncertainty principle, which he published in 1927. Heisenberg was awarded the 1932 Nobel Prize in Physics "for the creation of quantum mechanics." In early 1929, Heisenberg and Pauli submitted the first of two papers laying the foundation for relativistic quantum field theory. Also in 1929, Heisenberg went on a lecture tour through China, Japan, India, and the United States. In the spring of 1929, he was a visiting professor at the University of Chicago, where he gave lectures on quantum mechanics, which are summarized in this book.

24 **HELMHOLTZ, Hermann von**. *Beschreibung eines Augen-Spiegels zur Untersuchung der Netzhaut im lebenden Auge.* Berlin: A. Förstner'sche Verlagsbuchhandlung (P. Jeanrenaud), 1851. 8vo (203 x 130 mm). 43 [1], [2] pp. and one engraved plate by Afinger after drawings by Helmholtz. Bound in contemporary German marbled paper over card board, spine with hand-lettered paper label, red sprinkled edges, original endpapers (minor rubbing of extremities, corners slightly bumped, minor chipping to foot of spine). Protected in half-calf and cloth clamshell box with gilt-lettered spine. Text and plate little age toned, very minor occasional spotting. Provenance: pencil note on plate verso "complete/Norman". A very good and clean copy. (#003646) € 4500



BESCHREIBUNG

EINES

AUGEN-SPIEGELS

ZUR UNTERSUCHUNG

DER NETZHAUT IM LEBENDEN AUGE

VON

H. HELMHOLTZ,

PROFESSOR DER PHYSIOLOGIE! AN DER UNIVERSITAET ZU KOENIGSBERG.

BERLIN,

A. FÖRSTNER'SCHE VERLAGSBUCHHANDLUNG.

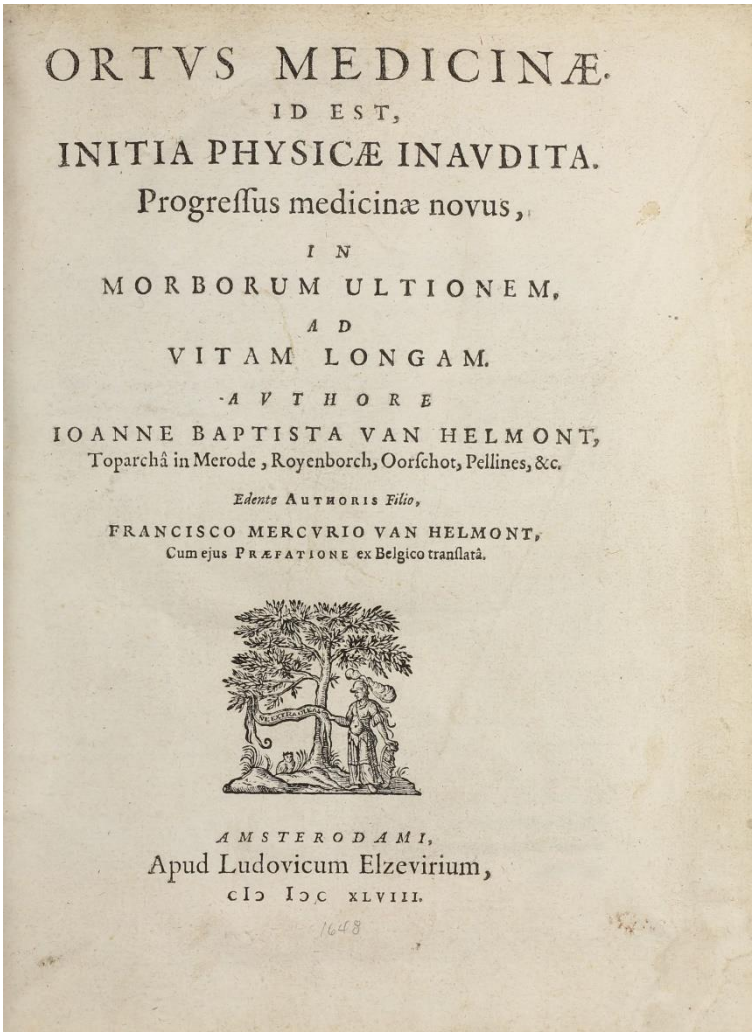
(P. JEANRENAUD.)

1851.

FIRST EDITION of Helmholtz' announcement of his invention of the ophthalmoscope. This was a by-product of Helmholtz's attempt to demonstrate to his physiology students that when the human eye is made to glow with reflected light, the light emitted from the pupil follows the same course it took in entering. Realizing that if the light could be brought to a focus the details of the retina would be made visible, he invented a device to accomplish this objective. The ophthalmoscope greatly improved the ability of ophthalmologists to diagnose eye disease and revolutionized visual science.

Literature: Norman 1041; Garrison-Morton 5866; Grolier Medicine 65; Heirs of Hippocrates 1886; Waller 4294; DSB VI, p. 246.

25 **HELMONT, Johan Baptist von**. *Ortus medicinae. Id est, initia physicae inaudita. Progressus medicinae novus, in morborum ultionem, ad vitam longam. Edente authoris filio, F. M. van Helmont*. Amsterdam: Elzevir, 1648. [36], 1-88, 87-158, 161-176, 175-382, 373-452, 457-800 pp. With engraved portraits of Helmont and his son on *4v and some woodcuts in text, frequent mispaginations. [Bound with:] *Opuscula medica inaudita. Editio secunda*. Three parts in one. Amsterdam: Elzevir, 1648. [8], 110, [2]; 115 [1]; 88 pp., including general title and separate title-leaves to each part, with the final blank P4 of De Lithiasi. Two works in one volume. 4to (205 x 162 mm). Contemporary full vellum, spined titled in manuscript, red-dyed edges, original endpapers (vellum soiled and spotted, corners bumped). Text quite bright and crisp throughout, very minor occasional spotting, a few pages with light dampstaining to blank fore-margin, two ink spots to edge penetrating a few mm inside, sparse light ink annotations and text markings in contemporary hand; pp. 100-101 of *De Lithiasi* soiled and spotted, lower corner of general title repaired, old paper repair to upper corner of p.107/8 of first work not affecting text. Provenance: Joseph Luce (his book ticket and an early engraved armorial bookplate with no text on front pastedown). Fine, wide-margined copy in untouched original binding, collated complete. (#003589) € 7500


ORTVS MEDICINÆ.
ID EST,
INITIA PHYSICÆ INAVDITA.
Progressus medicinæ novus,
IN
MORBORUM ULTIONEM,
AD
VITAM LONGAM.
AVTHORE
IOANNE BAPTISTA VAN HELMONT,
Toparchâ in Merode, Royenborch, Oorschot, Pellines, &c.
Edente AUTHORIS Filio,
FRANCISCO MERCVRIO VAN HELMONT,
Cum ejus PRÆFATIONE ex Belgico translatâ.
AMSTERODAMI,
Apud Ludovicum Elzevirium,
cIↃ IↃC XLVIII.
1648

PMM 135; Norman 1048; NLM/Krivatsy 5447; Heirs of Hippocrates 254; Osler 2929, Waller 4307; Wellcome III, 241; Hirsch-H. III,153; Willems 1066; Garrison-Morton 665 - FIRST COLLECTED EDITION; second edition of *Opuscula medica inaudita*. "Helmont was one of the founders of biochemistry. He was the first to realize the physiological importance of ferments and gases, and indeed invented the word 'gas'. He introduced the gravimetric idea in the analysis of urine. The above work is a collection of his writings, issued by his son" (Garrison-Morton).

"Helmont devoted his life to exploring the first principles of nature through chemistry. He is best remembered as the discoverer of gas, a term he coined to describe the 'specific smokes' that remain after the combustion of solids and fluids; among the gases he identified were carbon dioxide, carbon monoxide, chlorine gas and sulphur dioxide. He denied that metals dissolved in acid were either destroyed or transmuted, stating that such metals were recoverable in their original quantities, and correctly identifying the process of precipitation. Like Paracelsus, he rejected traditional humoral pathology and advocated an ontological concept of disease, regarding each disease as a specific entity caused by a specific pathogenic agent. He demonstrated that acid is the agent in animal digestion and came near to identifying it as hydrochloric acid; he also identified the causes of asthma and correctly described fever as a part of the body's natural healing process... Though separately paginated 'Opuscula medica inaudita' is considered a part of the whole volume, as indicated by the 'Index tractatum' on 5*5 - 5*6. Originally published as a separate work in 1644, 'Opuscula medica inaudita' contains reprints of Helmont's treatises on the stone, on fevers, on the errors of humoral pathology, and on the plague" (Norman 1048).

A large collection of works by one of the most distinguished Dutch zoologists

26 **HOEVEN, Jan van der**. Important collection of 18 tracts bound in two volumes, mostly separate printings and monographs of zoological interest, including all his doctoral theses and the important treatise on the color-change of chameleons. Hand-written index leaf at end of each volume. Bound in uniform contemporary half calf over marbled boards, blind-ruled and gilt-lettered spines (some rubbing of leather, joints split but holding, wear to extremities, corners bumped and scuffed). 4to (248 x 205 mm and 285 x 232 mm). The text and plates generally crisp, clean and wide-margined, with little age-toning only and without visible staining; a few tracts with foxing to text or plates. (#003620) € 8500

Content, vol. I:

1. *Commentatio de foliorum plantarum ortu, situ, fabrica et functione, in certamine literario civium Academiarum Belgicarum, die viii. Mensis Februarii A. MDCCCXX*. Leiden: J. Luchtmans, 1821. [2], 22 pp.

[Hoeven's thesis and first published work].

2. *Responsio ad quaestionem, ab ordine disciplinarum mathematicarum et physicarum*. *Anno M.D. CCC.XIX. propositam. "Quaeritur, quis sit usus, qualisque dignitas anatomes comparatae in stabiliendis regni animalium divisionibus?"* [Leiden], 1820. 25 [1] pp.

3. *Dissertatio philosophica inauguralis de sceleto piscium, quam, annuente summo numine, ex auctoritate rectoris magnifici Cornelii Ekama*. . . Leiden: L. Herdingh et Filium, 1822. [6], 112, [2] pp., including half-title and 1 folding engraved plate. The plate slightly shaved at fore-margin. Van der Hoeven's doctoral thesis.

4. *Mémoire sur le genre ornithorhinque (ornithorhynchus Bl.) / Corrections au Mémoire sur le genre ornithorhinque*. Offprint or extract from: Nova acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum. Vol. 11, pp. [351]-372. [Bonn]: [Weber], 1823. Including separate title page and engraved plate (partly colored), numbered XLVI. Light foxing.

5. *Dissertatio pathologica inauguralis, de morbis aurium auditusque*. Leiden: L. Herdingh et Filium, 1824. xii, 112, [4] pp., including half-title and errata leaf. Printed on thick paper. Van der Hoeven's M.D. thesis

6. *Oratio de diligenti veritatis studio praecipua naturae interpretis dote. Quam publice habuit die 29. Aprilis 1826.* Leiden: [S. & J. Luchtmans], [1828]. 18 pp. Van der Hoeven's Inaugural speech.

7. *Icones ad illustrandas coloris mutationes in Chamaeleonte*. Leiden: J. C. Cyfaveer, 1831. [6], 14, [2] pp., including half-title, errata leaf and 5 splendid hand-colored lithographed plates by L. Springer. Printed on thick paper. Bright and clean. Nissen ZBI 4231, Van der Hoeven's classic paper on chameleons.

8. *Annotationes de quibusdam mammalium generibus ... (Acad. exh. d. XVII. Maii a. MDCCCXXXVII.)*. Offprint from: Nova acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum, Vol. 19, pp. [169]-186, 3 lithographed plates numbered XVIII-XX. 1839.

Content, vol. II:

9. *Bijdragen tot de natuurlike geschiedenis van den negerstam*. Leiden: S. & J. Luchtmans, 1842. [8], 68 pp., including half-title and 4 plates. first 16 pp. of main text foxed.

10. *Fragmens zoologiques sur les batraciens*. From: Mémoires de la Société du Museum d'Histoire Naturelle / Société du Muséum d'Histoire Naturelle (Straßburg). - Paris [etc.], Vol. 3., 1840/46, pp. 1-12, 2 engr. plates (1 folding). lower corner of pl. 1 torn with slight loss (repaired)..

11. With **Schmidt, F. J. J. & Goddard, Quirinius Johannes**. *Aanteekeningen over de anatomie van den Cryptobranchus Japonicus*. Natuurkundige verhandelingen van de Hollandsche Maatschappij der Wetenschappen te Haarlem, 2. verzameling, 19. deel, 1. stuk. Haarlem : de erven Loosjes, 1862. [6], 66 pp., half-title, 12 lithographed plates (4 folding).

12. *Bijdrage tot de Kennis van den Potto van Bosman*. Amsterdam : Sulpke, 1851. 12 pp., 2 engraved plates. Lacking the title-leaf.

13. *Ontleedkundig onderzoek van den Potto van Bosman . . . Uit zijne nagelaten aanteekeningen bijeengebragt*. Amsterdam: C. G. van der Post, 1859. [2], 79 [3] pp., text illustrations and 3 engraved plates. Browning and light staining of title.

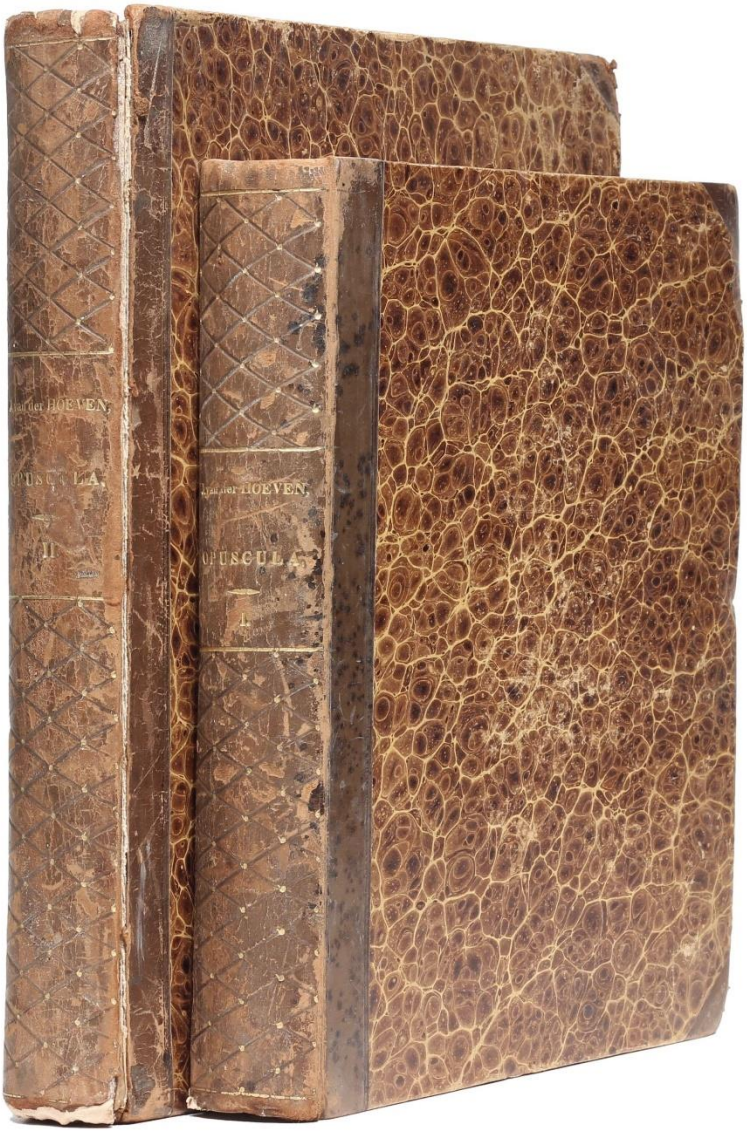
14. *Over het geslacht Icticyon van Lund*. Amsterdam: C. G. van der Post, 1855. [2], 10 pp., 1 folding engraved plate.

