

**CATALOGUE 42:**  
*Classics of Science and Medicine, Including  
Manuscripts in Mathematics and Physics  
For the 45th California International  
Antiquarian Book Fair*

*Pasadena Convention Center,  
February 10-12, 2012  
Booth 721*



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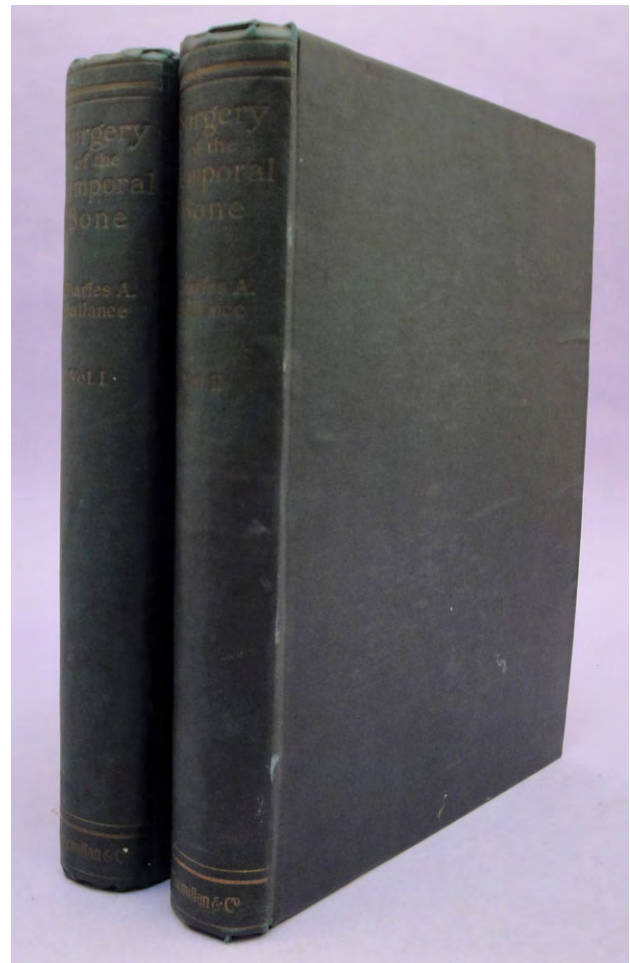
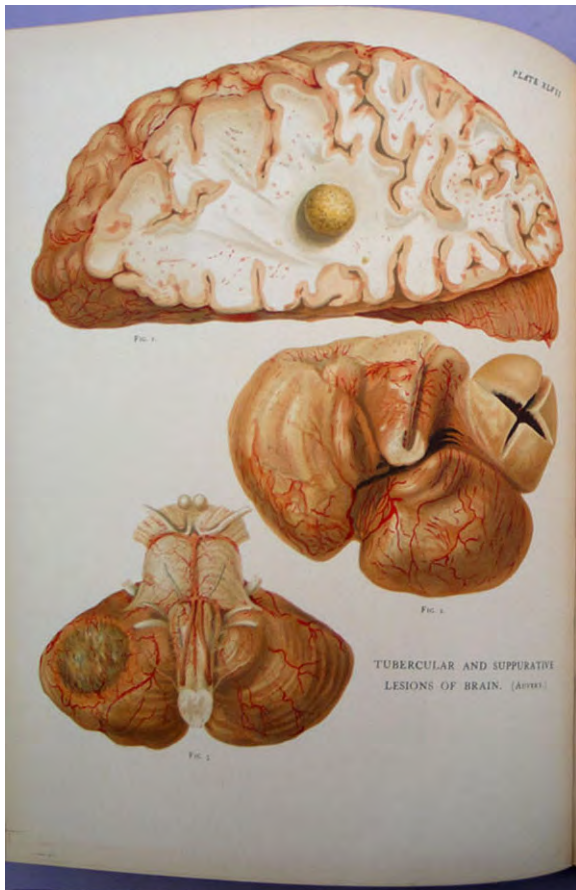
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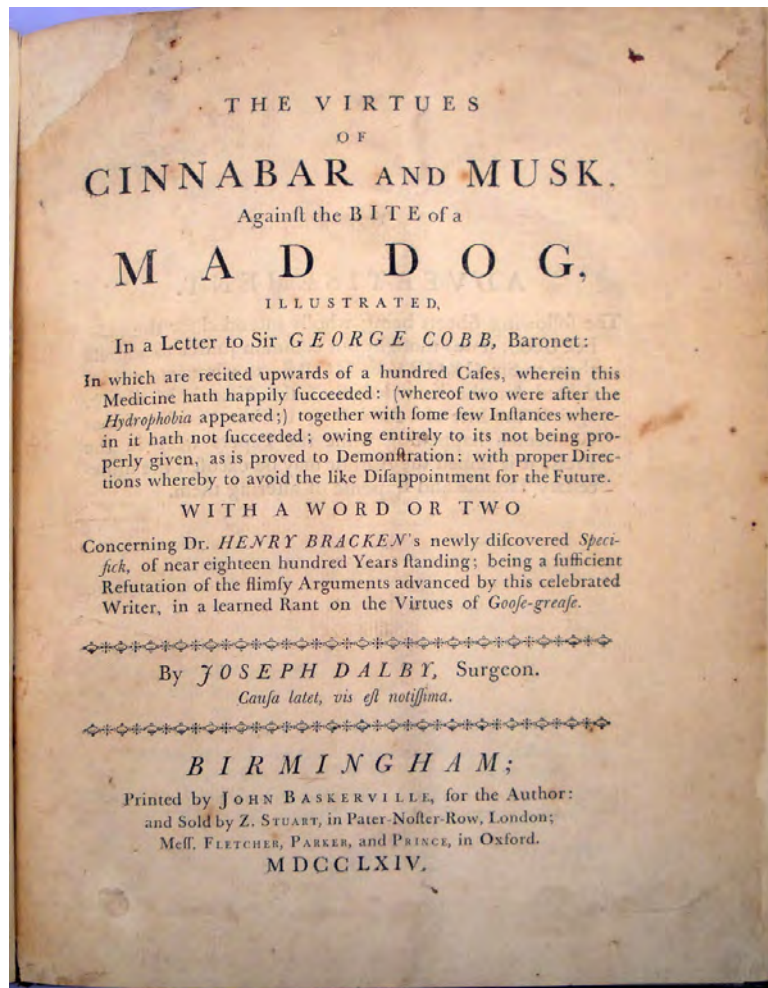


*“Brilliantly Written and Illustrated Classic”*

**1. Ballance, Charles Alfred (1856–1936) & Charles David Green.** Essays on the surgery of the temporal bone. 2 vols. xxiv, 253, [1]; xiii, 255–612pp. 125 plates, many with separate keys. London: Macmillan, 1919. 297 x 222 mm. Original cloth, gilt-lettered spines (a little dull), slight wear. Light toning but very good. Small, unobtrusive stamp of the Barnsley Hospital Medical Library on titles and free endpapers. \$1500

**First Edition** of this beautifully produced classic of neurosurgery and aural surgery, which contains “much clinical wisdom and many magnificent illustrations” (Weir, p. 166). “Ballance popularized the operation of radical mastoidectomy for advanced middle ear infection (1890), standardized an approach to drain or excise temporal brain abscesses, and was the first to clearly understand the neurological signs of cerebellar abscess (1894). Ballance also devised cranial base approaches to attack infectious thrombophlebitis of the lateral, petrosal, and cavernous sinuses. He was the first to completely remove an acoustic tumor (1894); 18 years later, the patient remained well. Ballance also drained a posterior fossa subdural hematoma (1906) and successfully sectioned the

auditory nerve for Meniere’s syndrome (1908). . . . His two-volume set, *Essays on the Surgery of the Temporal Bone* (1919), remains a brilliantly written and illustrated classic. . . . Ballance was second only to Horsley in reputation as a pioneer British neurological surgeon. Described as a painstakingly slow but delicate and meticulous operator, Ballance made a contribution to neurosurgery and temporal bone surgery that was immense” (Stone). Garrison–Morton 4889.1. Weir, *Otology: An Illustrated History* (1990), pp. 165–166. Stone, J. L., “Sir Charles Ballance: Pioneer British Neurological Surgeon [abstract].” PubMed.gov. U.S. National Library of Medicine; National Institutes of Health. Web. 10 Jan. 2012. 42277

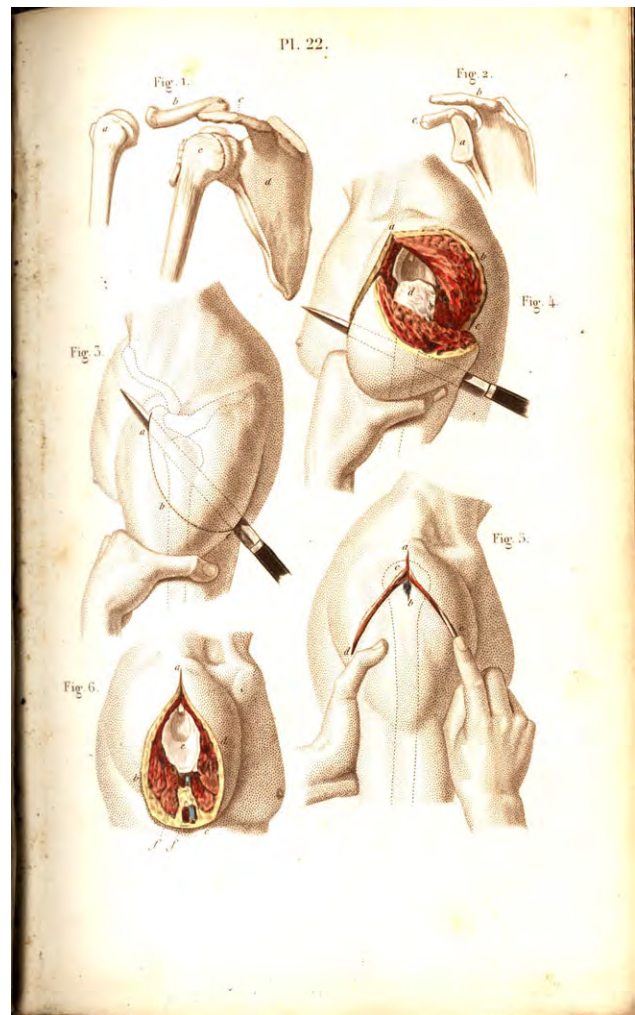
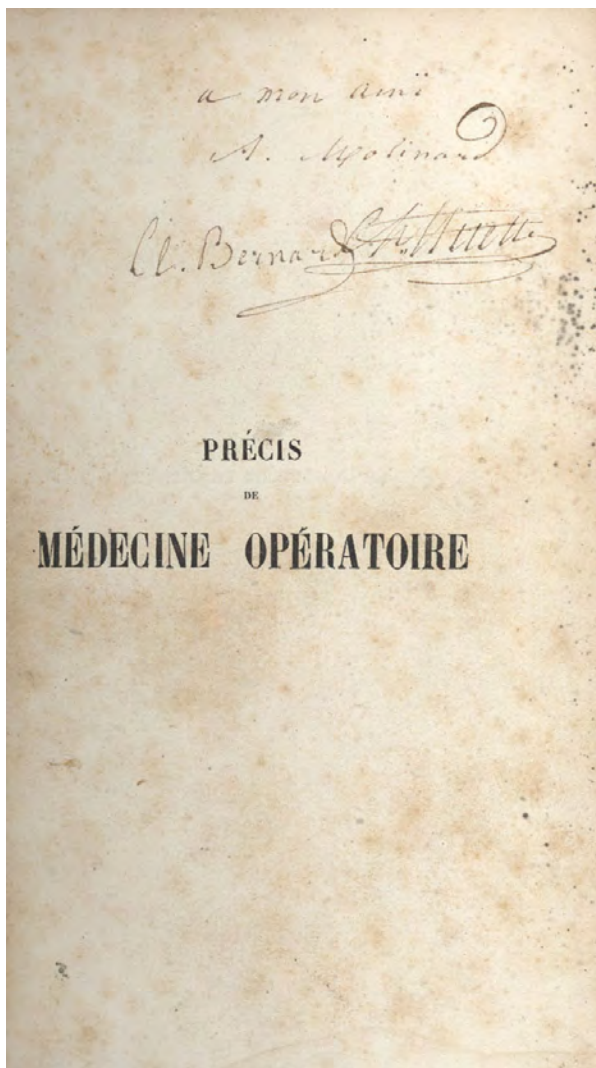


*Extraordinarily Rare Medical Book Printed by John Baskerville*

2. [Baskerville, John (1706-75).] Dalby, Joseph (d. 1784). The virtues of cinnabar and musk, against the bite of a mad dog . . . 4to. [8], 3-56pp. (leaf B1 not present as usual). Birmingham: John Baskerville, for the author, 1764. 256 x 203 mm. Full morocco, gilt-ruled, in antique style. Marginal repairs to title and one or two other leaves, not affecting text, occasional minor foxing, but very good. Errata corrected in an early hand. \$3750

**First Edition**, second state, with the title dated 1764. "The title-page is also found in an earlier state, with line 7 set in English instead of Great Primer and ending with a full point instead of a colon, and with the last line reading: M DCC LXII. Both states are printed from the same setting of type (with these exceptions), and neither is found as a cancel" (Gaskell). Dalby's short work on the treatment of hydrophobia is the first of only two medical books printed by Baskerville, the other being William Hunter's

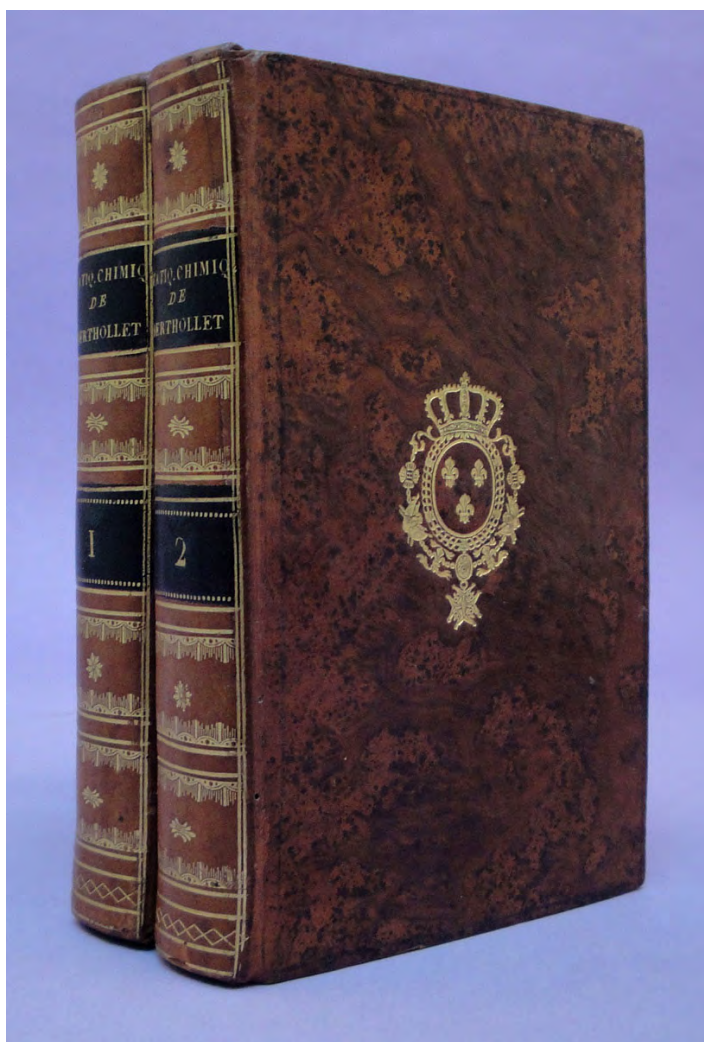
*Anatomy of the Human Gravid Uterus* (1774). Unlike the *Gravid Uterus*, Dalby's work is extremely rare on the market, with no auction records over the past 30 years; this is the first copy we have seen in over 40 years of trading. The work was printed for the author and sold by subscription. The subscribers' list (leaves a2-a4) cites fewer than 200 people, and it is likely that not many more than 200 copies were printed. Gaskell, *Bibliography of John Baskerville*, 29. 42281



*Rare Presentation Copy of the First Edition*

**3. Bernard, Claude** (1813-73) & **Charles Huette**. *Précis iconographique de médecine opératoire et d'anatomie chirurgicale*. 8vo. [4], xxvi [2], 488pp. Engraved frontispiece of Vesalius with printed tissue guard, issued only to subscribers, 113 engraved plates printed in sepia and hand-colored. Paris: Méquignon-Marvis, 1846. 188 x 117 mm. Quarter calfca. 1846, rebaked in period style. Lightly foxed throughout, but very good. Presentation copy, inscribed by the authors on the half-title: "A mon ami / A. Molinard / Cl. Bernard Ch. Huette." Boxed. \$7500

**First Edition**, and rare in commerce. Bernard and Huette's influential surgical textbook was one of the first of its kind to enjoy a world-wide market, and was still being reprinted at the end of the 19th century. Presentation copies of the first edition are extraordinarily rare; this is the only one that we have ever seen! Blocker, p. 34. 33317



### *In a Beautiful Royal Binding*

**4. Berthollet, Claude Louis** (1748–1822). *Essai de statique chimique*. 2 vols., 8vo. viii, 543 [1]; viii, 555 [1, errata]pp. Paris: Firmin Didot, 1803. 197 x 125 mm. Tree sheep, gilt spines, French royal arms in gilt on front covers. Occasional scattered foxing, but fine otherwise. \$2500

**First Edition.** Berthollet attempted to provide chemistry with an adequate theoretical foundation so that its experimental results could be analyzed on the basis of theoretical first principles. He gave a thorough critique of the contemporary oversimplified concept of the law of chemical affinity, which had not yet been properly examined; Berthollet's main contribution to the development of this concept was his proof that chemical affinity was relative, varying with the physical conditions—quantity, temperature, solubility, pressure, physical state—accompanying a chemical experiment. He introduced the highly important concept of “chemical mass”—relative affin-

ity combined with the mass of reactants in a chemical combination—to give the total force with which a given quantity of a substance reacted with another. He was probably the first chemist to perform an exhaustive investigation of how physical conditions affect chemical reactions, creating a molecular model of matter to explain the effects of temperature and density on chemical reactions. Norman 221. Duveen, p. 75. Smeaton, “Berthollet's *Essai de statique chimique* and its translations,” *Ambix* 24 (1977), pp. 149–158; “Berthollet's *Essai de statique chimique*: A supplementary note,” *Ambix* 25 (1978), pp. 211–212. 36063



### *Presentation Copy of Bodin's Treatise on Witchcraft*

**5. Bodin, Jean** (1530–1596). *De la demonomanie des sorciers*. 4to. [14], 252ff. Paris: Jacques du Puys, 1580. 222 x 155 mm. Modern vellum. Repairs to first few and last leaves, minor spotting and damp-staining, but very good. Presentation copy, inscribed on the flyleaf: “Cl. Varroni reg. consiliario urbis Alaunae Veromanduor. metropoleos I. Bodinus d.d.” \$12,500

**First Edition** of Bodin’s influential treatise on demons and witches; **Extremely Rare Presentation Copy**, with a Latin inscription noting Bodin’s gift of this copy to a government official in northern France. Bodin, a highly educated lawyer and political philosopher, was one of the most important French writers of the latter half of the sixteenth century. His *Démonomanie* was the most widely published book of its era on the subject, and has long been considered by historians to have been responsible for large-scale prosecutions of witches in the four or five decades following its appearance. The *Démonomanie* “is a lengthy and complex discussion of many aspects of magic and witchcraft. While Bodin divided it into four sections, or books, it really seems to fall into three parts. The first part is a largely theoretical discussion of magic and demons and how far humans can safely involve themselves in the occult. The second part, starting with Book Two, chapter four, covers aspects of witchcraft beliefs and the seriousness of

witchcraft as a crime. The third part is Book Four, a detailed legal essay on the prosecution of witches in the courts” (Pearl, p. 22). An important part of Bodin’s defense of the existence of witchcraft lies in his “Refutation des opinions de Jean Wier” [refutation of the opinions of Johann Weyer] on ff. 218–252. Weyer had stated in his *De praestigiis daemonum* (1563) that the various manifestations of “witchcraft” were actually caused by mental illness. Bodin attacked Weyer on both scholarly and legal grounds: he cited references to witchcraft in classical, Arab and Christian authorities, and was the first to challenge Weyer’s denial of the law’s right to judge and punish the mentally sick, thus bringing into focus the old and persistent divergence of opinion between medicine and law in cases hinging upon a defendant’s supposed insanity. Pearl, “Introduction,” in Bodin, *On the Demon-Mania of Witches*, tr. Randy A. Scott (1995), pp. 9–28. 41469



*The Remarkable & Rare Bright on the Kidneys*

**6. Bright, Richard** (1789-1858). Reports of medical cases . . . 4to. xvi, 231pp. 16 hand-colored plates, numbered 1-6, 6\*, 7-15, engraved by W. Say (1768-1834) after F. R. Say (d. 1858) with explanations. London: Longman . . . , 1827. 335 x 255 mm. Contemporary cloth-covered boards, uncut. New black morocco spine. Occasional light foxing on text but plates immaculate. Signature of American physician W. S. Bowen on title noting the purchase price of \$25.00 (then a comparatively large sum) in February 1859. Later inscription to George L. Porter, and his occasional ownership stamp in text (not affecting any plates). Case history penciled in Bowen's hand on front pastedown. Fine copy.

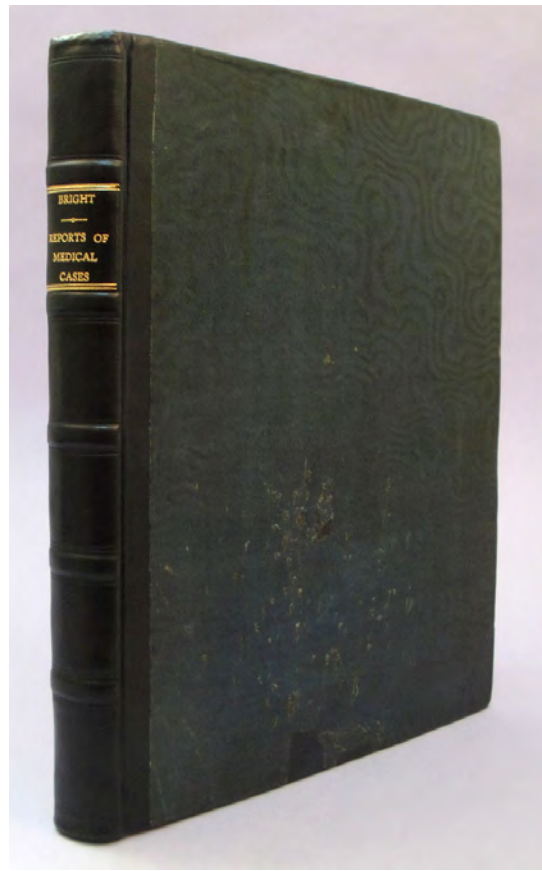
\$12,500





**First Edition** of the first volume of Bright's *Reports* (Bright published a second series of *Reports* in 1830–31, dealing with neuropathology; each series is a complete book in itself). Bright's work, a series of case histories correlating clinical and pathological phenomena, is one of the rarer and more ambitious English medical books of the 19th century. Information in the publisher's ledgers (now part of the Longman archive held at the Reading University Library), indicates that the *Reports* was printed on commission at Bright's expense, in lots of from five to fifty copies as ordered. According to the ledgers, 243 copies of the 1827 *Reports* and 171 copies of the 1830–31 *Reports* were sold between 26 September 1827 and 5 September 1861, when the last remaining copies were destroyed in the fire that consumed Longman's premises at Paternoster Row.

The 1827 *Reports* is most famous for its classic description of the complex of kidney disorders collectively and eponymically known as "Bright's disease." Bright was the first to distinguish between renal and cardiac edema, and the first to link renal edema and the presence of albumin in the urine with particular structural changes in the kidneys observed post-mortem. Five of the sixteen plates in the *Reports*

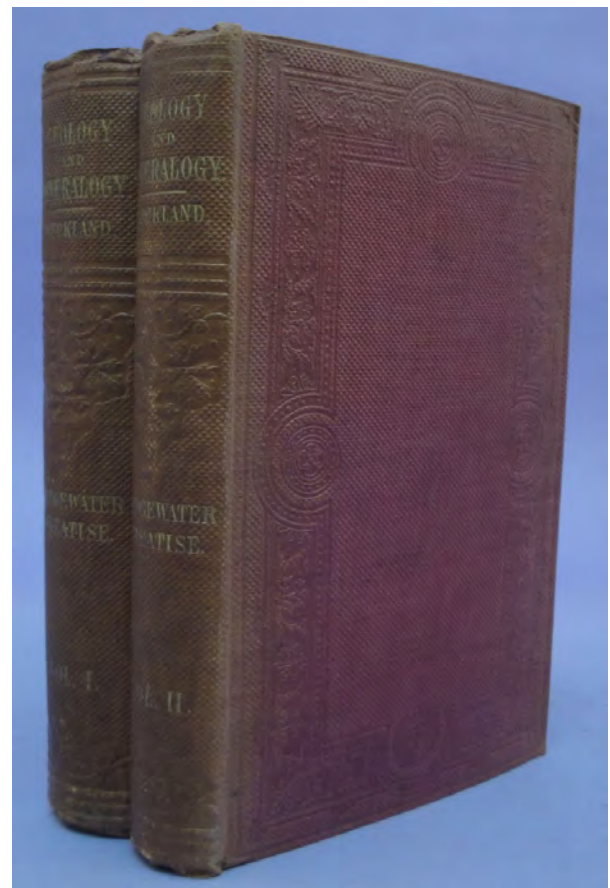


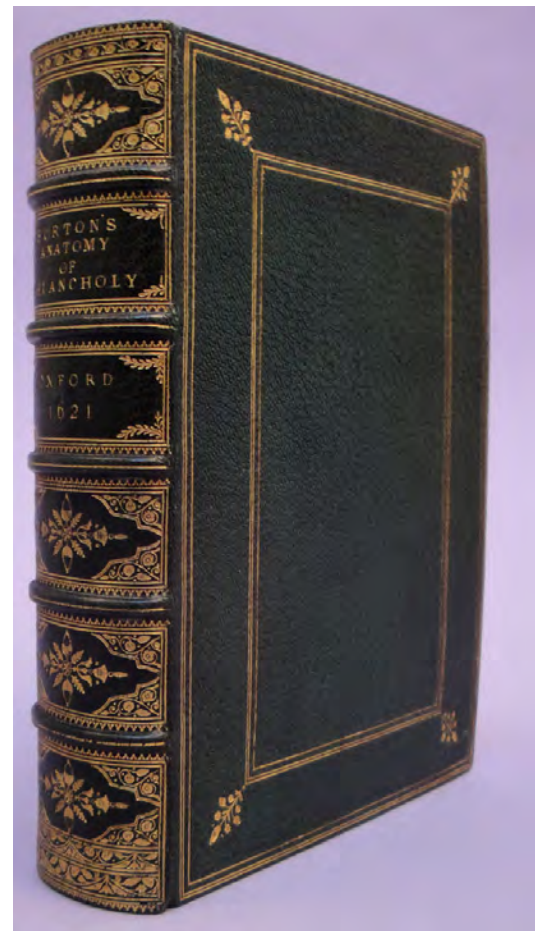
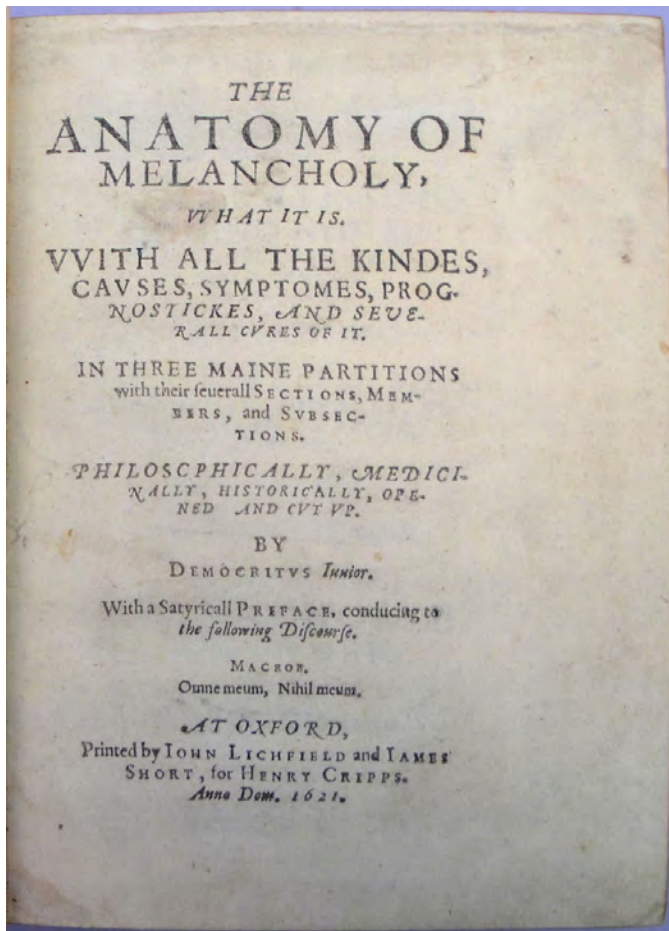
effectively show the surface mottling and granulated texture of diseased kidneys. The work's engraved plates, meticulously hand-colored to accord with Bright's descriptions of the specimens examined, are among the most beautiful of medical illustrations. Most were drawn by Frederick Richard Say, a distinguished portraitist whose portrait of Bright now hangs in the Royal College of Physicians of London. "In order to achieve the most poignant reproductions of his post-mortem material, Bright was probably required to bring Say to the autopsy room whenever a specimen of interest arose. Say presumably produced a water color image of the specimen on the spot which was subsequently copied by the engraver" (Fine, p. 779). Say's father, William, who produced the majority of the plates, used mezzotint variously combined with line-engraving, stipple, and soft-ground etching to create the printed images. Norman 341. Osler 1340. Lilly, p. 183. Goldschmid, pp. 126–127. Fine, "Pathological specimens of the kidney examined by Richard Bright," *Kidney International* 29 (1986), pp. 779–783. Peitzman, "Bright's disease and Bright's generation—toward exact medicine at Guy's Hospital," *Bull. Hist. Med.* 55 (1981), pp. 307–321. 41484



**7. Buckland, William** (1784–1856). *Geology and mineralogy considered with reference to natural theology*. . . A new edition, with additions, by Professor Owen, F.R.S. &c.; Professor Phillips, M.A., LL.D., &c.; Mr. Robert Brown, F.R.S. &c., and memoir of the author. Edited by Francis T. Buckland [1826–80]. 2 vols. [4], lxxxiii, 552; [4], 143pp. plus 4pp. adverts. and publisher's note bound before p. 1. Frontispiece in Vol. I, 90 plates in Vol. II, including folding hand-colored geological map. London: George Routledge, 1858. 220 x 143 mm. (Vol. I partly unopened). Original plum cloth, spines a bit faded, upper portion of Vol. I spine repaired. Fore-edge of first plate in Vol. II a bit frayed, but a fine copy. Library stamps and bookplate. \$750

Third edition, revised and enlarged. Buckland, the celebrated British geologist and paleontologist, was the author of the best-selling *Reliquiae Diluvianae* (1823), in which he introduced his catastrophist and theologically based “flood geology” theory in opposition to the uniformitarian theory of James Hutton. In 1824 Buckland became the first to publish a full account of a dinosaur (*Megalosaurus*), and in 1826 he discovered the “Red Lady of Paviland,” the oldest human remains found in Great Britain to date. In 1836 Buckland summarized his geological and evolutionary theories in his *Geology and Mineralogy Considered with Reference to Natural Theology*, which forms part of the eight-volume series of Bridgewater treatises “On the power, wisdom and goodness of God as manifested in the Creation.” This third edition was published posthumously, with additions and a memoir by Buckland’s son. The section on paleontology was revised by Richard Owen (1804–92). 42413



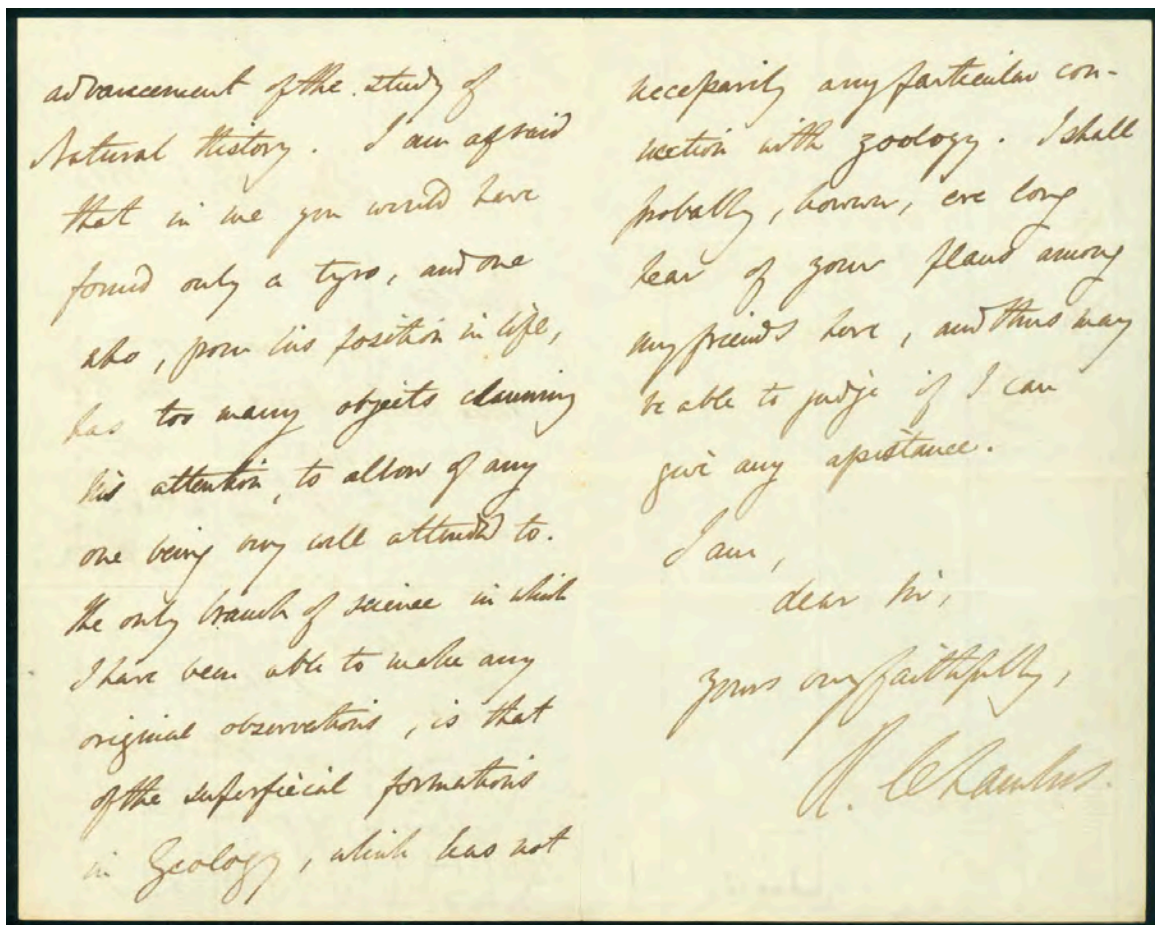


*“The Greatest Medical Treatise Written by a Layman”*

**8. Burton, Robert** (1577–1640). *The anatomy of melancholy, what it is . . .* 4to. [4], 72 [i.e., 76], [8], 783, [9]pp. Oxford: John Lichfield and James Short, 1621. 188 x 135 mm. Full green morocco gilt, all edges gilt, by Francis Bedford; slipcase. Expertly washed, top edges of the first 8 leaves remargined with no loss of text, light toning, but a fine copy. 20th century bookplate of Robert J. Collier. \$15,000