15. *Bijdragen tot de ontleedkundige kennis angaande Nautilus pompilius L., vooral met betrekking tot het mannelijke dier*. Amsterdam: C. G. van der Post, 1856. [2], 29 [1] pp., 5 engraved plates. Light foxing of plates.

16. With **Vrolik, Willem**. *Beschrijving en afbeelding van eenen te Pompeji opgegraven menschelijken schedel*. Amsterdam : C.G. Van der Post, 1859. [2], 6 pp., 2 lithographed plates.

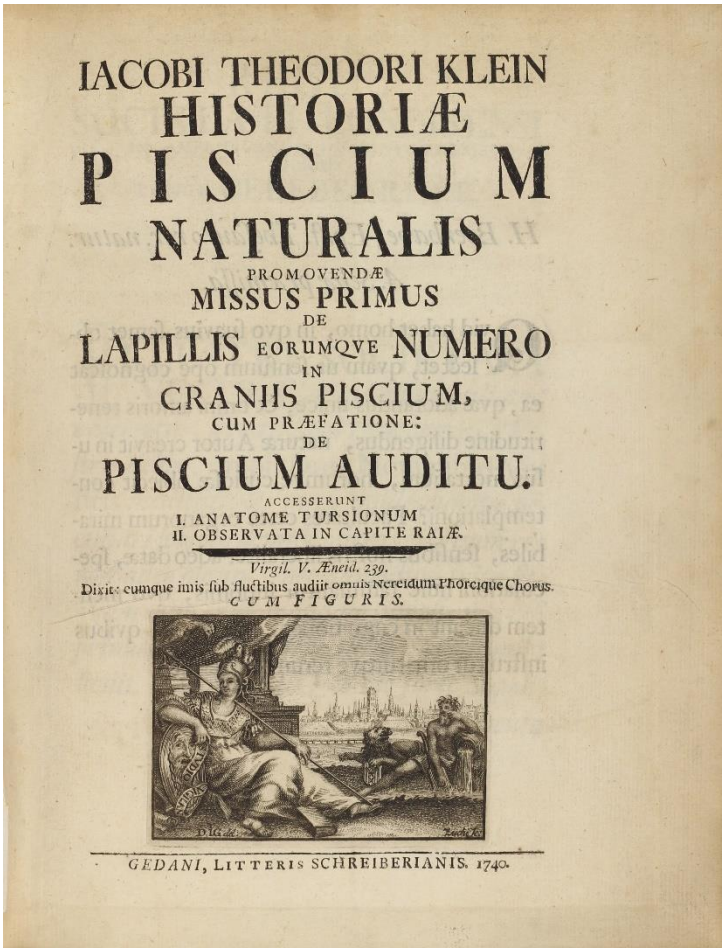
17. *Annotationes de Dromade Ardeola Payk*. Separate printing from vol. 33 of Verhandlungen der Kais. Leopoldino-Carolinischen deutschen Akademie der Naturforscher. Dresden: E. Blochmann, [1867]. 15 [1] pp., 1 folding lithographed plate. Light foxing of plate.

18. *Ontleed- en dierkundige Bijdragen tot de kennis van Menobranchus, den Proteus der Meren van Noord-Amerika*. Leiden: E. J. Brill, 1867. [4], 40 pp., text illustrations, 3 lithographed plates (one hand-colored). First plate foxed.



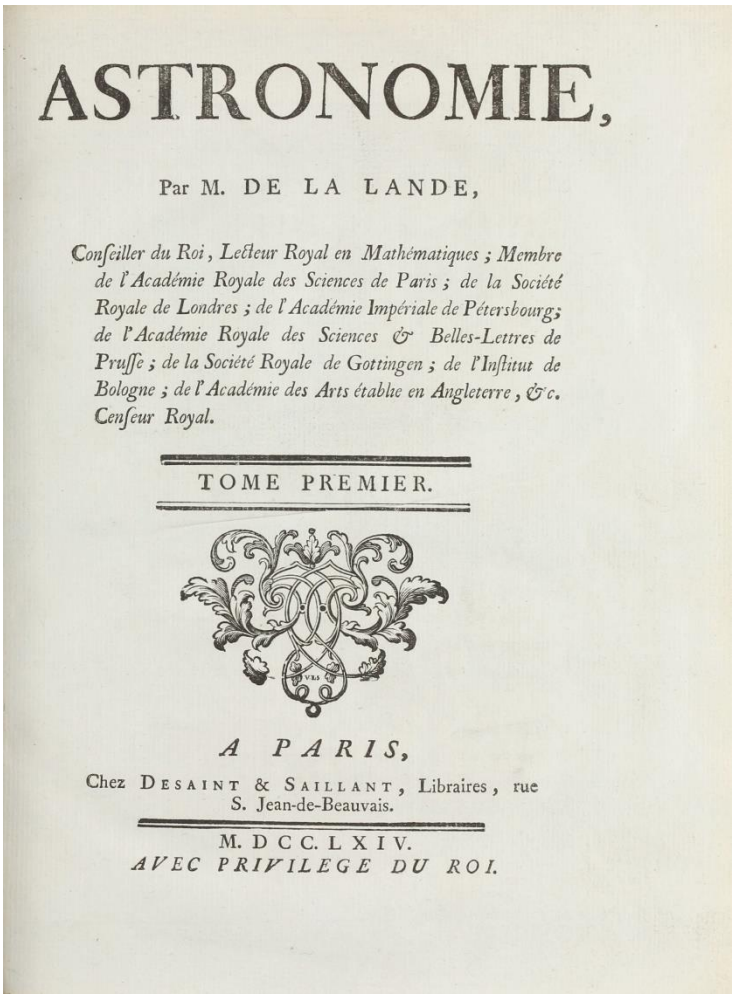
Jan van der Hoeven (1801-1868) was a Dutch zoologist. He wrote as readily about crocodiles as about butterflies, lancelets and lemurs. His research on the nautilus resulted in the discovery of a secondary sexual organ of unknown function which was then named after him as Hoeven's organ. He originated from a wealthy family of merchants in Rotterdam. In 1819 he moved to Leiden and in 1822 he got a degree in physics, followed in 1824 by another in medicine. After a visit to Paris he started working as a family doctor in Rotterdam, but in 1826 he was appointed Professor of Zoology and Mineralogy at the University of Leiden. In his youth Van der Hoeven was influenced by and paid tribute to the German philosopher Johann Gottfried Herder and he was friendly with Willem Bilderdijk, a prominent Dutch lawyer, author and historian, known for his Revivalism. By the 19th century it had become impossible to understand and comprehend all knowledge, but Van der Hoeven was a rather old fashioned scientist, (representing the Biedermeier era) and a generalist: neither specializing, nor becoming a theoreticist. In 1834 he started a magazine in natural history and physiology (Tijdschrift voor natuurlijke geschiedenis en physiologie). He was also involved in education, writing a biology book for pupils in secondary school, although, paradoxically, he was one of the last professors in Leiden to teach in Latin. In 1858, he was elected a foreign member of the Royal Swedish Academy of Sciences. In 1864 he published the Latin biology textbook Philosophia Zoologica. In 1832 he became correspondent of the Royal Institute and in 1845 member. In 1851 the Royal Institute became the Royal Netherlands Academy of Arts and Sciences. (Wikisource).

27 **KLEIN, Jacob Theodor**. *Historiae piscium naturalis promovendae missus primus (--quintus)*. Leipzig: Gleiditsch, Gdansk: Litteris Schreiberianis, 1740-1749. 5 parts in one volume. 4to (272 x 213 mm). Folding engraved portrait of the author bound as frontispiece, each part with separate title, engraved title-vignette, engraved headpiece and woodcut initial. 53 engraved plates (49 folding) in total, engraved text illustration, woodcut tailpiece and 3 errata leaves. Vol. I (1740): [2], 35 [1] pp., 6 engraved plates (numbered I-VI) on 5 sheets (2 folding); vol. II (1741): [6], 38, [2] pp., 4 folding engraved plates (numbered I-IV); vol. III (1742): [4], 46, [2] pp., 7 folding engraved plates (numbered I-VII, brown staining to gutter of two plates); vol. IV (1744): [6], 68 pp., 16 folding engraved plates (numbered I* and I-XV); vol. V (1749): [4], 102, [2] pp., 20 engraved folding plates (numbered I-XX), engraved text illustration and final errata leaf. 53 engraved plates in total. Contemporary polished vellum, gilt-lettered spine, dark-blue dyed edges, original endpapers (boards slightly bowed, vellum somewhat dust-soiled). Little even browning and occasional spotting of text and plates, a bit stronger to final part, one plate with split at fold. Provenance: Michael Morgenbesser (armorial bookplate to front pastedown with the motto of Leopoldina Academy "nunquam otiosus" and a monogrammed "M", further armorial bookplate to first flyleaf lettered "MONICA". A very cood, clean and wide-margined copy in untouched binding. Complete. (#003648) € 5500


IACOBI THEODORI KLEIN
HISTORIÆ
PISCIUM
NATURALIS
PROMOVENDÆ
MISSUS PRIMUS
DE
LAPILLIS EORUMQVE NUMERO
IN
CRANIIS PISCIUM,
CUM PRÆFATIONE:
DE
PISCIUM AUDITU.
ACCESSERUNT
I. ANATOME TURSIONUM
II. OBSERVATA IN CAPITE RAIÆ.
Virgil. V. Æneid. 239.
Dixit: cumque imis sub fluctibus audiit omnis Nereidum Phorcique Chorus.
CUM FIGURIS.
GEDANI, LITTERIS SCHREIBERIANIS. 1740.

Nissen ZBI 2204; Bosgoed Bibl. Ichthy. 112. FIRST EDITION, and exceptionally rare when complete. RBM-AE records the last complete copy sold at auction in 1966 (Sothebys NY, lot no. 140). The Prussian naturalist and zoologist Klein (1685-1759) used his many travels to build up one of the most extensive private natural history collections of the 18th century. For reasons that are not clear, he sold it in 1740 to Margrave Friedrich von Brandenburg-Bayreuth, who installed the collection in Bayreuth Castle. This work is Klein's most important on ichthyology which lists a total of 61 types of fish including some new species.

28 **LALANDE, Joseph-Jérôme de.** *Astronomie*. Two parts in two volumes. Paris: Desaint & Saillant, 1764. 4to (250 x 189 mm). xlviii, 752, 44; [4], (753)-1544, xxxiv, [2] pp., including half-title to each volume, titles with woodcut device, woodcut head- and tailpieces, index and privilege leaf at end of vol. II, 36 folding engraved plates. Contemporary calf, spines with 5 raised bands, compartments tooled in gilt and with gilt-lettered morocco labels, red sprinkled edges (spine ends chipped and repaired, joints repaired, boards scratched, extemities worn, corners bumped). Text and plates generally crisp and clean with only minor browning or spotting. Provenance: G. Costard (inscribed on first flyleaves and dated 1769); Richard Prime (armorial bookplate to front pastedowns). A very good set. (#003142) € 2000


ASTRONOMIE,

Par M. DE LA LANDE,

Conſeiller du Roi, Lecteur Royal en Mathématiques ; Membre de l'Académie Royale des Sciences de Paris ; de la Société Royale de Londres ; de l'Académie Impériale de Pétersbourg; de l'Académie Royale des Sciences & Belles-Lettres de Pruſſe ; de la Société Royale de Gottingen ; de l'Inſtitut de Bologne ; de l'Académie des Arts établie en Angleterre, &c. Cenſeur Royal.

TOME PREMIER.

A PARIS,

Chez DESAINT & SAILLANT, Libraires, rue S. Jean-de-Beauvais.

M. D CC. L XIV.

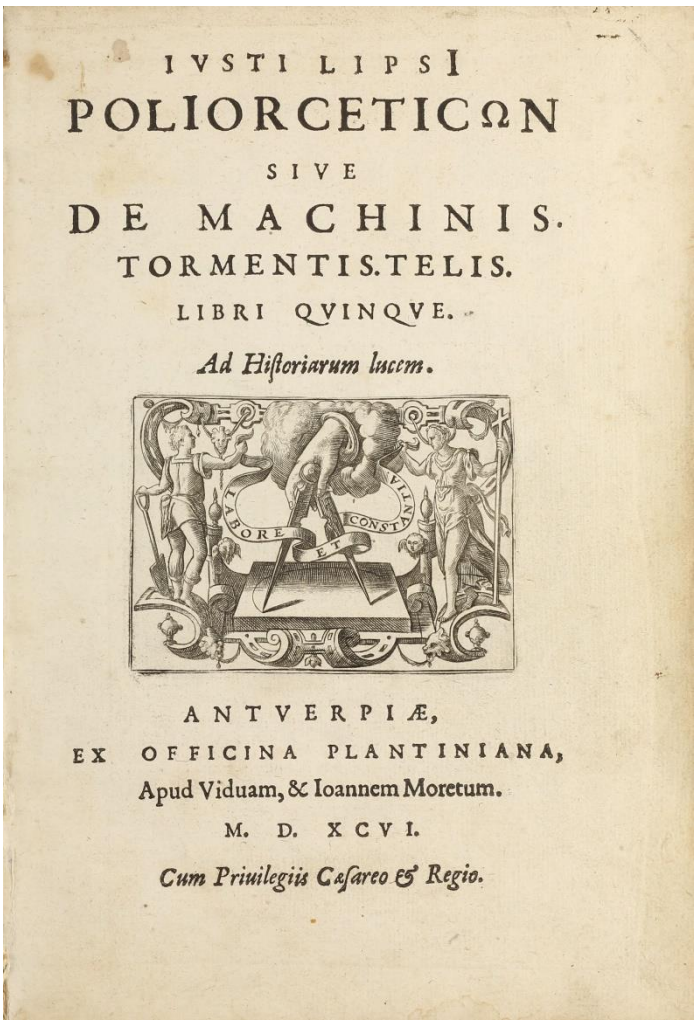
AVEC PRIVILEGE DU ROI.

Poggendorff I, 1349; Houzeau-L. I, 9258; Sotheran 2390; DSB 7:580; Honeyman 1889; DSB VII, p.580. - Next to his efforts to improve astronomical tables, Lalande's greatest achievement was his Astronomie, which "became a standard textbook and had the advantage over other texts of containing much practical information on instruments and methods of calculation" (DSB).

29 **LEIBNIZ, Gottfried Wilhelm & BERNOULLI, Johann**. *Commercium philosophicum et mathematicum.* Lausanne and Geneva: Marc-Michel Bousquet, 1745. Two parts in two volumes. 4to (235 x 180 mm). [4], xxviii, 484; [2], 492 pp., titles printed in red and black and with engraved vignettes, 23 folding engraved plates, lacking the frontispiece portrait as often. Bound in uniform contemporary full vellum, gilt titles on red morocco spine labels, red-dyed edges, boards with central supralibros (spine label of vol. II chipped with loss of letters, minor dust-soiling, a few worm holes to pastedowns). Text with minor uneven browning, the plates generally toned stronger, occasional minor spotting, p. vii/viii in vol. I and p. 441/2 in vol. II with paper flaw (small hole) costing a few letters of a word on each side, occasional paper flaws elsewhere not affecting text. Provenance: Sydney Ross (bookplate to front pastedown of vol. I). Still very good copy. (#003605) € 1500

Babson 196; Ravier 427; Honeyman 1975. FIRST EDITION of this important work that contains the main arguments in Leibniz's favor in the dispute over priority claims between Leibniz and Isaac Newton over the invention of calculus, supported by the correspondence between Leibnitz and Bernoulli.

30 **LIPSIUS, Justus**. *Poliorceticon sive de machinis tormentis telis. Libri Quinque*. Antwerp: Officina Plantiniana, apud viduam, & Joannem Moretum, 1596. 4to (255 x 175 mm). [16], 267, [9] pp., engraved printer's mark on title-page, woodcut printer's mark at final leaf recto, woodcut initials and tailpieces, 33 mostly full-page etched illustrations showing battle formations and examples of military engineering. Text in Latin and Greek. Near contemporary vellum with yapp edges, spine hand lettered (vellum slightly soiled, upper inner hinge broken before title, lacking two pairs of ties). Text with little even browning, occasional minor spotting, ink smudge at fore-margin of 4 pages, faint dampstaining to upper corner of 3 leaves. Very good copy in untouched binding. (#003631) € 900

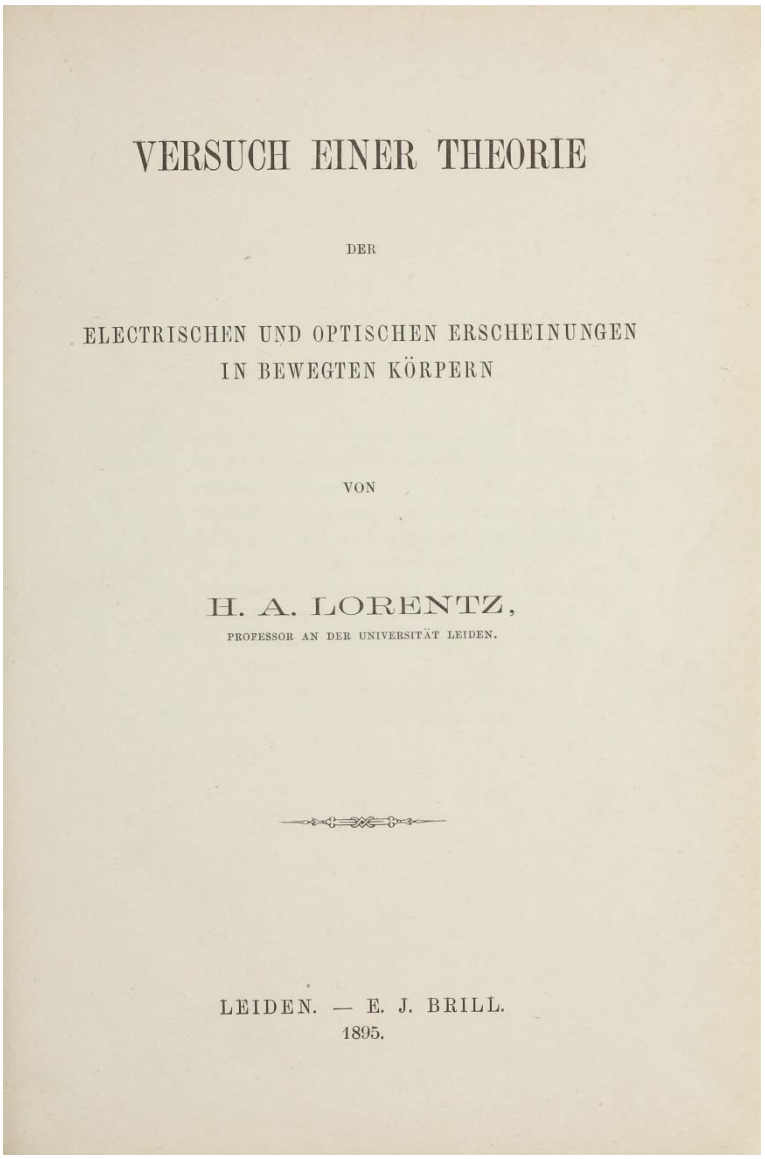

IVSTI LIPSI
POLIORCETICΩN
SIVE
DE MACHINIS.
TORMENTIS. TELIS.
LIBRI QVINQVE.
Ad Historiarum lucem.
LABORE ET CONSTANTIA
ANTVERPIÆ,
EX OFFICINA PLANTINIANA,
Apud Viduam, & Ioannem Moretum.
M. D. XCVI.
Cum Priuilegiis Cæsareo & Regio.

RARE FIRST EDITION of a treatise on the machinery of war by Justus Lipsius (1547-1606), one of the leading Dutch humanists of the 16th century. He wrote this while a professor at Louvain. He was a close friend of Plantin and his successor Moretus, who between them, published nearly all the first editions of Lipsius' works. The present work deals primarily with siege warfare, from both the offensive and defensive aspects, including ancient siege equipment and fortifications. The illustrations show the various methods of attack and defense and the deployment of the weapons used.

Literature: Cockle 672; Adams L.797; Bibl. Belg. L.424 ("Première édition, tirée à 1500 exemplaires"); Jähns p.561 ("Ein besonderes Verdienst erwarb er sich durch die für seine Zeit vortreffliche Abhandlung über die Maschinen der Alten").

31 **LORENTZ, Hendrik Antoon.** *Versuch einer Theorie der electrischen und optischen Erscheinungen in bewegten Körpern*. Leiden: E. J. Brill, 1895. 8vo (215 x 144 mm). [4], 138, [2] pp. Bound in contemporary half cloth, gilt-lettered spine, red sprinkled edges (minor rubbing of boards and extremities). Text very little age-toned, but generally clean and bright. A near fine copy, free of markings or stamps. (#003629) € 3800

PMM 378b; Norman 1388; DSB VIII, p. 494; Magill, *The Nobel Prize Winners*: Physics, pp. 35-42. FIRST EDITION, LAYING THE MATHEMATICAL FOUNDATION FOR EINSTEIN'S SPECIAL THEORY OF RELATIVITY. It is the second of Lorentz' two expositions of his electron theory of matter (the first titled *La theorie electromagnetique de Maxwell et son application aux corps mouvants* appeared in 1892 as an article in the journal *Archives neerlandaises des Sciences exactes et naturelles*) "Hertz's experimental and theoretical researches generated widespread interest


VERSUCH EINER THEORIE

DER

ELECTRISCHEN UND OPTISCHEN ERSCHEINUNGEN
IN BEWEGTEN KÖRPERN

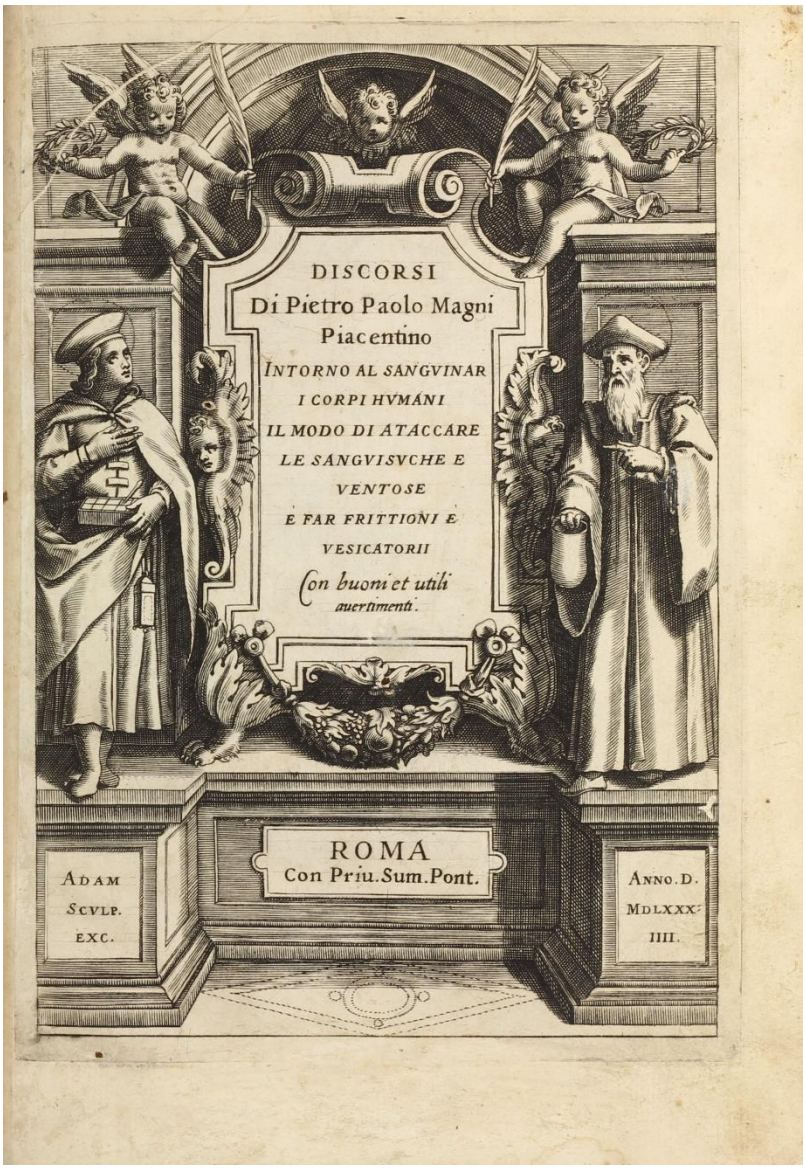
VON

H. A. LORENTZ,
PROFESSOR AN DER UNIVERSITÄT LEIDEN.

LEIDEN. — E. J. BRILL.
1895.

in Maxwell's theory among Continental physicists. Of the major theoretical statements of Maxwellian electrodynamics following Hertz's researches, several advanced a molecular view of electricity together with a stationary ether. Such theories - soon to be called electron theories - were proposed independently in the early 1890s by Lorentz, by Weichert, and by Larmoor . . . Of the three theories, Lorentz's gained the greatest authority on the Continent, in part because of its clear, if ultimately unsatisfactory, dualism of electron and field" (DSB). Lorentz's theory, for which he won the Nobel prize for physics in 1902 (shared with Pieter Zeeman), rested on the "fundamentally new assumption that the behavior of light and matter could be understood in terms of particles" (Norman). His articles contain the mathematical explanation of the results of the Michelson-Morley experiment, one of several "ether-drift" experiments that had disproved the theory that the speed of light is interfered with by the "luminiferous ether" that was still believed to surround the earth. The ether theory had attempted to explain the so-called "angle of aberration", the fact that in examining any fixed star it is necessary to point the telescope a bit in advance of the star. In this second paper Lorentz explained the optical aberration by his "famous contraction hypothesis" (DSB) which assumes that matter is of an electrical nature, so that "all electrical particles became shortened when in motion along the direction in which the ether drifts" (PMM). In 1905 Einstein published his special theory of relativity, which refuted the Michaelson-Morley experiment as fundamentally flawed since it presumed the existence of an observer independent of and unrelated to the universe, and for which he adopted the equations of Lorentz's theory. Although Lorentz admired Einstein's reinterpretations of his equations, "to the end of his life he believed that the ether was a reality and that absolute space and time were meaningful concepts" (DSB).

32 **MAGNI, Pietro Paolo**. *Discorsi intorno al sanguinar i corpi humani il modo di ataccare le sanguisuche e ventose a far frittioni e vesicatorii*. Rome: Bartolomeo Bonfadino & Tito Diani, 1584. 4to (226 x 164 mm). [12], 106, [2] pp., including engraved title within architectural border, 11 fine full-page engraved illustrations, text diagram, woodcut initials and headpieces, final leaf with colophon and errata. Signatures: †^{6} A-M^{4} N^{6}. 18th-century mottled calf, spine with 5 raised bands, tooled in gilt and ruled in blind, marbled endpapers (expertly rebacked, rubbed, extremities a trifle chipped, corners worn). Lower edge titled in ink. Text and plates only very little browned, some minor dust- and finger-soiling to outer margins, engraved title mounted on stub. Provenance: Robert J. Moes* (bookplate to front pastedown). A very good copy. (#003615) € 7500



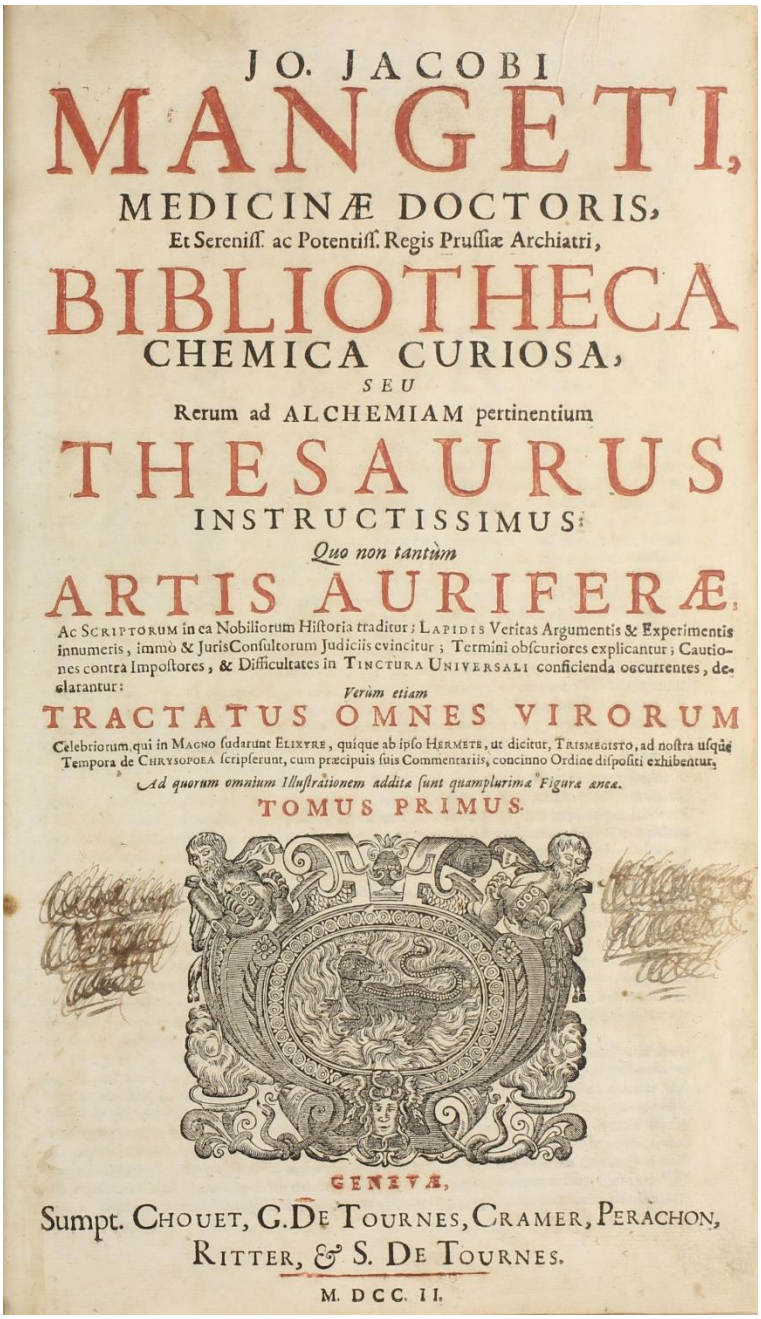
Mortimer, Italian II, 267; Cushing M78; Waller 6142; NLM/Durling 2905; Wellcome I, 3959; not in Norman lib. RARE FIRST EDITION of Magni's treatise on the art of bloodletting and the use of leeches in therapeutic medicine, containing eleven superb engravings by Adamo Ghisi, an artist of the school of Marcantonio Raimondi. The plates depict scenes of the many places on the human body which may be used for bloodletting (e.g., forehead, under the tongue, arms, legs, ball of the foot and other areas).

Magni, an Italian surgeon of Piacenza, was a practitioner of phlebotomy and wrote this treatise as well as on cautery. This is the only edition to have the artist's name on the title. Later editions appear to attribute the illustrations to other artists. Bloodletting has been practiced for thousands of years and has been utilized in the attempt to cure almost every ailment known to mankind. Its popularity as a therapeutic technique has waxed and waned over the centuries and it has often been the focal point of great controversy. Phlebotomy reached its zenith during the eighteenth and early nineteenth centuries and then began to decline as the principles of scientific medicine became firmly established. Today, bloodletting has nearly disappeared but is echoed in the development of plasmapheresis and is still recognized as a treatment for polycythemia and hemochromatosis.

This first edition is very rare. According to American Book Prices Current, only one complete copy has sold at auction in the last 40 years.

*Robert J. Moes, M.D. was a physician who served as an ambulance and police surgeon for several years in Los Angeles, before becoming head of the emergency medical division of the Los Angeles Citizens Defense Corps during World War II. He was an avid bibliophile who prowled downtown Los Angeles bookshops while a resident at the old California Lutheran Hospital, Moes at his death had accumulated hundreds of books on anatomy.