**First Edition** of the book that William Osler called “the greatest medical treatise written by a layman.” With a keen eye for contradiction and a perverse relish for exposing it, Burton virtually destroyed the dominant humoral psychology by showing its inability to effectively define or cure the mental illness of melancholia, a term that encompasses what we now call clinical depression. Burton, who himself suffered from melancholia, drew upon nearly every science of his day (including psychology, physiology,

astronomy, meteorology and even demonology) in his attempts to explicate the disease. The work is a curious blend of psychiatric encyclopedia (the first of its kind, citing nearly 500 medical authors) and literary tour-de-force. It was one of the most popular books of the 17th century, going through five revised editions in Burton’s lifetime. Jordan-Smith 1. *Printing and the Mind of Man* 120. Hunter & Macalpine, pp. 94–98. 41455



“In Me You Would Have Found Only a Tyro”

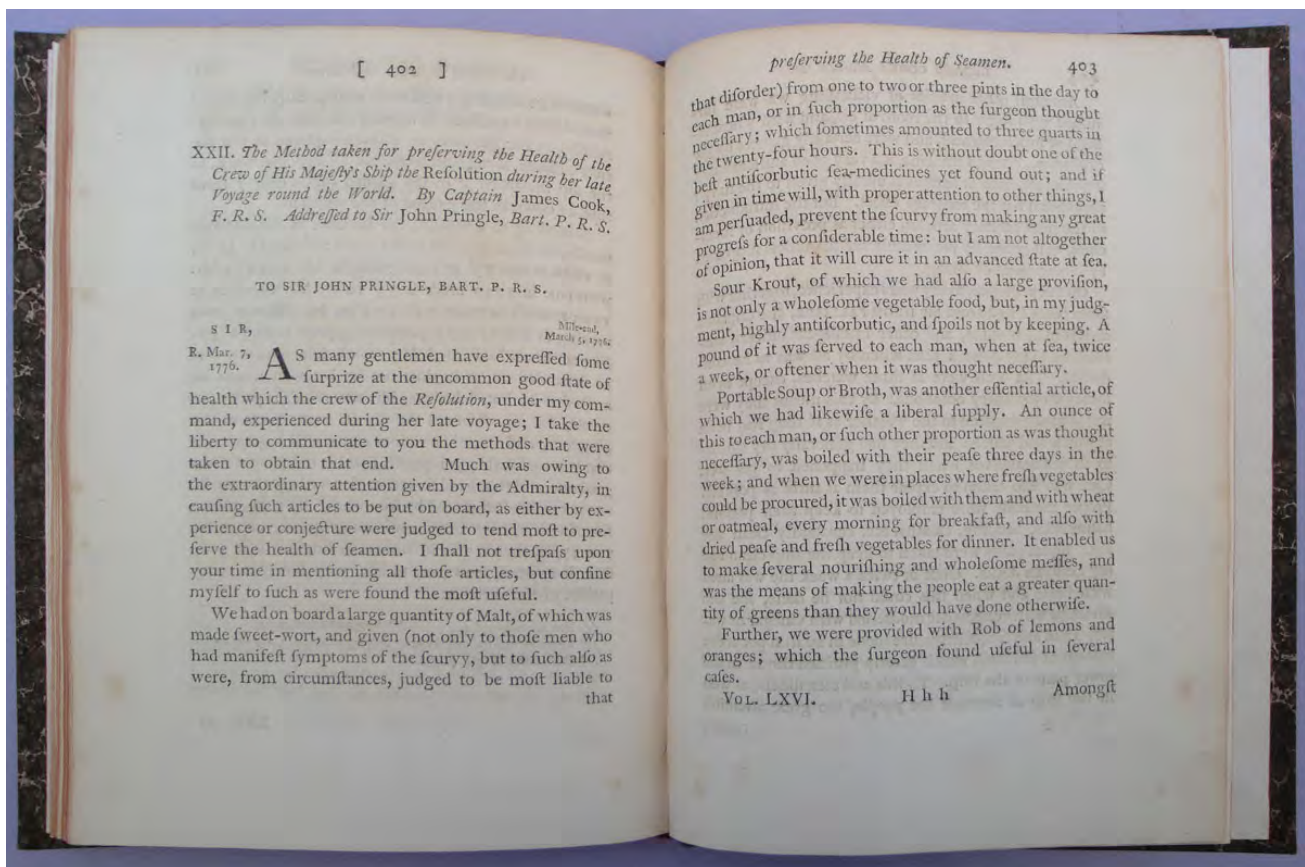
9. **Chambers, Robert** (1802–71). Autograph letter signed to an unidentified correspondent. Edinburgh, Sept. 6, 1850. 3pp. 158 x 99 mm. Light soiling along folds, small tear along central fold but very good. Docketed on verso of second leaf. \$950

A slyly misleading letter from Scottish publisher Robert Chambers, best known as the anonymous author of *Vestiges of the Natural History of Creation* (1844), the first full-length exposition in English of an evolutionary theory of biology and the most sensational book on its subject to appear prior to Darwin’s *On the Origin of Species*. Chambers’s work was one of the greatest scientific best-sellers of the Victorian age, going through at least twelve large editions in England, numerous American editions, and several foreign-language translations. Chambers decided to publish the *Vestiges* anonymously because he feared that the ensuing controversy over its inflammatory subject would hurt his publishing business; his authorship of the work was revealed only after his death. The present letter is an excellent example of Chambers covering his tracks.

In the letter, written six years after publication of the *Vestiges*, Chambers passes himself off as a scientific dilettante:

I am very sorry at not having been able to see you as you proposed, but I trust that you would see others able and willing to co-operate with you in your endeavours for the advancement of the study of Natural History. I am afraid that in me you would have found only a tyro, and one also, from his position in life, [who] has too many objects claiming his attention, to allow of any one being very well attended to. The only branch of science in which I have been able to make any original observations, is that of the superficial formations in Geology, which has not necessarily any particular connection with zoology . . .

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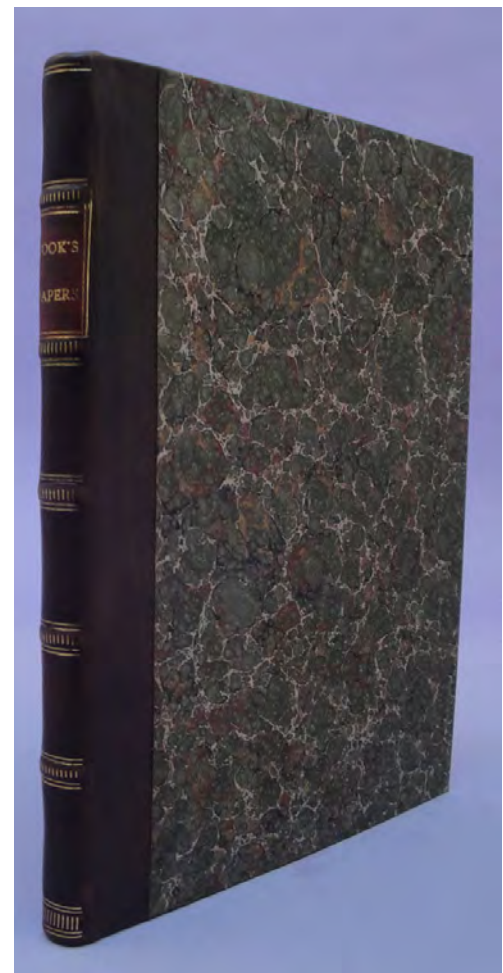
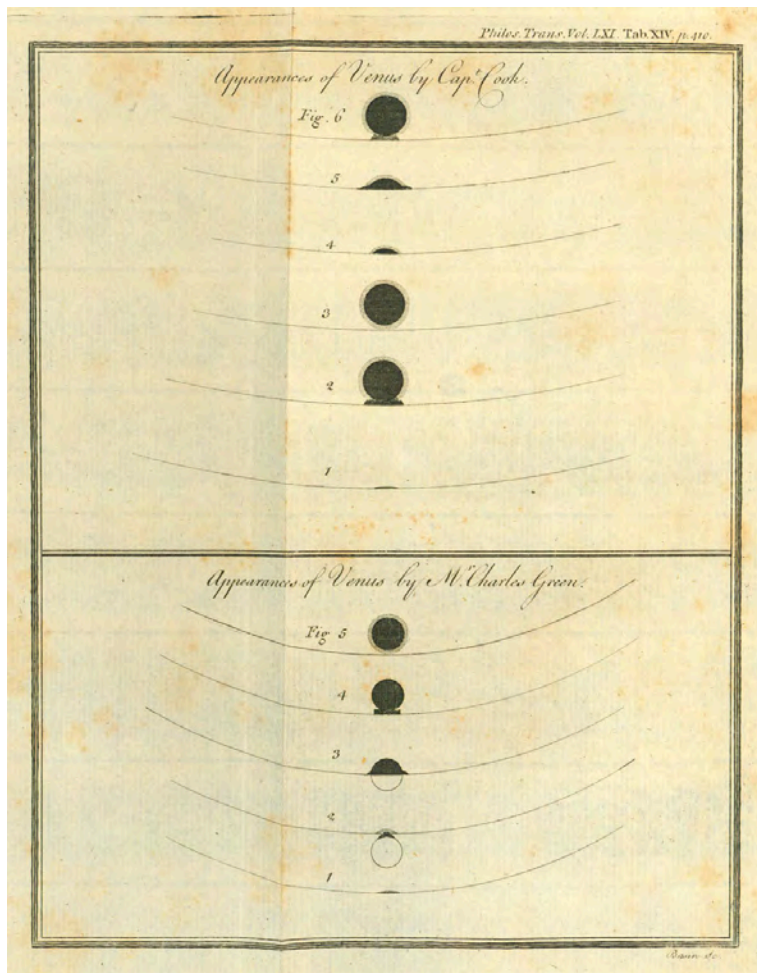


### Captain Cook on Scurvy and the Transit of Venus

**10. Cook, James** (1728-79). (1) Observations made, by appointment of the Royal Society, at King George's Island in the South Sea. Extract from *Philosophical Transactions* 61 (1771): 397-421. Folding plate. (2) Variation of the compass, as observed on board the Endeavour bark, in a voyage round the world. Extract from *Philosophical Transactions* 61 (1771): 422-432. (3) Transitus Veneris & Mercurii in eorum exitu e disco solis, 4to mensis Junii & 10mo Novembris, 1769, observatus. Extract from *Philosophical Transactions* 61 (1771): 433-436. (4) Of the tides in the South Seas. Extract from *Philosophical Transactions* 66 (1776): 447-449. (5) The method taken for preserving the health of the crew of His Majesty's Ship the Resolution during her late voyage round the world. Extract from *Philosophical Transactions* 66 (1776): 402-406. Together 5 items. 229 x 177 mm. Bound together in half calf, marbled boards, antique style. Minor foxing and toning, but very good. \$3500

**First Editions** of nos. (1) - (4); second edition of no. (5). These papers include Cook's observations of the transit of Venus in 1769 during his first voyage around the world (1768-71; nos. [1] and [3]), and his method of preventing scurvy on board ship during his second circumnavigation (1772-75; no. [5]). In 1768, at the suggestion of the Royal Society, the British Navy sent an expedition to Tahiti aboard H. M. Bark Endeavour to observe the transit of Venus across the sun and to perform other secret missions. Cook

was appointed commander of the *Endeavour* and ordered to conduct some of the astronomical observations of the transit. "On the 3rd June 1769 Cook, Charles Green the other official Transit observer, and two others recorded the six hour-long event using clocks, quadrants and telescopes. . . . In just over a century the Transit of Venus takes place only twice. It was important that accurate records were made of this rare event but Cook and his fellow observers noted discrepancies in what they saw, thus reducing

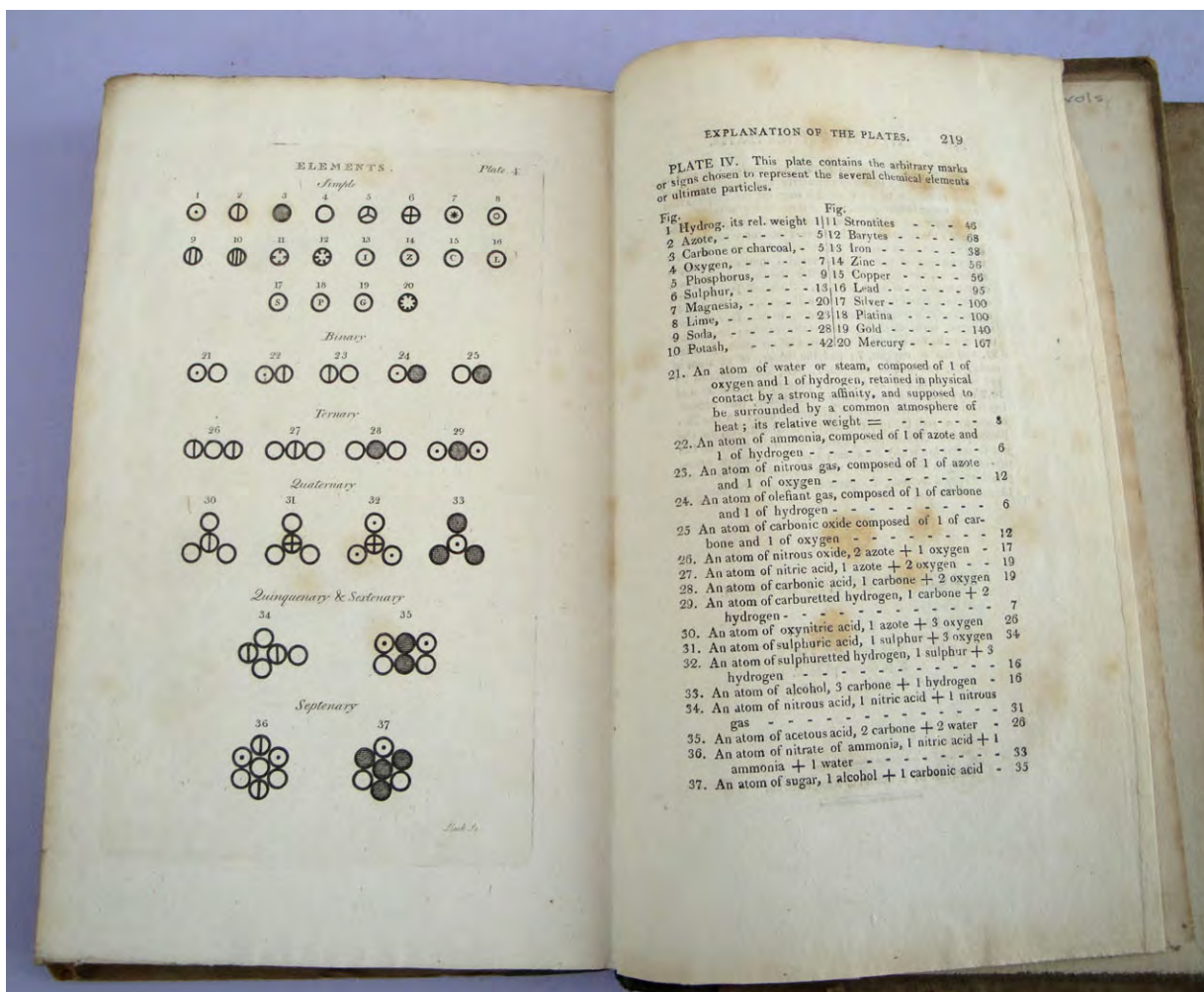


the value of the exercise. With the equipment available it was difficult to see the precise moment that the shadow of Venus started to pass over the face of the sun and left it at the end of the transit. This was due to the large ‘Atmosphere or dusky shade’ (penumbra) around the circumference of the planet. Cook and Green’s findings, along with the results of observations made across the World, were presented to the Royal Society after the *Endeavour’s* return to England” (Captain James Cook). The folding plate in no. (1) records what Cook and Green saw, along with the discrepancies in their observations.

On his second voyage around the world, commanding the ships *Resolution* and *Adventure*, Cook was so successful at preventing scurvy among his crew that he did not lose a single man to the disease. “No commander before had been so particular about the diet of his men . . . sour kroust, mustard, vinegar, wheat, orange and lemon juice, saloop and portable soup were used regularly, and every chance of obtaining fresh vegetables and ‘scurvy-grass’ was eagerly

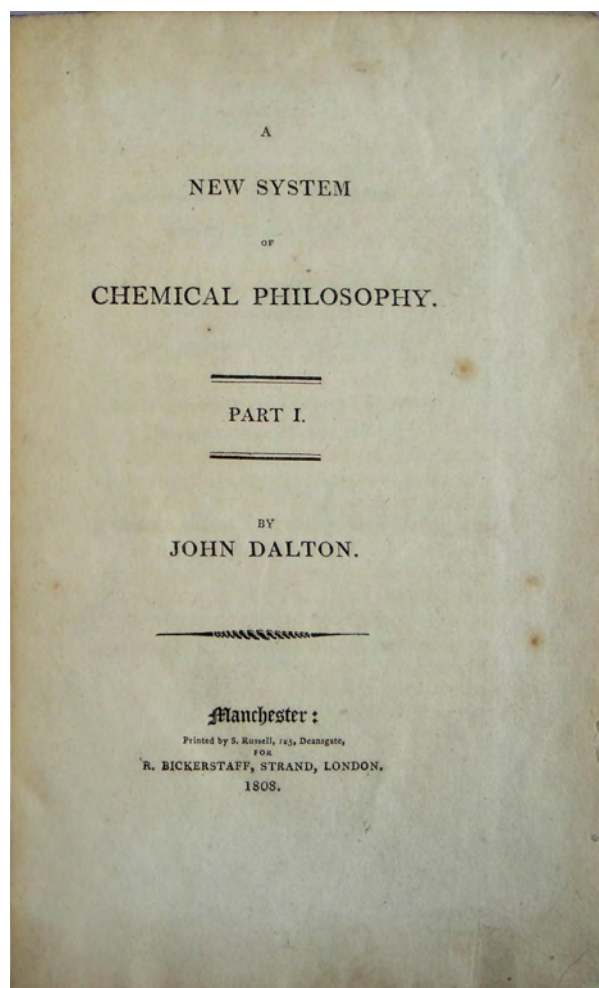
seized” (Beaglehole, pp. 256–57). After returning from this voyage, Cook was unanimously elected a Fellow of the Royal Society, and contributed his paper on preventing scurvy to the *Philosophical Transactions*. The paper had first been published in John Pringle’s *Discourse upon Some Late Improvements in the Means for Preserving the Health of Mariners* (1776).

Along with the Cook papers listed above, this collection of extracts from the *Philosophical Transactions* contains papers by Henry Cavendish (“An account of the meteorological instruments used at the Royal Society’s house”), John Smeaton (“An experimental examination of the quantity and proportion of mechanic power . . .”) and Charles Hutton (“A new and general method of finding simple and quickly-converging series”). Beaglehole, *Exploration of the Pacific* (3rd ed.), pp. 256, 284. “Captain Cook Themes – Transit of Venus.” Captain James Cook 1728–1779. Web. 05 Jan. 2012. *Dictionary of Scientific Biography*. Garrison–Morton 3714. 42391



## Foundation of the Atomic Theory—In Original Boards

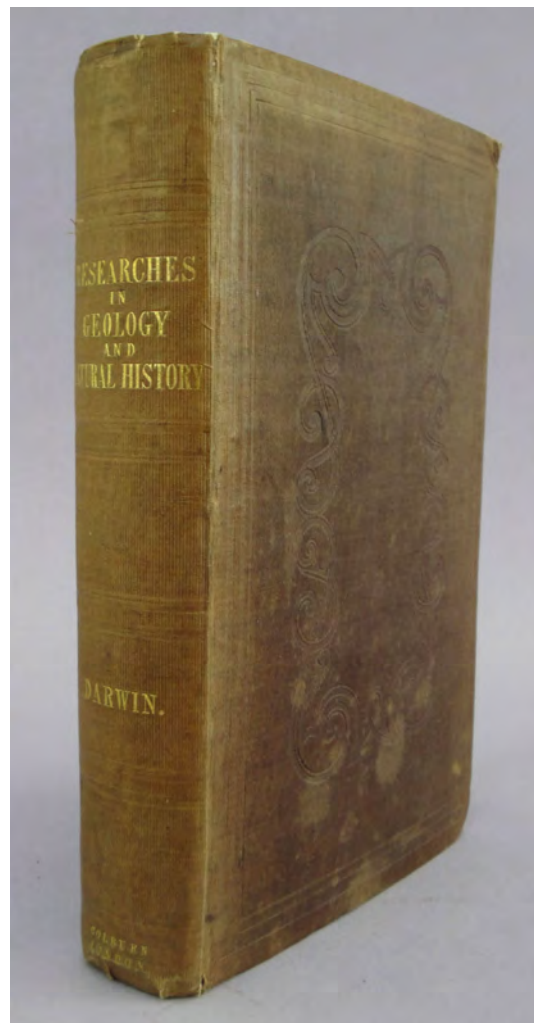
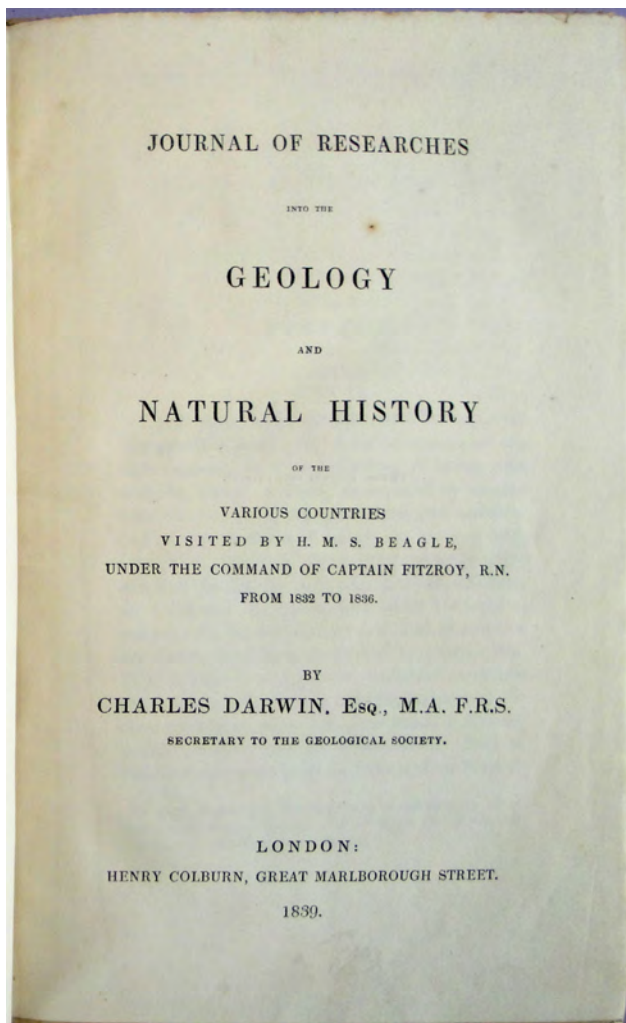
**ii. Dalton, John** (1766–1844). A new system of chemical philosophy. 2 vols. in 3. vi, [2]. 220; [8], 221–560; xii, 357, [3]pp. 8 plates. Manchester: S. Russell for R. Bickerstaff, Strand, London; Manchester: Russell & Allen for R. Bickerstaff, Strand, London; executors of S. Russell for George Wilson, 1808–1810–1827. 222 x 135mm. (uncut and partially unopened). Original boards, cloth spines, printed paper labels, spines of the second two volumes expertly repaired. Light browning and foxing, a few tiny tears in blank margins, but fine otherwise. 19th century stamp of W. B. Sellers, Surgeon, Rochdale inside covers and on a few pages. In cloth slipcase. \$30,000



**First Edition.** The idea that all matter is composed of singular, indestructible particles can be traced back to the Roman poet Lucretius, but the first scientific exposition of this “atomic” theory and its physical implications was presented by Dalton in his *New System of Chemical Philosophy*. Dalton believed that all matter was composed of indestructible and indivisible atoms of various weights, each weight corresponding to one of the chemical elements, and that these atoms remained unchanged during chemical processes. Dalton’s theory was the first to give significance to the relative weights of the ultimate particles of all known compounds, and to provide a quantitative explanation of the phenomena of chemical reaction. Taking the lightest atom—hydrogen—Dalton found that oxygen weighed 6.5 times as much, sulfur 13 times as much, etcetera. His

work with relative atomic weights prompted him to construct the first periodic table of elements (in Vol. I, pt. 1), to formulate laws concerning their combination and to provide schematic representations of various possible combinations of atoms. He expressed the age-old problem of chemical combination in terms of the number of atoms of each contributing element contained in the smallest unit (later termed a “molecule”) of any compound substance; this model of physical matter, later confirmed by experiment, has dominated chemical theory (with modifications) ever since. Dalton’s equation of the concepts “atom” and “chemical element” was of fundamental importance, as it provided the chemist with a new and enormously fruitful model of reality. Rare in the original matching bindings. Dibner 44. Horblit 22. Norman 575. *Printing and the Mind of Man* 261. 41436



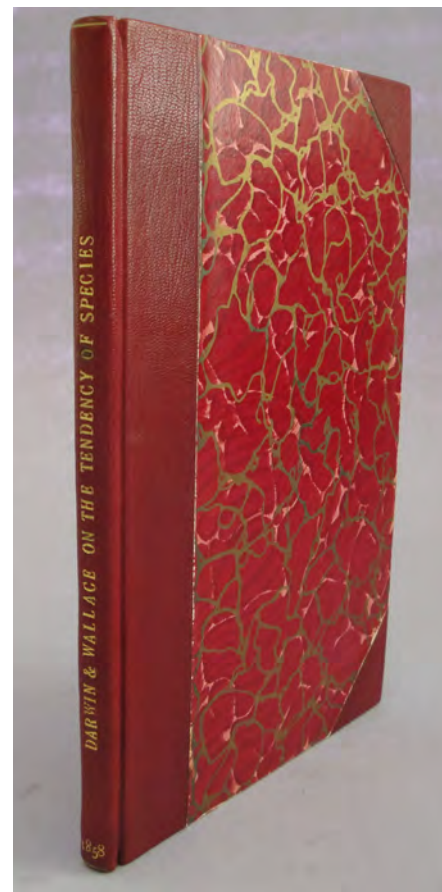
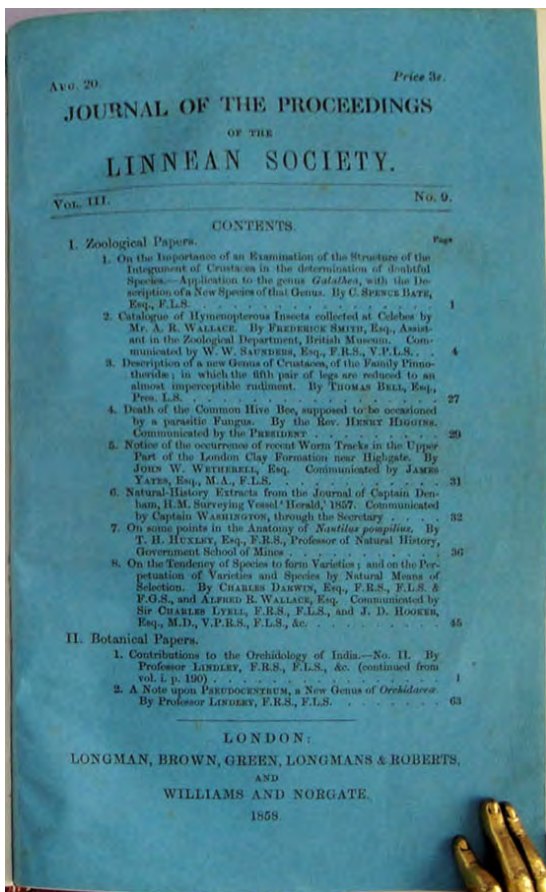


### *Voyage of the Beagle—Darwin's First Published Book*

**12. Darwin, Charles** (1809–82). Journal of researches into the geology and natural history of the various countries visited by H. M. S. Beagle . . . [i–iv], [vii] viii–xiv, 615pp. plus pp. 609–629 addenda. 2 folding maps, 4 text wood-engravings. London: Henry Colburn, 1839. 235 x 146 mm. Original plum cloth (Freeman binding b), minor fading and spotting, spine skillfully and subtly repaired. Edges of first folding map a bit frayed, minor foxing, but fine otherwise. 19th century owner's name partly erased from front pastedown. \$25,000

**First Edition**, second issue, and the **First Separate Edition**. Darwin's first published book, now universally known as *The Voyage of the Beagle*, "is undoubtedly the most often read and stands second only to *On the Origin of Species* as the most often printed. It is an important travel book in its own right and its relation to the background of his evolutionary ideas has often been stressed. . . . The first issue forms, as is well known, the third volume of *The*

*Narrative of the Voyages of H. M. Ships Adventure and Beagle*, edited by Captain Robert Fitzroy and published, in three volumes and an appendix to Volume II, in 1839. . . . On its first appearance in its own right, also in 1839, it was called *Journal of Researches into the Geology and Natural History etc.*" (Freeman, pp. 31–32). See Freeman for a detailed discussion of the work's publishing history and bibliographical features. Freeman, *The Works of Charles Darwin*, II. 414–56

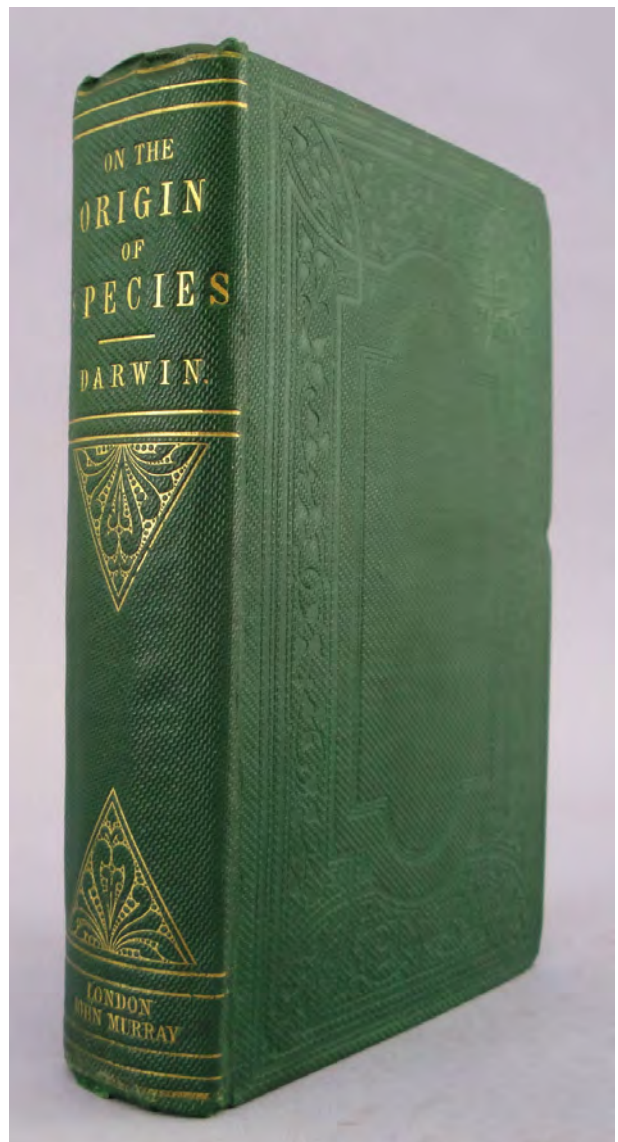
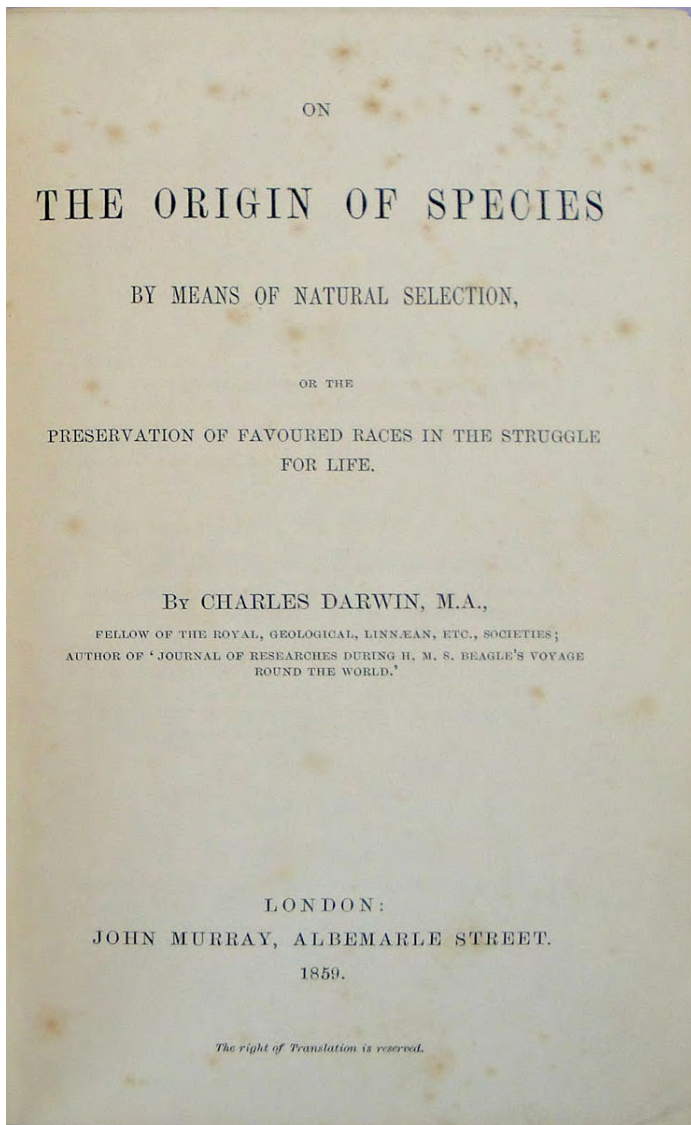


**13. Darwin, Charles** (1809–82) & **Alfred Russel Wallace** (1823–1913). On the tendency of species to form varieties; and on the perpetuation of varieties and species by natural selection. Extract from Journal of the Proceedings of the Linnean Society 3 (1858): 45–62. 217 x 138 mm. 19th century half morocco, journal number's original blue printed wrappers bound in. Very good copy. \$20,000

**First Printing.** The first printed exposition of the theory of evolution by natural selection. Darwin had developed the essential elements of his theory by 1838 and set them on paper in 1844; however, he chose to keep his work on evolution unpublished for the time, instead concentrating his energies first on the preparation for publication of his geological work on the Beagle voyage, and then on an exhaustive eight-year study of the barnacle genus Cirripedia. It is possible that the extremely cautious Darwin might never have published his evolutionary theories during his lifetime had not Alfred Russel Wallace, a New Zealand naturalist, independently developed his own theory of natural selection. Wallace conceived the theory during an attack of malarial fever in Ternate in the Mollucas (February, 1858) and sent a manuscript summary to Darwin, who feared that his discovery would be pre-empted. "In the interest of justice Hooker and Lyell suggested joint publication of Wal-

lace's paper, 'On the tendency of varieties to depart indefinitely from the original type,' prefaced by a section of a manuscript of a work on species written by Darwin in 1844, when it was read by Hooker, plus an abstract of a letter by Darwin to Asa Gray, dated 1857, to show that Darwin's views on the subject had not changed between 1844 and 1857" (Garrison-Morton 119). The two papers were read by Lyell before the Linnean Society on 1 July 1858 and published on 20 August.