33 **MANGET, Jean Jacques (editor)**. *Bibliotheca Chemica Curiosa, Seu Rerum Alchemiam pertinentium Thesaurus Instructissimus: Quo non tantum Artis Auriferae. Ac Scriptorum in ea Nobiliorum Historia traditur; Lapidis Veritas Argumentis & Experimentis innumeris, immo & Juris Consultorum Judiciis evincitur; Termini obscuriores explicantur...* Geneva: Chouet, G. De Tournes, Cramer, Perachon, Ritter, & S. De Tournes, 1702. Two parts in two volumes. Folio (348 x 213 mm). [20], 938 (i.e., 936); [4], 904 pp. Titles with large woodcut device, first title printed in red and black, woodcut initials, head- and tailpieces, 30 full-page engraved plates (16 in vol. I, 14 in vol. II), engraved text illustrations and woodcut diagrams. Lacking the half-title in vol. I and the original portrait frontispiece (here replaced by Manget's portrait of his *Theatrum Anatomicum*, 1717). Signatures: [cross]^4 (-[cross]1) 2[cross]^6 A-4I^6; [pi]^2, A-4E^6, 4F^8. Uniformly bound in 20th century full vellum, gilt decorated spines with 6 raised bands each and gilt-lettered brown morocco labels (spine of vol. II with a few scratches and upper left joint partly split). Text unevenly browned and spotted (the plates generally less affected), engravings of plate 4 in vol. II cut out and laid down with captions added in manuscript, plates 5 and 6 with short gutter due to binding offset. Provenance: illegible ownership inscriptions on titles crossed out. Still a very good copy. (#003583) € 6500

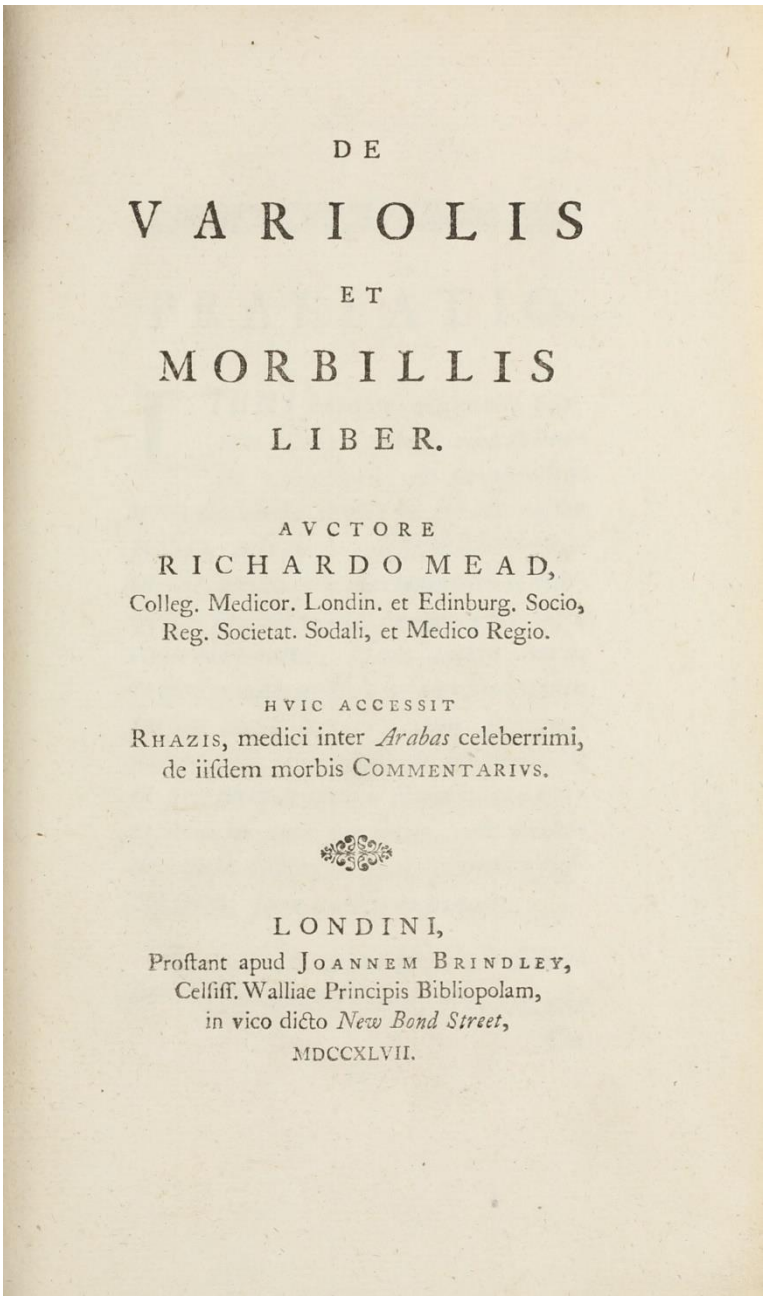

JO. JACOBI
MANGETI,
MEDICINÆ DOCTORIS,
Et Sereniſſ. ac Potentiſſ. Regis Pruſſiæ Archiatri,
BIBLIOTHECA
CHEMICA CURIOSA,
SEU
Rerum ad ALCHEMIAM pertinentium
THESAURUS
INSTRUCTISSIMUS:
Quo non tantùm
ARTIS AURIFERÆ,
Ac Scriptorum in ea Nobiliorum Hiſtoria traditur; Lapidis Veritas Argumentis & Experimentis innumeris, immò & JurisConſultorum Judiciis evincitur; Termini obſcuriores explicantur; Cautiones contra Impoſtores, & Difficultates in Tinctura Universali conficienda occurrentes, declarantur:
Verùm etiam
TRACTATUS OMNES VIRORUM
Celebriorum, qui in Magno ſudarunt Elixyre, quique ab ipſo Hermete, ut dicitur, Trismegisto, ad noſtra uſquè Tempora de Chrysopoea ſcripſerunt, cum præcipuis ſuis Commentariis, concinno Ordine diſpoſiti exhibentur.
Ad quorum omnium Illuſtrationem addita ſunt quamplurimæ Figuræ æneæ.
TOMUS PRIMUS.
GENEVÆ,
Sumpt. Chouet, G. De Tournes, Cramer, Perachon,
Ritter, & S. De Tournes.
M. DCC. II.

RARE FIRST EDITION of this famous collected edition by the Swiss doctor Manget (1652-1742. Geneva issue (another issue is known with 'Coloniae Allobrogum' in the imprint). "The most complete collection of alchemical texts ever published, containing 140 treatises [...]. For the historian of chemistry this is the most important and indispensable work" (Duveen). Manget was appointed physician to the Elector of Brandenburg in 1699, a position he retained when the Elector became King of Prussia. His work collects and reprints 'treatises on medicine and surgery, [which] are valuable as works of reference to books which either are now difficult to obtain or which have disappeared' (Ferguson p.71). Ferguson gives a full listing of the treatises.

References: Duveen 387 (= Ferguson II:68); NLM/Blake 285; Caillet 7071; Wellcome IV:42; Honeyman 2128; Brüning 3062-3; Caillet 7071; Esoterica 2870; Rosenthal, Magica, 585; Brunet III, 1365; Casanatense 807; Verginelli, Hermetica, 211; Neville II, 136.

Author's presentation and large paper copy

34 **MEAD, Richard**. *De Variolis et Morbillis Liber*. London: Brindley, 1747. 4to (217 x 213 mm). xvi, 197, [3] pp., including half-title, final blank leaf Cc4, woodcut head- and tailpieces. Inscribed on first flyleaf verso "From the Author" and further up "Grand papier". About 5 cm at head of half-title trimmed (away from text field) and restored with paper. Contemporary calf, spine with 5 raised bands, gilt decoration and gilt-lettered morocco label, boards and board edges tooled in gilt, marbled edges, original endpapers (minor wear to extremities, front hinge starting, upper board stained ut upper corner). Text crisp and clean throughout. A very good+ copy printed on strong paper. (#003586) € 2000



DE

VARIOLIS

ET

MORBILLIS

LIBER.

AVCTORE

RICHARDO MEAD,

Colleg. Medicor. Londin. et Edinburg. Socio,
Reg. Societat. Sodali, et Medico Regio.

HVIC ACCESSIT

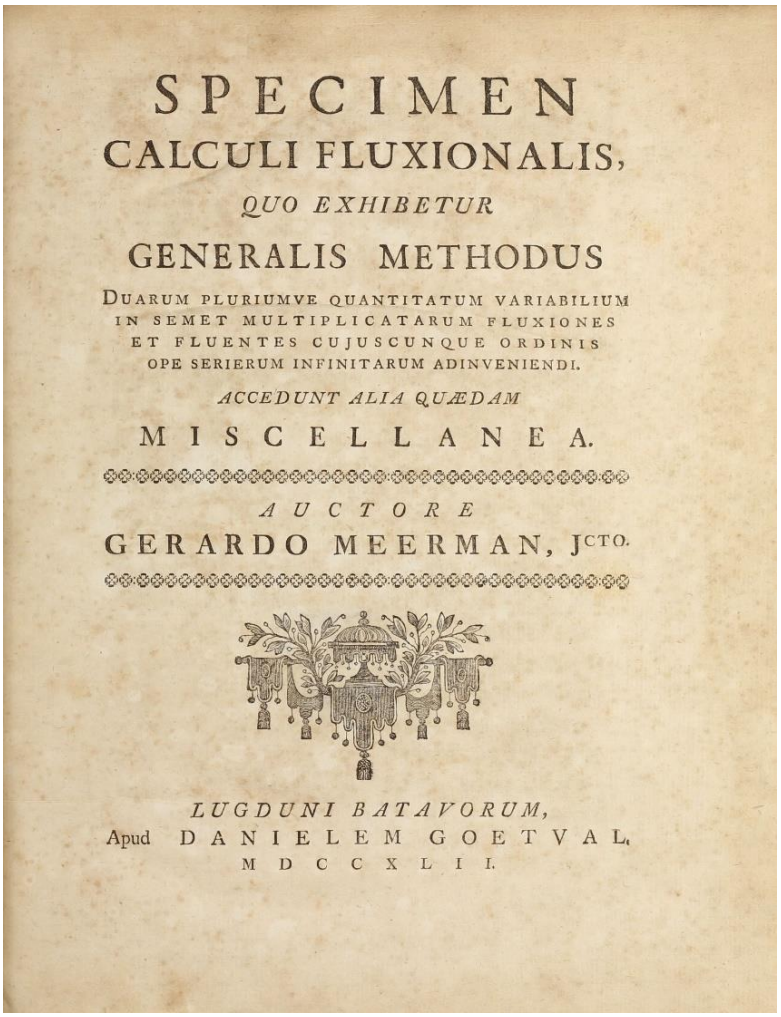
RHAZIS, medici inter *Arabas* celeberrimi,
de iisdem morbis COMMENTARIVS.

LONDINI,

Proſtant apud JOANNEM BRINDLEY,
Celſiſſ. Walliae Principis Bibliopolam,
in vico dicto *New Bond Street*,
MDCCXLVII.

Garrison-Morton 5417; NLM/Blake, p.295; Wellcome IV, p. 96. FIRST EDITION of Mead's work on smallpox, and one of the 150 "fine" issues, with manuscript note, "Grand papier" above presentation inscription. The work includes a Latin translation of Rhazes' commentary, the first work on smallpox. Mead (1673-1754) was physician to George I and II and to Isaac Newton, and an advocate of inoculation and his influence helped towards a more general acceptance of this measure. He also was the first to attempt the organisation of preventative quarantine in cases of "pestilential contagion."

35 **MEERMAN, Gerard**. *Specimen calculi fluxionalis, quo exhibetur generalis methodus duarum pluriumve quantitatum variabilium. Accedunt alia quaedam miscellanea*. Leiden: Daniel Goetval (The Hague: Antonius de Groot), 1742. 4to (260 x 205 mm). [16], 95 [1] pp. Title page with woodcut device, woodcut initials, head- and tailpieces. Contemporary sprinkled calf, spine with 6 raised bands and gilt decoration, marbled endpapers and edges (spine rubbed and with label gone, joints cracked at foot and head, extremities rubbed, minor wear to corners). Text somewhat browned, minor foxing (stronger to title and preliminary pages). Still very good, wide-margined copy. (#003606) € 1900

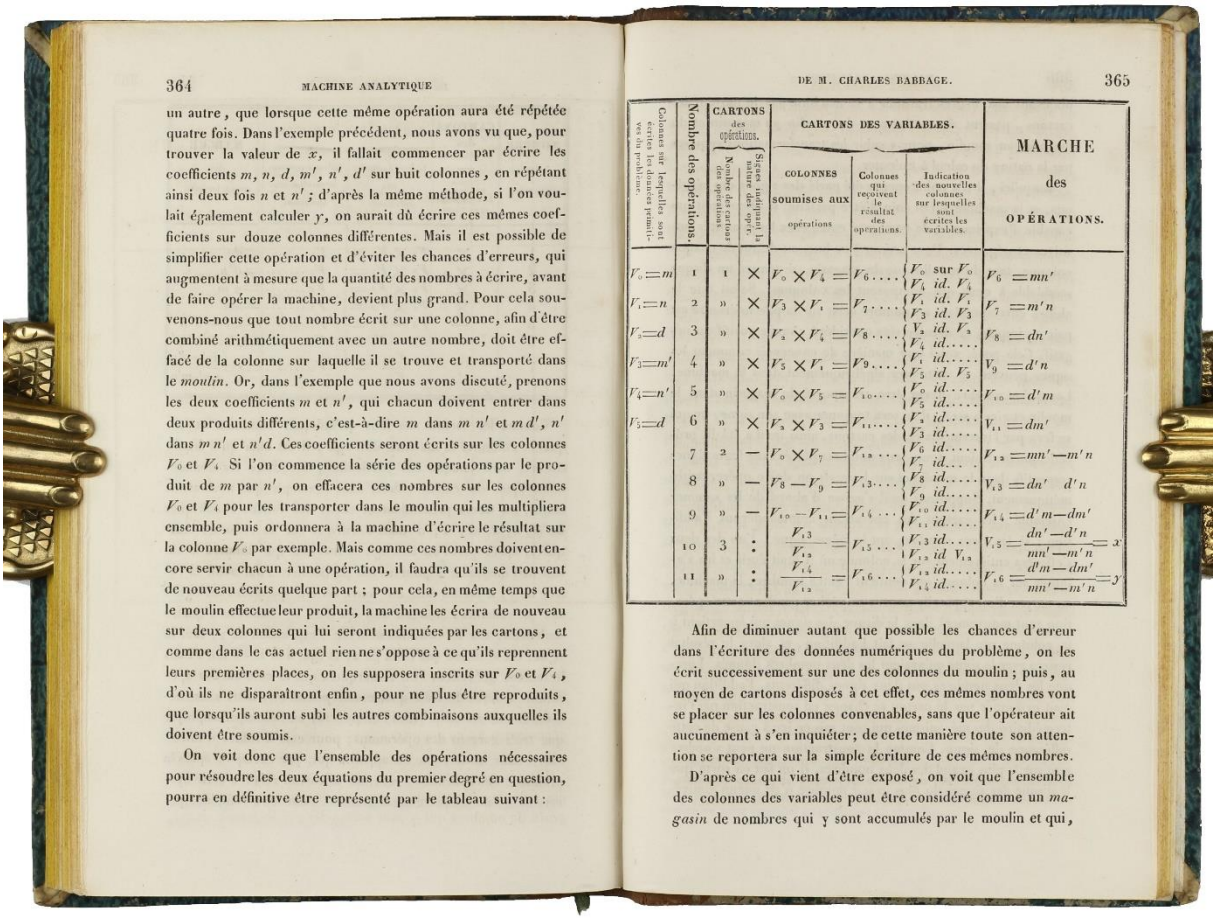


SPECIMEN
CALCULI FLUXIONALIS,
QUO EXHIBETUR
GENERALIS METHODUS
DUARUM PLURIUMVE QUANTITATUM VARIABILIUM
IN SEMET MULTIPLICATARUM FLUXIONES
ET FLUENTES CUJUSCUNQUE ORDINIS
OPE SERIERUM INFINITARUM ADINVENIENDI.
ACCEDUNT ALIA QUÆDAM
MISCELLANEA.
AUCTORE
GERARDO MEERMAN, JCTO.
LUGDUNI BATAVORUM,
Apud DANIELEM GOETVAL,
MDCCXLII.

See Macclesfield sale, Sothebys lot no. 2251. RARE FIRST EDITION of this textbook on infinitesimal calculus by Gerard Meerman (1722-1771), Dutch scholar, author and famous book collector, and son of Johan Meerman, director of the Dutch East India Company. Gerard Meerman studied law at Leiden University until 1741. Since then he has been busy with literary work despite numerous deals that have kept him busy. From 1744 to 1747 he undertook extensive journeys through Europe, met scholars and lawyers and visited libraries. On his return in 1748 he was appointed council pensioner of Rotterdam. He held this position with a colleague until 1753 and alone until 1766, in which year he resigned for health reasons. In 1757 he had been sent to England as ambassador to settle some differences that had arisen between that power and Holland. As a result, Emperor Joseph II granted him the title of Baron of the Holy German Empire. From 1766 Meerman was a councilor to the great chamber of commerce. He was a great book lover and owned one of the most important libraries of his time. Among other things, he conducted research into the origin of book printing (Wikisource).

36 **MENABREA, Luigi Federico [BABBAGE, Charles]**. *Notions sur la machine analytique de M. Charles Babbage*. In: Bibliothèque Universelle de Genève, Nouvelle Série, Tome 41, pp. 352-376. Genève / Paris, B. Glaser / Anselin, 1842. Entire volume no. 41, 8vo (207 x 129 mm). [5], 6-420 pp, including half-title and a folding table. Bound in contemporary half-calf, blue marbled boards, spine with gilt decoration and two orange labels lettered in gilt, yellow-dyed edges, original endpaper (light rubbing of boards and extremities, minor wear to corners, slight chipping of spine labels not affecting lettering). Occasional minor foxing, but generally crisp and clean throughout. Provenance: École d'artillerie de Rennes (ink stamps to half-title, title and a few text leaves). A very good copy in untouched binding. (#003649) € 18,500

RARE FIRST EDITION, journal issue, of the first published account of Babbage's Analytical Engine and the first account of its logical design including the first computer programs ever published. In 1840 Babbage travelled to Turin to make a presentation on the Engine to a group of Italian scientists. Babbage's talk, complete with charts, drawings, models, and mechanical notations, emphasized the Engine's signal feature: its ability to guide its own operations. In attendance at Babbage's lecture was the young Italian mathematician Luigi Federico Menabrea (later prime minister of Italy), who prepared from his notes an account of the principles of the Analytical Engine. He published his paper in French in a Swiss journal two years after Babbage's presentation. The paper must have provided some consolation to Babbage, who was refused government funding for the construction of the machine shortly after its publication.



364 MACHINE ANALYTIQUE

un autre, que lorsque cette même opération aura été répétée quatre fois. Dans l'exemple précédent, nous avons vu que, pour trouver la valeur de x, il fallait commencer par écrire les coefficients m, n, d, m', n', d' sur huit colonnes, en répétant ainsi deux fois n et n'; d'après la même méthode, si l'on voulait également calculer y, on aurait dû écrire ces mêmes coefficients sur douze colonnes différentes. Mais il est possible de simplifier cette opération et d'éviter les chances d'erreurs, qui augmentent à mesure que la quantité des nombres à écrire, avant de faire opérer la machine, devient plus grand. Pour cela souvenons-nous que tout nombre écrit sur une colonne, afin d'être combiné arithmétiquement avec un autre nombre, doit être effacé de la colonne sur laquelle il se trouve et transporté dans le *moulin*. Or, dans l'exemple que nous avons discuté, prenons les deux coefficients m et n', qui chacun doivent entrer dans deux produits différents, c'est-à-dire m dans $m\,n'$ et $m\,d'$, n' dans $m\,n'$ et $n'd$. Ces coefficients seront écrits sur les colonnes V_0 et V_4. Si l'on commence la série des opérations par le produit de m par n', on effacera ces nombres sur les colonnes V_0 et V_4 pour les transporter dans le moulin qui les multipliera ensemble, puis ordonnera à la machine d'écrire le résultat sur la colonne V_6 par exemple. Mais comme ces nombres doivent encore servir chacun à une opération, il faudra qu'ils se trouvent de nouveau écrits quelque part; pour cela, en même temps que le moulin effectue leur produit, la machine les écrira de nouveau sur deux colonnes qui lui seront indiquées par les cartons, et comme dans le cas actuel rien ne s'oppose à ce qu'ils reprennent leurs premières places, on les supposera inscrits sur V_0 et V_4, d'où ils ne disparaîtront enfin, pour ne plus être reproduits, que lorsqu'ils auront subi les autres combinaisons auxquelles ils doivent être soumis.

On voit donc que l'ensemble des opérations nécessaires pour résoudre les deux équations du premier degré en question, pourra en définitive être représenté par le tableau suivant :

DE M. CHARLES BABBAGE. 365

Colonnes sur lesquelles sont écrites les données primitives du problème.	Nombre des opérations.	CARTONS des opérations. — Nombre des cartons des opérations	CARTONS des opérations. — Signes indiquant la nature des opér.	CARTONS DES VARIABLES. — COLONNES soumises aux opérations	Colonnes qui reçoivent le résultat des opérations.	Indication des nouvelles colonnes sur lesquelles sont écrites les variables.	MARCHE des OPÉRATIONS.
$V_0 = m$	1	1	×	$V_0 \times V_4 =$	$V_6 \ldots$	V_0 sur V_0, V_4 id. V_4	$V_6 = mn'$
$V_1 = n$	2	»	×	$V_3 \times V_1 =$	$V_7 \ldots$	V_1 id. V_1, V_3 id. V_3	$V_7 = m'n$
$V_2 = d$	3	»	×	$V_2 \times V_4 =$	$V_8 \ldots$	V_2 id. V_2, V_4 id.	$V_8 = dn'$
$V_3 = m'$	4	»	×	$V_5 \times V_1 =$	$V_9 \ldots$	V_1 id., V_5 id. V_5	$V_9 = d'n$
$V_4 = n'$	5	»	×	$V_0 \times V_5 =$	$V_{10} \ldots$	V_0 id., V_5 id.	$V_{10} = d'm$
$V_5 = d$	6	»	×	$V_2 \times V_3 =$	$V_{11} \ldots$	V_2 id., V_3 id.	$V_{11} = dm'$
	7	2	—	$V_6 \times V_7 =$	$V_{12} \ldots$	V_6 id., V_7 id.	$V_{12} = mn' - m'n$
	8	»	—	$V_8 - V_9 =$	$V_{13} \ldots$	V_8 id., V_9 id.	$V_{13} = dn' \quad d'n$
	9	»	—	$V_{10} - V_{11} =$	$V_{14} \ldots$	V_{10} id., V_{11} id.	$V_{14} = d'm - dm'$
	10	3	:	$\frac{V_{13}}{V_{12}} =$	$V_{15} \ldots$	V_{13} id., V_{12} id V_{13}	$V_{15} = \frac{dn' - d'n}{mn' - m'n} = x$
	11	»	:	$\frac{V_{14}}{V_{12}} =$	$V_{16} \ldots$	V_{14} id., V_{14} id.	$V_{16} = \frac{d'm - dm'}{mn' - m'n} = y$

Afin de diminuer autant que possible les chances d'erreur dans l'écriture des données numériques du problème, on les écrit successivement sur une des colonnes du moulin; puis, au moyen de cartons disposés à cet effet, ces mêmes nombres vont se placer sur les colonnes convenables, sans que l'opérateur ait aucunement à s'en inquiéter; de cette manière toute son attention se reportera sur la simple écriture de ces mêmes nombres.

D'après ce qui vient d'être exposé, on voit que l'ensemble des colonnes des variables peut être considéré comme un *magasin* de nombres qui y sont accumulés par le moulin et qui,

"In keeping with the more general nature and immaterial status of the Analytical Engine, Menabrea's account dealt little with mechanical details. Instead he described the functional organization and mathematical operation of this more flexible and powerful invention. To illustrate its capabilities, he presented several charts or tables of the steps through which the machine would be directed to go in performing calculations and finding numerical solutions to algebraic equations. These steps were the instructions the engine's operator would punch in coded form on cards to be fed into the machine; hence, the charts constituted the first computer programs. Menabrea's charts were taken from those Babbage brought to Torino to illustrate his talks there" (Stein).

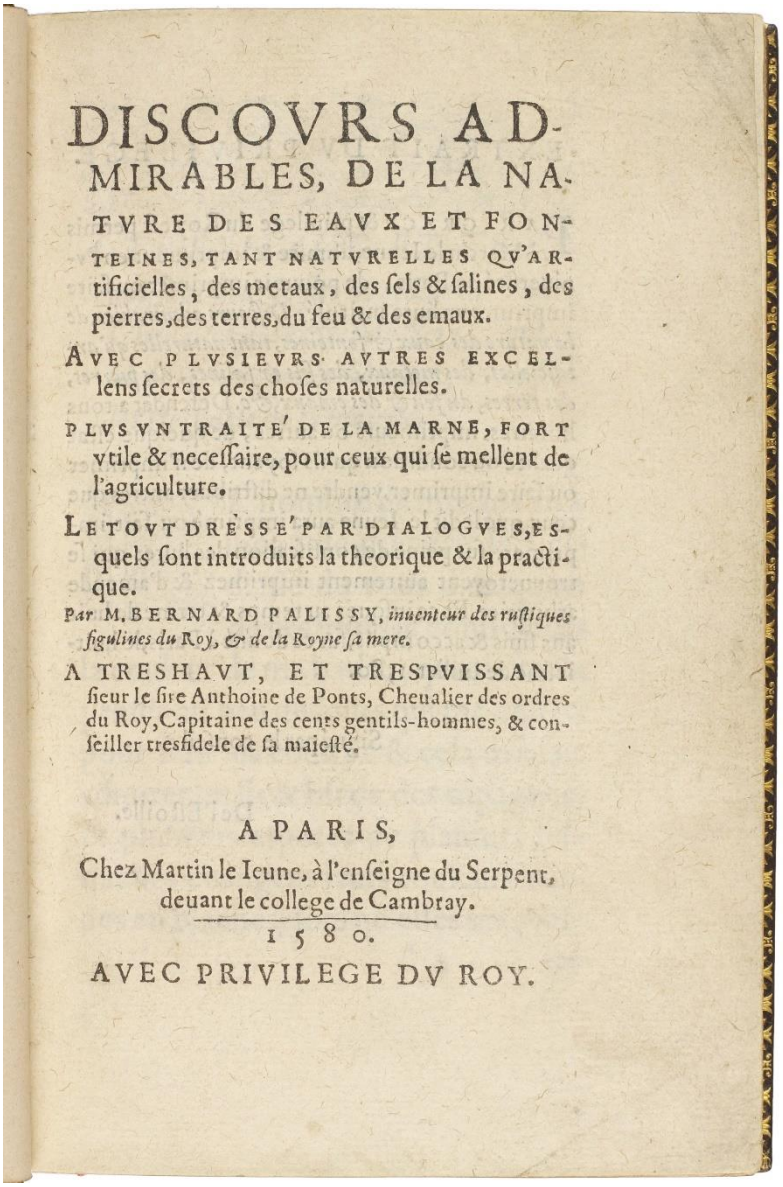
"What may be the most remarkable aspect of Babbage's monumental invention in thought and engineering was the extent to which it was ignored. Menabrea's twenty-three-page paper and its expanded English translation by Ada, Countess of Lovelace in the following year were the only detailed publications on the Analytical Engine

before Babbage's account in his autobiography (1864). Shortly after inventing the machine Babbage wrote a manuscript *On the Mathematical Powers of the Calculating Engine* (1837) which was not published until about 1970. Menabrea himself wrote only two other very brief articles about the Analytical Engine in 1855. They primarily concerned his surprise and fascination in learning that Ada, Countess of Lovelace was the translator of his paper" (Origins of Cyberspace 60).

Reference: Hook & Norman, *Origins of Cyberspace* 60; Stein, *A Life and a Legacy*, 1985, p. 92.

Of great importance in the history of chemistry and science

37 **PALISSY, Bernard**. *Discours admirables, de la nature des eaux et fonteines, tant naturelles qu'artificielles, des métaux, des sels & salines, des pierres, des terres, du feu & des emaux*. Paris: Martin le Jeune, 1580. 8vo (165 x 108 mm). [16], 361, [23] pp. Signatures: *^{8} A-Aa^{8}. Woodcut initials and headpieces. Bound in 19th century fine brown morocco by Hardy (see Flety 89), spine with 5 raised bands and gilt lettering, all edges gilt, board edges ruled in gilt, rich gilt-tooling of turn-ins, marbled endpapers (light rubbing of extremities). Text with little even browning, Y6 with short clean tear at fore-margin, V3 with repared tear at head obscuring page numbering, pp. 8-13 with unobtrusive text markings in black ink, first pages with occasional light finger soiling, tiny wormtrack at blank lower margin of pp. 289-302. In all a clean and sound copy with ample margins. (#003601) € 25,000



DISCOVRS AD-
MIRABLES, DE LA NA-
TVRE DES EAVX ET FON-
TEINES, TANT NATVRELLES QV'AR-
tificielles, des metaux, des sels & salines, des
pierres, des terres, du feu & des emaux.

AVEC PLVSIEVRS AVTRES EXCEL-
lens secrets des choses naturelles.

PLVS VN TRAITE' DE LA MARNE, FORT
vtile & neceſſaire, pour ceux qui ſe mellent de
l'agriculture.

LE TOVT DRESSE' PAR DIALOGVES, ES-
quels ſont introduits la theorique & la practi-
que.

Par M. BERNARD PALISSY, *inuenteur des ruſtiques figulines du Roy, & de la Royne ſa mere.*

A TRESHAVT, ET TRESPVISSANT
ſieur le ſire Anthoine de Ponts, Cheualier des ordres
du Roy, Capitaine des cents gentils-hommes, & con-
ſeiller tresfidele de ſa maieſté.

A PARIS,
Chez Martin le Ieune, à l'enſeigne du Serpent,
deuant le college de Cambray.
1580.
AVEC PRIVILEGE DV ROY.

FIRST EDITION of this famous and fascinating collection of eleven distinct scientific treatises on subjects as diverse as the nature of water, the use of marl to reclaim land, and the famous treatise *De l'Art de terre*, an extraordinary story in which Palissy recounts his setbacks and his tireless efforts to discover the secret of enamels. "A book of great importance in the history of chemistry and science generally . . . extremely rare" (Duveen).