Freeman lists five forms in which this paper appears: 1) as above; 2) journal issue, zoology papers only (pink wrappers); 3) journal volume, zoology and botany papers; 4) journal volume, zoology papers only; and 5) authors' offprint (buff wrappers). Only a handful of copies of the offprint are recorded. De Beer, *Charles Darwin*, pp. 149–151. *Dictionary of Scientific Biography*. Freeman 346. Horblit 23a. *Printing and the Mind of Man* 344a. Norman 591. 41444



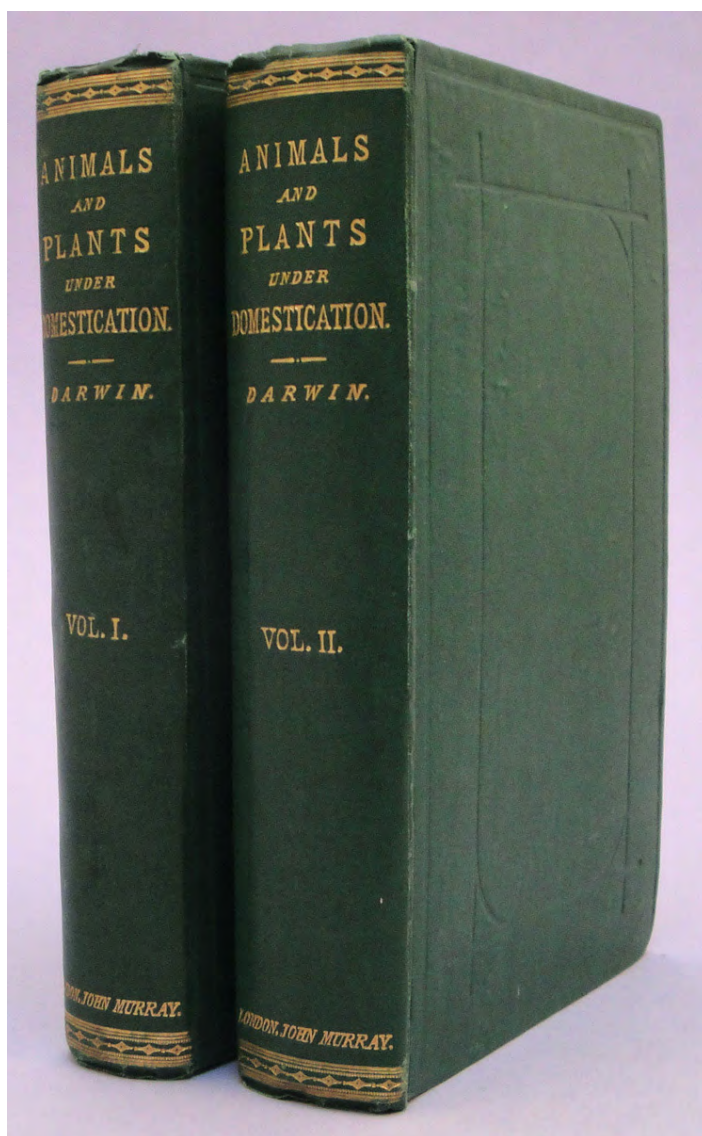
## Evolution

**14. Darwin, Charles** (1809–82). *On the origin of species by means of natural selection*. ix, 502pp., plus 32-page publisher’s catalogue dated June 1859. Folding diagram. London: John Murray, 1859. 200 x 123 mm. Original green cloth, hinges very skillfully repaired. Minor foxing, but a fine, bright copy, preserved in a quarter morocco slipcase. 19th century bookplate of William Frederick Vernon.

\$125,000

**First Edition.** Although the idea of species evolution can be traced as far back as the ancient Greek belief in the “great chain of being,” Darwin’s great 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. There is only

one issue of the first edition. While three binding and advertisement variants have been identified, no priority has been established. 1250 copies were printed, of which about 1,170 were available for sale; the remainder consisted of 12 author’s copies, 41 review copies, 5 copyright copies, and at least 20 presentation copies. Freeman 373. Dibner 199. Horblit 23b. *Printing and the Mind of Man* 344b. Norman 593. 41425

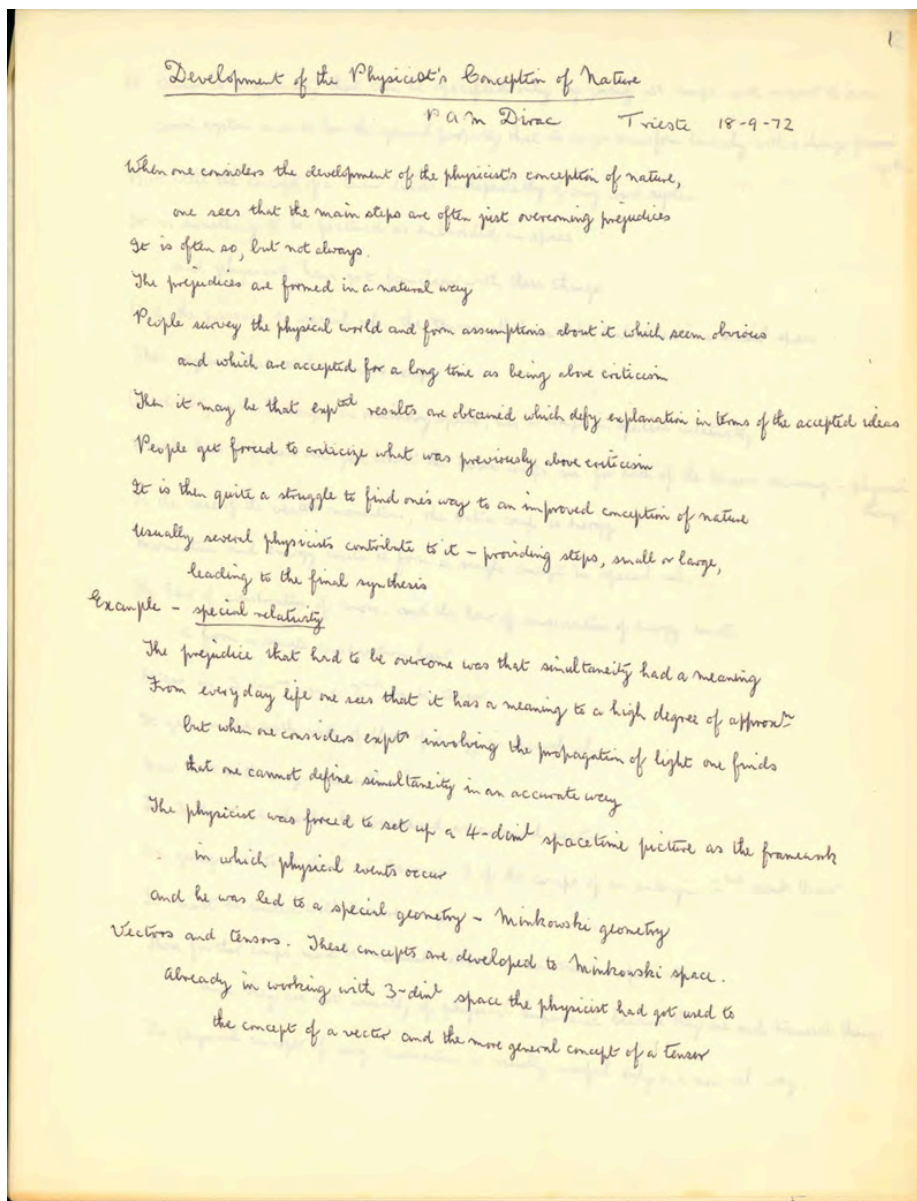


*Darwin's Most Important Contribution to Genetics*

**15. Darwin, Charles** (1809–82). The variation of animals and plants under domestication. 8vo. viii, 411, [I], adverts. dated April, 1867; viii, 486pp., adverts. dated February, 1868. Text illustrations. London: Murray, 1868. 224 x 140 mm. Original cloth, lower corner of Vol. I front cover and text block slightly gnawed, otherwise a very good, bright set. 19th century owner's signature ("J. Pierce, Brighton, 1868") in both volumes. \$3750

**First Edition, First Issue**, with fourteen errata in the two vols. This work contains Darwin's provisional hypothesis of pangenesis, his most important contribution to genetics. Darwin had intended

*Variation of Animals and Plants* to be the second in a multi-volume series, to which the *Origin* was only the introduction. It is a mine of data on its subject. Freeman, *Works of Charles Darwin*, 877. 42140

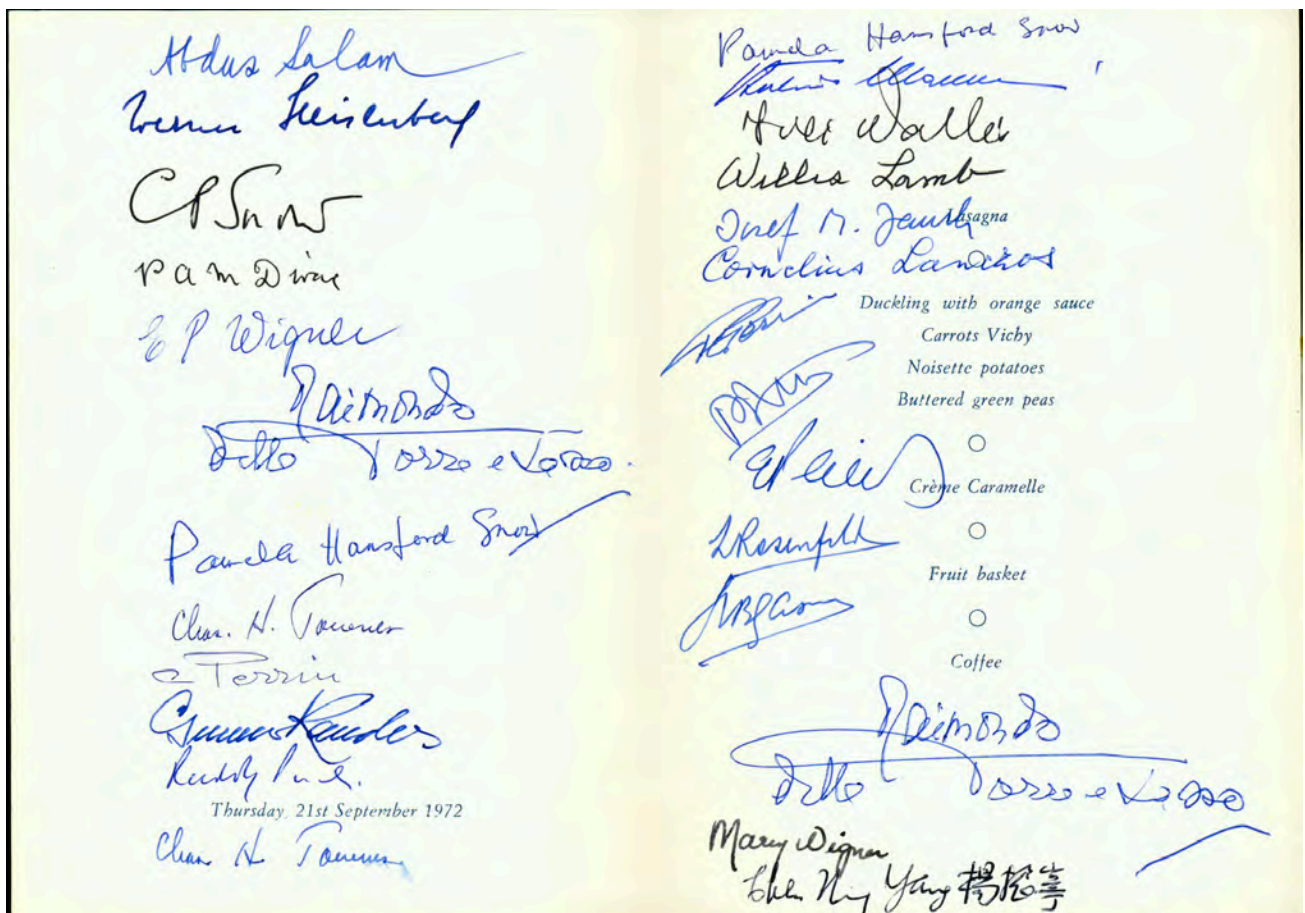


*Signed Autograph Manuscript on the Physicist's Conception of Nature*

**16. Dirac, Paul A. M.** (1902-84). Development of the physicist's conception of nature. Autograph manuscript signed. 12ff. Trieste, 18 September 1972. 282 x 216 mm. Faint marginal toning, but very good. From the library of historian of physics Jagdish Mehra (1931-2008). \$8500

The manuscript of Dirac's opening lecture delivered at the 1972 Symposium on the Development of the Physicist's Conception of Nature, organized by Jagdish Mehra and Abdus Salam in honor of Dirac's seventieth birthday. Dirac wrote the lecture in outline form, expanding upon the outline when he gave the lecture. The text of Dirac's manuscript thus varies substantially from the text of the lecture as published in *The Physicist's Conception of Nature* (1973; pp. 1-14),

the proceedings of the symposium edited by Mehra. Dirac was one of the most brilliant theoretical physicists of all time, author of the landmark relativistic theory of the electron (from which he predicted the existence of the positron), and recipient (with Erwin Schroedinger) of the 1933 Nobel Prize for his fundamental work on quantum mechanics. Kragh, *Dirac: A Scientific Biography*, p. 311. 42409



*Signed by Dirac, Heisenberg, and Other Notable Physicists*

**17. Dirac, Paul A. M.** (1902-84). Banquet in honour of Professor P. A. M. Dirac on the occasion of his seventieth birthday. Printed menu. 2ff. Trieste, 21 September 1972. 175 x 124 mm. Signed by Dirac and several other celebrated physicists, including Nobel laureates **Werner Heisenberg** (1901-76), **Eugene P. Wigner** (1902-95), **Abdus Salam** (1926-96), **Willis E. Lamb** (1913-2008) and **Chen-Ning Yang** (1922-). Fine. From the library of historian of physics Jagdish Mehra (1931-2008).

\$3000

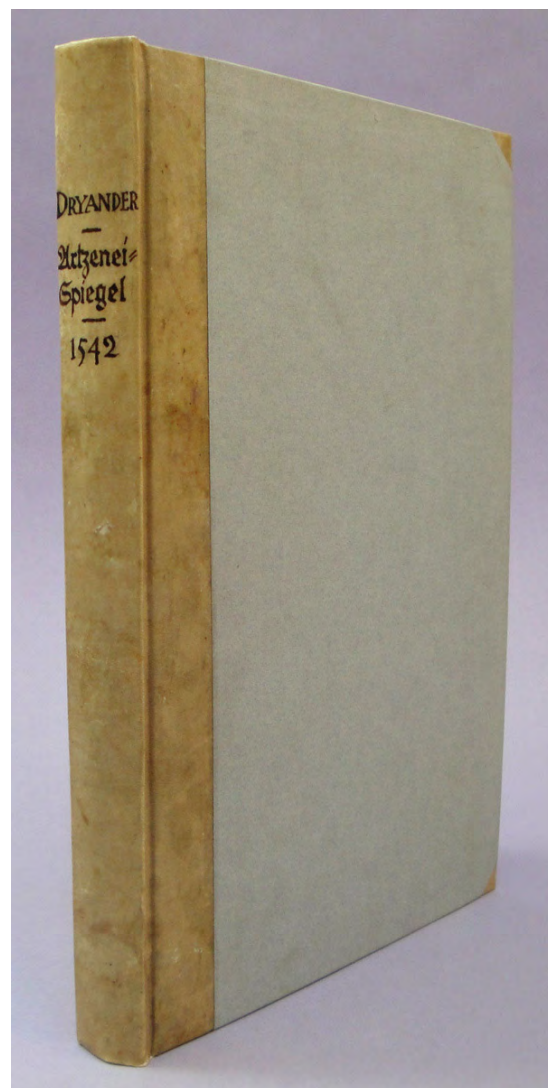
Signed menu from a banquet held in connection with the 1972 Symposium on the Development of the Physicist's Conception of Nature in honor of Paul Dirac's seventieth birthday. The menu bears the signatures of Nobel laureates Paul Dirac (1933, for his fundamental work in quantum mechanics), Werner Heisenberg (1932, for the creation of quantum mechanics), Eugene P. Wigner (1963, for his contributions to the theory of the atomic nucleus), Abdus Salam (1979, for his contributions to the theory of the unified weak and electromagnetic interaction between elementary particles), Willis E. Lamb (1955, for his discoveries concerning the fine structure of

the hydrogen spectrum), and Chen-Ning Yang (1957, for his investigation of the so-called parity laws leading to important discoveries regarding the elementary particles). Other signatures include those of physicists Rudolph Peierls (1907-95), Ivar Waller (1898-1991), Cornelius Lanczos (1893-1974), Josef M. Jauch (1914-74) and Léon Rosenfeld (1904-74); and novelist and physicist C. P. Snow (1905-80). All of the above contributed papers to the symposium, which were edited by Mehra and published under the title *The Physicist's Conception of Nature* (1973). Kragh, *Dirac: A Scientific Biography*, p. 252. Mehra & Rechenberg, *Historical Development of Quantum Theory I*, p. xvi. 42407



*First Brain Dissections*

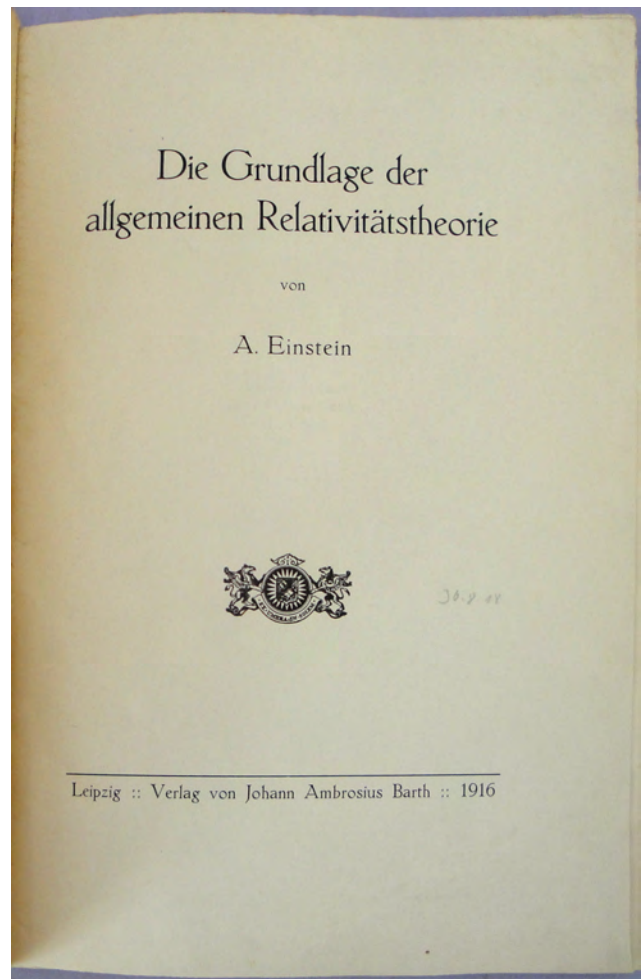
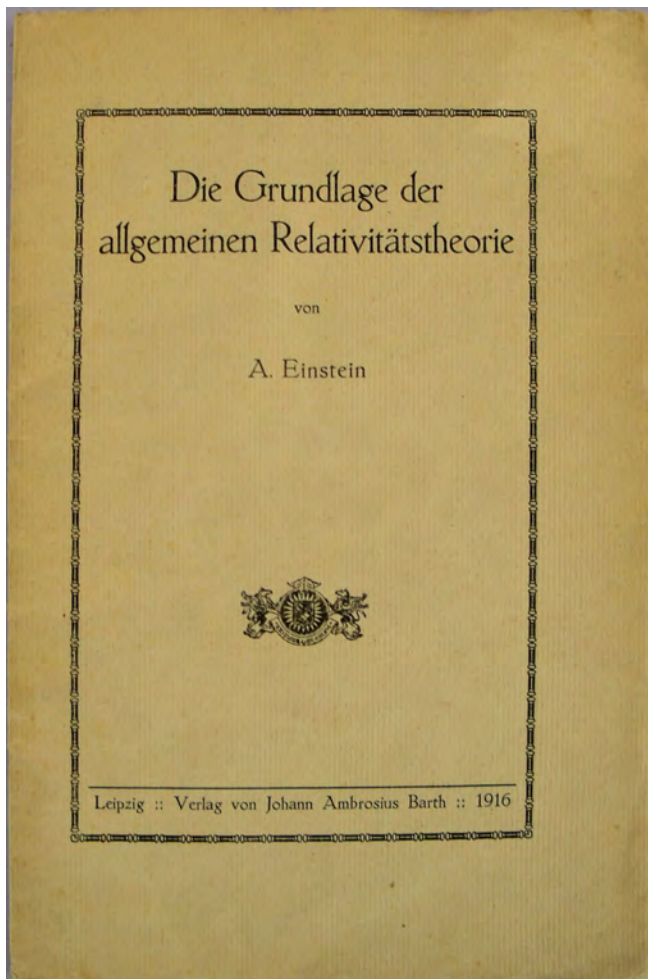
**18. Dryander, Johannes** (Johannes Eichmann) (1500–60). Der gantzen Artzenei gemeyner Inhalt, des einem Arzt bede in der Theorie und Practic zusteht. Folio. [4] (includes blank \*4), 110ff. Numerous anatomical & other woodcuts included in foliation, attributed to Hans Brosamer or his school, or to Georg Thomas. Frankfort: Christian Egenolph, [1542]. 298 × 197 mm. Modern half vellum. Some browning & soiling, minor dampstaining & worming in margins of some leaves, but still very good. 20th century owner's signature on endpaper. \$12,500



**First Edition.** Dryander's practice of medicine is one of the first general works on medicine to include a series of woodcuts based on dissection. Dryander, fellow-student in Paris with Vesalius, and professor of medicine at Marburg, carried out some of the earliest public dissections in Germany. Based on these, he issued his celebrated and excessively rare *Anatomia Capitis Humani* in 1536, the first work on the anatomy of the head, and his *Anatomiae, hoc est, Corporis Humani Dissectionis* in 1537, which repeated and expanded on the 1536 work (see Garrison-Morton 370–71). For his 1542 *Artzenei* he re-issued the key woodcuts showing dissection of the brain from the two previous works, as well as other woodcuts he had used, based on Berengario primarily, and his own

dissections. There are two entirely new woodcuts in the *Artzenei*, both full-page, one of which fuses in a single diagram the two vascular plates from Vesalius's *Tabulae Sex* published in 1538. Vesalius complained bitterly about this in the *Fabrica* in 1543; however, Herrlinger (85) points out that in some cases Vesalius's own illustrations are taken from Dryander, albeit with improvements. Numerous other woodcuts illustrate text on food and drink, materia medica, and medical treatment. Choulant/Frank 148–49, & 132, noting that Dryander also drew on the remarkable woodcuts in Phryesen's *Spiegel der Artzny* (Strassburg, 1518); in fact in his preface, Dryander states that his book is meant to update the earlier Phryesen. Cushing, *Bibliography of Andreas Vesalius*, II.20. 41438



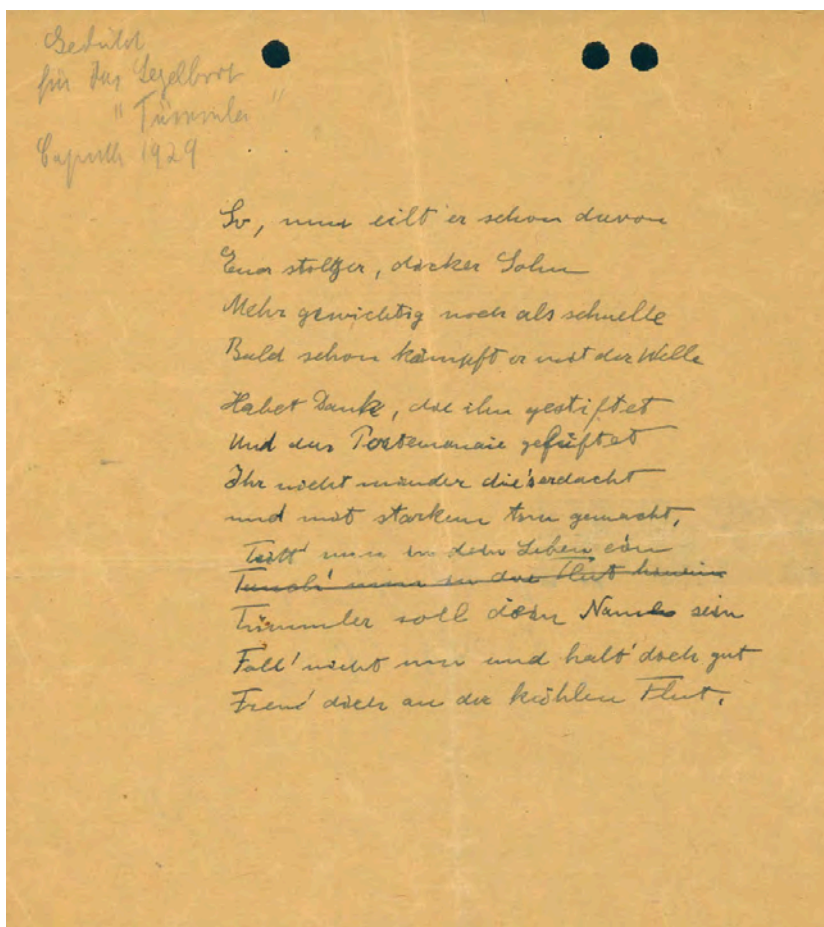


## General Relativity

**19. Einstein, Albert** (1879–1955). *Die Grundlage der allgemeinen Relativitätstheorie*. 8vo. 64pp. Leipzig: J. A. Barth, 1916. 244 x 163 mm. Original buff wrappers, spine very skillfully repaired; preserved in a cloth drop-back box. Very good copy. \$8500

**First Separate Edition** of Einstein's paper announcing his general theory of relativity. This is not an offprint of the journal issue in the *Annalen der Physik*, but a completely new setting of type with significant additions and revisions, including an introduction published here for the first time. "This

separate edition is printed on good, strong paper, the wrappers are of strong material too, and it is described now as 'the original edition' of this classic paper" (Weil). *Printing and the Mind of Man* 408. *Horblit* 26c. *Dibner* 167. *Weil* 80a. *Boni* 78.1. 41457



*“Tümmler Will be Your Name”*

**20. Einstein, Albert** (1879–1955). Autograph poem. 1 page, written on the back of a used envelope. Caputh, 1929 (dated by Einstein’s secretary, Helen Dukas, in a pencil note in the upper left corner). 235 x 210 mm. 3 holes punched in upper margin, tape repair along central fold, but very good.

\$7500

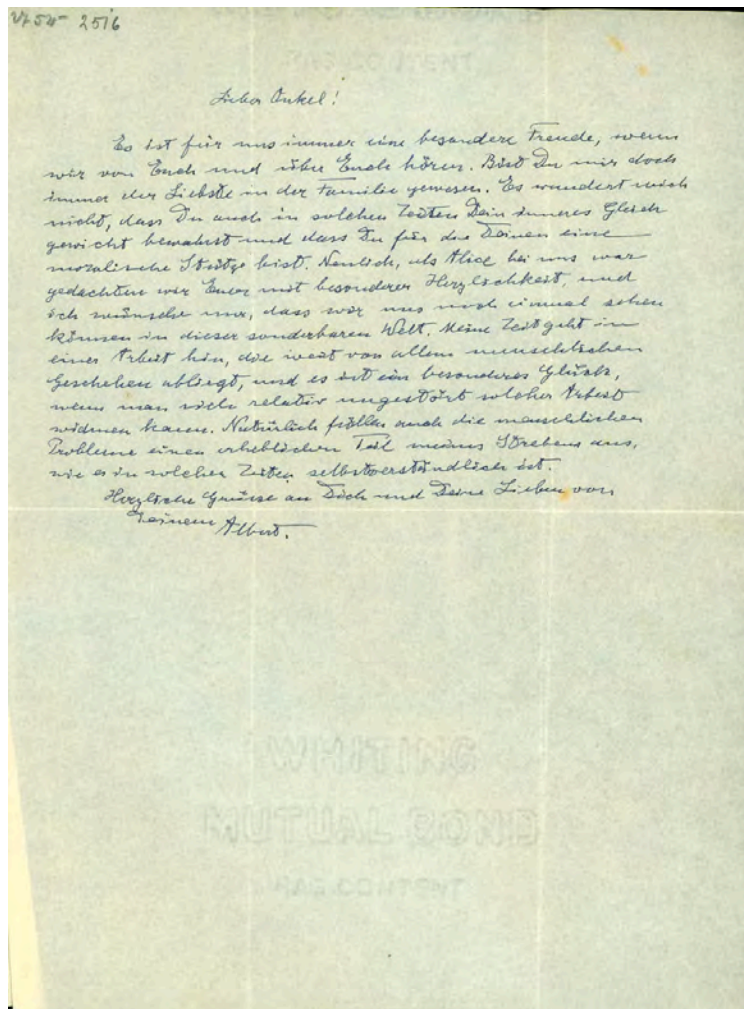
A charming representation of two of Einstein’s lifelong pleasures—light verse and sailing. Einstein wrote the poem at Caputh, a small town on the Havel River near the lakes Templiner See and the Schwielowsee, where he and his wife, Elsa, had acquired property for a summer home in 1929. The city council of Berlin had intended to present Einstein with a summer home in honor of his fiftieth birthday (March 14, 1929), but because of some embarrassing (and somewhat anti-Semitic) controversy within the council over the gift, Einstein declined the offer. The Einsteins ended up buying the property on their own and building a small cottage on it “in the woods near the water,” as Elsa Einstein described it (quoted in Clark, *Einstein: The Life and Times*, p. 501). To mark this occasion, several of Einstein’s friends combined to buy him a small sailboat,

in which he spent many happy hours during his final years in Germany.

The present autograph is the draft of the inaugural verses that Einstein wrote for his sailboat, which he christened “Tümmler” (porpoise or dolphin). The poem can be translated as follows:

So, now he hurries away, your proud but plump son, heavier indeed than he is fast, soon he’ll make battle with the waves. Thanks to you who gave him, opening your purses; equal thanks to you who designed and with strong arm built him. Enter you now upon your life, Tümmler will be your name; keep yourself well, and don’t capsize; take pleasure in the cooling sea.

42414



*“You Have Always Been the One Dearest to Me in the Entire Family”*

**21. Einstein, Albert** (1879–1955). Autograph letter signed, in German, to his maternal uncle, Caesar Koch (d. 1941). 1 page. N.p., n.d. [Princeton, 1941?]. 278 x 211 mm. Evidence of folding, 2 faint rust spots, but very good. From the library of historian of physics Jagdish Mehra (1931–2008). \$12,500

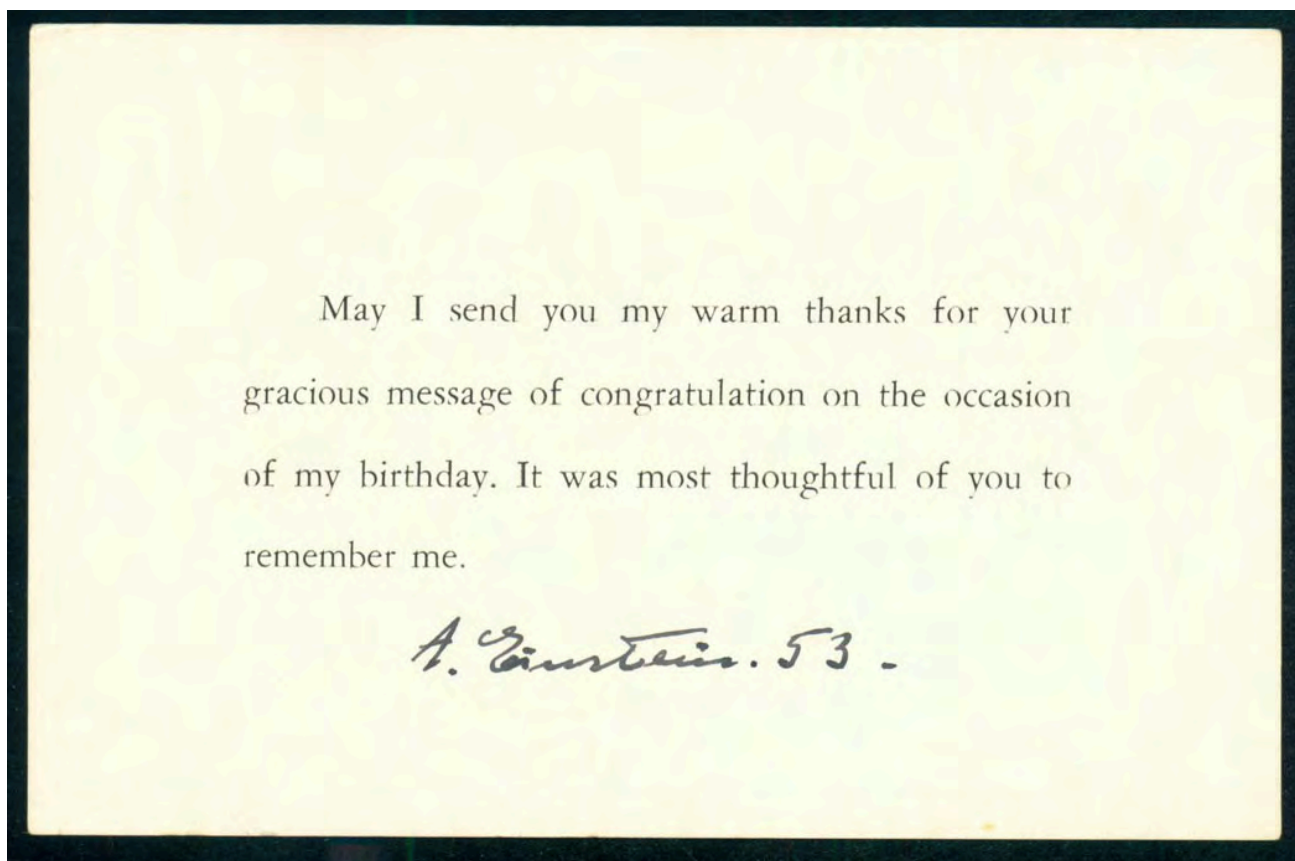
Einstein’s last letter to his favorite uncle, his mother’s younger brother Caesar Koch. Koch had long held a special place in Einstein’s affections; in 1895, when Einstein was still in his teens, he sent Koch one of his first scientific manuscripts, titled “Über die Untersuchung des Ätherzustandes im magnetischen Felde” (On the examination of the state of the ether in a magnetic field), together with a cover letter announcing his intent to go to the ETH in Zurich (see Pais, *Subtle is the Lord*, p. 130). Koch, a widely traveled grain merchant, eventually settled in Antwerp; in 1941 he was in his mid-eighties, but still very much in Einstein’s thoughts:

It is always a great joy to us when we hear from you and about you. You have always been the one dearest to me in the entire

family. I am not surprised that you are still able to maintain in such times your inner equilibrium and that you remain such a pillar of moral strength for your family. Recently, when [Caesar’s daughter and Einstein’s cousin] Alice visited us, we thought of you with special warmth, and I only wish that we could meet one more time in this strange world [translation].

Einstein’s wish was not granted, as Koch died a few months after receiving this letter. The form of the signature used in the letter—“deinem Albert” (your Albert)—is quite unusual, but it is the same as the one Einstein used in his youthful 1895 letter to Koch.

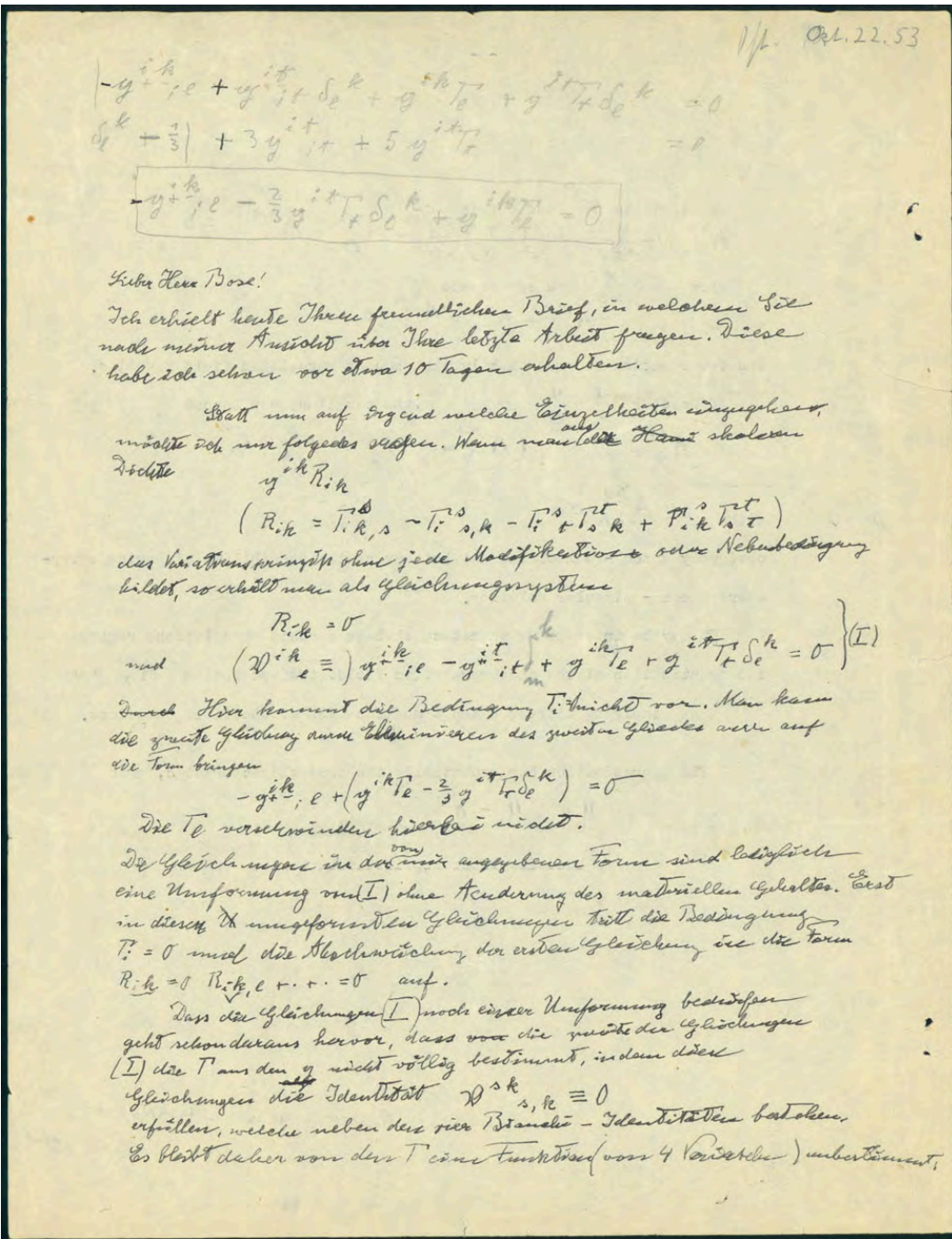
42412



**22. Einstein, Albert** (1879-1955). Printed card signed (“A. Einstein. 53”). N.p., 1953. 84 x 128 mm. Fine. From the library of historian of physics Jagdish Mehra (1931-2008). \$2500

Printed card sent in response to birthday greetings: “May I send you my warm thanks for your gracious message of congratulation on the occasion of my birthday. It was most thoughtful of you to

remember me. [signed] A. Einstein. 53.” The card was sent to Jagdish Mehra, author of numerous works on the history of 20th century physics, including *Einstein, Physics and Reality* (1999). 42410



Only Surviving Letter from Einstein to S. N. Bose

**23. Einstein, Albert** (1879-1955). Autograph letter signed ("A. E."), in German, to Satyendra Nath Bose (1894-1974). 2ff. [Princeton,] October 22, 1953. 270 x 210 mm. Written on the verso of 2 pages of Bose's typed draft of a paper on unified field theory that he sent to Einstein; the pages include Bose's signature ("S. N. Bose") and extensive mathematical calculations in Bose's hand. Accompanied by Einstein's 3-page carbon typescript (with ms. additions) of his typed reply to Bose translated into English. Small marginal tears and staple holes in the leaves of Einstein's autograph letter, light creasing, but very good. From the library of historian of physics Jagdish Mehra (1931-2008). \$75,000

Das dem Gleichgewicht) inhaltliche gleichwertige Gleichungssystem  
 (I)  $\gamma^{\mu\nu} \epsilon = 0$   $T_{\mu\nu} = 0$   $\left\{ \begin{array}{l} \text{(II)} \\ R_{\mu\nu} = 0 \end{array} \right.$   
 $R_{\mu\nu} \epsilon + \dots = 0$

erhält man in folgender Weise. Man ersetzt die  $T$  durch  
 gemäß der Formel  $T_{\mu\nu} = T_{\mu\nu}^{\text{alt}} + \delta g_{\mu\nu}^{\text{alt}}$ ,  
 wobei  $\delta g$  ein Vektorfeld und  $T_{\mu\nu}^{\text{alt}}$  ein neues Verschleppungsfeld  
 ist. Diese Ersetzung der  $\epsilon$  durch  $\delta g$  und  $T_{\mu\nu}^{\text{alt}}$  und  $\delta g$  bringt es  
 mit sich, dass man nach Aufhebung der Variation nach den  
 $T_{\mu\nu}^{\text{alt}}$  und  $\delta g$  die  $T_{\mu\nu}^{\text{alt}}$  des vor Bedingunges  $T_{\mu\nu}^{\text{alt}} = 0$  aufheben  
 kann (Normierung) ohne die fakt. äquivalente Bedingung  
 für das Feld einzuführen.

Durch die obige Substitution erhält man  
 $R_{\mu\nu} = R_{\mu\nu}^{\text{alt}} - (\delta_{\mu\nu} \epsilon - \delta g_{\mu\nu})$ ,  
 so dass die in variierende Funktionen nun die Form  
 $\gamma^{\mu\nu} [R_{\mu\nu}^{\text{alt}} - (\delta_{\mu\nu} \epsilon - \delta g_{\mu\nu})]$   
 annimmt. Durch Variation nach den  $T_{\mu\nu}^{\text{alt}}$  liefert dann  
 diese genau die gleiche der Gleichungen I, aber geschrieben  
 in den  $T_{\mu\nu}^{\text{alt}}$  statt in den  $T_{\mu\nu}$ . Diese variieren dann  
 nach Variation der Normierung, gemäß  $T_{\mu\nu}^{\text{alt}} = 0$  die Form  
 $\gamma^{\mu\nu} \epsilon = 0$   
 an (wobei die Differentiation; mit den  $T_{\mu\nu}^{\text{alt}}$  vorgenommen ist).  
 Die Variation nach den  $\delta g$  liefert nichts Neues. Die Variation  
 nach den  $\epsilon$  aber liefert  
 $R_{\mu\nu} - (\delta_{\mu\nu} \epsilon - \delta g_{\mu\nu}) = 0$  oder  $\left\{ \begin{array}{l} R_{\mu\nu} = 0 \\ \delta g_{\mu\nu} \epsilon + \dots = 0 \end{array} \right.$

Damit hat man das System (II) erhalten (für den  $T_{\mu\nu}^{\text{alt}}$ ),  
 welches also mit (I) völlig gleichwertig ist.

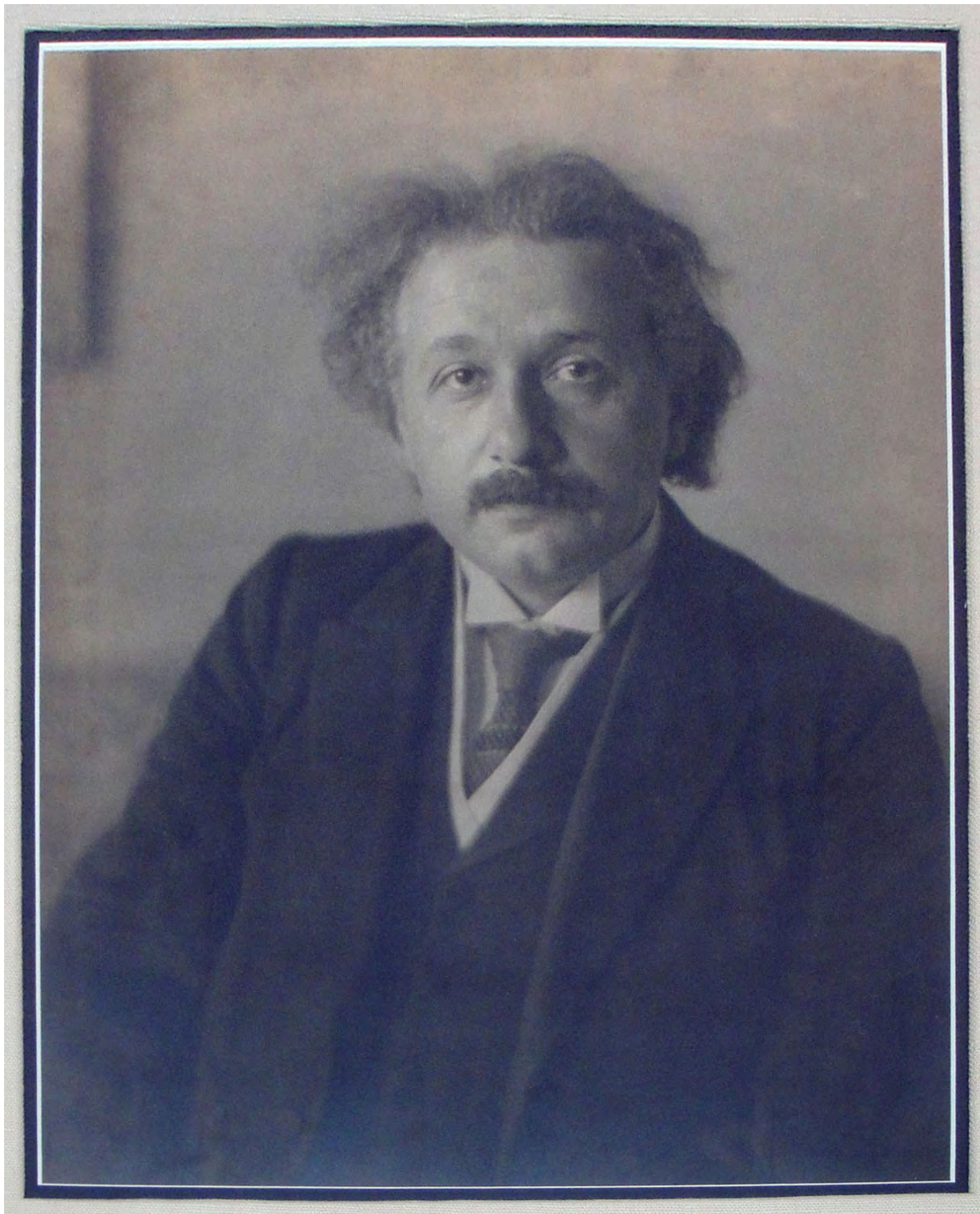
Das soll zeigen, dass die Gleichungen  $T_{\mu\nu} = 0$  keine  
 Willkür in sich schließen. Das System (II) hat  
 ausserdem den Vorteil, erkennen zu lassen, dass es  
 ein Transportinvariantes Transposition-invariantes  
 System ist.

Fremdliche grüsst Sie Ihre  
 A. E.

**The Last Scientific Contact between Einstein and his One-Time Collaborator, the Brilliant Indian Physicist S. N. Bose.** This is apparently the **Only Surviving Example** of a letter from Einstein to Bose, his earlier communications to Bose having been lost. In 1924 Bose, then living in Dacca, India (now part of Bangladesh), sent Einstein a manuscript on the investigation of a new derivation of Planck's blackbody radiation law, asking Einstein to see to its publication if it had any merit. Recognizing the paper's importance, Einstein translated it himself into German and had it published in the *Zeitschrift für Physik*. Einstein realized that the form of statistics used by Bose could be applied to the quantum theory of ideal gas, and he himself published three papers on this topic in 1924 and 1925. On the basis of Einstein's support, Bose was awarded a fellowship allowing him to spend two years in Europe, working with Maurice de Broglie in Paris and Einstein in Berlin. Bose then returned to India, where he had a long and distinguished scientific and administrative career in Dacca.

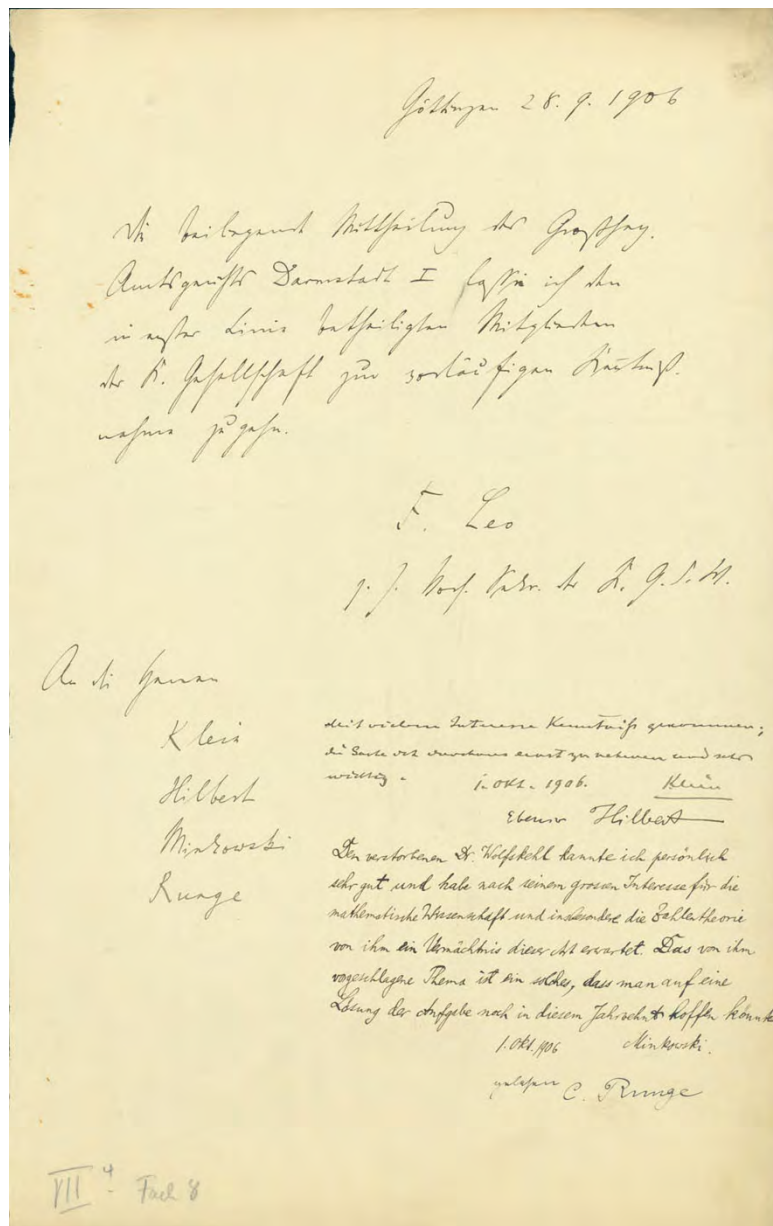
Almost three decades after this initial contact Bose, then working in Paris, sent Einstein a draft of his paper "A unitary field theory of gravitation and general relativity," which was eventually published in the *Journal de Physique*. Einstein's reply to Bose commented on the use of the variational principle and on the significance of the auxiliary conditions—the conservation laws. Einstein had great respect for Bose, taking account of Bose's criticisms in Appendix II of the final edition of his *The Meaning of Relativity* (1955).

The names of Einstein and Bose are permanently linked in the terms "Bose-Einstein statistics" and in Einstein's postulate of the ultra-low temperature phenomenon known as "Bose-Einstein condensation," in which individual atoms condense into a "superatom" that behaves as a single entity. This unique state of matter was created and confirmed in 1995 by the physicists Eric Cornell and Carl Wieman, who received the Nobel Prize in 2001 for their achievement. 42415



**24. Einstein, Albert** (1879-1955). Portrait photograph of Einstein in middle age, by an unidentified photographer. N.p., n.d. (1920s). Archivaly framed. 430 x 325 mm. (image); 720 x 610 mm. (frame).  
Very fine. \$3500

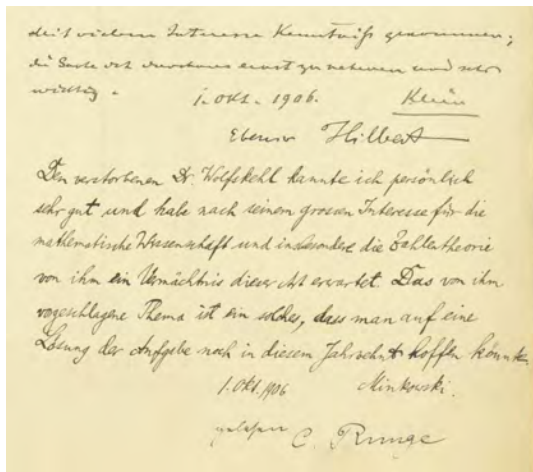
Excellent and very large black-and-white photograph portrait of Einstein, handsomely framed. 42426



*Creation of the Wolfskehl Prize: The Original Documents Signed by Hilbert, Klein, Minkowski, Runge and Landau Relating to the Most Celebrated Problem in Number Theory—Fermat’s Last Theorem*

**25.** [Fermat, Pierre de (1601–65).] Wolfskehl Prize. Extensive archive consisting of 35 manuscript and 5 printed documents (detailed listing available) concerning the founding and early administration of the Prize, established by a bequest left by Paul Wolfskehl (1856–1906), to be awarded to the first person to solve Fermat’s Last Theorem of 1637. Ca. 140pp. Göttingen and Darmstadt, 1906–14. Various sizes. Very good to fine. The documents include numerous signatures and signed statements of famous Göttingen mathematicians **David Hilbert** (1862–1943) **Felix Klein** (1849–1925) **Hermann Minkowski** (1864–1909), **Carl Runge** (1856–1927) and **Edmund Landau** (1877–1938), among others. From the library of historian of physics Jagdish Mehra (1931–2008). \$95,000





**The Original Mathematical-Scientific Archive Relating to the Most Celebrated Problem in Number Theory, Fermat's Last Theorem.** The Wolfskehl Prize, intended for the first person to publish a complete proof of Fermat's Last Theorem, was established in 1907 by the Göttingen Academy of Sciences. It was awarded 90 years later to British mathematician Andrew Wiles, who published his proof in 1995. The worldwide fame of Fermat's Last Theorem in the last century is due in no small part to the Wolfskehl Prize; as Alf van der Poorten, author of *Notes on Fermat's Last Theorem* (1996), remarked, "It's the romance, and size, of this prize that gave the FLT its popularity and notoriety" (quoted in Barner, p. 1301).

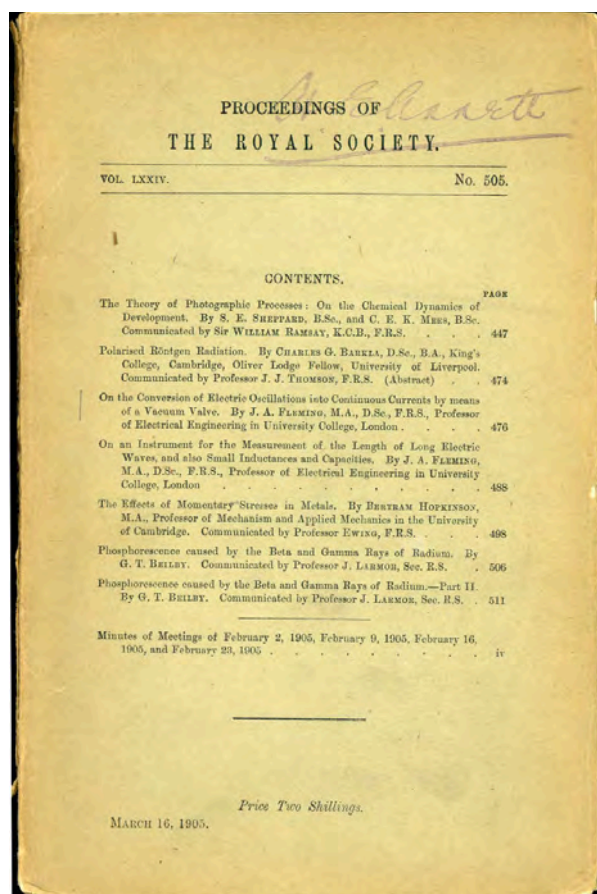
The story of Fermat's celebrated "Last Theorem" is among the most famous in the history of mathematics. Fermat owned a copy of the 1621 *Arithmetica* of Diophantus, edited by Claude Bachet, and was in the habit of noting his own number theory propositions in the margins of the book. In 1637 Fermat made a marginal note next to one of the problems put forth by Diophantus, stating, in essence, that equations of the form  $x^n + y^n = z^n$  have no whole-number solutions when  $n$  is greater than 2. In his note Fermat stated that he had found a truly marvelous proof (*demonstratio mirabilis*), which would not fit into the narrow margin of the book. Fermat died in 1665 without revealing his proof, and today some scholars doubt that he actually achieved it. In 1670 Fermat's son published a second edition of Bachet's *Diophantus* that incorporated all of Fermat's marginal notes and propositions. Most of Fermat's propositions were proved during the 18th century, but the Last Theorem remained a stumbling block for succeeding generations of mathematicians and by the early 19th century

it had gained a reputation as perhaps the world's most baffling mathematical mystery.

Among the many mathematicians, professional and amateur, who came under the spell of the Last Theorem was Paul Wolfskehl, a Darmstadt physician from a wealthy family who took up the study of mathematics in the 1880s after he began exhibiting symptoms of multiple sclerosis. In January 1905, about a year and a half before his death, Wolfskehl altered his will to include a bequest of 100,000 gold marks to the Göttingen Academy of Sciences (Königliche Gesellschaft der Wissenschaften) for the establishment of the Wolfskehl Prize, to be awarded to the first person either to solve Fermat's Last Theorem or to supply a valid counterexample. The bequest originally amounted to about \$1.5 million in today's money, but was reduced by inflation and currency devaluation to \$50,000, the amount that Wiles was awarded in 1997.

Upon receiving notice of Wolfskehl's bequest, the Göttingen Academy appointed a commission, consisting of mathematicians Ernst Ehlers, David Hilbert, Felix Klein, Hermann Minkowski and Carl Runge, and began working on formulating the rules and conditions of the prize. The archive we are offering documents this process in detail, and also offers a great deal of information on the early years of the Wolfskehl Commission to 1914. Jagdish Mehra, the former owner of the archive, drew upon it extensively when discussing the Wolfskehl Prize in his *Historical Development of Quantum Theory* (6 vols., 1982-2001).

The Wolfskehl Prize was significant not only for mathematics but also for the development of modern physics, as interest from the prize money was used to fund guest speakers in mathematics and physics at the University of Göttingen. Henri Poincaré, the renowned French mathematician and physicist, was the first Wolfskehl lecturer (in 1908); others included H. A. Lorentz, Arnold Sommerfeld and Einstein. In 1913 Hilbert used Wolfskehl Prize income to organize the week-long Kinetische Gas-Kongress, in which Lorentz, Sommerfeld, Max Planck, Peter Debye, Walther Nernst and Marian von Smoluchowski participated. Mehra summed up his discussion of the Wolfskehl lectures by stating that "in the disbursement of funds from the income of the Wolfskehl endowment the field of physics was evidently the great beneficiary, and Felix Klein and David Hilbert were undoubtedly behind that" (Mehra and Rechenberg I, p. 280). 42283



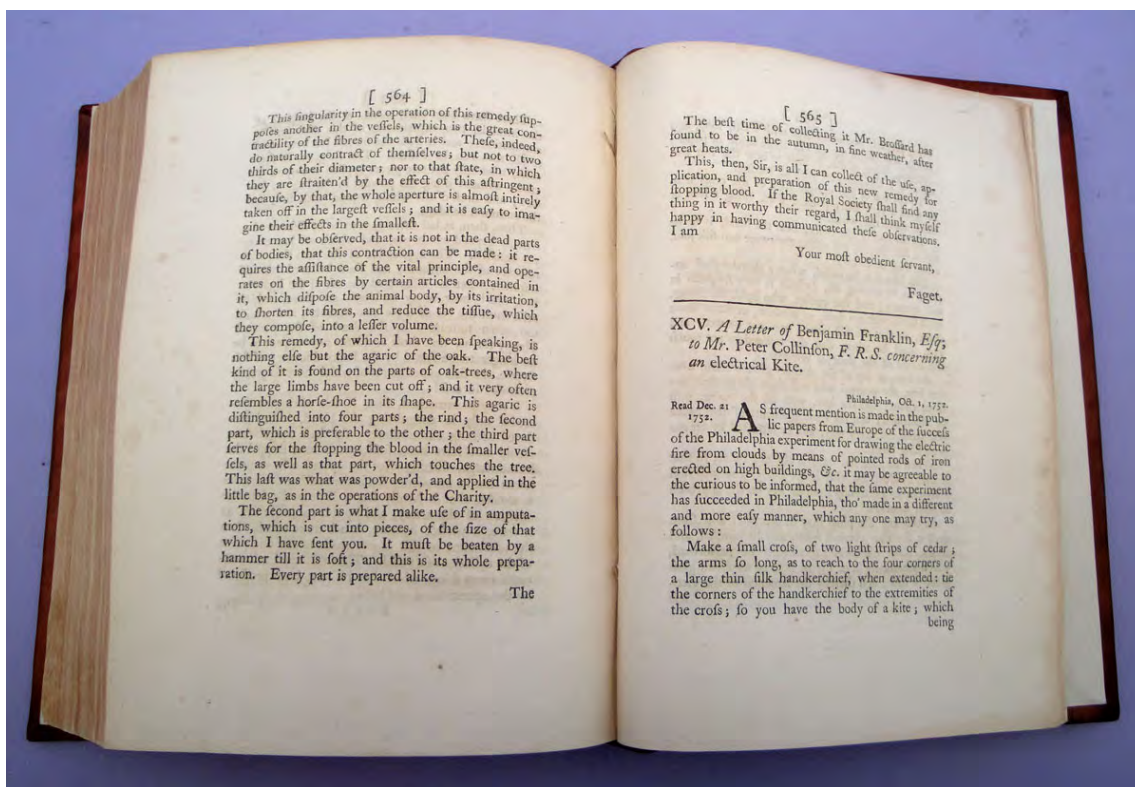
## Vacuum Tube—Beginning of Electronics

**26. Fleming, John Ambrose** (1849-1945). On the conversion of electric oscillations into continuous currents by means of a vacuum valve. In *Proceedings of the Royal Society* 74 (1905): 476-487. Whole number. 447-518pp. Text diagrams. 223 x 146 mm. Original printed wrappers, spine and margins a little chipped. Outer margins a bit frayed but very good. Ownership stamp ("H. E. Annett") on the front wrapper. \$3750

**First Edition.** journal issue. Fleming's paper introduced the basic principle of the modern wireless valve, and marks the beginning of electronics. A precursor of the transistor, the vacuum tube was the first switch used in the earliest electronic computers. Using vacuum tubes as switches, the first general-purpose electronic computer, the ENIAC, operated 10,000 times the speed of a human computer. By comparison, the Harvard Mark I, which used electromechanical relays as switches, computed 100 times the speed of a human computer.

Fleming, an electrical engineer and physicist who had worked with Thomas Edison's company in London, invented and patented the two-electrode vacuum-tube rectifier. Fleming had been aware since 1884 of the so-called "Edison effect" of "unilateral flow of

particles from negative to positive electrode, and he repeated some of the experiments, with both direct and alternating currents, beginning in 1889. . . . [In 1904] he returned to his experiments on the Edison effect, with a view to producing a rectifier that would replace the inadequate detectors then used in radiotelegraphy. He named the resulting device a 'thermionic valve,' for which he obtained a patent in 1904. This was the first electron tube, the diode, ancestor of the triode and the other multielectrode tubes which have played such an important role in both telecommunications and scientific instrumentation" (*Dictionary of Scientific Biography*). Fleming's invention paved the way for Lee DeForest and others to perfect the broadcasting of wireless signals. *Printing and the Mind of Man* 396. 42398



## Franklin's Most Famous Experiment

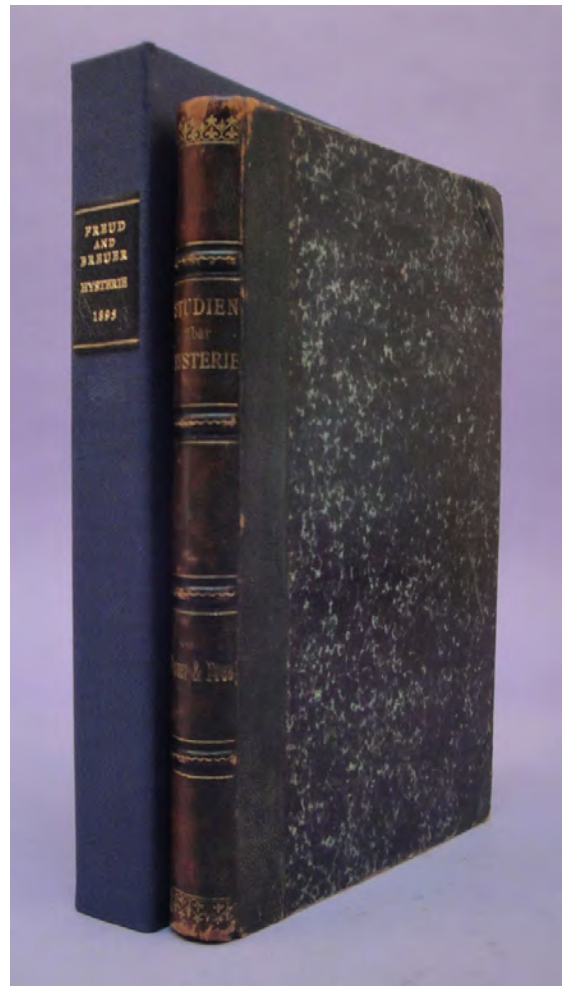
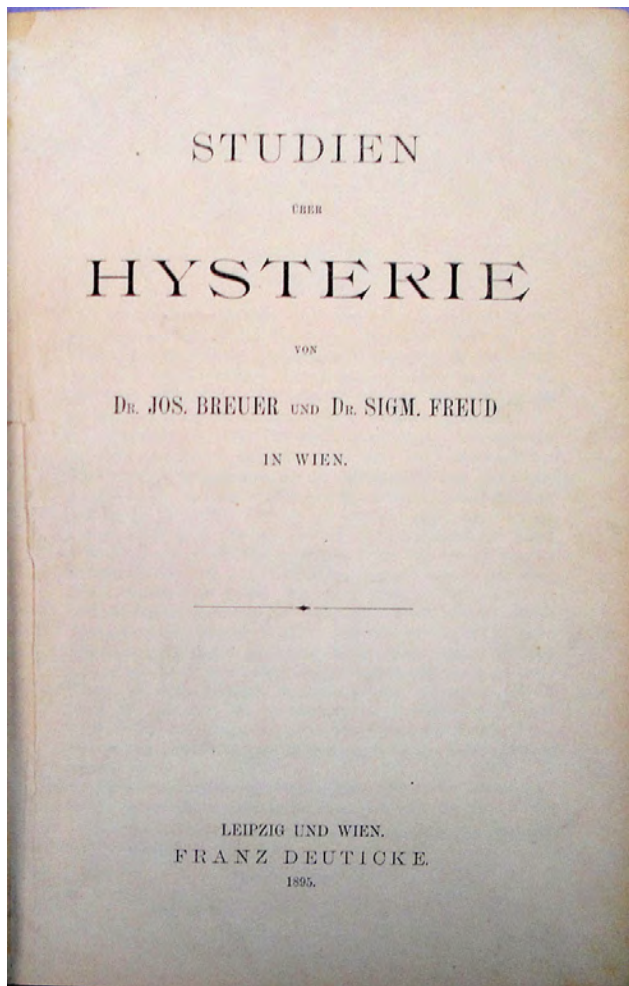
**27. Franklin, Benjamin** (1706–90). (1) A letter of Benjamin Franklin, Esq; to Mr. Peter Collinson, F.R.S. concerning an electrical kite. In *Philosophical Transactions* 47 (1753): 565–567. (2) A letter from Mr. Franklin to Mr. Peter Collinson, F.R.S. concerning the effects of lightning. In *ibid.*: 289–291. (3) Watson, William. An account of Mr. Benjamin Franklin's treatise, lately published, entitled, *Experiments and Observations on Electricity, made at Philadelphia in America*. In *ibid.*: 202–211. Whole volume, 4to. [18], 571, [17] pp. 18 plates of 20; lacking plates 7 and 14 (the missing plates do not illustrate the Franklin papers). 227 x 173 mm. Full antique calf, gilt in period style. Very small, almost invisible library blind-stamp on title and last leaves. Light foxing and toning, but very good. \$4500

**First Editions.** Franklin's famous kite experiment, in which he demonstrated that lightning is an electrical phenomenon, was first published in no. (1), a letter Franklin wrote to his friend Peter Collinson on October 1, 1752 that was read before the Royal Society on December 21, 1752. In the letter Franklin gave instructions on constructing the electrical kite (a kite made of silk fabric and lightweight wood, with a "sharp-pointed wire" attached to the vertical cross-piece and a metal key tied to the kite's string) and on conducting the experiment:

The kite is to be raised, when a thunder-gust appears to be coming on . . . As soon as any of the thunder-clouds come over the kite, the pointed wire will draw the electric fire from them; and the kite, with all

the twine, will be electrified; and the loose filaments of the twine will stand out every way, and be attracted by an approaching finger. When the rain has wet the kite and twine, so that it can conduct the electric fire freely, you will find it stream out plentifully from the key on approach of your knuckle (p. 566).