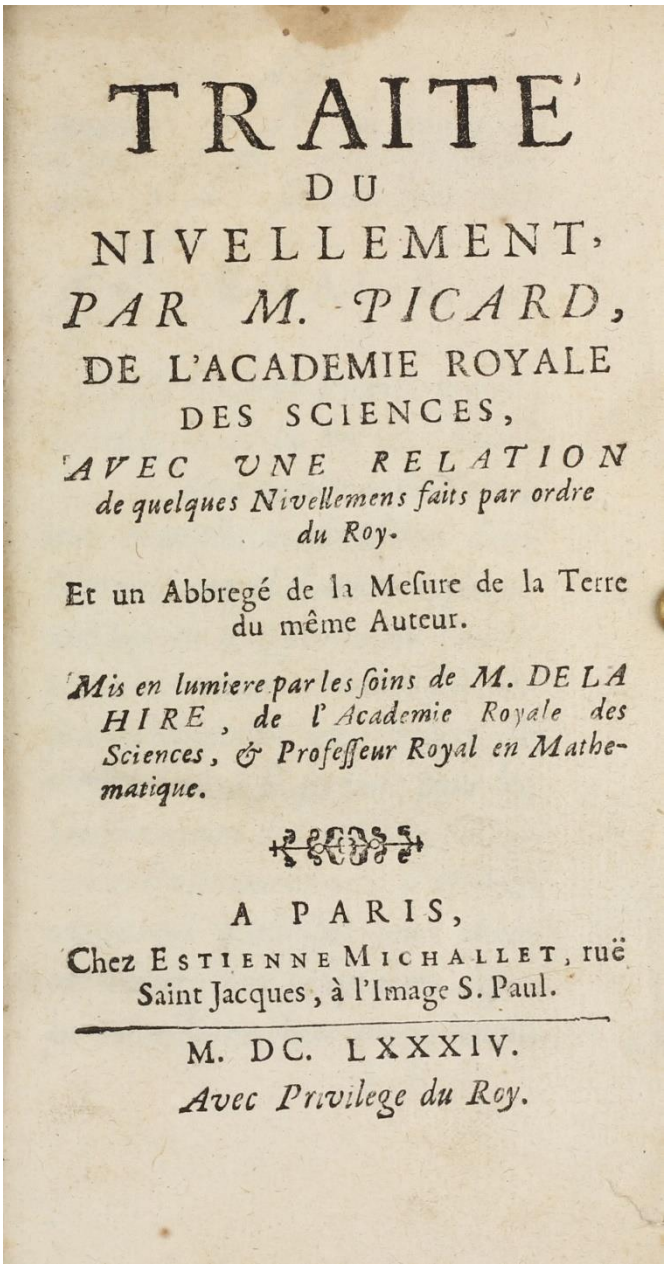
A skilled potter, Palissy first became famous for making 'rustic' enamelled earthenware, an art which earned him the position of 'inventeur des rustiques figurines du roy'. In 1575, despite his lack of formal education, he began lecturing on natural history. Written in the form of a dialogue between 'Theorique' and 'Pratique', the *Discours* covers a wide range of subjects, the most important of which are those on hydrology and paleontology. "Palissy's views on hydrology and paleontology, as expressed in the *Discours*, are of particular interest. He was one of the few men of his century to have a correct notion of the origins of rivers and streams [. . .] He was one of the first to hold a resonably correct view of the process of petrification [. . .] From experimentation he concluded that all minerals with geometric crystal forms must have crystallized in water; his classification of salts were nearly correct; and he suggested the concept of superposition for the development of sedimentary rocks [. . .] There is little doubt that Palissy was probably one of the first men in France to teach natural sciences from facts, specimens and demonstrations rather than hypotheses" (DSB).

"An early supporter of the infiltration theory, he denied that rivers and streams had any source other than rainfall. He also recognised the relation between fossils and both living and extinct species, and was one of the first to hold a reasonably correct view of the process of petrification. Palissy's views were not original, being derived from Leonardo da Vinci by way of Cardano's *De subtilate*; however, Palissy used his own experience to illustrate and elaborate upon these views" (Norman).

Literature and references: Norman 1629; Hoover 621; Thorndike 5, 596-599; En français dans le texte 72; Duveen 446; Neu 3034; Honeyman 2393; DSB X, 280f.

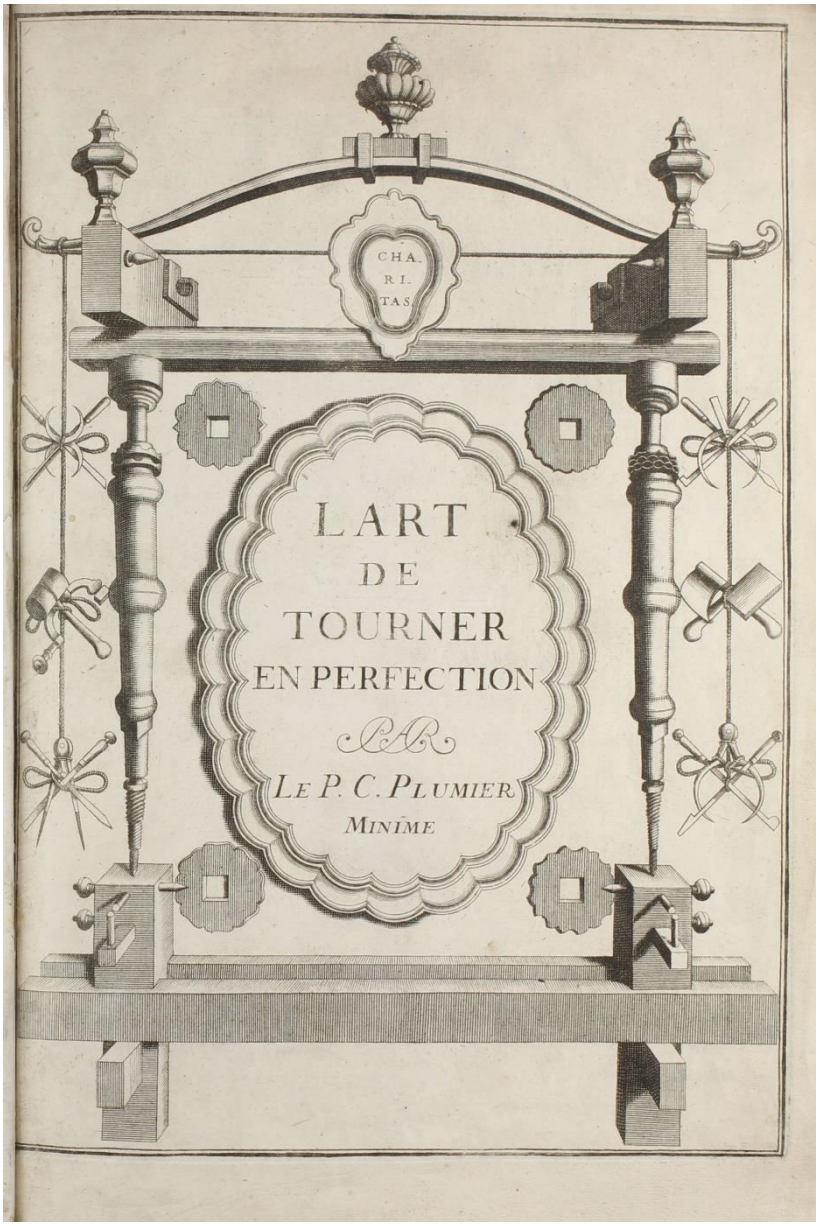
Interesting association copy, presented to Sylvestre Francois Lacroix

38 **PICARD, Jean**. *Traité du Nivellement, avec une Relation de quelques Nivellemens faits par ordre du Roy, et un Abbregé de la Mesure de la Terre. Mis en lumiere par les soins de M. de La Hire*. Paris: Estienne Michallet, 1684. 8vo (156 x 84 mm). [12], 1-204, 241-248, [4] pp., including errata leaf and final blank, woodcut text diagrams, 4 engraved plates, woocut initials, head- and tailpieces. Bound in contemporary French calf, spine with 5 raised bands, gilt decorated in compartments and with faint lettering piece (spine chipped at head and foot, extremities rubbed, bumped bumped and scuffed). Text only little browned, occasional minor spotting, first preliminary pages with small brown spot at upper margin, the third plate with two figures separated as often and bound-in at the named pages. A very good, clean copy. (#003632) € 900


TRAITE'
DU
NIVELLEMENT,
PAR M. PICARD,
DE L'ACADEMIE ROYALE
DES SCIENCES,
AVEC UNE RELATION
de quelques Nivellemens faits par ordre
du Roy.
Et un Abbregé de la Meſure de la Terre
du même Auteur.
Mis en lumiere par les ſoins de M. DE LA
HIRE, de l'Academie Royale des
Sciences, & Profeſſeur Royal en Mathe-
matique.
A PARIS,
Chez ESTIENNE MICHALLET, ruë
Saint Jacques, à l'Image S. Paul.
M. DC. LXXXIV.
Avec Privilege du Roy.

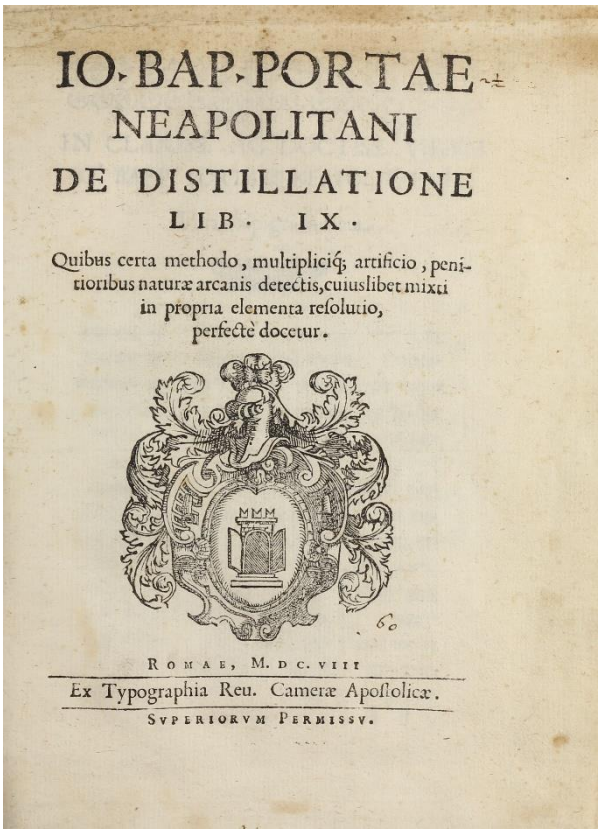
FIRST EDITION of Picard's book on surveying and leveling, written as a by-product of his researches into the measurement of the circumference of the earth. This work was prepared for the press by Philippe de la Hire (1640-1718) after Picard's death, and was considered one of the prime books on the subject, being reprinted in numerous editions until 1780. De la Hire supplies descriptions and illustrations both of Picard's level and of alternative instruments designed by Huygens, Römer and himself. These levels were some of the most accurate instruments available at the time. Picard's instrument was used to supply the chateaux of Marly and Versailles with water, a surveying project undertaken by the French Academy in which king Louis XIV took a keen interest and which Picart and Römer carried out under Colbert's instructions: 'on this occasion [Picard and Römer] succeeded in transforming the art of levelling by the high degree of accuracy they introduced' (see M. Daumas, *Les instruments scientifiques aux XVIIe et XVIIIe siècles*, Paris, PUF, 1953, p.55). References: Honeyman 2474; Sotheran, First Supplement, 2604.

39 **PLUMIER, Charles**. *L'art de tourner ou de faire en perfection toutes sortes d'ouvrages au to ur. Dans lequel, outre les principes & elemens du tour qu'on y enseigne met hodiquement pour tourner tant le bois, l'ivoire &c. que le fer & tous les a utres metaux . . . Ouvrage tres curieux, et tres necessaire a ceux qui s'exercent au tour. Composé en francois & en latin en faveur des etrangers*. . . Paris: Aubouin, Ribou and Jombert, 1706. Folio (373 x 241 mm). [28], 187 [1] pp., engraved additional title page, 72 engraved plates (1 folding), woodcut initials, head- and tailpieces. Text in two columns in French and Latin. Signatures: â^4 ẽ^4 ĩ^6, A-Y^4, Z^6. Contemporary French sprinkled calf, spine with 6 raised bands, gilt decoration and gilt-lettered morocco label, rebacked and recornered, red-sprinkled edges, original endpapers (boards little cratched and soiled, extremities rubbed). Text and plates with only little browning, occasional spotting and finger-soling. Provenance: Kenney Collection (small sticker to front pastedown); Tho. Frankland (signed on engraved title verso). A near fine, tall and unstained copy. (#003633) € 1300



Brunet IV-729; Graesse V, 353; Ornamentstichsammlung Berlin I, 146 (1st ed.); Honeyman 2504. Second issue of the first edition of 1701, with a new title page only. The work represents the earliest known treatise on the lathe. It describes the turning of wood, metals, ivory, diamonds, etc. and the tools and machines to be used. Further shown are objects to be made in this way, such as vases, urns, knives or snuff-boxes. Charles Plumier (1646-1704) is best known today as an important botanist and explorer. On three major expeditions to South America, undertaken on behalf of Louis XIV, he discovered and named numerous plants on the continent. His work on lathe art presented here, however, also met with great interest among his contemporaries. For the first time, practices and tools were presented, the use of which had previously been a well-kept secret of a few specialists. In addition to the description of the tables and working methods, the text also contains numerous recipes for the production of paints, varnishes, etc.

40 **PORTA, Giovanni Battista della**. *De distillatione lib. IX. Quibus certa methodo, multiplicique artificio, penitioribus naturae arcanis detectis, cuiuslibet mixti in propria elementa resolutio, perfecte docetur*. Rome: Camera Apostolica, 1608. 4to (215 x 160 mm). [20], 154, [6] pp. Title with printer's device, woodcut initials, head- and tailpieces, full-size engraved portrait of the author, 35 woodcut text illustrations, epigrams at beginning with Hebrew, Greek, Chaldaean, Persian and Illyrian scripts; colophon and woodcut device on final leaf verso. Signatures: *4 *6 A-V4. Bound in contemporary limp vellum, bottom edge titled in manuscript (single wormhole in upper joint, light soiling and rubbing of covers, inner front hinge partially broken). Some soiling at head of title, text very little browned, some minor spotting, paper flaw with paper thinning and tear at fore-marging of leaf S1 (outside text area), portrait leaf detached. A very good+ copy in untouched first binding. (#003607) € 10,500


IO. BAP. PORTAE
NEAPOLITANI
DE DISTILLATIONE
LIB. IX.
Quibus certa methodo, multiplicíq; artificio, penitioribus naturæ arcanis detectis, cuiuslibet mixti in propria elementa resolutio, perfectè docetur.
ROMAE, M. D C. VIII
Ex Typographia Reu. Cameræ Apostolicæ.
SVPERIORVM PERMISSV.

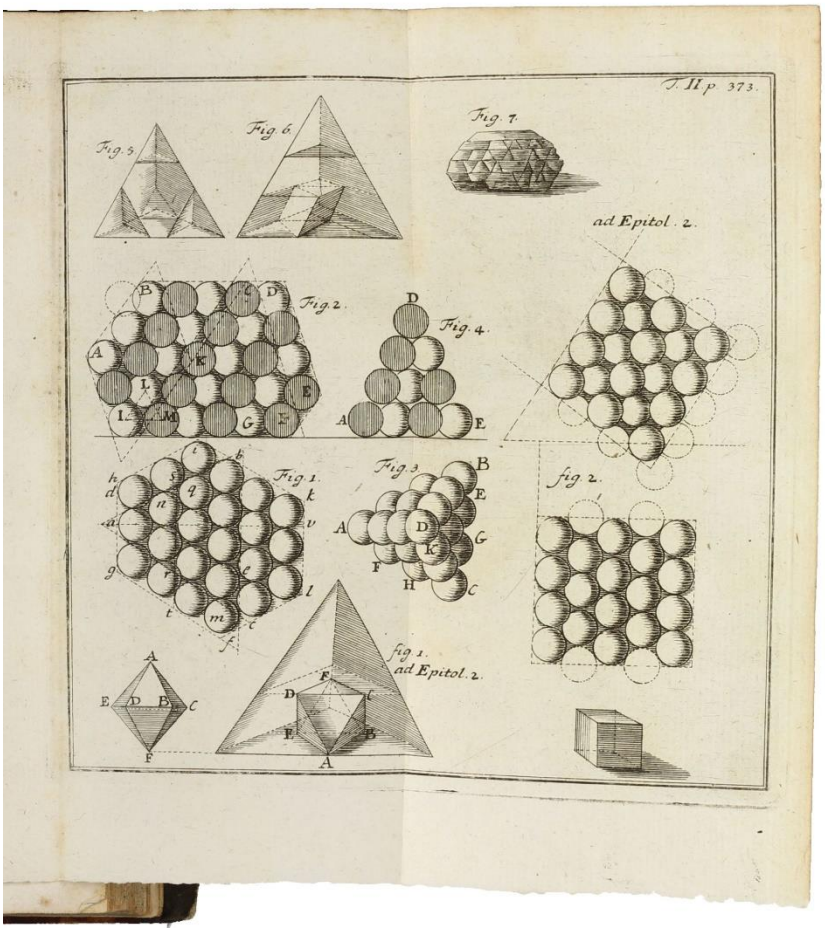
RARE FIRST EDITION. Della Porta's treatise gives the most comprehensive view of the applications of distillation in the sixteenth century. The work is an expansion of the section on distillation in Book X of the enlarged edition of his Magia naturalis (1589). "It deals in successive books with the names of the vessels used in the various distillation processes (fancifully compared with animals and birds) and the degree of heat; distillation of waters; oils of flowers, exotic plants, resins, and woods; strong waters (aqua regia), water or oil of vitriol, oil of sulphur (with figure of a multiple-headed alembic), and expressed oils" (Partington). "This book is as rare as it is beautiful [. . .] among the many fine woodcuts contained in the book, the most curious are those depicting pieces of apparatus likened to different animals" (Duveen).