This volume of the *Philosophical Transactions* includes an earlier letter from Franklin to Collinson on lightning and electricity (no. [2]), in which he describes electricity's effects on magnetized compass needles and the firing of gunpowder by electricity. It also includes a review of the first part of Franklin's *Experiments and Observations on Electricity* (no. [3]). Cohen, *Benjamin Franklin's Science* (1990), ch. 6. 42158

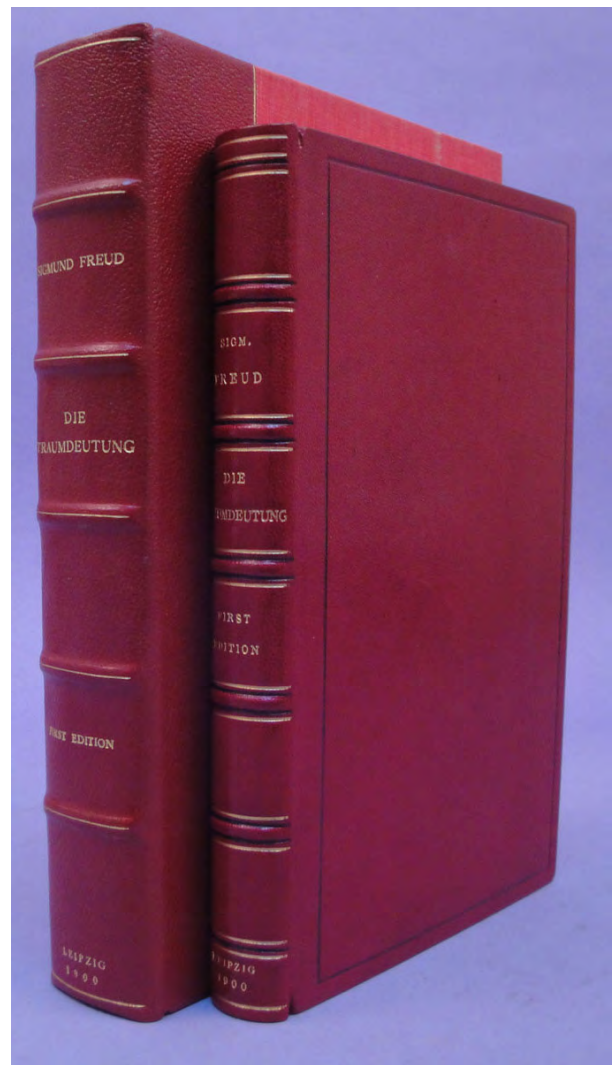
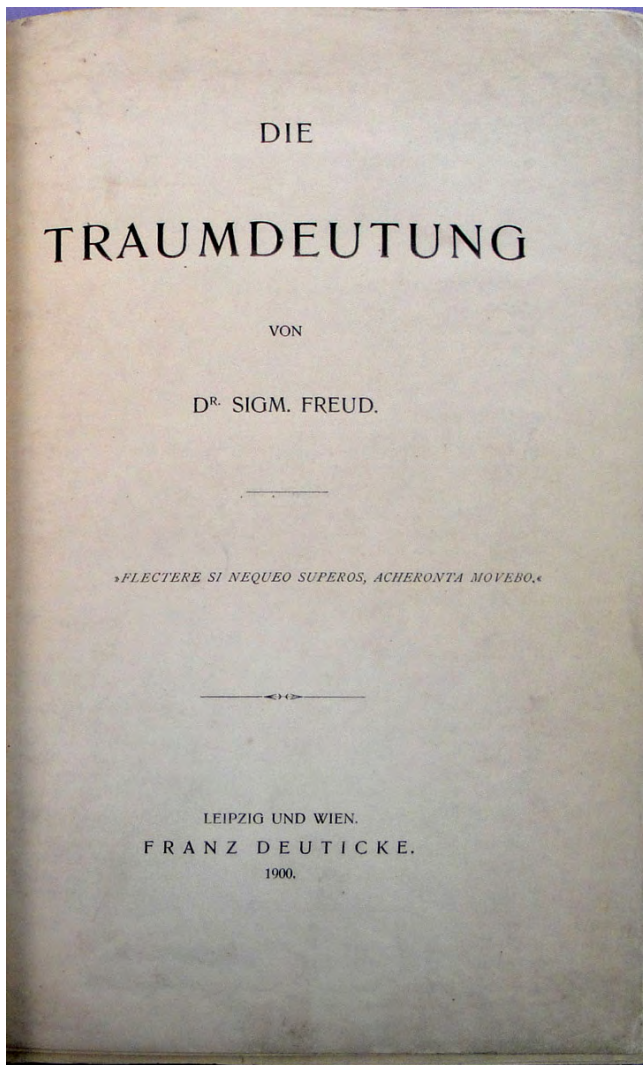


### *Beginning of Psychoanalysis*

**28. Freud, Sigmund** (1856–1939) and **Josef Breuer** (1842–1925). *Studien über Hysterie*. [6], 269pp. Leipzig & Vienna: Franz Deuticke, 1895. Half morocco ca. 1895, extremities and corners slightly rubbed; preserved in cloth drop-back box. Fine. \$3750

**First Edition.** *Studies in Hysteria*, which gives the first detailed account of the free-association method, is customarily regarded as the starting-point of psychoanalysis. Breuer had discovered the “cathartic” method of curing hysteria in the early 1880s while treating the patient who would later be immortalized as “Anna O.”; this patient, who exhibited a myriad of severe hysterical symptoms, found that the symptoms would disappear when she told Breuer the details of their onset. (Jones gives “Anna O.,” whose real name was Bertha Pappenheim, a large share of the credit for inventing what she called the “talking cure.”) Freud learned of this interesting case from Breuer shortly after its termination in June 1882; it made a strong impression on him, and a few years later he began using a combination of hypnosis and

the cathartic method in his own neurological practice. From this Freud gradually developed the method of free association, in which the patient was encouraged to say whatever came into his mind however “non-sensical” or “irrelevant,” since Freud believed that the patient’s statements provided clues about the network of associations already established in his mind, and would thus lead the therapist to the source of the patient’s neurosis. “It was through devising the new method that Freud was enabled to penetrate into the previously unknown realm of the unconscious proper and to make the profound discoveries with which his name is imperishably associated” (Jones, *Life and Work of Sigmund Freud*, I, p. 265). Garrison–Morton 4978. Norman F26. 41696



## *Interpretation of Dreams*

**29. Freud, Sigmund** (1856-1939). *Die Traumdeutung*. [4], 371, [5]pp. Leipzig & Vienna: Franz Deuticke, 1900. 230 x 150 mm. (partly unopened). Full crimson crushed morocco gilt, top edges gilt; preserved in quarter morocco drop-back box. Title-leaf skillfully backed without loss of imprint on verso, inner margin of second leaf expertly repaired, but very good. \$15,000

**First Edition.** *Die Traumdeutung* contains Freud's general theory of the psyche, which he had developed during the past decade. Using his refined understanding of the operation of the unconscious, Freud interpreted dreams on the basis of his wish-fulfillment theory and discussed displacement (the appearance in conscious thought of symbols for repressed desires), regression, Oedipal impulses and the erotic nature of dreams. Although this was his first major work on normal psychology, Freud gave an unprecedented precision and force to the idea of the essential similarities of normal and abnormal behav-

ior, opening up the door to the irrational that had been closed to Western psychology since the time of Locke. Only 600 copies of the first edition of *Die Traumdeutung* were printed, and the book sold so slowly that the second edition did not appear until nine years later. Jones (*Life and Work of Sigmund Freud*, I, p. 395) states that the book "was actually published on November 4, 1899, but the publisher chose to put the date 1900 on the title page." Garrison-Morton 4980. *Printing and the Mind of Man* 389. Horblit 32. Norman F33. 41428

PROCEEDINGS OF  
THE ROYAL SOCIETY.

VOL. LXI.

No. 376.

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*Price Two Shillings.*

JULY 31, 1897.

**30. Galton, Francis** (1822-1911). The average contribution of each several ancestor to the total heritage of the offspring. In *Proceedings of the Royal Society* 61 (1897): 401-413pp. Whole number, 8vo. 216 x 139 mm. Orig. printed wrappers, spine repaired. Boxed. Fine copy. \$750

**First Edition.** Galton's "Law of Ancestral Heredity," which states that half of an individual's hereditary makeup is supplied by his / her parents, one-quarter from grandparents, one-eighth from great-grandparents, etc. Galton's "law," based on both human and basset hound pedigrees, was adopted by

both the biometrician Karl Pearson and the Mendelian geneticist William Bateson; it was instrumental in sparking the controversy between the two camps that characterized late 19th-early 20th century studies of heredity. Garrison-Morton 239. Forrest, p. 314. 38748



*Inscribed Presentation Copy*

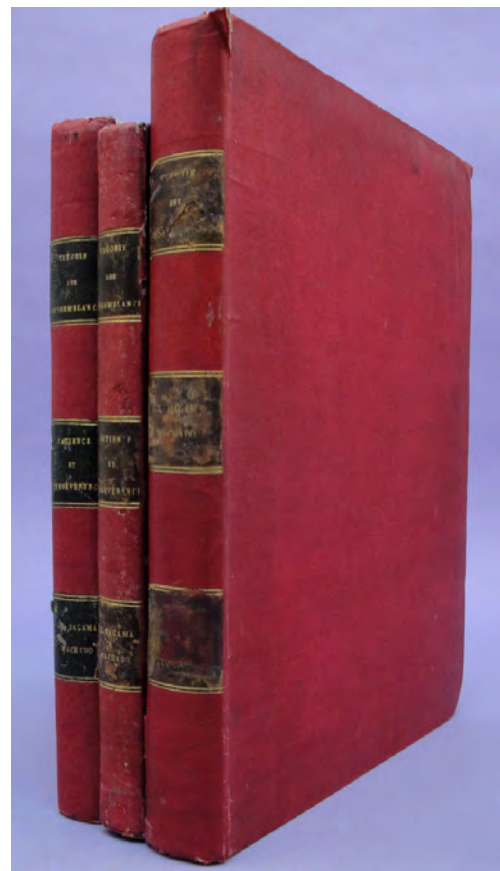
**31. Gama Machado, José Joachim de** (1776–1861). *Théorie des ressemblances*, ou essai philosophique sur les moyens de déterminer les dispositions physiques et morales des animaux, d’après les analogies de formes, de robes et de couleurs. 3 vols., 4to. 36 hand-colored lithograph plates: 20 (of 21) in Vol. I, 11 in Vol. II and 5 in Vol. III. *Lacking plate 15 in Vol. I* but with an additional unnumbered plate (“Cimitière des fourmis”) not cited in the volume’s plate list; Vol. II with a duplicate of the plate illustrating “Similitudes d’origine” in Vol. III; Vol. III with 2 plates (“Mythologie indienne” and an untitled plate opposite p. 138) not cited in the volume’s plate list. Paris: Treuttel & Würtz, 1831–44. 295 x 228 mm. (Vol. I); 300 x 230 mm. (Vol. II); 333 x 250 mm. (Vol. III). 19th century red moiré cloth, light wear at spines and corners, a few signatures starting in Vol. III. Some occasional foxing, light toning, some marginal dampstains in Vol. I, but on the whole very good. *Presentation copy, inscribed by Gama Machado* to Portuguese statesman and diplomat Rodrigo da Fonseca de Magalhães (1787–1858) in all three volumes: “A son Excellence Monsieur le Conseiller d’état Rodrigo da Fonseca Magalhães, Pair du Royaume. Hommage très respectueux de l’auteur J: J: da Gama Machado.” Some additions and corrections in Gama Machado’s hand in Vol. I.

\$8500



**First Edition** of one of the most curious and bizarre illustrated works of natural history ever published. Issued in a very small edition, it is particularly rare with colored plates. A fourth volume (not included here) was published in 1858; this volume is extremely scarce, with only one copy (Bibliothèque nationale) recorded in OCLC.

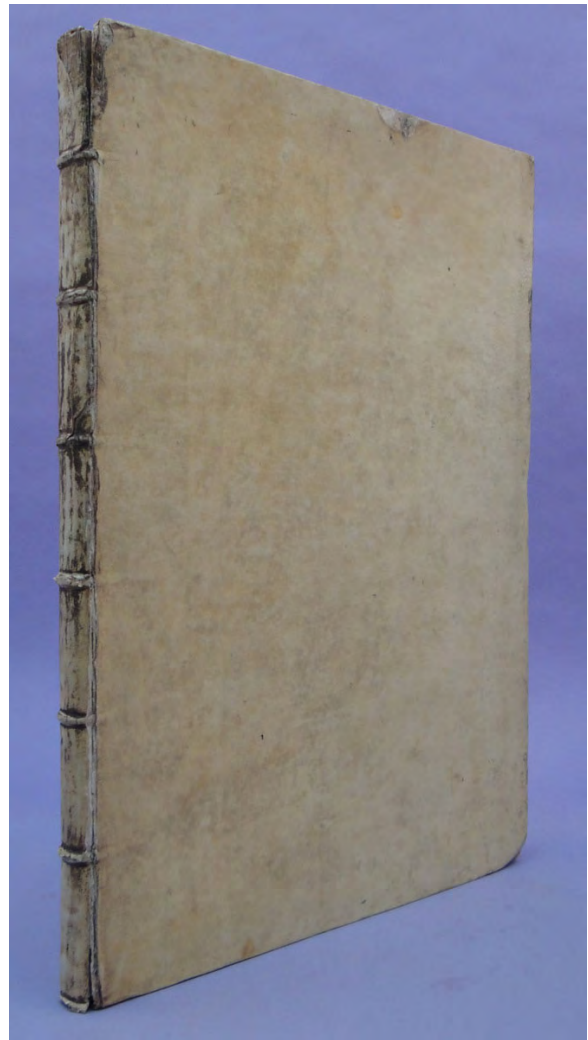
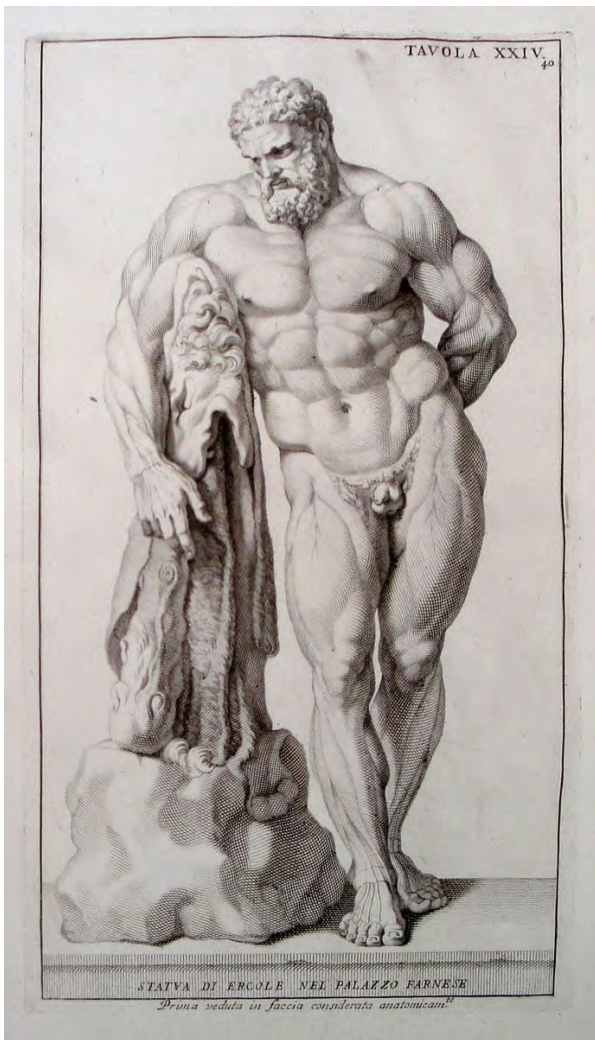
Gama Machado was a native of Portugal who spent the last 55 years of his life in Paris, serving part of that time as councilor to the Portuguese embassy. An amiable eccentric, Gama Machado loved birds; he was often seen strolling the boulevards of Paris accompanied by one or more of the feathered creatures, and never traveled anywhere without his favorite parrot. After studying homeopathy, phrenology and physiognomy, Gama Machado took up natural history at the age of 50, familiarizing himself with the works of contemporary naturalists, comparative anatomists and embryologists. He developed a theory, expounded in the *Théorie des ressemblances*, that animals having the same form, color and outward appearance will also share the same habits and customs (a vague foreshadowing of ecological niche theory). Gama Machado's ideas were particularly influenced by the Renaissance physiognomist Giambattista Porta, who wrote about



the “doctrine of signatures” and attempted to establish a scientific basis for the correspondence between external form and internal character by analyzing the likeness of various human features to those of animals. The *Théorie des ressemblances* illustrates Gama Machado's theories with striking plates done after his own drawings, illustrating (for example) the similarities between hyenas and bulldogs, brightly colored birds and similarly colored flowers or insects, owls and moths, seals and basset hounds. One remarkable plate, titled “Gradation régulière de l’homme,” shows what appears to be an evolutionary sequence from frog to orangutan to “homme sauvage” (wild man); another shows Gama Machado, bird perched on shoulder, playing chess with the Siamese twins Chang and Eng.

Gama Machado presented this copy to Portuguese statesman Rodrigo da Fonseca Magalhães, one of the country's most important 19th century liberal political figures. The presentation took place sometime after October 22, 1847, the date when da Fonseca Magalhães was made a Peer of the Realm (“Pair du Royaume”). Nissen, *Zoologische Buchillustration*, 1472. British Museum (Natural History) II, 637. 41496



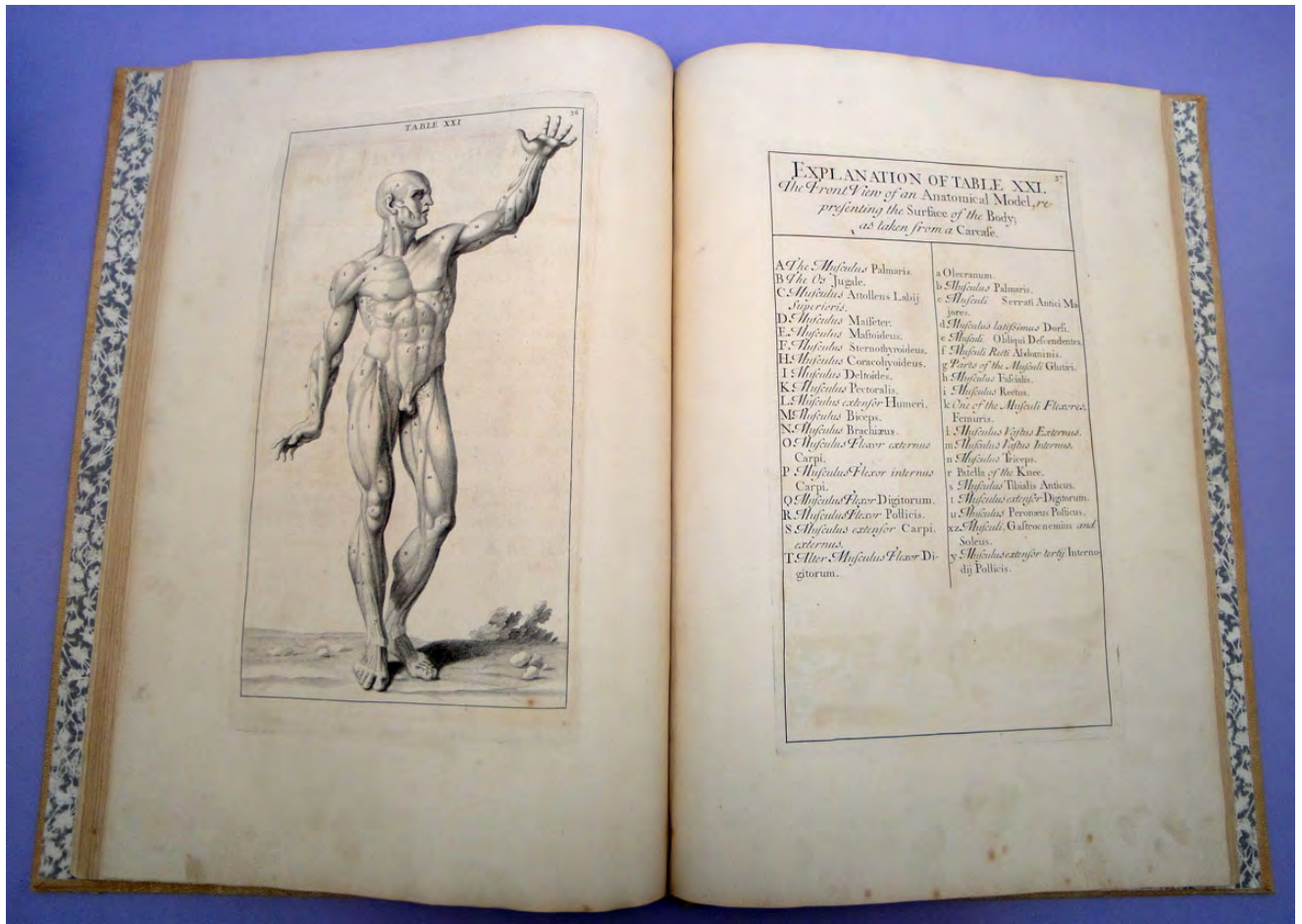


### *One of the Finest Artist's Anatomies*

**32. Genga, Bernardino** (1655-1734). *Anatomia per uso et intelligenza del disegno. . . .* Folio. 56 leaves printed on rectos only, comprising 16 engraved text leaves and 40 plate leaves including title and the remarkable allegorical frontispiece probably by François Androit after Charles Errard (d. 1689). Rome: Domenico de Rossi, 1691. 471 x 356 mm. Vellum ca. 1691, front hinge cracked, upper extremity of spine chipped, minor soiling. Small repair to lower corner of title-leaf, some dampstaining to first few leaves, light toning, one or two small marginal tears, but very good. \$5000

**First Edition.** One of the finest of all anatomy books for artists. "Of the plates with pictures nine pertain to osteology, and fourteen to myology; sixteen are representations of antique figures viewed from different sides, namely, the Farnese Hercules, the Laocöon (without his sons), the Gladiator, and the Borghese Faun. Of the plates with text seven pages are devoted to osteology, seven to myology, and one page to an *Indici delle cose notabili*" (Choulant / Frank, p. 254). The work was conceived for the use of the French Royal Academy of Painting and Sculpture,

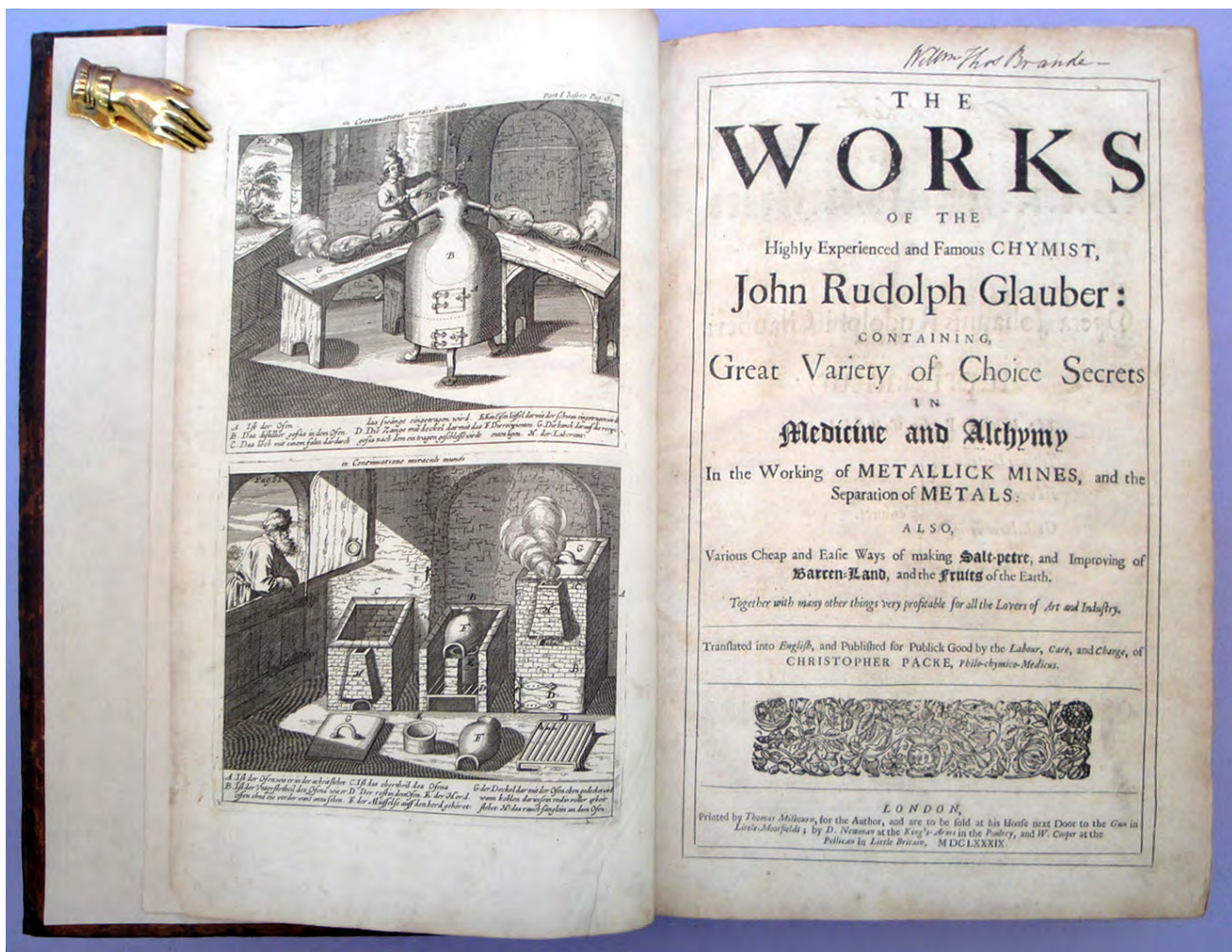
and the engravings were made under the direction of Charles Errard, head of the French Academy at Rome, possibly from his own drawings. Genga made the anatomical preparations; the explanations are by Giovanni Maria Lancisi, who issued the Eustachi plates in 1714. Choulant states that some copies have an extra text plate and two additional illustrations; these copies were probably issued later than the ordinary copies. Choulant / Frank, pp. 254-255. Garrison-Morton 386. Norman 888. 41446



**33. Genga, Bernardino** (1655-1734). *Anatomy improv'd and illustrated with regard to the uses thereof in designing*. . . Folio. 60ff., entirely engraved, consisting of 18ff. text and 42 full-page engravings, many signed by Michael van der Gucht; engraved title with allegorical vignette and engraved dedication to Dr. Richard Mead both signed by John Sturt. London: John Senex, n.d. [1723]. 356 x 320 mm. Modern boards. Light browning, occasional foxing but a fine copy. \$5000

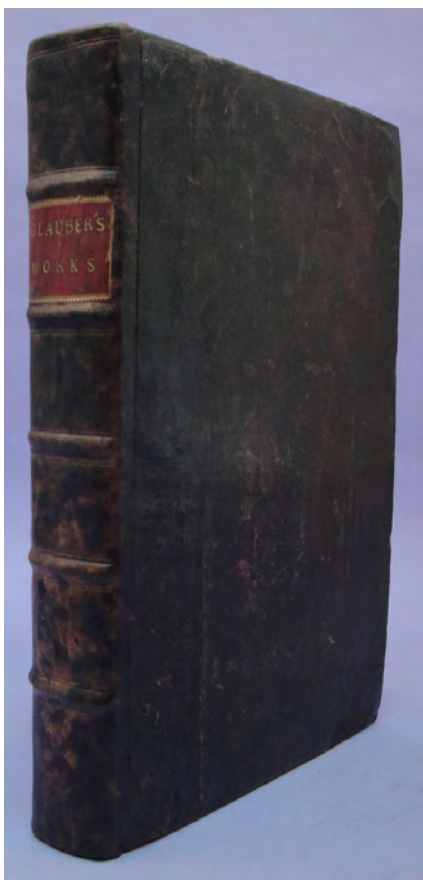
**First Edition in English.** The English version was printed by subscription; the subscribers' list, containing 144 names, appears after the index. According to Russell, the plates of the English edition were engraved by Gerard and Michael van der Gucht, Andrew Motte, Robert Sheppard and John Sturt. Choulant / Frank, pp. 254-255. Russell, *British Anatomy*, 313. See Garrison-Morton 386; Norman 888. 41447





*First Edition in English*

**34. Glauber, Johann Rudolph** (1604-70). The works of the highly experienced and famous chymist, John Rudolph Glauber . . . Translated into English . . . by the labour, care, and charge, of Christopher Packe . . . Folio. [12], 440, [4], 220, 92, [11]pp. 7 engraved plates (including frontispiece), 4 woodcut plates, woodcut text illustrations. London: Thomas Milbourn for the author, 1689. 353 x 230 mm. Paneled calf ca. 1689, rebacked, corners repaired, endpapers renewed. Light toning, some fore-edges a bit frayed, marginal tear in frontispiece repaired, but very good. From the libraries of British chemists Charles Hatchett (1765-1847), with his ownership stamp on the verso title, and his son-in-law William Thomas Brande (1788-1866), with his signature on the title. Armorial bookplate of British metallurgist Hugh Lee Pattinson (1796-1858). \$3750



**First Edition in English** of the collected works of Glauber, who has been called “the best practical chemist of his day and the first industrial chemist” (*Dictionary of Scientific Biography*). A self-taught chemist and alchemist in the iatrochemical tradition of Paracelsus, Glauber was responsible for many practical advances in the science of chemistry, the most important being the invention of improved distilling furnaces (he may have been the first to construct one with a chimney) that greatly increased the range of distillable substances. This English collected works opens with his *Furni novi philosophici*, originally published in German between 1646–1649, which contains most of his significant chemical achievements. Glauber used concentrated forms of hydrochloric, sulfuric and nitric acid to prepare chlorides, nitrates and sulfates, was probably the first to distill coal and to obtain from it benzene and phenol, obtained acroleins by distilling burned clay balls soaked in olive oil, produced metal acetates and acetone with distilled wood vinegar, and obtained potassium carbonate and potassium silicate from powdered flints. His efficient production of the mineral acids is particularly noteworthy, as they are essential reactants in other

chemical processes. Glauber’s influence quickly spread throughout Europe, and his efforts were praised by both Robert Boyle and Hermann Boerhaave.

The collection also contains English translations of Glauber’s *Pharmacopoea spagyrica* (1654–68), a collection of iatrochemical medical preparations; *Dess Teutschlands-Wohlfahrt* (1656–61), a work encouraging Germans to make better use of their natural resources; *Miraculum mundi* (1653–60), on the “universal salt”; *Tractatus de natura salium* (1658), discussing Glauber’s “sal mirabile” (hydrated sodium sulfate); and *Operis mineralis* (1651). Glauber’s works were originally published piecemeal, with several appendices; one of these appendices contains his important and useful work on the coloring of glass, including his rediscovery of the process for ruby glass which had been lost for years.

This copy has a distinguished chemical provenance, having belonged to Charles Hatchett, who discovered the element niobium; Hatchett’s son-in-law William Thomas Brande, who succeeded Humphry Davy in the chair of chemistry at the Royal Institution; and metallurgist Hugh Lee Pattinson, who developed an economical method for extracting silver from lead ore. Duveen, *Bibliotheca alchemica et chemica*, p. 260. Wing G-845. 41684



## Laying on of Hands

**35. Greatrakes, Valentine** (1629–83). A brief account of Mr. Valentine Greatraks's, and divers of the strange cures by him lately performed. Written by himself in a letter addressed to the Honourable Robert Boyle Esq. 4to. 96pp. Frontispiece portrait by William Faithorne (1616–91), skillfully mounted preserving all text. London: J. Starkey, 1666. 186 x 144 mm. Early 19th century russia gilt, rebacked. Faint marginal dampstains on a few leaves, but a fine copy, with the very rare portrait. **[With:] Hocking, Samuel.** Autograph letter signed to Mr. John T. Rodda, discussing this copy of Greatrakes's work. 3–1/2pp. Rosewarne, Camborne, 24 August 1872. Edges a bit frayed but very good. \$6000

**First Edition.** Greatrakes's *Brief Account* was the first scientific account of healing by "laying on of hands" to be written by a practitioner of the art, and the first to be corroborated by witnesses. Dubbed the "Irish stroker," Greatrakes employed a precursor of hypnosis in his cures, praying while stroking with his hands the afflicted parts of his patients' bodies; he achieved some success with what we would now call hysterical or psychosomatic illnesses. In 1666 he

traveled from Ireland to London where he established a successful practice, causing a considerable stir in the medical and scientific communities and prompting a command performance before Charles II.

At the end of February 1666 Henry Stubbe, a physician in Stratford-on-Avon, published *The Miraculous Conformist* (see below), which attributed Greatrakes's treatments to a supernatural agency. These pamphlets provoked David Lloyd's anonymous reply *Wonders*

Roscawne, Camborne.  
26<sup>th</sup> August 1872-

Mr. J<sup>nr</sup> S. Roddall  
Dear Sir.

I return with thanks the scarce and valuable work "A Brief Account of Mr. Valentine Greatrakes, and divers of the strange cures by him lately Performed. Written by himself in a letter addressed to the Honourable Robert Boyle Esq:—"

Of Mr. Greatrakes and his reported curative powers, I have been familiar for about thirty years; but never before met with this book, which, I have now carefully read; and should be glad, if an opportunity offered, of personally expressing to the Rev<sup>d</sup> my gratitude for the permission given you to shew it to me. In this book, Mr. Greatrakes gives an account of himself and <sup>his</sup> cures; up to May 1668— In the year 1667 he returned to Ireland, where he seem to have remained till his death in 1685—

In Vol. XXI. of the Philosophical Transactions

no Miracles (see below), in which he attacked Greatrakes's private character. Greatrakes vindicated himself by publishing his *Brief Account*, an autobiographical letter addressed to Robert Boyle (who had witnessed several cures), which was accompanied by 53 testimonials from Boyle, Andrew Marvell, and other reliable witnesses. He afterwards returned to Ireland, where he spent the remainder of his life.

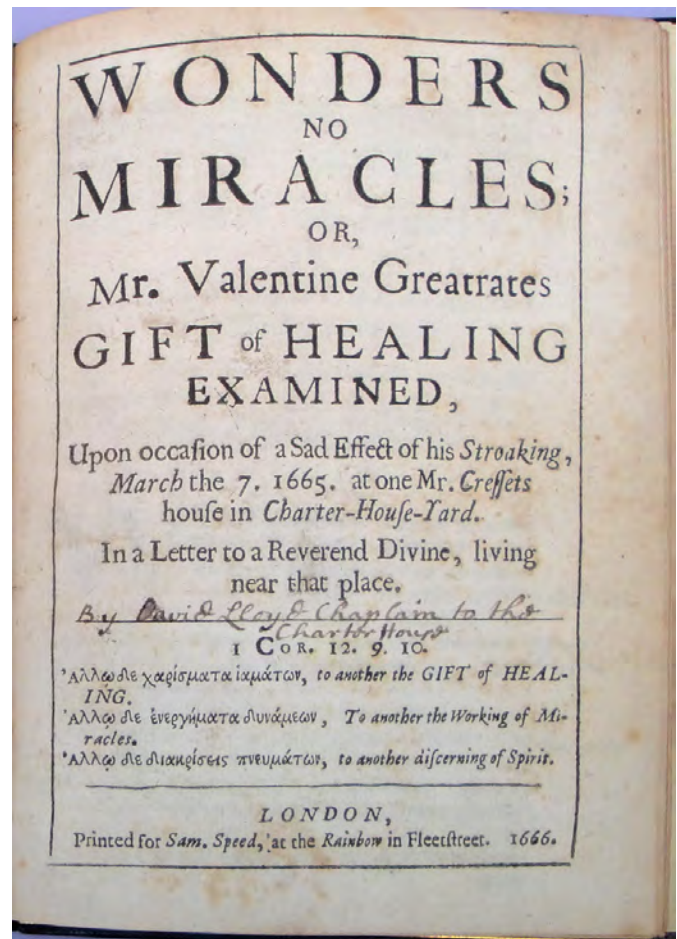
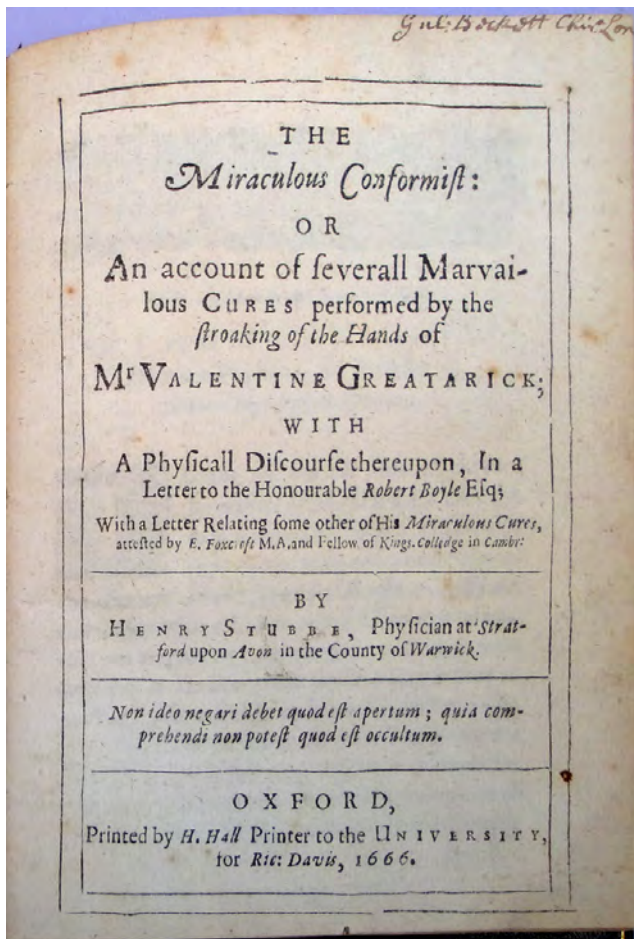
This copy is accompanied by a letter from Samuel Hocking, a 19th-century practitioner of mesmerism, thanking his correspondent for lending him this copy of Greatrakes's work and giving a detailed history of Greatrakes's healing powers as described in the *Philosophical Transactions* and in the Dr. Birch manuscript collection at the British Museum. He then describes his own experience as a mesmeric healer:

For thirteen years (1843-1856) I lived in London, practicing as a Civil Engineer . . . during that period Animal Magnetism, in its various phases, attracted public attention. I early discovered in myself considerable curative powers, developed by the "laying on of hands" &c. I associated myself with

Dr. Elliotson [i.e. John Elliotson (1791-1868), one of the first in England to perform surgery on hypnotized patients] and others, who were desirous of separating the curative quality of Animal Magnetism from the purely curious phenomena; and, they would have named it after Greatrakes, but thought Mesmer's a better sounding name; so it was christened "Mesmerism."

I am familiar with the cures, of every kind, named in Mr. Greatrakes book; most of which I have succeeded in curing by my own hands (King's Evil excepted; a disease I never met with) . . .

Hocking also noted that "the greatest healers I know of, in the present day, are Dr. Newton of America, and Jacob the Zouave, of Paris." Here he refers to Dr. James Rogers Newton (b. 1810), and the famous French spiritual healer Auguste Henri Jacob (1828-1913). Garrison-Morton 492. Fulton, *Boyle*, 319. Hunter & Macalpine, pp. 178-181. Norman 940. Wing G-1789. 41472



36. [Greatrakes, Valentine (1629-83).] Stubbe, Henry (1632-1676). The miraculous conformist: Or an account of severall marvailous cures performed by the stroaking of the hands of Mr. Valentine Greatarick . . . 4to. [6], 44pp. Oxford: H. Hall for Ric. Davis, [February] 1666. 182 x 134 mm. Modern morocco, all edges gilt. Fine copy. \$2500

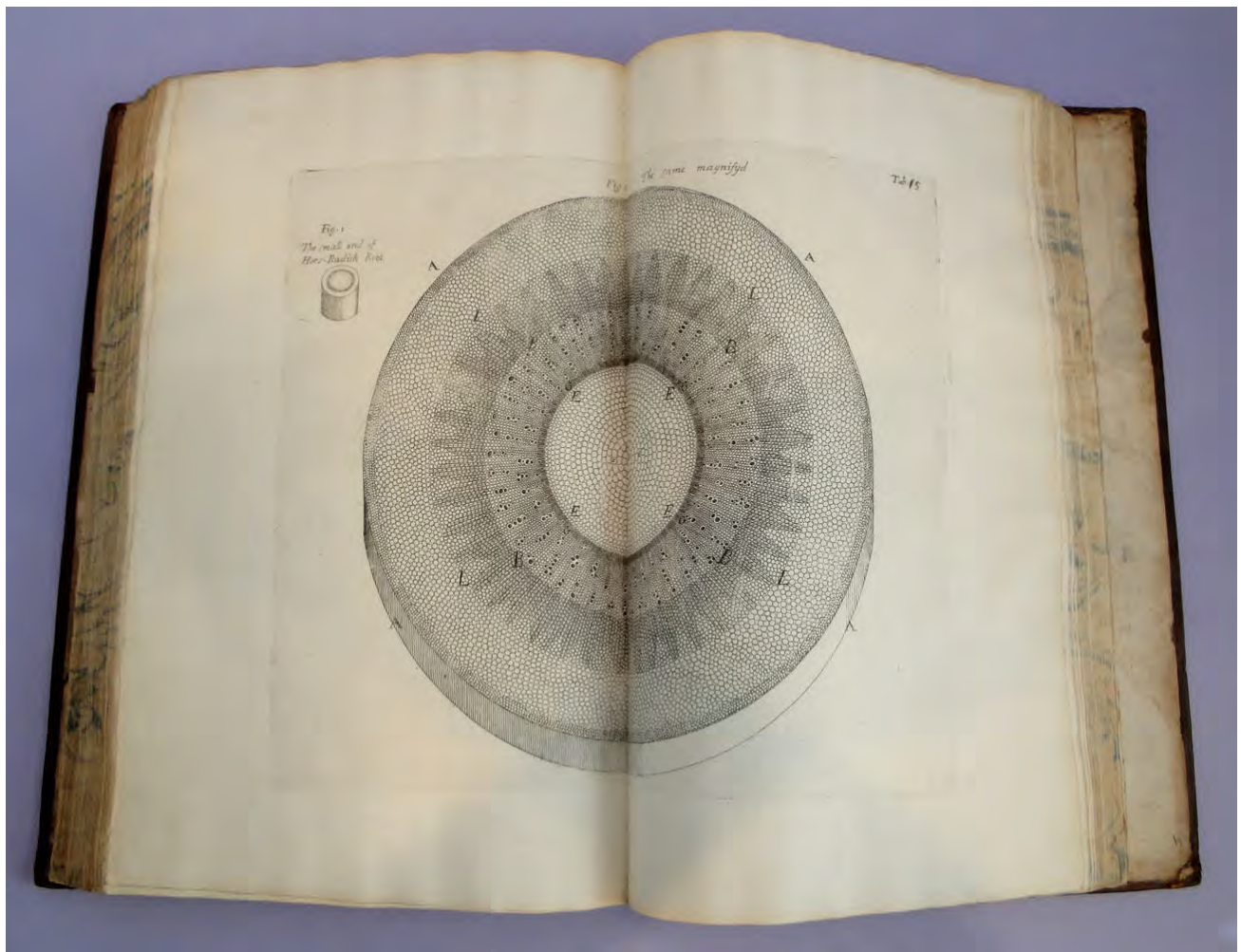
**First Edition.** Stubbe, a physician in Stratford-on Avon, attributed the “stroking cures” of Valentine Greatrakes (see no. 35) to miraculous agency. The pamphlet prompted David Lloyd (see below) to

respond with the anonymous *Wonders no Miracles*, an attack on Greatrakes’s character; this in turn inspired Greatrakes to publish his own *Brief Account* (1666). Norman 2029. Wing S-6062. 41470

37. [Greatrakes, Valentine (1629-83).] [Lloyd, David (1635-1692).] Wonders no miracles; or, Mr. Valentine Greatrates [sic] gift of healing examined. . . . 4to. London: Sam. Speed, 1666. 182 x 134 mm. Modern morocco, all edges gilt. Minor foxing, otherwise fine. Bookplate of Kenneth Garth Huston. \$2000

**First Edition.** An anonymous attack on the private character of the “Irish stroker,” Valentine Greatrakes, written by the chaplain to the Charterhouse. Lloyd’s attack was prompted by Henry Stubbe’s *The Miraculous Conformist* (see above), which

attributed Greatrakes’s cures to a miraculous agency. Lloyd’s pamphlet inspired Greatrakes to respond with his *Brief Account of Mr. Valentine Greatrak’s* (see no. 35), which contained testimonials from reliable witnesses to his stroking cures. Norman 1379. Wing L-2649. 41471



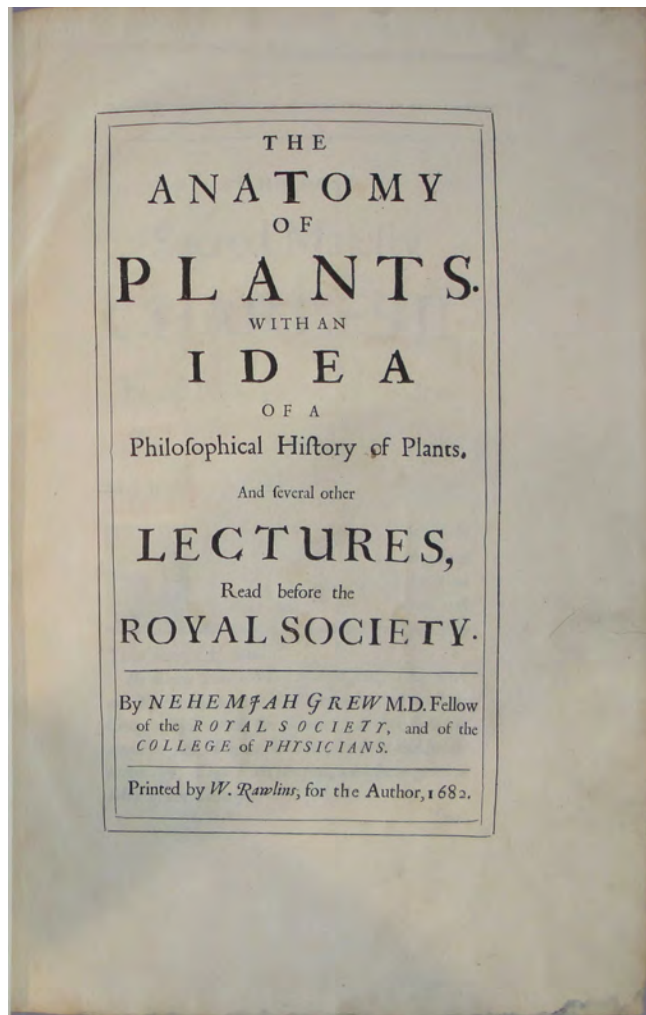
## Foundation of Plant Anatomy

**38. Grew, Nehemiah** (1641-1712). *The anatomy of plants. With an idea of a philosophical history of plants. And several other lectures, read before the Royal Society.* Folio. [22] 24, [10] 304, [20]pp. 83 engraved plates (5 double-page). [London:] W. Rawlins for the author, 1682. 367 x 236 mm. (large paper copy, printed on paper watermarked with the Strasbourg lily). Speckled calf c. 1682, rebacked, a little rubbed at extremities. Fine, crisp copy. Signature of English collector and antiquary John Nickolls (1710-45) on the front free endpaper; engraved bookplate of Sir Peter Thompson (1698-1770) on the verso of the title-leaf. \$4500

**First Edition.** Along with Malpighi—whose work Grew knew of and admired—Grew is considered the founder of plant anatomy, and this revised collected edition of three earlier treatises (*The Anatomy of Vegetables Begun* [1672], *An Idea of a Phyto-logical History Propounded* [1673], and *The Comparative Anatomy of Trunks* [1675]) represents the first textbook on the subject. Grew's pioneering investigations into how organs and tissues are formed during plant growth led to the conception of the plant as a coor-

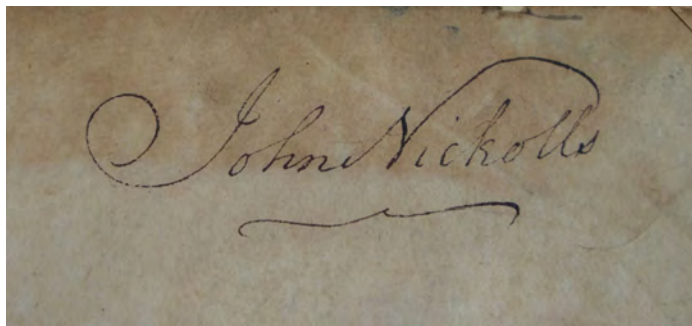
dated developing structure and marked the beginning of efforts to link structure and development. He related plant morphology to underlying principles of anatomical structure, and showed that morphological entities could be defined not only by their function, but also by their structure, mode of origin, and development. Along with Malpighi, Grew was the first to investigate internal plant anatomy: with the aid of the microscope, he demonstrated that plants have a characteristic ordered inner structure, (illus-

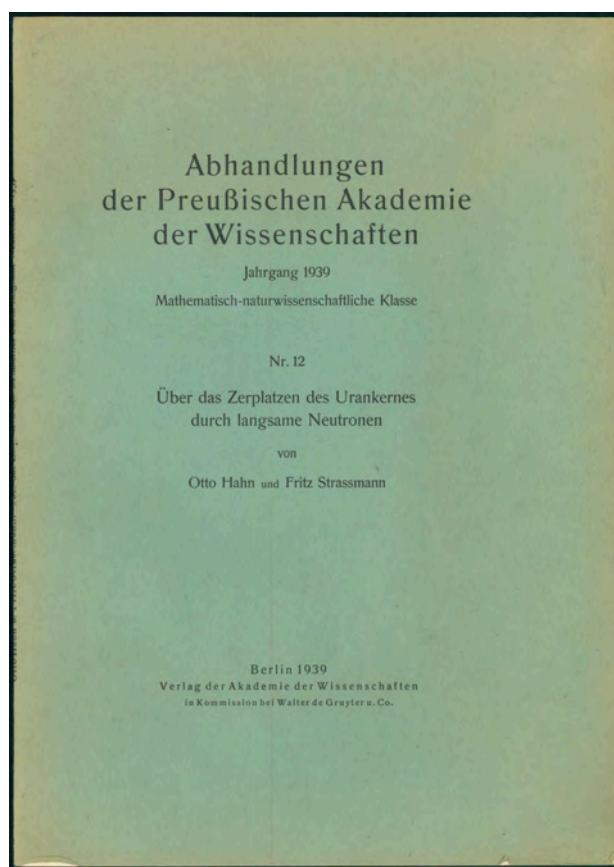




trated in his accurate and beautiful plates) and that all plant tissues could be broadly divided into “ligneous” (fibro-vascular) and “pithy” (parenchymatous) categories. He showed that the “cells” first observed by Robert Hooke made up the normal structure of the parenchyma, and came very close to recognizing the universal cellular structure of plants. He believed that a plant’s sexual organs were contained in its flowers, and recognized the stamen to be a male organ.

This copy is from the library of two English antiquaries, John Nickolls and Sir Peter Thompson, both of whom assembled important collections of books, documents, manuscripts and prints. It is likely that Thompson acquired this copy from the estate of Nickolls, who died at the age of 35. *Dictionary of Scientific Biography*. Henry 162. Horblit 43b. Hunt 362. LeFanu, pp. 98–105. Morton, pp. 178–194. Nissen (botany) 758. Norman 946. Pritzel 3557. Wing G-1945. 41540





## *Nuclear Fission*

**39. Hahn, Otto** (1879–1968) & **Fritz Strassmann** (1902–80). Über das Zerplatzen der Urankernes durch langsame Neutronen. Offprint from *Abh. Preuss. Akad. Wissensch., math.-naturwiss. Klasse*, no. 12 (1939). 4to. 20pp. Text diagrams. Berlin: Akademie der Wissenschaften, 1939. 297 × 211 mm. Original green printed wrappers, slightly faded, small crease in one corner, but a very good copy, preserved in a cloth folding box. \$2000

**First Edition**, commercial offprint issue of the first of Hahn and Strassmann's three fundamental papers on nuclear fission, containing the first comprehensive account of the phenomenon. In 1938 radiochemist Otto Hahn and nuclear chemist Fritz Strassmann demonstrated the presence of radioactive barium, lanthanum and cesium among the products of neutron bombardment of uranium—a phenomenon that seemed to contradict all previous experiences of nuclear physics. The two announced their puzzling findings in a paper published in *Naturwissenschaft* on January 6, 1939 ("Ueber den Nachweis und das Verhalten der bei der Bestrahlung des Urans mittels Neutronen entstehenden Erdalkalimetalle"). Before the paper's publication Hahn wrote to the theoretical physicist on their research team, Lise Meitner, then under Nazi exile in Copenhagen, to report their discovery and ask advice. It was this letter

that inspired Meitner and her nephew Otto Frisch to theorize a fission process, which they published on February 11, 1939.

Hahn and Strassmann's paper offered here "indicated fission of the uranium nucleus into two parts of about equal size with the release of much energy [in fact a tremendous jump over the energy produced in all previous transmutation reactions]. Hahn received the Nobel Prize for chemistry in 1944; he, Meitner and Strassmann shared the U.S.A. Fermi Award in 1966" (Dibner). Two versions of the offprint exist: the present green-wrapped version, issued commercially, and an extremely rare version issued in orange wrappers and with "Einzelausgabe" and "Überreicht von den Verfassern" on the front wrapper. We have seen only one copy of the orange-wrapped version in our 40-plus years in the trade. Dibner 168. Norman 963. Segrè, *X-Rays to Quarks*, pp. 206–7. 41730

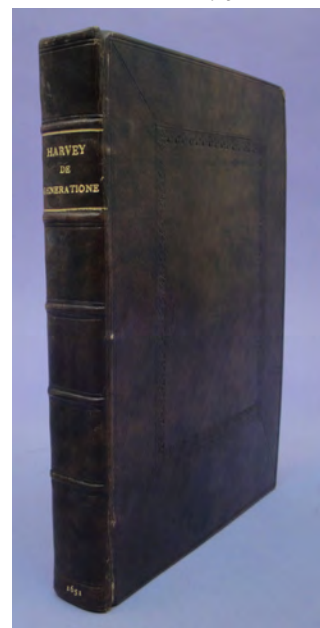


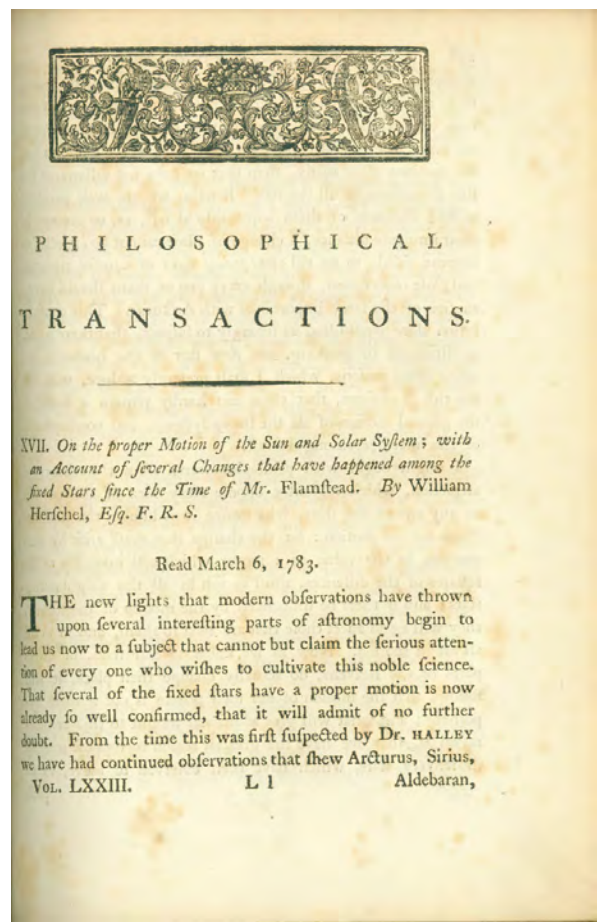
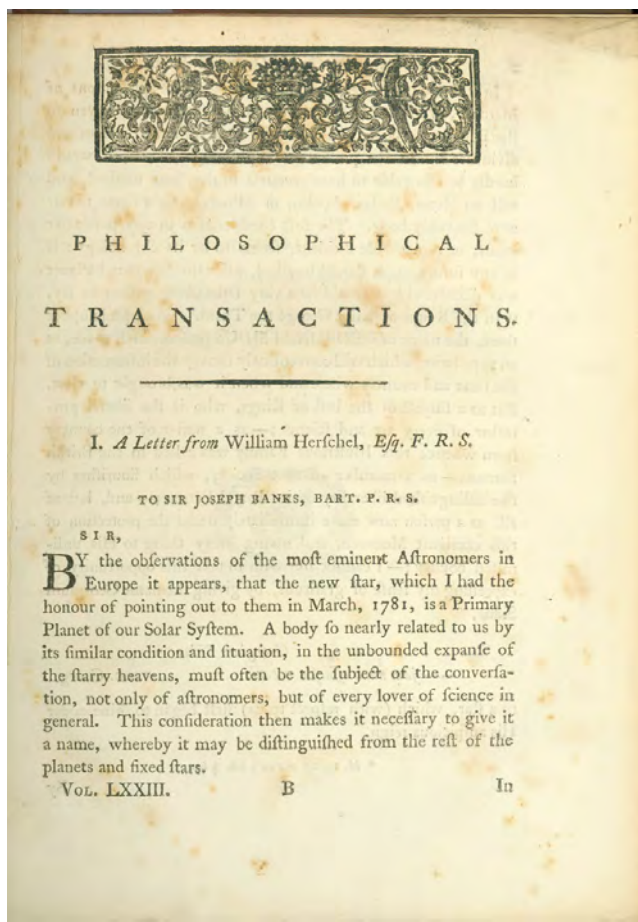
“Ex Ovo Omnia”

**40. Harvey, William** (1578–1657). *Exercitationes de generatione animalium*. 4to. [28], 301, [1, errata] pp. Engraved frontispiece. London: Du-Gard for Octavian Pulleyn, 1651. 216 x 161 mm. Modern paneled calf, gilt-lettered spine. Frontispiece trimmed at outer margin (minimally affecting image), otherwise a fine copy. \$9500

**First Edition.** Harvey’s *De generatione animalium*, containing the first fundamentally new theory of generation since antiquity, represents a major advance in the study of animal reproduction, ranking with the works of Fabrizio and Malpighi. Contemporary theories of generation, based on the work of Aristotle and Galen, had held that the fetus was formed by the action of semen on menstrual blood, but Harvey argued, based on his studies of developing chick and deer embryos, that all life arose from eggs (*ex ovo omnia*)—he even denied the possibility of spontaneous generation. Harvey also advocated an epigenetic theory of

fetal development—“the additament of parts budding one out of another”—in contrast to the prevailing belief in preformation. Needham, in his *History of Embryology* (1934) stated that Harvey “handled the question of growth and differentiation better than any before, anticipating the ideas of the present century.” *De generatione animalium* covers all aspects of conception and birth; its chapter on parturition was the first original work on the subject by an Englishman. Garrison–Morton 467. Keynes, Harvey, 34. *Printing and the Mind of Man* 127. Norman 1011. Wing H-1091. 41475



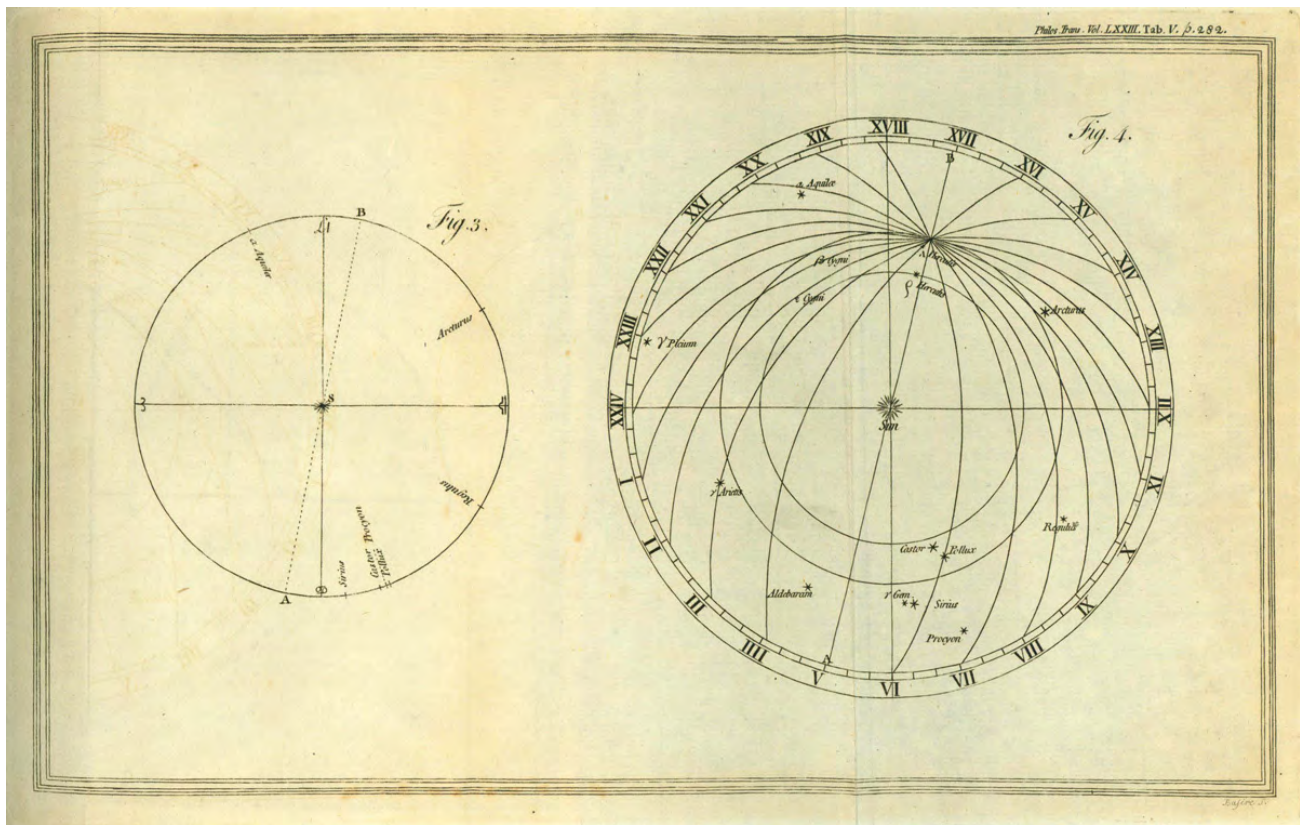


## *Uranus and the Motion of the Stars*

**41. Herschel, William** (1738–1822). (1) A letter from William Herschel, Esq., F.R.S. to Sir Joseph Banks, Bart., F. R. S. (2) On the diameter and magnitude of the Georgium Sidus; with a description of the dark and lucid disk and periphery micrometers. (3) On the proper motion of the sun and solar system; with an account of several changes that have happened among the fixed stars since the time of Mr. Flamsteed. In *Philosophical Transactions* 73 (1783): 1–3; 4–14; 247–283. 3 plates (nos. IV–VI). Whole volume, 4to. vii, [1], 245, [1], vii, [1], iv, 247–302, \*303–\*370, 303–501, [3, incl. errata]pp. 10 plates. Full calf gilt in period style. Very small, almost invisible library blind-stamp on title and last leaves. Occasional light foxing and toning, but very good. \$3750

**First Editions.** On March 13, 1781, while undertaking an extensive telescopic survey of the heavens, Herschel observed an object which he immediately recognized as being unlike any ordinary star. He first believed it to be a comet, and announced it as such in a paper read before the Bath Philosophical Society; however, examination of the object's orbit by other astronomers revealed that it was in

fact a planet—the first planet in our solar system to be discovered in historical times. In an open letter to Joseph Banks (no. 1), Herschel proposed naming the new planet Georgium Sidus (Georgian star) in honor of George III. This proposal did not find favor with Continental astronomers, however, and the name Uranus, suggested by German astronomer J. G. Bode, was soon widely adopted (the name became



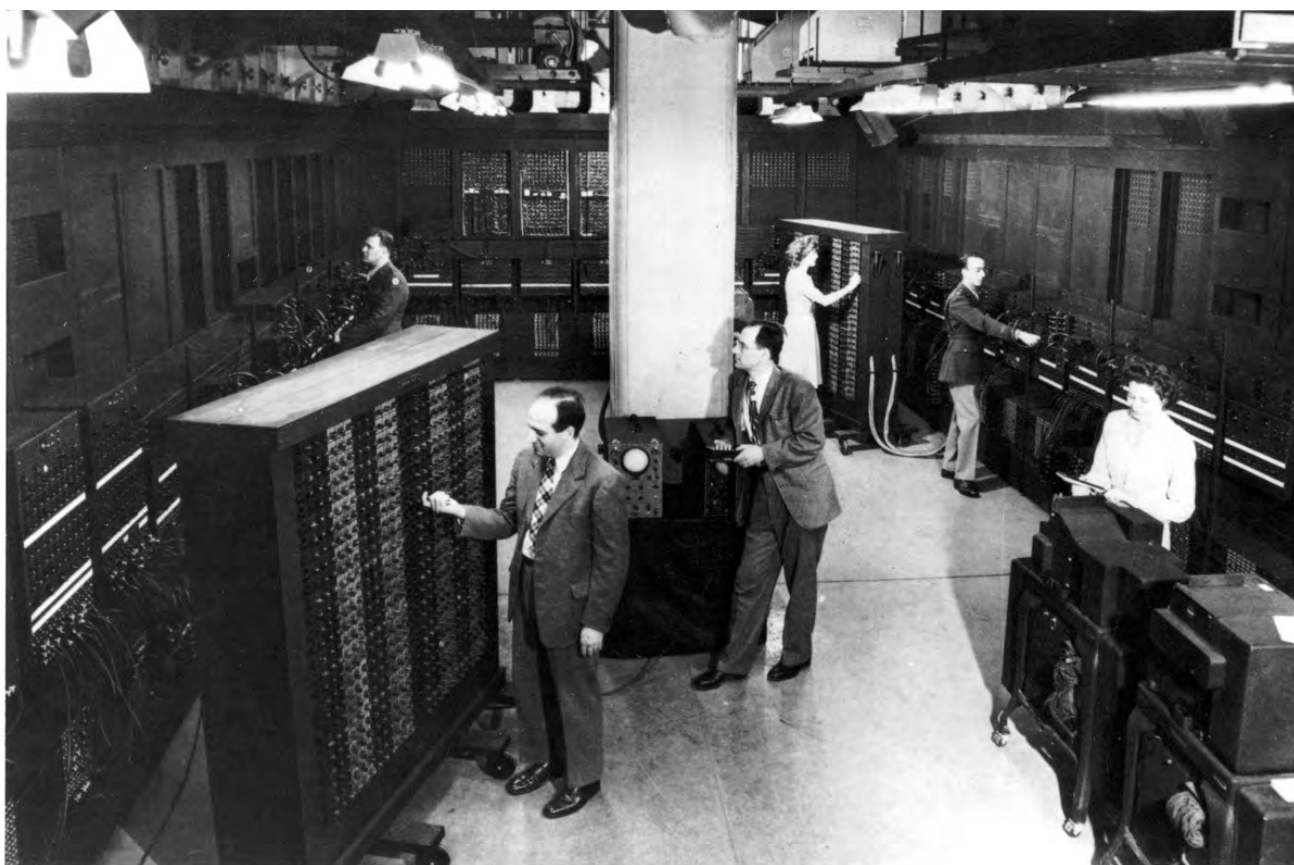
universal in 1850 when Britain's Nautical Almanac Office finally switched from Georgium Sidus to Uranus). Herschel's first paper on the new planet (no. 2) records his observations of the Georgium Sidus between October 22, 1781 and November 4, 1782; it was read before the Royal Society on November 7, 1782 and published in the 1783 volume of the *Philosophical Transactions*.

Herschel's primary goal as an astronomer was to understand "the construction of the heavens," and to that end he designed and constructed the largest and most powerful telescopes of his day. With these superior instruments he "threw open the doors to the modern telescopic exploration of the universe" (Mullaney, p. 140), discovering hundreds of new stars and nebulae, identifying nebulae as clusters of stars, describing the rotational behavior of binary stars, and confirming that the Milky Way galaxy is a flat, finite

cluster of stars. In his "On the proper motion of the sun and solar system" (no. 3) Herschel announced another remarkable finding: that

our Solar System is moving through space in the direction of the constellation Hercules—just  $10^{\circ}$  from the modern position . . . He noticed that the stars in that direction of the sky appeared to be "opening up" or spreading out before us while those in the opposite part of the sky were "closing in" on themselves . . . This was truly an amazing deduction on his part, especially given the relatively primitive and limited number of positions available to him (Mullaney, p. 141).

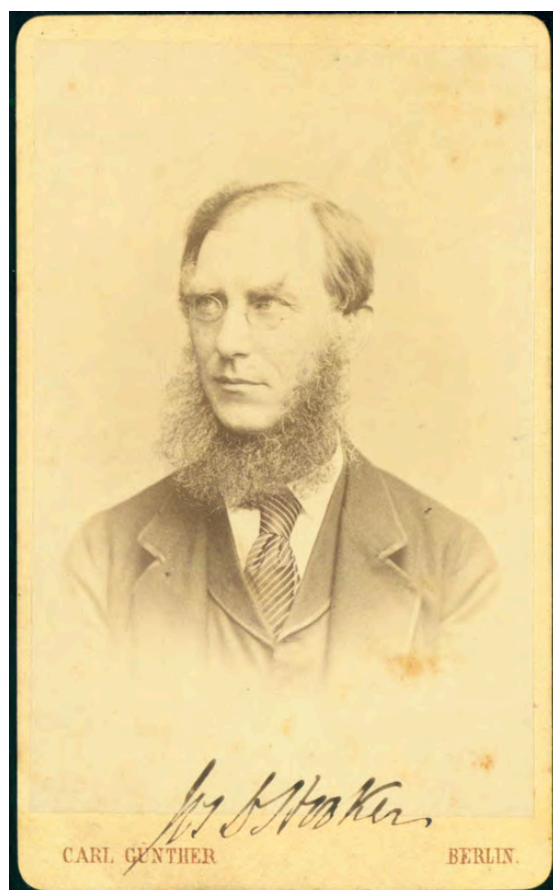
*Printing and the Mind of Man* 227 (no. 3). Mullaney, *The Herschel Objects and How to Observe Them* (2007), pp. 139-141. *Dictionary of Scientific Biography*. 42150



**42. Hook, Diana H. & Jeremy M. Norman**, with contributions by Michael R. Williams. *Origins of cyberspace: A library on the history of computing, networking, and telecommunications*. 670 pages. 284 illustrations. Novato: Norman Publishing, 2002. 8-1/2 x 11 inches. Cloth, 80-pound acid-free paper. Limited to 500 copies. \$500

Extensively annotated and illustrated bibliography describing 1411 books, technical reports, pamphlets, blueprints, typescripts, manuscripts, photographs and ephemera on the history of computing and computer-related aspects of telecommunications. Covers the period from the 17th century to circa

1970; includes several lengthy essays and a detailed timeline of significant events and publications in computer history. Indexed. Printed in two colors throughout. 38301



*Extremely Rare Signed Photograph*

**43. Hooker, Joseph Dalton** (1817-1911). Carte-de-visite photograph by Carl Günther (1827-1912), signed (“Jos. D. Hooker”), showing Hooker in middle age. Berlin: Carl Günther, n.d. (ca. 1869). Photograph measures 90 x 59 mm.; printed mount measures 102 x 63 mm. A few faint fox-marks, but fine otherwise. \$5000

**Rare Signed Photograph** of Joseph Dalton Hooker, the eminent British taxonomic botanist, plant geographer, and supporter of Darwinian evolution, who served as director of Kew Gardens (succeeding his father, William Jackson Hooker) from 1865 to 1885. The photograph, by Berlin photographer Carl Günther, was probably taken in 1869 during Hooker’s six-week tour of Europe and Russia in connection with the International Exposition of Horticulture in St. Petersburg; see *Life and Letters of Sir Joseph Dalton Hooker*, I, p. 85. Signed photographs of Hooker are extremely scarce; this is the first one we have seen in our 40 years in business. 42359



the fact of his now being  
 again engaged to go a  
 second time to New  
 Caledonia, is I think  
 a guarantee of his  
 entire fitness for the  
 Paraguay expedition.