Bibliography: Norman 1725; Partington I, p.24; Ferguson II, 215f.; Duveen 481; NLM/Krivatsy 9177; Riccardi I(ii), 312.


38 LIBER
minimè vaporosa, flatulentaq; ad eorum distillationem organa ampla, eademq; humilia requirunt. Animal est testudo satis terrestre siccum rigido tegmine intectum ex terrestri, qua constat parte, amplo corpore, semper prona, inclinatoq; capite incedit, domifera, tardigrada, vnde simplicia terrestria, vt sales, vitrioli, & alia mineralia, quæ non ascendunt, his testudinibus vtimur, vulgus leuto vocat, quia in testudinis animalis modum efformata sunt vel musici instrumenti testudo, vel leuto vocati.
Hęc vasa testa veluti accubantia, vt etiam testudo animal incedit, in fornaculis accommodatur, vt vi ignis prolectus liquor, in subiectam illico ampullam fluat.
Sunt
PRIMVS. 39
Sunt quoque, & simplicia humidarum partium, crassarumq; sed parum halituosa, vt animal Vrsum imitentur, crassum, terrestre, viscosum, stolidum, informe, formatum, vt totum corpus, & caput appareant sine collo, corpore amplo, carnoso, breui. Vas ad eius similitudinem efformant, vulgus vrsale, vel vrinale vocat, in quo simplicia minimè spirituosa, vel difficilis ascensus, vt viscositatem, crassitiemq; eorum exuant, & breui, & amplo tractu deferantur.
Sed si simplicium partes spirituosę essentiæ crassamentis, & terrenis fęcibus immersæ, vt tenuiores, & puriores euadant, & crassis illis, & impuris exonerentur, & in fęcibus relinquant, velut medicis vtibus ineptæ, oportet multiplicatis viribus, in se ipsas resoluantur, & reducantur, vt assiduo motu circumgiratæ nobiliorem vim, & magis egregiam sortiantur. Vas excogitatum est, quod Pelicanum vocant, quod ad auis Pelicani figuram adumbratũ est, in quo simplicium par-
tes

41 **SCHEUCHZER, Johann Jakob.** *Natur-Geschichte des Schweitzerlandes: samt seinen Reisen über die Schweitzerische Gebürge. Aufs neue hrsg. und mit einigen Anmerkungen versehen von Joh[ann] Georg Sulzern*. Zürich: David Gessner, 1746. 16, 488, [2]; [8], 381 [1] pp. First title printed in red and black and with engraved vignette, errata leaf at end of vol. I, 30 engraved plates (7 folding). Tear in folding plate to p.191 in vol. II verso repaired by tape, some minor browning and occasional spotting. [Bound with]: **SULZER, Johann Georg**, *Untersuchung von dem Ursprung der Berge, und andrer damit verknüpften Dinge*. Zürich: David Gessner, 1746. 44 pp. 1 folding engraved plate, woodcut tailpiece. [Bound with:] **SULZER, Johann Georg**. *Beschreibung einiger Merckwürdigkeiten, welche er in einer Ao. 1742 gemachten Berg-Reise durch einige Oerter der Schweiz beobachtet hat*. Zürich: David Gessner, 1747. 71 [1] pp. Engraved title vignette, woodcut initials, head- and tailpieces, 1 folding engraved plate. Some minor browning and spotting. Three works bound in two volumes. 8vo (212 x 160 mm). Uniform contemporary half calf and marbled paper over boards, red morocco label lettered in gilt, red-sprinkled edges (some rubbing, minor wear and chipping of extremities, corners bumped). Provenance: Carl Walliser (inscribed on first flyleaves); Rudolf Schaller (modern bookplate to front pastedowns). Very good set. (#101713) € 2800

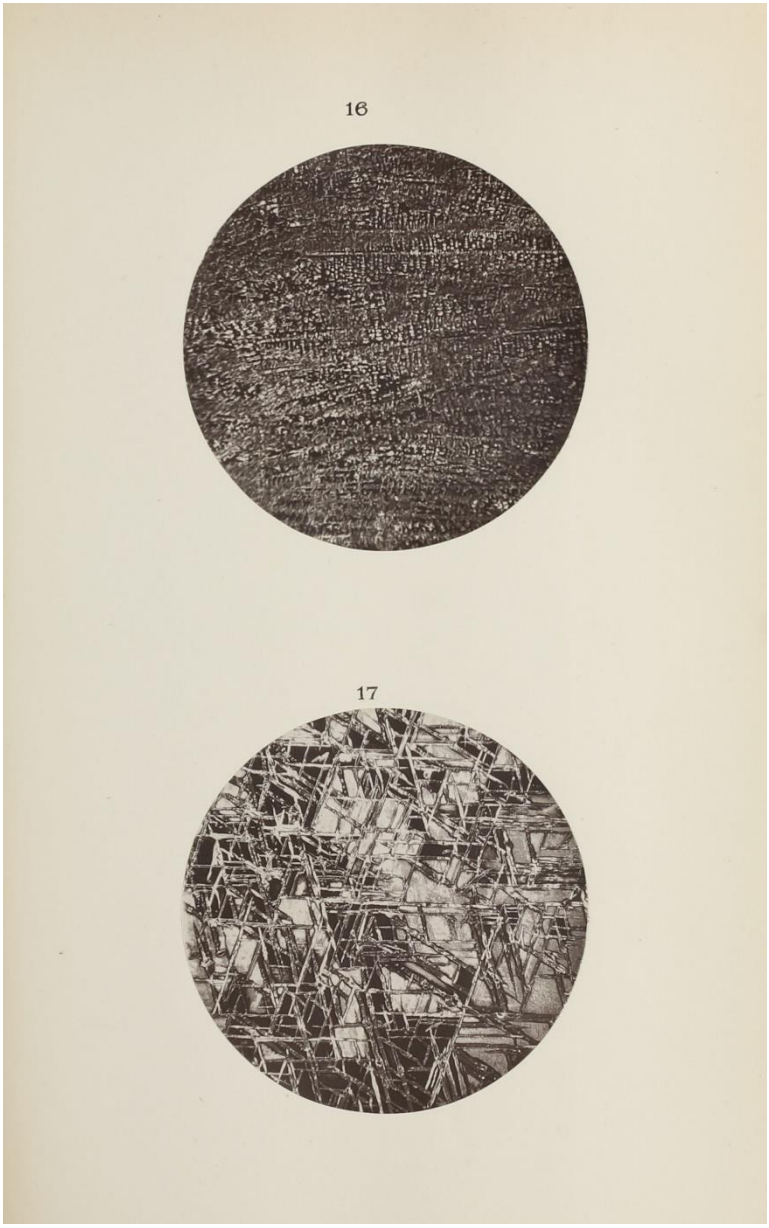
Lonchamp 2645. Waber I, 32. Steiger I, 160. Haller I, 1043. - With the map of Glarner Land, and the tables of landscapes (Gotthard, Teufelsbrücke, Vierwaldstättersee, Luzerner Drachenstein, Pfaffers bzw. Pfaffikon etc.). The first part contains the tightened summary of of the 1705-07 unsystematical "description of natural history of the Swiss country" appeared in weekly supplies. There now all this messages very disjointed and informal were, then sel. the Joh has. George Sulzer of the scholarly world certainly a large service gethan, selbige to umzuschmelzen and. give change. The notes of the publisher are very good and useful" (Haller). The second part contains the first German expenditure of the 1708 and 1723 first Latin of reports Scheuchzers appeared over its alpine journeys. "Scheuchzer was beside Conrad Gessner and Albrecht of Haller a most important universal scholar, that Switzerland it own calls. It combined a physician, a natural scientist, a mathematician, a paleontologist, a Geodaeten, a geographer, a historian, a Numismatiker, a theologian and a Philologen "(Fueter) in itself. Scheuchzers natural history was trailblazing in the area of regional studies, alpine research and the physical geography of the Swiss high mountains. With its historical data this expenditure beside Tschudis chronicle formed one of the most important sources for Schillers "Tell". On its journeys Scheuchzer made the first barometric levellings in the mountains, examined the glaciers, collected Petrefakten etc. Under the copper boards are to emphasize the beautiful map Graubuendens of G. Walser, the interior opinion of a cheese factory, the representation of a total solar eclipse, illustrations of minerals and petrifying as well as opinions among other things from bath Pfaefers, Walterswil, pc. God hard etc. Johann George Sulzers writings in the appendix offer valuable, likewise additions supported by own observations (Curtis Schuh's Bibliography of Mineralogy, The Mineralogical Record).



The paper that marks the beginning of the field of metallography

42 **SORBY, Henry Clifton**. *On the microscopical structure of iron and steel*. In: The Journal of Iron and Steel, No. 1, 1887, pp. 255-289, 6 plates with 17 photographs and heliographs, 2 text illustrations. London: E. & F. N. Spon, 1887. 8vo (213 x 137 mm). Entire volume: xii, [2], 530 pp., 27 plates (14 folding), 3 folding letterpress tables, text illustrations and diagrams. Bound in contemporary plum cloth, spine gilt lettered and blind ruled, dark-brown endpapers (rubbing of extremities, corners bumped, spine ends frayed, binding somewhat untight, front pastedown damaged). Text clean and bright throughout, old tape repair to gutter of p. 224/5. Provenance: Dorman, Long & Co (ink stamps to free endpapers). (#003622) € 3500

FIRST EDITION of the paper that marks the beginning of the field of metallography, also the first publication of photographic images in microscopic petrography. "The first technical interests in examining the nature of steel came just past the midpoint of the 19th century. Henry Clifton Sorby of Sheffield, England, examined, polished, and etched surfaces of meteorites and several commercial steels under a microscope during the period 1863-1866 [. . .] Sorby discovered that the microstructure of steel was complex, and he found an area that he called 'pearly'. However, no interest developed at the time even though he reported his findings in his home town of Sheffield, which had been a toolmaking center for centuries [...] The very beginning of any scientific or technical field is always difficult to determine because there is usually some knowledge or activity that can be shown to predate whatever beginning is selected. Thus, while the period 1885 to 1890 can be shown as the beginning of the studies of the internal structures of metals, some previous work had been done by Sorby, Dmitry Chernov, Floris Osmond, Adolf Martens, and others. It was the first attempts by Osmond and Martens to publish their examination of polished and etched surfaces of steel in the Journal of the Iron and Steel Institute of Great Britain that reawakened Sorby's interest in an area he had worked on more than 20 years earlier. Sorby immediately set about a new examination of the microstructure of steels. He presented this work in 1886 and published it in the Journal of the Iron and Steel Institute in 1887. This new work by Sorby, along with that of Osmond and Martens, is considered the real beginning of the field of metallography, the study of the internal structure of metals by light-reflected microscopy. From this point forward, the ever-increasing research in how the behavior of metals relates to their internal structure has been the foundation of our modern technological age" (C. R. Simcoe, *The History of Metals in America*, ASM International, 2018, pp. 47-49).



The Most Sumptuous Book on Fencing ever produced

43 **THIBAULT D'ANVERS, Girard**. *Academie de l'Espee ... ou se demonstrent per reigles mathematiques sur le fondement d'un cercle mysterieux le theorie et pratique des vrais et jusqu'a present incognus secrets du maniement des armes a pied et a cheval*. Leiden: Elzevier, 1628-1630. Two parts in one volume. Large folio (540 x 405 mm). Engraved title, portrait of the author, preliminaries including a dedication leaf to emperor and princes, 9 leaves of engraved plates showing the coats-of-arms of the dedicatees, privilege leaf of King Louis XIII and the States-General of the Netherlands, additional imperial privilege leaf of Ferdinand II in Latin, epigramma and applausus leaf; an unnumbered leaf "Advertissement au lecteur" with colophon bound at end, 46 plates of fencing (45 double-page and mounted on stub) interleaved with explanatory text, woodcut initials, head- and tailpieces. The work is divided into 33 sections in the first part, and 13 sections in the second, each separately paginated and preceded by an engraved plate. Bound in early 19th century half red morocco over marbled boards, blind-tooled and gilt-lettered spine (extremities rubbed, corners worn and bumped, leather and paper over boards little cratched), marbled endpapers. Text with little uneven browning, minor occasional spotting, plate II in the second part incorrectly bound and inserted after plate II in the first part, plate I of second part slightly smaller in size, clean tear and small hole in plate VI of part II, short clean tear in plate XXXIII of part I repaired, long clean tear in plate XIII of part 2 repaired, plate XX (part I) and plate XI (part II) with light water staining to lower corners, 3 leaves (Latin privilege, epigramma and colophon) with paper repairs to blank margins. Provenance: Scandinavian private collection. Complete with the 15 preliminary leaves, the final advert/colophon leaf and 46 engraved plates. (#003627) € 55,000

FIRST EDITION, AND EXCEPTIONALLY RARE IF COMPLETE AS HERE. Berghman, after 20 years of research, could only identify 5 copies, all defective (Berghman 687). "Can be reckoned, without exception, the most elaborate treatise on swordsmanship, and probably one of the most marvellous printed works extant" (Castle). Brunet gives the place of publication as Anvers, but the name of printer and place of impression can be found in the colophon leaf which also gives the year of publication with 1630 (the title page is dated 1628). On this leaf, there is also the announcement of the death of the author. The part of the work relating to the exercise on horseback was never published. Our copy well conforms to the digitized copy at Biblioteca Patrimonial of Universitat de Barcelona.

The *Academie de l'Espee* is the finest publication of the Elzevir press, and one of the 17th-century's most lavish publications. Gerard Thibault was born at Antwerp around 1574 and followed other members of his family into the wool trade. In about 1603, he was living at Sanlucar de Barrameda, south of Seville, where he learned the mathematical method of fencing taught by the famous Luis Pacheco de Narvaez. Thibault further refined and elaborated on this system and, soon after returning to Flanders in 1611, presented himself and his system to the Dutch fencing masters assembled at Rotterdam for a competition. After further demonstrations to Prince Maurice and Prince Henry, he conceived of the idea for his book. Thibault's system is based on the 'mystic circle', a diagram drawn on the floor within a

circle, the radius of which is in accurate proportion to the stature of the fencer and the length of his sword. The circle was marked according to the probabilities of strokes and parries, and one contestant was intended to traverse from one intersection to the next. If this stepping was done correctly, the result was a foregone victory, and if both contestants followed the system, they could fence without fear of injury. The book was produced during a period when the Italian rapier (or epee) held sway. "The Italians discovered the effectiveness of the dexterous use of the point rather than the edge of the sword. By the end of the 16th century, their lighter weapon [. . .] and simple, nimble, and controlled fencing style, emphasizing skill and speed rather than force, spread throughout Europe. Most of the wrestling tricks [used in earlier disciplines] were abandoned, the lunge was discovered, and fencing became established as an art" (Encyclopaedia Britannica).

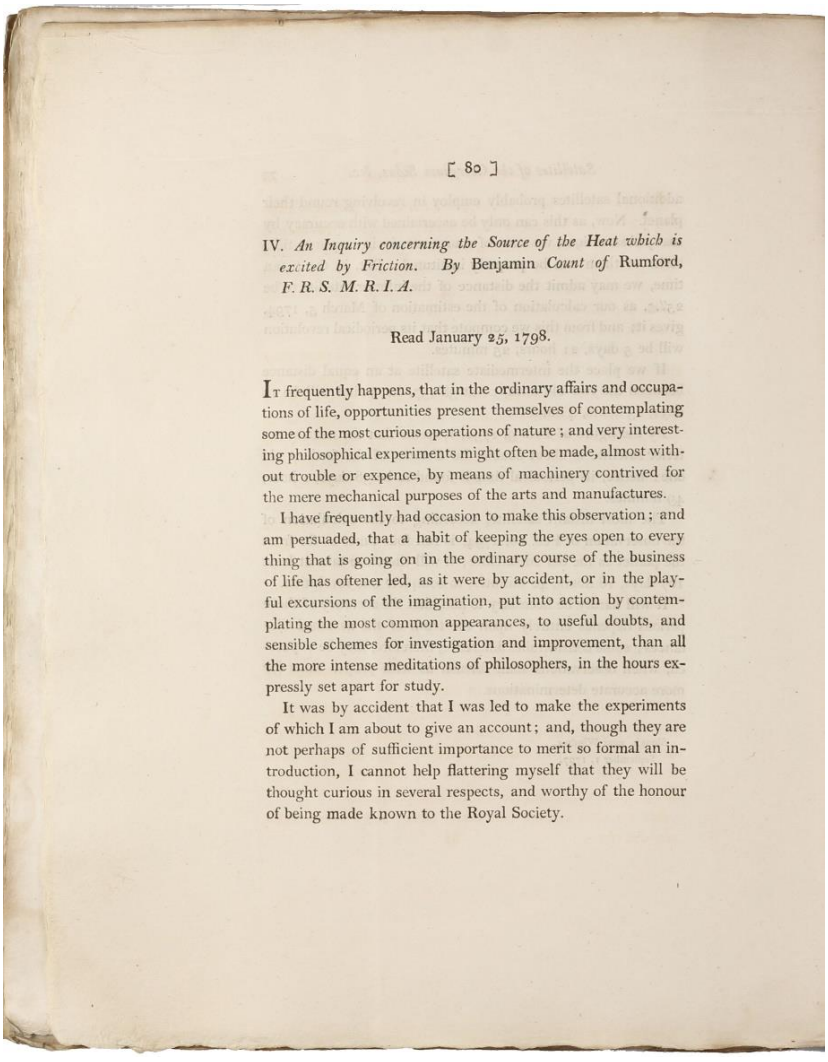
The unnumbered plates consist of: title page engraved by Schelte van Bolswert and Gerard Gauw (the latter responsible for the lettering); portrait of the author engraved after a painting by D. Bailly; 9 unsigned dedication plates. The numbered plates are the work of 16 different engravers from Amsterdam, The Hague, Haarlem, Leiden, Delft, Utrecht, and Germany and nearly all on double leaves (apart from plate II in the first sequence). They are engraved by Johann Gelle (6 plates), Claes Pietersz. Lastman (3 plates), Crispijn van de Passe (1 plate), Andries Jacobsz. Stock (3 plates), Adriaen Matham (4 plates), Egbert van Panderen (4 plates), Robert Baudous (1 plate), Peter Iselburg (1 plate), Willem Delff (3 plates), Pieter van Serwouters (3 plates), Schelte Bolswert (4 plates), Crispyn van de Queboren (5 plates), Boëce van Bolswert (2 plate), Salomon Savery (3 plates), Pieter de Jode (1 plate) and Jacob van der Borcht (1 plate). 1 plate is unsigned. Two plates are enlarged copies of emblematic engravings in praise of fencing which Michel le Blon had produced for Thibault around 1615.

References: Willems 302; Brunet V, 815; Lipperheide 2960; Vigeant p.125; J. Gelli, *Bibliografia generale della scherma*, 1895, pp. 448-52; C.A.Thimm, *A complete bibliography of fencing & duelling*, 1898, p.287; Hofer, *Baroque Book Illustration* 124; Castle, *Schools and Masters of Fence*; Berghman 687 (after 20 years of research could only identify 5 copies, all defective).

Uncut and in the original wrappers

44 **THOMPSON, Benjamin [COUNT RUMFORD]**. An Inquiry concerning the Source of the Heat which is excited by Friction. In: *Philosophical Transactions of the Royal Society of London*, vol. 88, Part I, for the year 1798, pp. 80-102, 1 folding engraved plate. London: Peter Elmsly, 1798. 4to (292 x 235 mm). Entire volume (part I) offered: vi, 199 [1], 26 pp., 7 folding engraved plates and folding table. All pages uncut. Original blue wrappers, spine hand-lettered in ink (paper dust-soiled and spotted, paper over spine heavily rubbed and chipped towards spine ends, edges slightly frayed, corners dog-eared). Text and plates with light even browning, minor dust-soiling to outer margins, occasional pale dampstaining at outer margins, more pronounced on first 8 pages of The Meteorological Journal appendix (not affecting the paper by Thompson). Provenance: Benjamin Hyett Esq. (signature on front wrapper). A very good, completely unsophisticated copy. (#003561) € 3500

Dibner *Heralds of Science* 151, Sparrow *Milestones of Science* 189, Norman 2073 - FIRST EDITION. Rumford discovered for the first time by experiment that heat is induced by friction, and he worked out a surprisingly accurate figure of coefficiency. This was the first blow to the current theory of heat as an 'igneous fluid' called 'caloric,' and foreshadowed the conclusions summed up in Tyndall's phrase 'heat as a mode of motion.' Also in this vol.: Herschel, William, *On the Discovery of Four Additional Satellites of the Georgium Sidus*, pp.47-79, 2 folding engraved plates.



[80]

IV. *An Inquiry concerning the Source of the Heat which is excited by Friction.* By Benjamin *Count of* Rumford, *F. R. S. M. R. I. A.*

Read January 25, 1798.

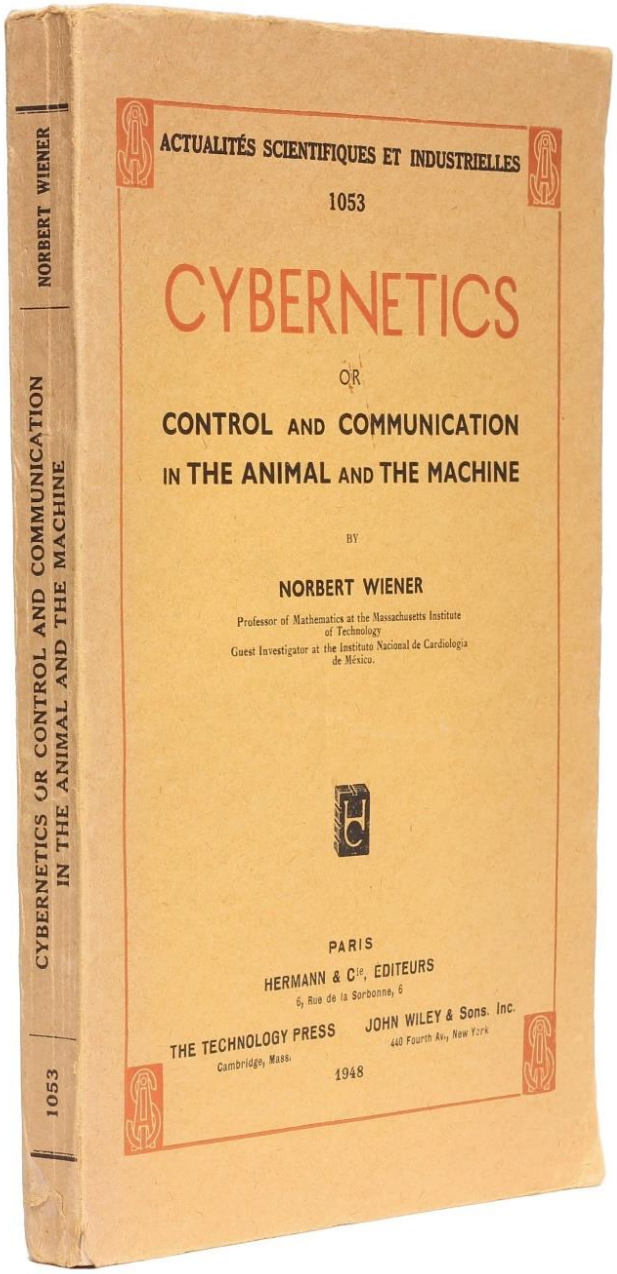
It frequently happens, that in the ordinary affairs and occupations of life, opportunities present themselves of contemplating some of the most curious operations of nature; and very interesting philosophical experiments might often be made, almost without trouble or expence, by means of machinery contrived for the mere mechanical purposes of the arts and manufactures.

I have frequently had occasion to make this observation; and am persuaded, that a habit of keeping the eyes open to every thing that is going on in the ordinary course of the business of life has oftener led, as it were by accident, or in the playful excursions of the imagination, put into action by contemplating the most common appearances, to useful doubts, and sensible schemes for investigation and improvement, than all the more intense meditations of philosophers, in the hours expressly set apart for study.

It was by accident that I was led to make the experiments of which I am about to give an account; and, though they are not perhaps of sufficient importance to merit so formal an introduction, I cannot help flattering myself that they will be thought curious in several respects, and worthy of the honour of being made known to the Royal Society.

"Born in colonial Massachusetts, Thompson became a count and minister of war in Bavaria, later the founder of the Royal Institution in London and the Bavarian Academy in Munich. His major contribution was in the theory of heat. Observing the heat created in the boring of cannon, he measured the thermal capacities of the chips and boring bars. He then set up controlled experiments simulating the boring operation, using a Steel borer and brass cylinder, all placed in a wooden box holding a known volume of water. By observing the rise in temperature of the water, from cold to boiling; the heat produced could be read by this calorimeter. Since the amount of heat generated depended only on constant friction, the old concept of a body's 'calorie' was destroyed; a mechanical interpretation became valid. Heat became not matter, but motion" (Dibner).

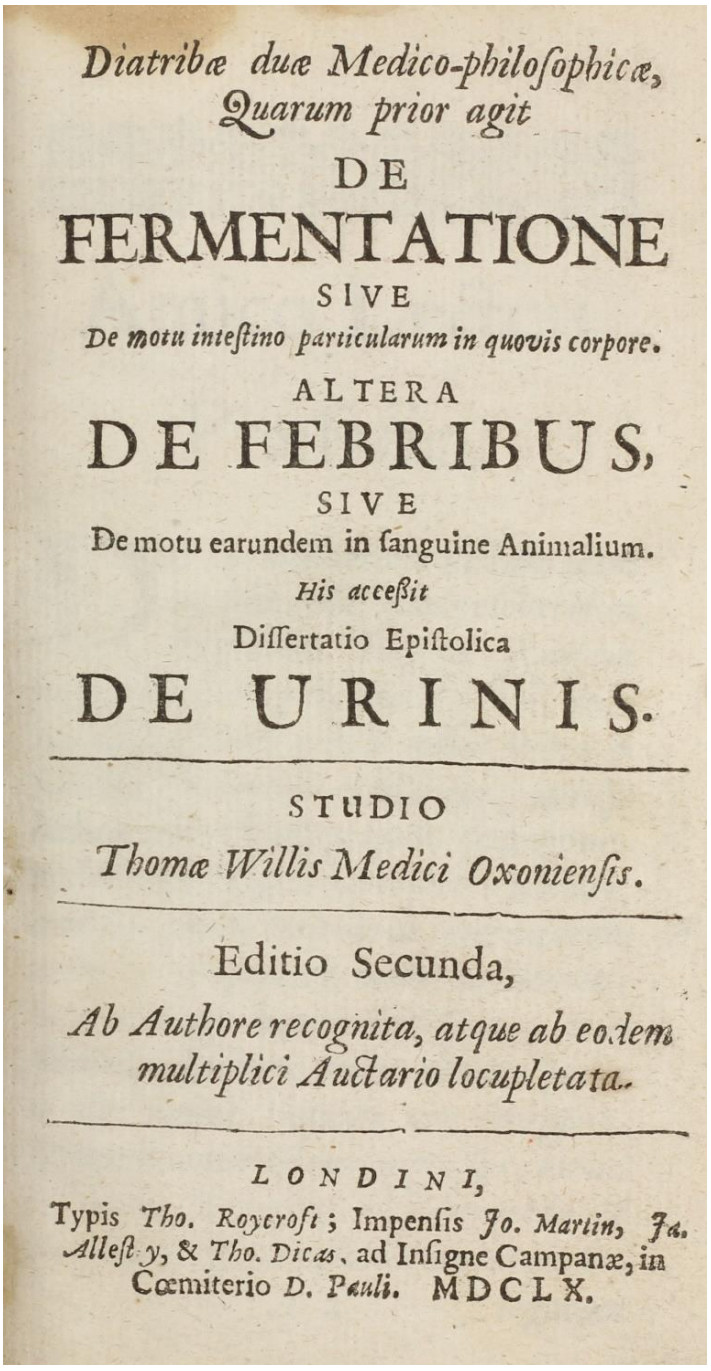
Also in this volume: Herschel, William, *On the Discovery of Four Additional Satellites of the Georgium Sidus*, pp. 47-79, 2 plates.



45 **WIENER, Norbert**. *Cybernetics or control and communication in the animal and the machine*. Actualités scientifiques et industrielles, 1053. Paris / Cambridge / New York: Hermann & Cie. / The Technology Press / John Wiley & Sons, 1948. 8vo (253 x 165 mm). 194, [2] pp. Publisher's orange wrappers printed in red and black (wrappers a trifle dust-soiled, lower corner of front wrapper with small dog-ear, slight unobtrusive chipping at foot of spine). Text crisp and clean troughout with just a little age-toning. A near fine copy. (#003626) € 2500

FIRST EDITION, FIRST ISSUE. DSB XIV, p. 347: "[Wiener] has contributed to popularizing a way of thinking in communication theory terms" (DSB). Important contribution to computer technology. The book sees itself as a theory of communication and control processes in machines and living organisms. It is less suitable as a systematic reference work, but it contains important impulses for the architecture of modern calculating machines.

46 **WILLIS, Thomas**. *Diatribae duae medico-philosophicae quarum prior agit de fermentatione sive de motu intestino particularum in quovis corpore : altera de febribus, sive de motu earundem in sanguine animalium ; his accessit Dissertatio epistolica de urinis. Edito secunda, ab authore recognita, atque ab eodem multiplici auctario locupletata.* London: Thomas Roycroft, 1660. 12mo (142 x 83 mm). [36], 376, [6] pp., including engraved frontispiece, typeset headpieces, errata leaf, two leaves of publisher's advers, leaf [pi]1 of frontispiece explanation bound at end, lacking the final two blank leaves R11-12. Signatures: [pi]^{2} A^{12} a^{6} B-R^{12} (-R11-12). Contemporary sheep, spine with 4 raised bands gilt in compartments, boards ruled in gilt, red sprinkled edges, original endpapers (head of spine slightly chipped, minor rubbing of leather). Text little age-toned, occasional minor spotting, creasing of 2 leaves, small light brown stain to upper blank margins of initial leaves. Provenance: illegible inscription on front pastedown. Very good copy. Collated and textually complete. (#003618) € 1800



Diatribæ duæ Medico-philoſophicæ,
Quarum prior agit
DE
FERMENTATIONE
SIVE
De motu inteſtino particularum in quovis corpore.
ALTERA
DE FEBRIBUS,
SIVE
De motu earundem in ſanguine Animalium.
His acceßit
Diſſertatio Epiſtolica
DE URINIS.
STUDIO
Thomæ Willis Medici Oxonienſis.
Editio Secunda,
Ab Authore recognita, atque ab eodem multiplici Auctario locupletata.
LONDINI,
Typis *Tho. Roycroft*; Impenſis *Jo. Martin, Ja. Alleſtry*, & *Tho. Dicas*, ad Inſigne Campanæ, in Cœmiterio *D. Pauli.* MDCLX.

Wing W2833, NLM/Krivatsy 13021; this edition not in Wellcome. VERY RARE SECOND EDITION of Willis' first book, a collection of tracts on fermentation, fevers, and urine, originally published in London 1659. The first text "contains the earliest suggestion that fermentation is an intestinal or internal motion of particles" (Garrison-Morton); the second contains the first description of epidemic typhoid; and the third notes the sweet taste of urine in diabetes mellitus.

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