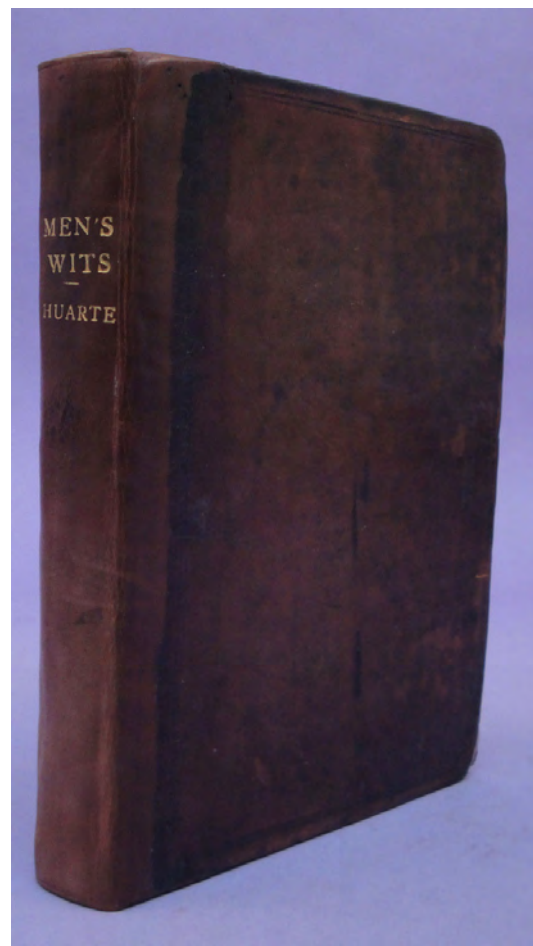
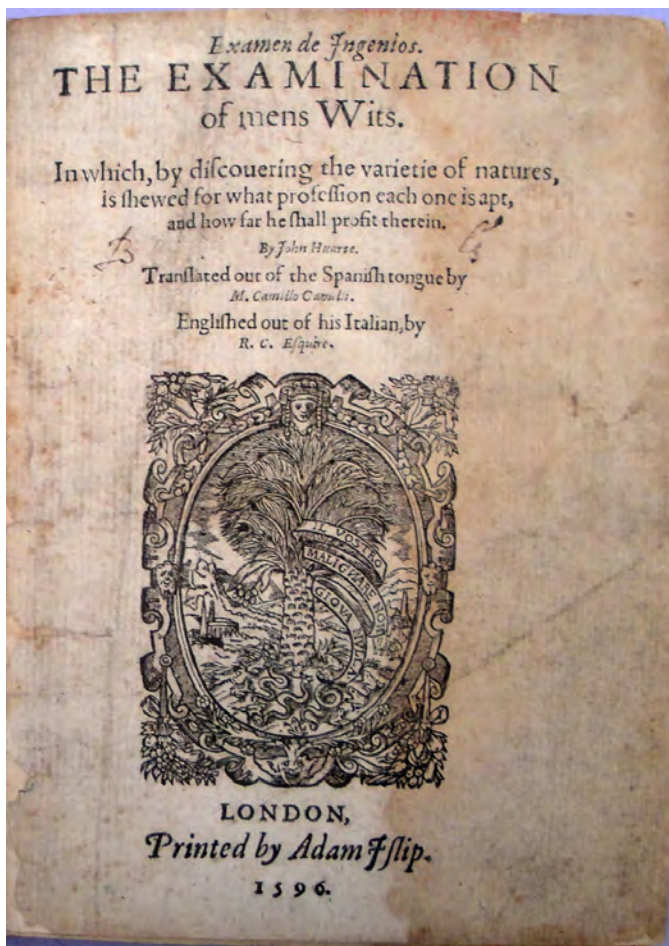
I herewith enclose  
 the instructions under which  
 I remain with the  
 Fiji. In regard to  
 my father's  
 L. Levi Esq. J. Dalton

**44. Hooker, Joseph Dalton** (1817-1911). Autograph letter signed to Leone Levi (1821-88). [London] Kew Gardens, May 22, 1873. 2pp. 186 x 112 mm. Fine. \$750

Hooker's correspondent was British lawyer and economist Leone Levi, professor of commercial law at King's College, London; he was the author of *History of British Commerce and of the Economic Progress of the British Nation, 1763-1870* (1872), and helped to found the first chamber of commerce in Great Britain. Hooker asks Levi for a testimonial for a Mr. Balanca,

"which I hope will not be delayed. . . . I have seen a gentleman who has just returned from France & knows Mr. Balanca well; he assures me of his entire fitness; & the fact of his now being again engaged to go a second time to New Caledonia, is I think a guarantee of his entire fitness for the Paraguay expedition." 42400



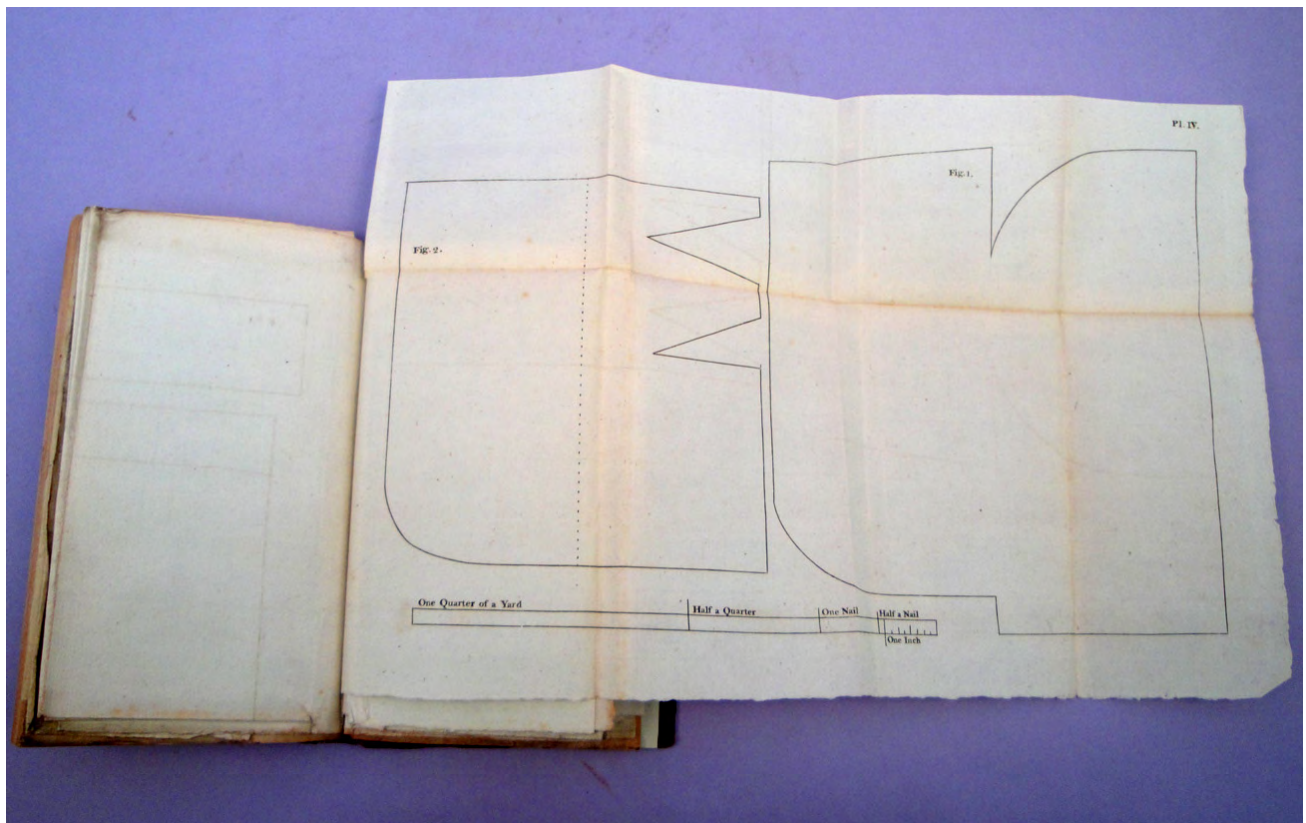


### *First Modern Psychologist*

**45. Huarte, Juan** (1530–92). *Examen de ingenios. The examination of mens wits . . .* Translated out of the Spanish tongue by M. Camillo Camili. Englished out of his Italian, by R[ichard] C[arew] Esquire. 4to. [16], 333, [3]pp. London: printed by Adam Islip, 1596. 182 x 133 mm. Old calf, rebacked, endpapers renewed. Title mounted, marginal repairs to a few other leaves, moderate toning and soiling, some marginal staining, but a good to very good copy. Note in an early hand identifying the British translator, signed “JP,” on front flyleaf. \$3000

Second edition in English; originally published in Spanish in 1575. Huarte was the first to try to link physiology and psychology; he is considered the first modern psychologist. Huarte’s book “aimed to show that only when skill and natural endowment are combined can a person operate at his highest level. Under the influence of congenital, characterological, and environmental factors, in each individual one of the three basic kinds of wits prevails—memorial, imaginative, or intellective—and that to each one of them correspond particular arts and sciences; hence

the rationale for guiding each individual through education and vocational orientation to the field of activity most appropriate to his natural with. In this way Huarte contributed in an important way to constitutional concepts that are relevant to modern psychiatry” (Wallace and Gach, *History of Psychiatry and Medical Psychology*, p. 244). *Examen de Ingenios* had seventy editions in various languages before 1700; the first English edition appeared in 1594. STC 13893. Garrison–Morton 4964 (citing the first edition). 41648

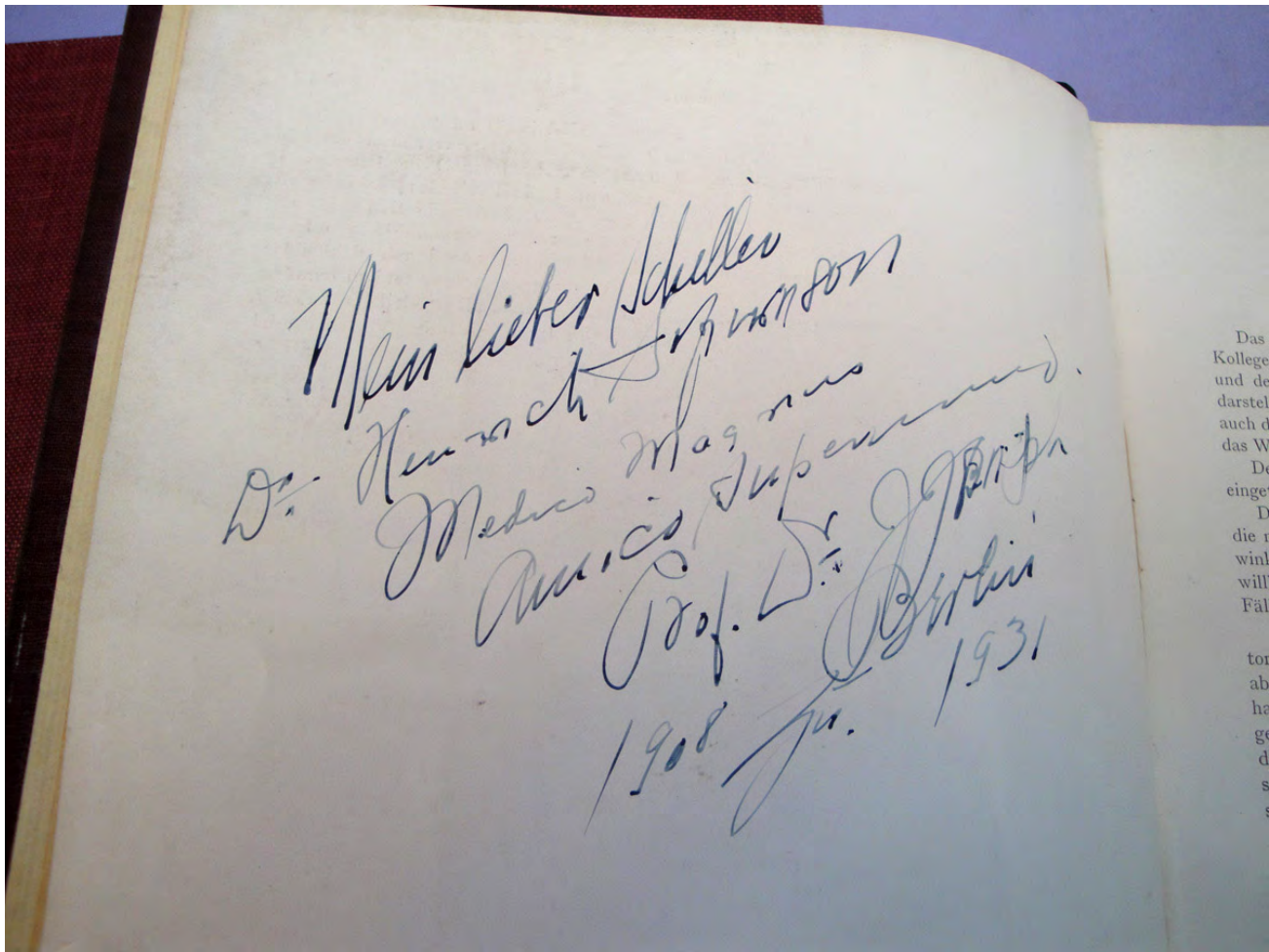


*With 13 Engraved Plates of Clothing Patterns*

**46. Instructions** for cutting out apparel for the poor; principally intended for the assistance of the patronesses of Sunday schools, and other charitable institutions. . . . 8vo. xii, 85 [7]pp. 13 folding engraved plates of clothing patterns. London: J. Walter, 1789 [imprint lined out, with ms. correction below: Sold at the Parliament Office / Old Palace Yard]. Gilt-ruled calf c. 1789, a little rubbed, rebacked, endpapers renewed. Title-leaf silked, some edges of plates a trifle soiled and frayed, insignificant foxing and dampstaining. Very good copy. \$6000

**First Edition.** This very rare work on methods and costs of producing affordable clothing for poor children, addressed to “Patronesses of Sunday Schools,” is one of the products of the Sunday school movement, which spread rapidly throughout Britain after the philanthropist Robert Raikes (1736-1811) established the first Sunday school in Gloucester in 1783. The book describes the charitable program established at Hertingfordbury in the county of Hertfordshire, involving the town’s two Sunday schools and two day schools or “Schools of Industry.” In order to encourage the poor to send their children to the Sunday schools, a small portion of the charitably supported Sunday School Fund was used to purchase the raw materials (cloth, yarn, ribbon, sewing and

knitting needles, etc.) for various items of clothing; these were then transformed into finished goods by the female students at the School of Industry, and offered for sale to the families of Sunday school students at a reduced price. The system was supposed to provide clothing for Sunday school students at about half of what it would ordinarily cost, plus provide the girls at the School of Industry with the training necessary to become “good servants, and useful mothers to families of their own.” Quantities, types and prices of a great number of materials and finished goods are given, plus instructions and actual patterns for making various types of clothing. Kress B.1634. Goldsmiths 13970. EB (Raikes). 31828



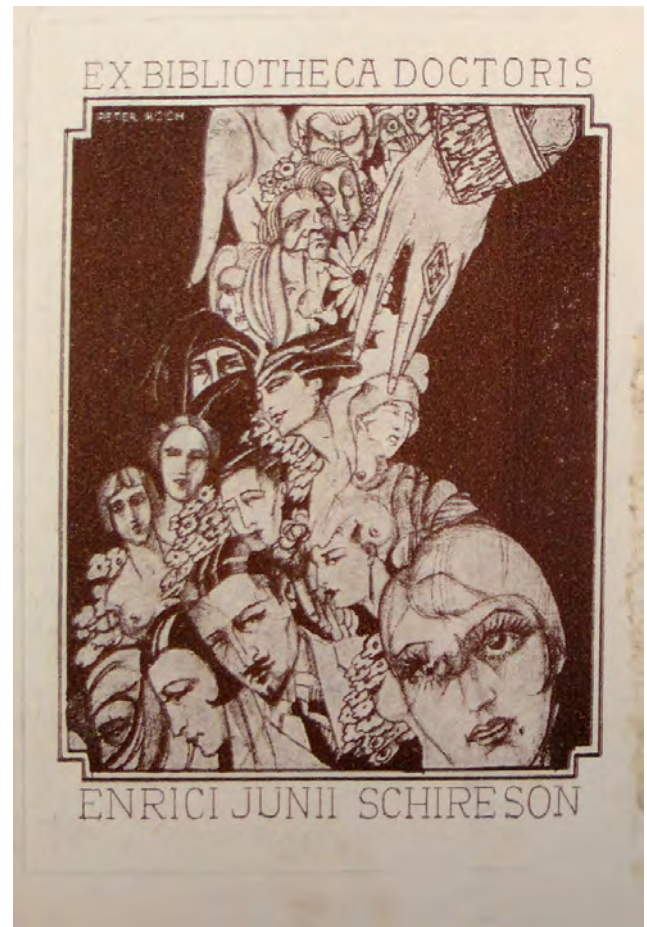
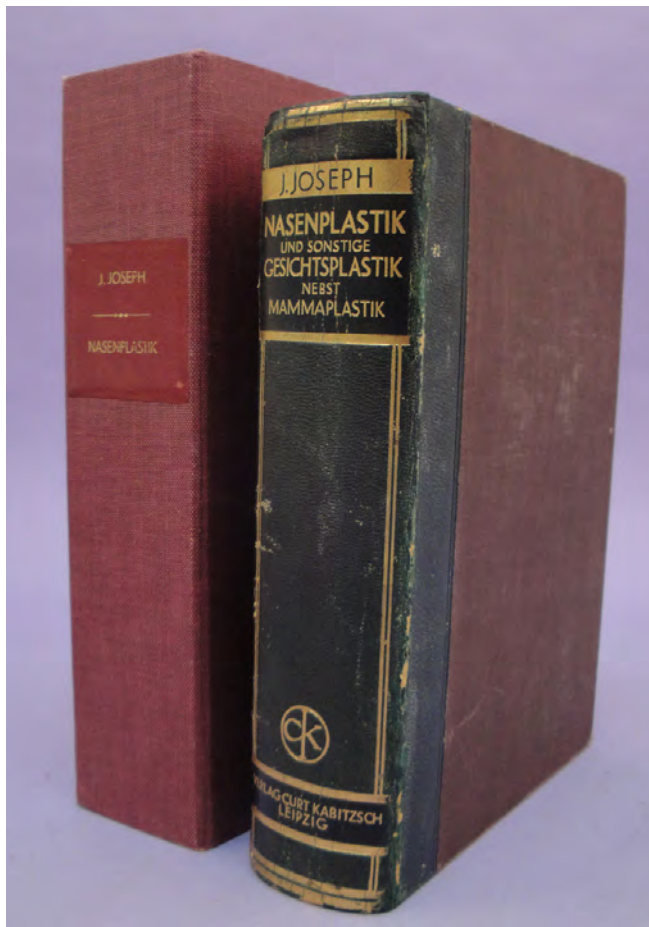
*Extremely Rare Inscribed Copy of Joseph’s “Nasenplastik”*

**47. Joseph, Jacques** (1865-1934). *Nasenplastik und sonstige Gesichtsplastik nebst einem Anhang über Mammoplastik*. 8vo. xxxi, [1], 842, [2]pp., adverts. 1718 text illustrations (some with color). Leipzig: Kabitzsch, 1931. 260 x 184 mm. Publisher’s quarter morocco, gilt, top of spine repaired, light wear at spine and corners; in cloth folding box. Very good copy, inscribed by Joseph to his onetime student Henry Junius Schireson (1881-): “Mein lieber Schiller, Dr. Henrich Schireson, Medico Magnus, Amico Super[...], Prof. Dr. J. Joseph, 1908, Berlin, zur. 1931.” Schireson’s bookplate on front pastedown and flyleaf. \$10,000

**Extraordinarily Rare Inscribed First Edition** of what is probably the most famous 20th century classic of plastic and aesthetic surgery. This is the first inscribed copy of Joseph’s *Nasenplastik* that we have seen in over 40 years in the rare book trade. Joseph inscribed this copy to his former student Henry J. Schireson, a prominent American plastic surgeon famous for having given Ziegfield Follies star Fannie Brice (immortalized in the musical “Funny Girl”) a nose job in her hotel room in 1923; this

“seminal event for cosmetic surgery . . . generated more press than any other medical event and made the erstwhile Dr. Schireson into the rock star plastic surgeon of the day” (Howard).

Joseph’s work, which contains over 1700 illustrations, documents in exhaustive detail the operative methods he devised for correcting deformities of the nose, forehead, eyelids, cheeks, lips and mouth, jaw, ears and breasts. Paul Natvig, Joseph’s biographer, describes the work as follows:



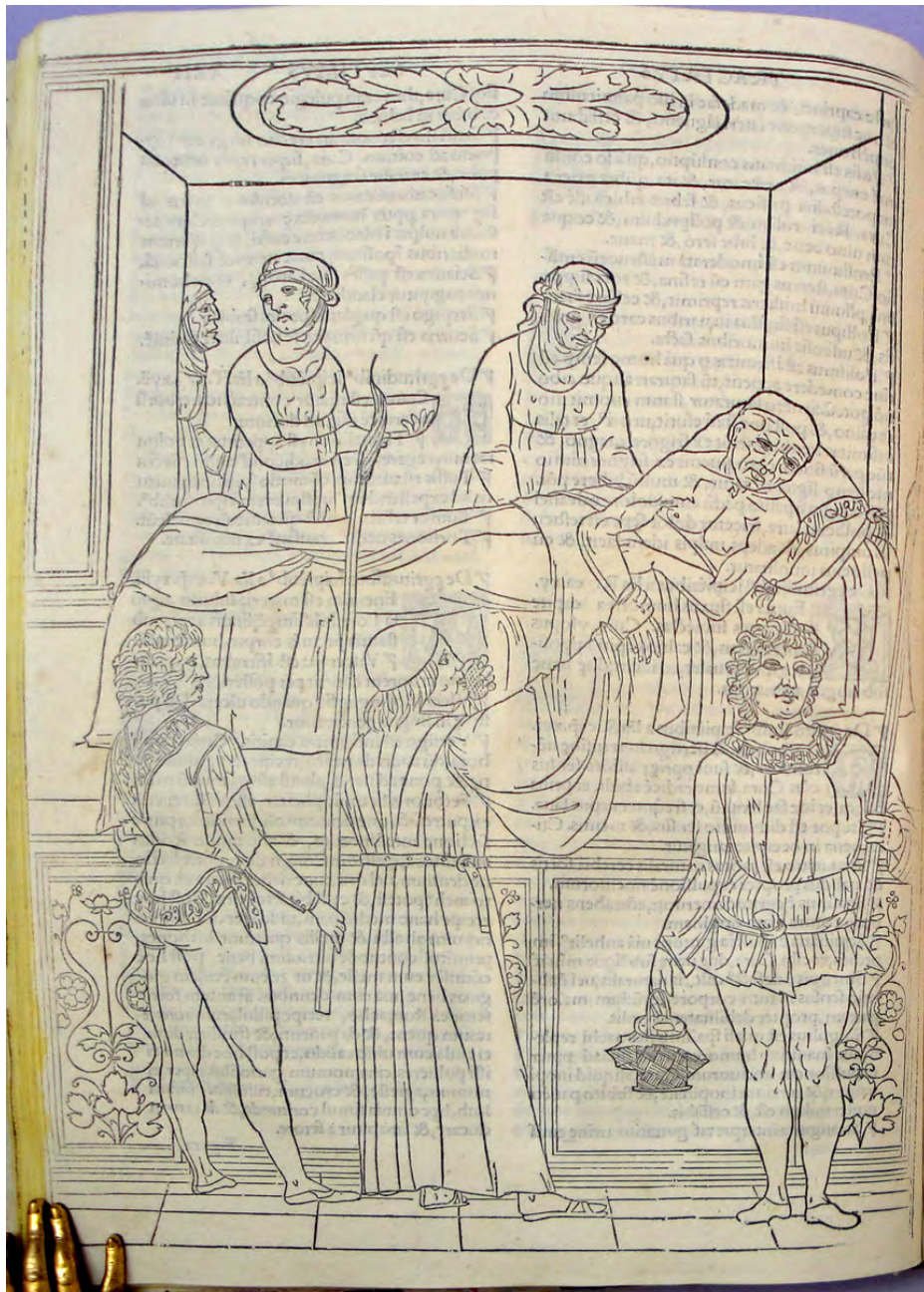
[It] is characterized by its scientific and technical thoroughness. It is divided and sub-divided in an extremely detailed, comprehensive and logical manner. Dr. Joseph supplies the appropriate historical background and lists in chronological order the procedures that have been used at each stage of development. He gives meticulous credit to the originators. Following this, he presents his own refined technique. He supplies in footnotes the etymology of the terms he employs.

In addition to the strictly operative procedures, he pays careful attention to the psychological aspects of facial defects, as in the case of the young Frenchman who sought by means of rhinoplasty to prevent

himself from performing a criminal deed. The patient was quoted as saying, "If anyone laughs at my nose, I feel that I'm ready to kill him."

Also, the many lavish illustrations in his book are completely honest in their depiction of what he had achieved. Many are photographs and all were left completely unretouched when reproduced. As an example of a perfect nose, Joseph included a profile photograph of his wife, to whom the book is dedicated (Natvig, pp. 84-85).

Garrison-Morton 5763.01. Natvig, *Jacques Joseph, Surgical Sculptor* (1982). Howard, Paul S. "The History of Face Lift by Dr. Paul Howard." *The Howard Lift*. 2011. Web. 03 Jan. 2012. 42247



*Most Beautiful Early Medical Book*  
*Greatest Woodcut Book in the Classic Venetian Style*

**48. Ketham [Kircheim], Johannes de** (fl. 15th cent.). *Fasciculus medicie*. Folio. [4], lviii [i.e., lix] ff., final blank. 10 full-page woodcuts attributed to the school of Andrea Mantegna (1431?-1506), especially to his brother-in-law Gentile Bellini (1429-1507). Title with woodcut border and woodcut initials in text. [Venice: Cesare Arrivabeni, 1522.] 302 x 206 mm. Old antiphonal vellum sheet (perhaps 15th cent. Italian, with red and blue ornamentation) over boards, hinges repaired, minor working in back board. A little dampstaining & soiling in first and last leaves, a few leaves trimmed closely minutely affecting borders and a few text letters but not the beautiful woodcut images, otherwise a fine copy. A few old annotations.

\$21,500



Penultimate Venetian edition of “the greatest piece of illustration in the classic style of XV-century Venetian books” (Hind, *Intro. Hist. Woodcut*, 2, p. 494; see also pp. 495–97). See Garrison–Morton 363, citing the first edition of 1491. This collection of short medical treatises, some dating as far back as the thirteenth century, circulated widely in manuscript before the de Gregorii of Forlivio issued the first edition from their Venetian press in 1491. The “Ketham” to whom the printers attributed the collection was, as Sudhoff speculates, most probably Johann von Kircheim, a physician and professor of medicine in Vienna who assembled these texts for educational purposes; “Ketham” is a plausible corruption of “Kircheim.” The 1491 edition was the first printed medical book to contain anatomical illustrations, if we discount the crude phlebotomy figure that occurs in a Flemish collection of surgical texts by Lanfranck, Guy de Chauliac and Avicenna (Louvain, 1481), and the woodcut of the three cerebral ventricles printed in the *Philosophia naturalis* of Albertus Magnus (Brescia, 1490). The anatomical illustrations prepared for the 1491 edition included the following: (1) Phlebotomy man; (2) Zodiacal man; (3) Seated figure of pregnant woman, showing the internal organs; (4) Wound man;

and (5) Disease man. Another woodcut, printed in red and black, shows a schematic representation of urine glasses arranged in a circle. All of these illustrations are well established in the manuscript tradition.

The 1491 edition of Ketham’s collection was followed by an Italian translation published in 1493/4, to which Mondino’s *Anathomia* was added. For this Italian translation, all of the illustrations save that of the “Disease man” were redrawn and recut, and four new illustrations were added: (1) Petrus de Montagnana in his pulpit (frontispiece); (2) Petrus, his students and an attendant with a flask of urine; (3) Doctor’s visit to a plague patient; and (4) A lesson in dissection. There has been much speculation about the identity of the artist of these strikingly beautiful woodcuts, but he was certainly close to the school of Gentile Bellini. The 1493/4 Italian edition of Ketham, and the 1495 Latin edition that followed, were the basis of the dozen or so editions printed over the next thirty years, including the 1522 edition we are offering here. Herrlinger, *History of Medical Illustration from Antiquity to A. D. 1600*, p. 66. Norman / Grolier Medical 100, 10. Choulant / Frank, pp. 115–22. *Heirs of Hippocrates* 126, noting that the 1522 edition, which gives Ketham’s name and nationality in the incipit, finalizes the idea that Ketham was responsible for the work. 41437

PHYSICS.

Didaktisches zur Verwendung der grand Ensembles in der Statistik.  
Von H.A. KRAMERS.

( Communicated at the meeting of December 18, 1937.)

Par.1. Einleitung.

Im folgenden geben wir zunächst (Par.2) eine kurze Uebersicht über die klassische Theorie der grand Ensembles, die GIBBS im 15. Kapitel seines Buches über Statistik entwickelt hat. Der Nachweis, dass  $\Omega$  bei einem homogenen System gleich  $pV$  ist (wir haben das Vorzeichen von  $\Omega$  entgegengesetzt als bei GIBBS definiert), und die explizite Berechnung von  $\Omega$  für ein Edelgas stehen nicht bei GIBBS. Im dritten Paragraphen, der von dem Gebrauch der grand Ensembles in der Quantenstatistik handelt, werden praktisch dieselben Formeln gebracht, die schon von PAULI im Jahre 1927 entwickelt wurden.

Par. 2. Die GIBBSschen grand Ensembles in der klassischen Theorie.

In der klassischen Statistik sind die kanonischen Ensembles dadurch ausgezeichnet, dass zwei solcher Ensembles mit den Dichtefunktionen:

$$\rho^{(1)} = e^{-\frac{F^{(1)} - \epsilon^{(1)}}{\theta^{(1)}}}, \quad \rho^{(2)} = e^{-\frac{F^{(2)} - \epsilon^{(2)}}{\theta^{(2)}}}$$

bei formaler Komposition zu einem Gesamtensemble.

$$\rho = \rho^{(1)} \cdot \rho^{(2)} \quad (1)$$

wieder ein stationäres, und zwar ein kanonisches, Ensemble liefern, wenn die Temperaturen  $\theta^{(1)}$  und  $\theta^{(2)}$  einander gleich sind:

$$\rho = e^{-\frac{(F^{(1)} + F^{(2)}) - (\epsilon^{(1)} + \epsilon^{(2)})}{\theta}} \quad (2)$$

Ist die Komposition nicht eine formale, sondern eine physikalische, d.h. wird eine lose Kopplung zwischen den zwei betrachteten Systemen hergestellt, sodass sie Energie auswechseln können, so kann man die Energiefunktion des Gesamtsystems in folgender Form schreiben:

$$\Sigma = \epsilon^{(1)} + \epsilon^{(2)} + \epsilon^{(1,2)} \quad (3)$$

wo  $\epsilon^{(1,2)}$  der als klein zu betrachtende Wechselwirkungsterm ist. Das Ensemble (1) wird jetzt noch immer sehr wenig verschieden sein von dem stationären (und zwar kanonischen) Ensemble (2) des Gesamtsystems. Diese einfache Rechnung mit kanonischen Ensembles enthält wohl die zweckmässigste und natürlichste Interpretation des Wärmegleichgewichts zwischen zwei thermodynamischen Systemen. Im Grunde enthält sie auch das wesentliche an jener Rechnung bei der nachgewiesen wird, dass die MAXWELL-BOLTZMANN Verteilung von freien Molekülen bei den Zusammenstößen nicht zerstört wird; im diesem Falle sollen 1 und 2 sich auf zwei stössende Moleküle beziehen und es beschreibt  $\epsilon^{(1,2)}$  die Wechselwirkung beim Stoss.

Die Energie eines Gesamtsystems ist gleich der Summe der Energien der Einzelsysteme; darauf beruht schliesslich die zentrale Rolle welche die kanonische Verteilungsfunktion spielt. Etwas ähnliches gilt nun aber auch für die Anzahlen  $N_1$  und  $N_2$  von gleichartigen Teilchen, welche zwei gekoppelte Teilsysteme enthalten; ihre Summe ist gleich der Anzahl jener Teilchen im Gesamtsystem:

$$N = N_1 + N_2.$$

49. **Kramers, Hendrik Anthony** (1894-1952). Didaktisches zur Verwendung der grand Ensembles in der Statistik. Original typescript with ms. additions. 11ff. Stapled. N.p., 1937. 286 x 226 mm. Very good. With 2 mimeograph typescripts. From the library of physicist and historian of physics Abraham Pais (1918-2000). Together 3 documents, in portfolio (defective), with ms. title "Prospectus aankondig-ing etc. Quantum Chemie van moderne boekwerken" in Pais's hand. Signature of Dutch chemist W. C. B. Smithuysen on mimeograph typescripts. \$1500

Kramers's paper, published in *Amsterdam Proc.* 41 (1938), discusses the use of Josiah Willard Gibbs's "grand ensembles" (introduced in *Elementary Principles in Statistical Mechanics* [1902]), "essentially elaborating on Gibbs's treatment of grand ensembles and at the same time introducing some new concepts and showing how grand ensemble theory could be extended to cover quantum mechanical systems. The contents of this paper are now standard topics in statistical mechanics textbooks" (ter Haar, *Master of Modern Physics: The Scientific Contributions of H. A. Kramers*, p. 71). The title of Kramers' paper translates as "Instructions on the use of grand ensembles in statistics." The manuscript additions, most likely in Kramers's hand, consist of numbered mathematical equations and mathematical symbols.

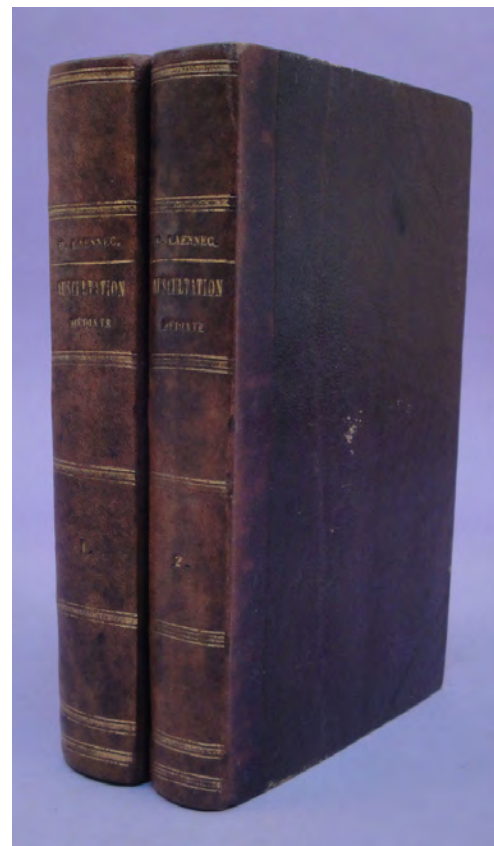
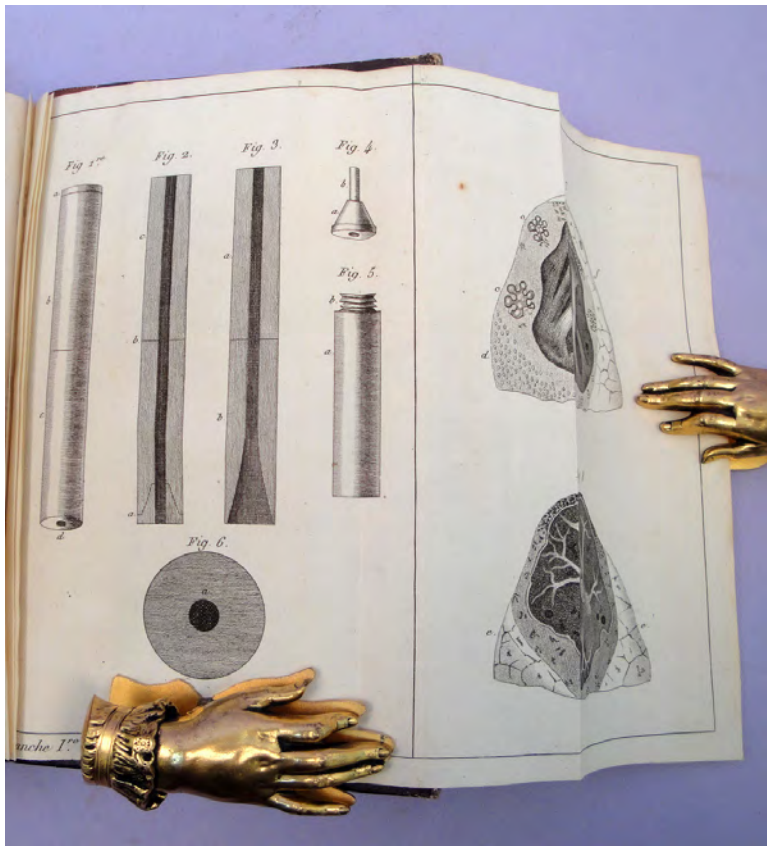
With Kramers's original typescript is a mimeograph paper by Kramers: "Voordrachten over quantum-chemie" (Lectures on quantum chemistry, 192pp.), accompanied by the separately paginated "Toelichtingen bij de voordrachten over quantumchemie" (Notes to the lectures on quantum chemistry, 6pp.). All of these papers are from the library of Abraham Pais, who had been a close friend of Kramers since their first meeting in 1939. In 1943 Pais, who was Jewish, was forced to go into hiding in Amsterdam to escape arrest by the Gestapo; Kramers visited Pais often during this time.

One day, in November 1943, the Gestapo came to the house where Pais was hiding.

Kramers was there at the time. Pais went quickly to his hiding place and, by good fortune, was not discovered by the Gestapo. After they had left, Pais remained in his hiding place: ". . . I heard the door to my room, which lay on the other side of my hiding spot, open softly. Someone entered [and] sat down on a small bench [and] began to read, not loud but quite softly. It was Kramers. Earlier he had lent me a volume of Bradley's *Lectures on Shakespeare*. What this good man was doing now was reading to me from that book in order to calm my nerves." Later Pais was captured by the Germans and Kramers wrote to Heisenberg asking him to intercede on Pais' behalf (O'Connor & Robertson).

Dutch chemist W. C. B. Smithuysen, whose signature is on the two mimeograph papers, was a correspondent of Kramers; see the American Philosophical Society's "Archive for the History of Quantum Physics" (web). O'Connor, J. J., and E. F. Robertson. "Hendrik Anthony Kramers." The MacTutor History of Mathematics Archive. Web. 26 July 2011. Archive for the History of Quantum Physics, 1898-1950 (bulk). Archive for the History of Quantum Physics. American Philosophical Society. Web. 26 July 2011. 41641





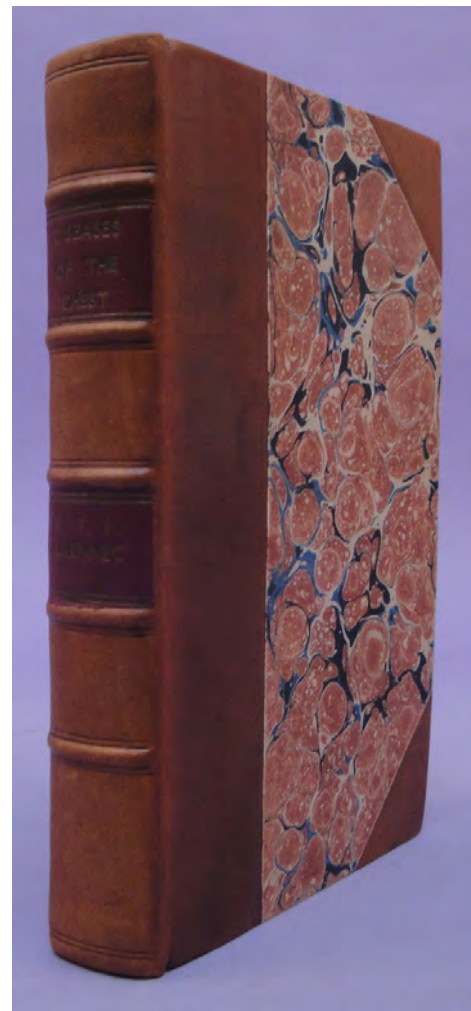
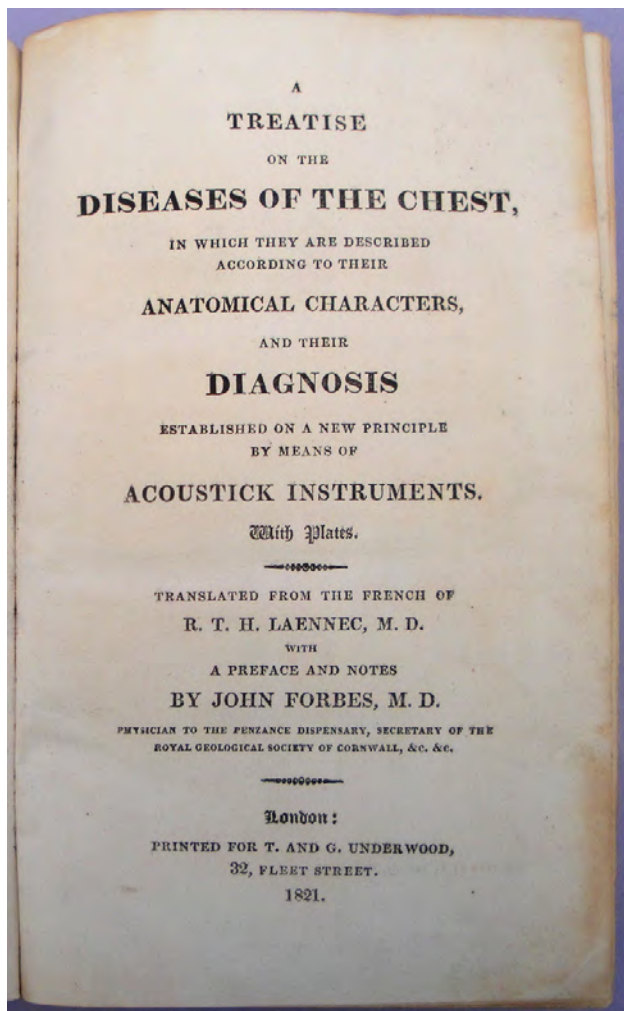
## The Stethoscope

**50. Laennec, René Théophile Hyacinthe** (1781–1826). *De l'auscultation médiate ou traité du diagnostic des maladies des poumons et du coeur . . .* 2 vols., 8vo. [5], viii–xlviii, 456, [8]; xvi, 472pp. 4 folding engraved plates numbered I–IV. Paris: J.-A. Brosson & J.-S. Chaudé, 1819. 204 x 124 mm. 19th century quarter morocco, boards, gilt spines (a little faded). Minor foxing, one plate number trimmed, but very good. \$3750

**First Edition, First State**, with the original cancellandum leaf a\*2. Laennec's invention of the stethoscope, which he announced in his *De l'Auscultation médiate*, provided the first adequate method for diagnosing diseases of the thorax, and represented the greatest advance in physical diagnosis between Auenbrugger's percussion and Röntgen's discovery of x-rays. Laennec used his new tool to study the sounds made by the movements of the heart and lungs, for which he invented a terminology. He described pneumothorax, established the fact that all phthisis is tuberculous, distinguished pneumonia from bronchitis and from pleuritis, and gave descriptions of bronchitis, edema of the lungs, emphysema, tuberculosis and lung cancer that have in many respects remained unsurpassed until today. He also provided the first description of chronic interstitial

hepatitis, for which he coined the term "cirrhosis"; the disease is often called "Laennec's cirrhosis." The four folding plates illustrate Laennec's stethoscope (a short wooden tube), pathologic conditions of the lung, and deformity of the chest from chronic latent pleurisy.

P. J. Bishop, Laennec's bibliographer, states that "the first edition of Laennec's *De l'auscultation médiate* was published on 15 August 1819, in a first printing of 2100 copies, with a second impression of 1500"; however, he does not indicate whether these printings correspond to the states with and without the original leaf a\*2. Bishop, "Reception of the stethoscope and Laennec's book," *Thorax* 36 (1981): 487–492. Dibner 129. Garrison–Morton 2673; 3219; 3614. Lilly, p. 173. Norman 1253. *Printing and the Mind of Man* 280. 41656



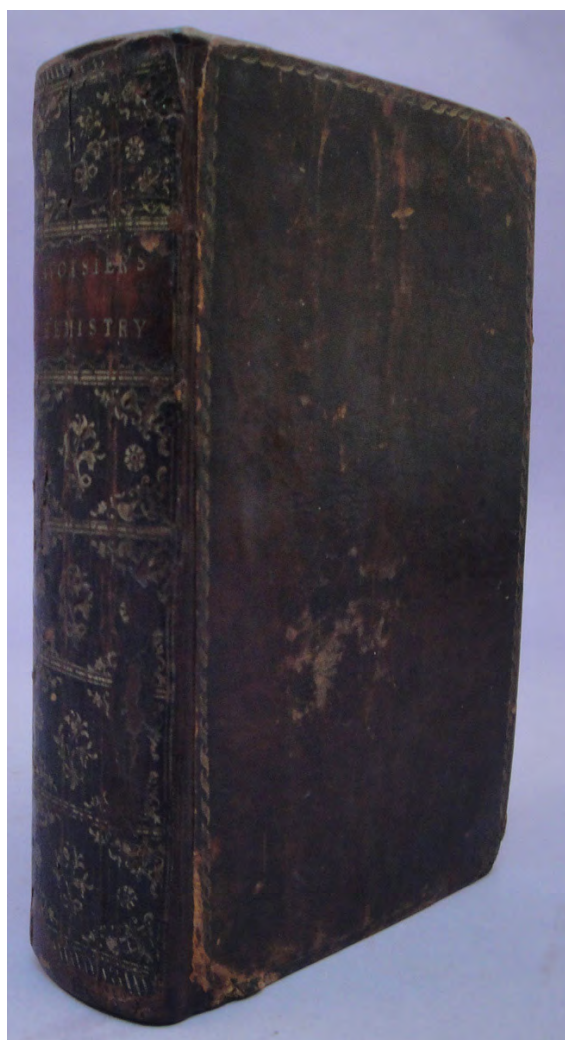
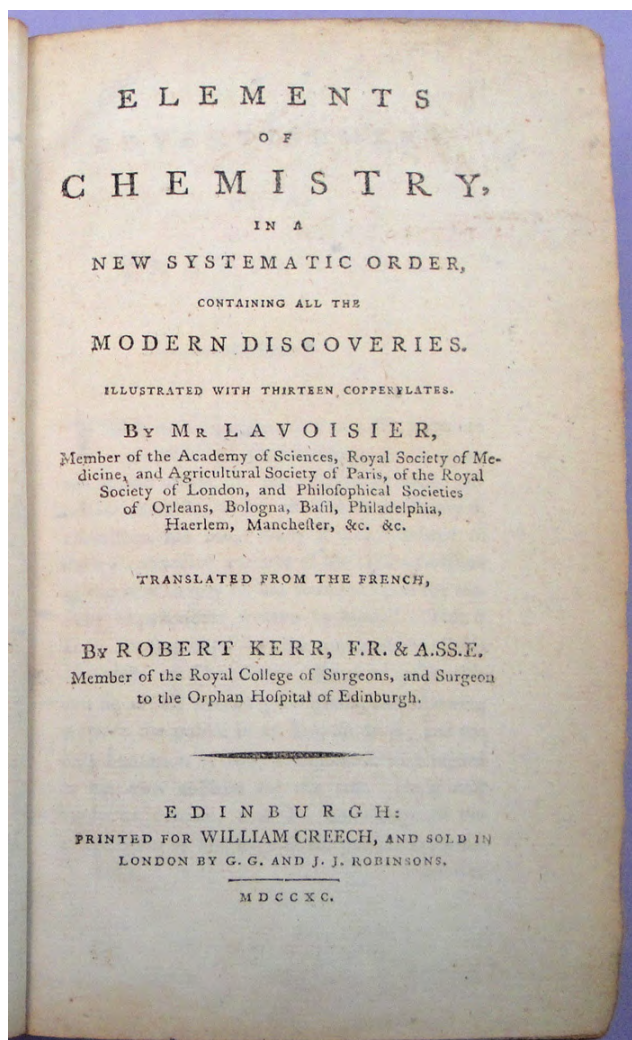
*The Exceedingly Rare First English Translation*

**51. Laennec, René Théophile Hyacinthe** (1781–1826). A treatise on the diseases of the chest, in which they are described according to their anatomical characters, and their diagnosis established on a new principle by means of acoustick instruments. Translated by John Forbes (1787–1861). 8vo. [4], [vii]–xl, [2], 437 [1]pp. 8 engraved plates by John Pope Vibert (1797–1865). London: T. and G. Underwood, 1821. 210 x 132 mm. Modern half calf in antique style. Occasional minor foxing & soiling, some offsetting from plates, but a fine copy. \$5000

**First Edition in English**, and *exceedingly rare* because it was printed in an edition of only 500 copies, as compared to the total printing of 3600 copies which comprised the two states of the first edition in French.

Forbes, the British translator, abridged parts of Laennec's work, omitted others, and condensed the remainder, reducing it to about half of its original length. Although he greatly underestimated the influence the stethoscope was to have on medicine, Forbes

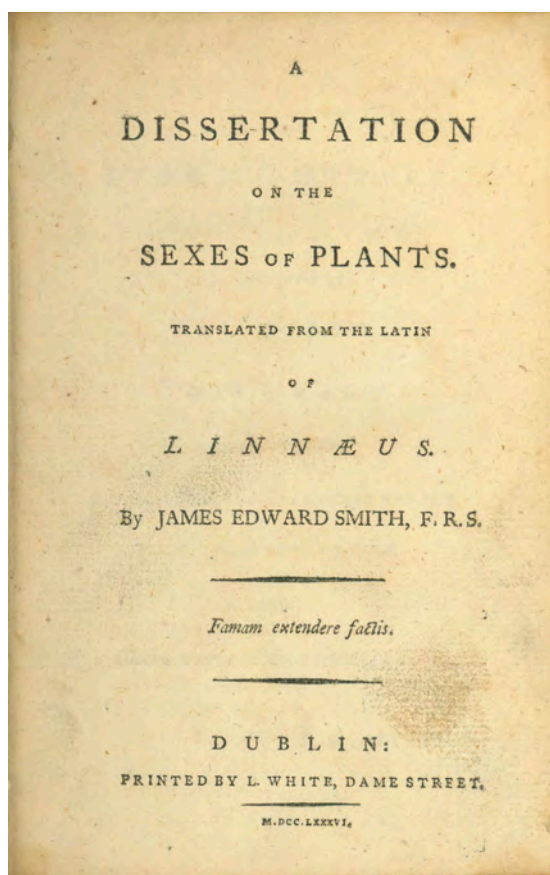
nevertheless was as responsible as anyone else for introducing and popularizing the use of the stethoscope in the English-speaking world. According to a letter from Forbes to Laennec all 500 copies of the small English printing had been sold by September, 1823. This suggests that the initial reception of the stethoscope was slow in England, but by the time of the second English edition demand had widened exponentially. Bishop, "Reception of the stethoscope and Laennec's book," *Thorax* (1981): 36, 487–92. Norman 1256. 41655



**52. Lavoisier, Antoine Laurent** (1743–94). *Elements of chemistry, in a new systematic order, containing all the modern discoveries . . .* Translated from the French, by Robert Kerr, F.R. & A.S.S.E. 8vo. 1, 511pp. 13 engraved plates, 2 folding tables. Edinburgh: William Creech; sold in London by G. G. and J. J. Robinsons, 1790. 206 x 128 mm. Calf gilt ca. 1790, rebaked preserving original spine, light rubbing. Minor foxing and toning, edges of plates a little frayed, but very good. \$2000

**First Edition in English** of the foundation work of modern chemistry. Lavoisier overthrew the phlogiston theory of Stahl, established the concept of elements as substances which cannot be further decomposed, and reformed chemical nomenclature. An important consequence of his work was the law of conservation of mass, which states that matter remains constant throughout all chemical change. Kerr's translation "is the only English translation of the *Traité Élémentaire de Chimie*; all subsequent four English and four American 'editions' are based on

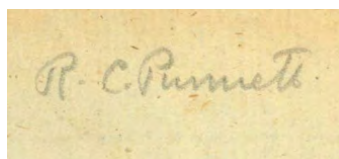
it. . . The rendering is a careful one, with greater attention being given to 'accuracy of translation than to elegance of stile.' The weights and measures are not changed into English denominations because there was no time to make the calculations. Fahrenheit degrees are interpolated in brackets next to the Réaumur figures employed in the original" (Duveen and Klickstein, p. 181). Duveen and Klickstein, *Bibliography of the Works of Antoine Laurent Lavoisier*, 163. 41763

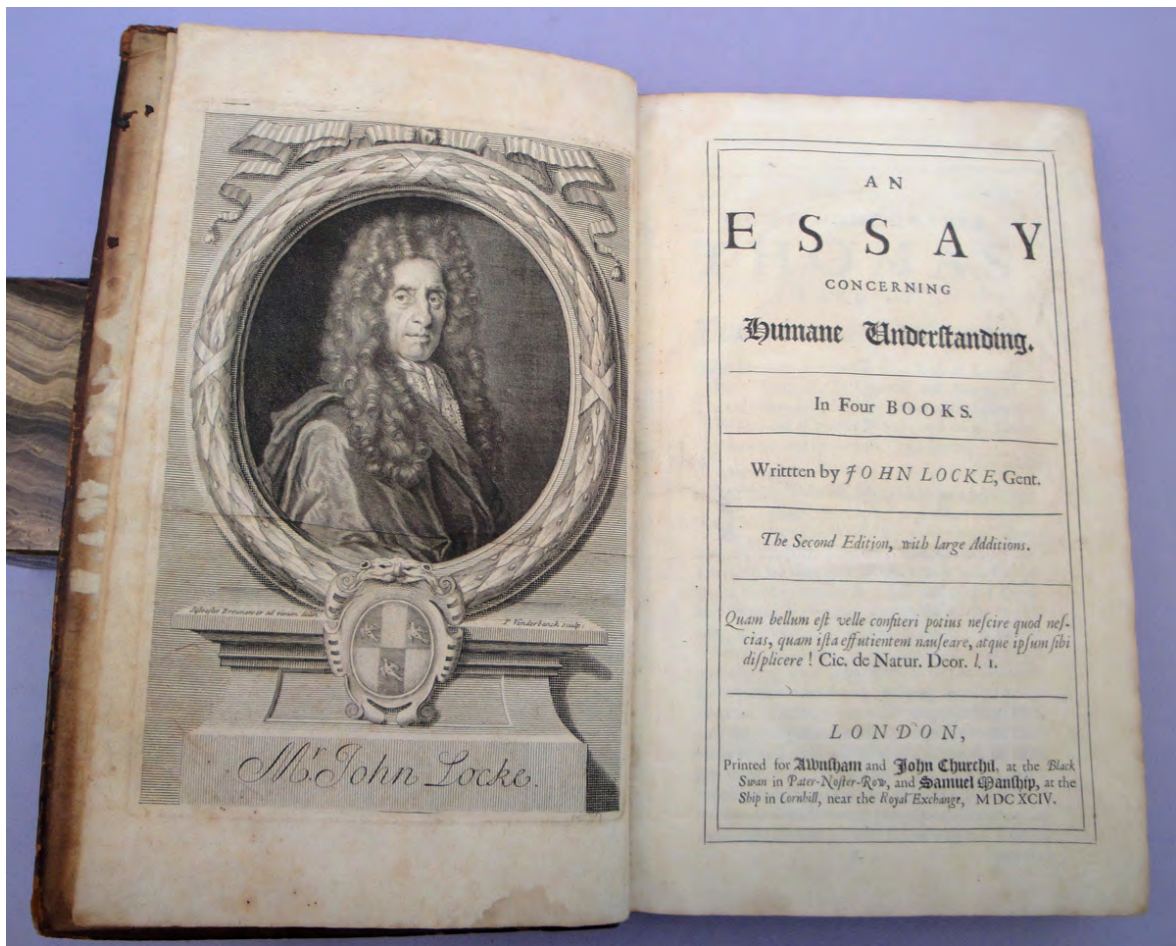


**53. Linnaeus, Carl** (1707-78). Reflections on the study of nature; and a dissertation on the sexes of plants. Translated by James Edward Smith. 2 parts in 1, 8vo. xi, [1], 62; xiii, [1], 40 pp. [second part bound before the first]. General title (bound after p. 62 in this copy) plus separate title pages for both parts. Dublin: L. White, 1786. 175 x 116 mm. Half sheep, marbled boards ca. 1786, spine and corners worn, hinges cracked, light rubbing but very good. From the library of British geneticist **Reginald C. Punnett** (1875-1967), with his pencil signature on the front free endpaper. \$1250

**First Irish Editions** of both works, issued together in a single volume. "Reflections on the study of nature" was originally published in Latin as the preface to Linnaeus's *Museum Regis Adolphi Friderici* (Holm, 1754); Smith's translation, the first in English, was initially published in London in 1785. The "Dissertation on the sexes of plants" was first published in Latin in under the title *Disquisitio de quaestione . . . sexum plantarum argumentis* (St. Petersburg, 1760); the first English translation, again by Smith, initially appeared in London in 1786. This copy is from the library of noted British geneticist and morphologist R. C. Punnett, who worked with William Bateson

to establish the study of genetics at Cambridge after the rediscovery in 1900 of Mendel's work in genetics and heredity. "During the period 1904-1910 [Punnett and Bateson] confirmed several basic discoveries of classical Mendelian genetics, including the Mendelian explanation of sex determination, sex linkage, complementary factors and factor interaction, and the first example of autosomal linkage" (*Dictionary of Scientific Biography*). Punnett is perhaps best known for his invention of the "Punnett square," a diagram used by biologists to determining the probability of an offspring's having a particular genotype. Soulsby, *Catalogue of the Works of Linnaeus*, 2117a. 42243



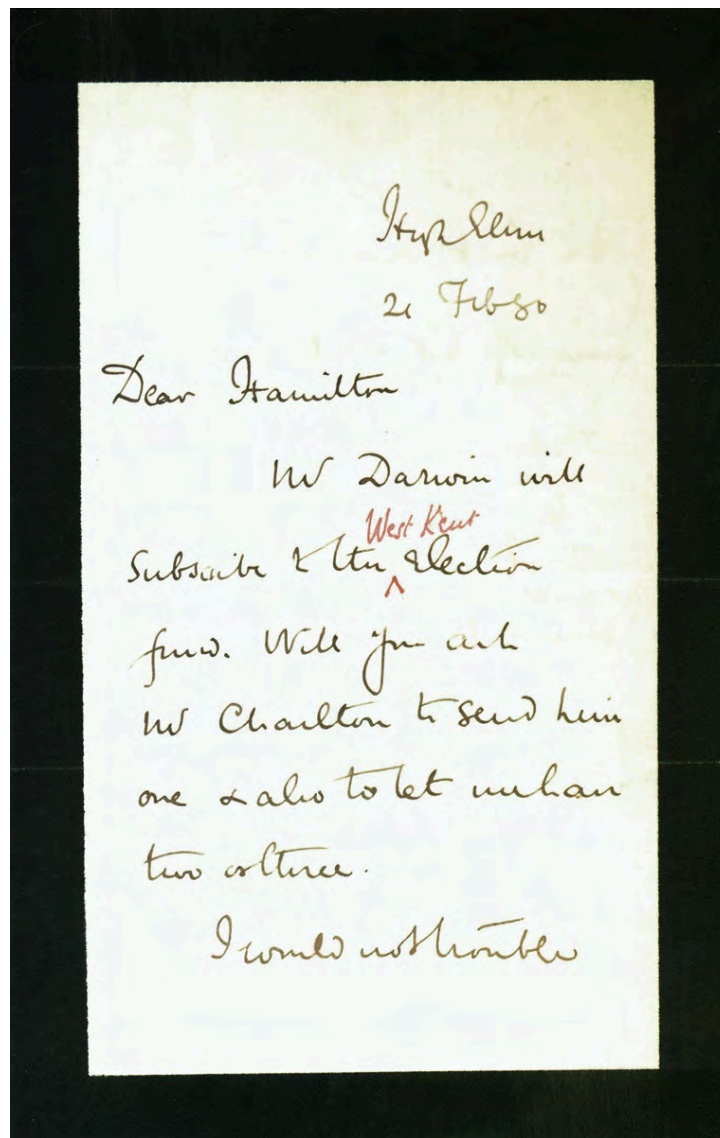


**54. Locke, John** (1632–1704). *An essay concerning humane understanding*. . . . The second edition, with large additions. Folio. [40], 407, [13, incl. index]pp. Engraved frontispiece portrait by P. Vanderbanck after Sylvester Brounower. London: Printed for Awnham and John Churchil . . . and Samuel Manship, 1694. 313 x 187 mm. Calf ca. 1694, rebacked, corners a bit worn. Light soiling on preliminary leaves, but very good. \$6000

Second edition, with approximately 50 pages of new material, and the first to include Locke’s name on the title. “Locke is known today primarily as the author of *An Essay Concerning Humane Understanding*. This would have no doubt pleased him. It was the work in which he invested the most effort and on which he staked his reputation” (Attig, p. 40). Locke’s philosophy was founded on psychological principles about the scope, nature and boundaries of human knowledge that limited the data of psychology to the contents of an individual’s consciousness—what happens in the mind when a person sees something, remembers a past event, puzzles over a problem, or experiences a distinct emotion. Mental life could be known, by introspection, for what it was; Locke’s

psychology thus was principally a descriptive science without any need for elaborate techniques of analysis. Locke’s philosophy has not only had a profound effect upon philosophical and political thought, but also laid the foundations of modern psychology, dominating the field until well into the nineteenth century.

The *Essay* was first published in 1690, but Locke continued to revise it during his lifetime. “Four editions were published during his lifetime . . . To these editions, he added important discussions on liberty and determinism, identity, perception, enthusiasm and the association of ideas” (Attig, p. 41). Attig, *Works of John Locke*, 229. Wing L-2740. See Garrison–Morton 4967; *Printing and the Mind of Man* 164. 41504

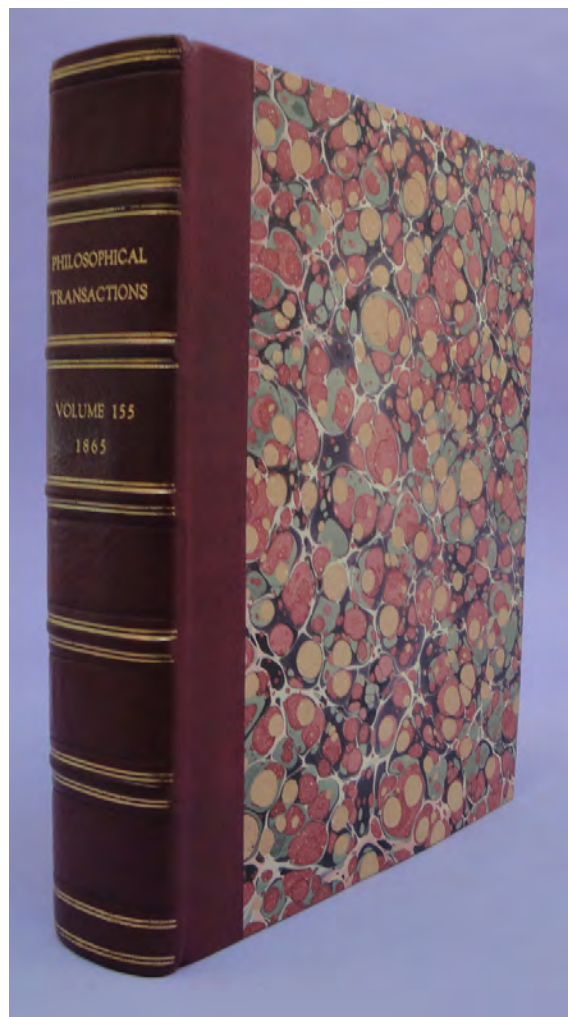
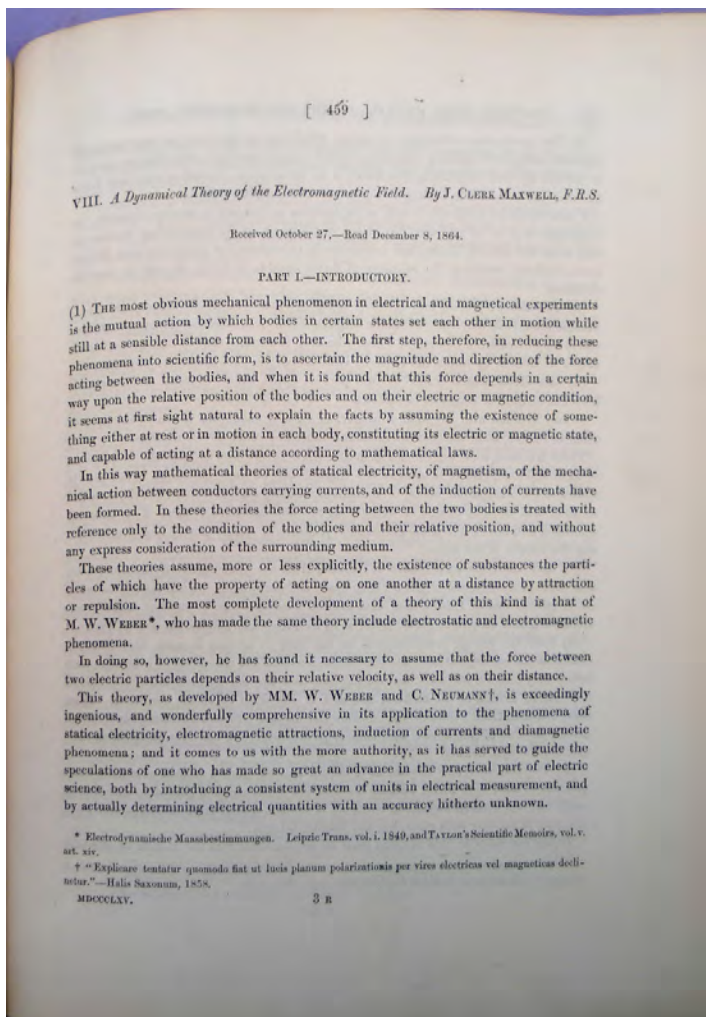


“Mr. Darwin Will Subscribe . . .”

**55. Lubbock, John** (1834-1914). Autograph letter signed to “Hamilton,” mentioning **Charles Darwin** (1809-82). 2pp. High Elm, 21 February 1880. 180 x 113 mm. Light soiling along folds but very good. \$950

From British scientist and banker John Lubbock, who made his name in scientific circles as a Darwinian anthropologist and archeologist. He is best remembered for having introduced the terms “Paleolithic” and “Neolithic” to describe the Old and New Stone Ages; these terms first appeared in his *Pre-Historic Times* (1865), the most influential archeo-

logical text of the nineteenth century. Lubbock was a close friend and neighbor of Darwin, having first met Darwin while still a child; he leased and then sold to Darwin the land on which Darwin made his famous “Sand Walk.” In this brief letter Lubbock states that “Mr. Darwin will subscribe to the [West Kent] election funds” (“West Kent” added in red ink in another hand) and asks that “Mr. Charlton” forward the relevant papers. 42405

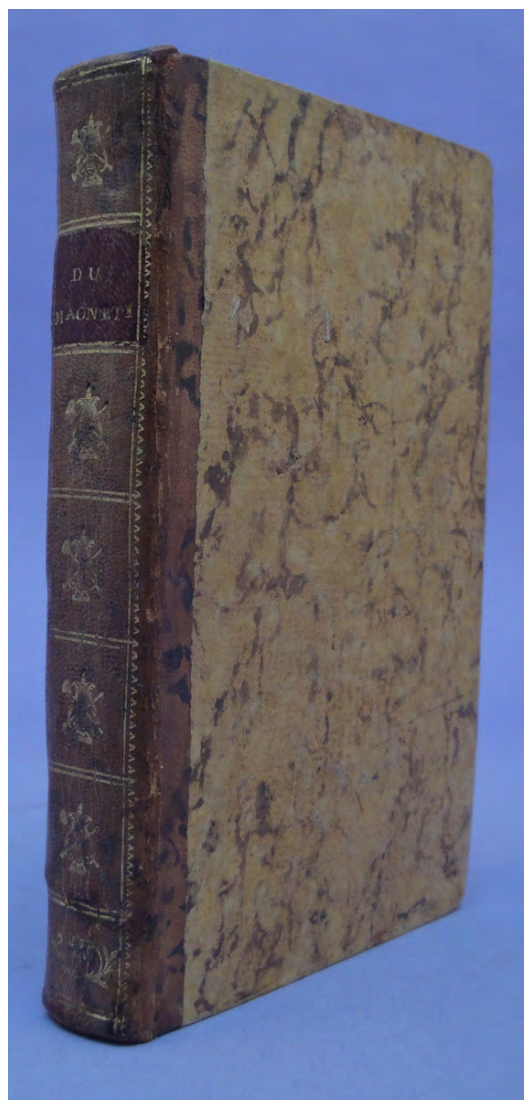
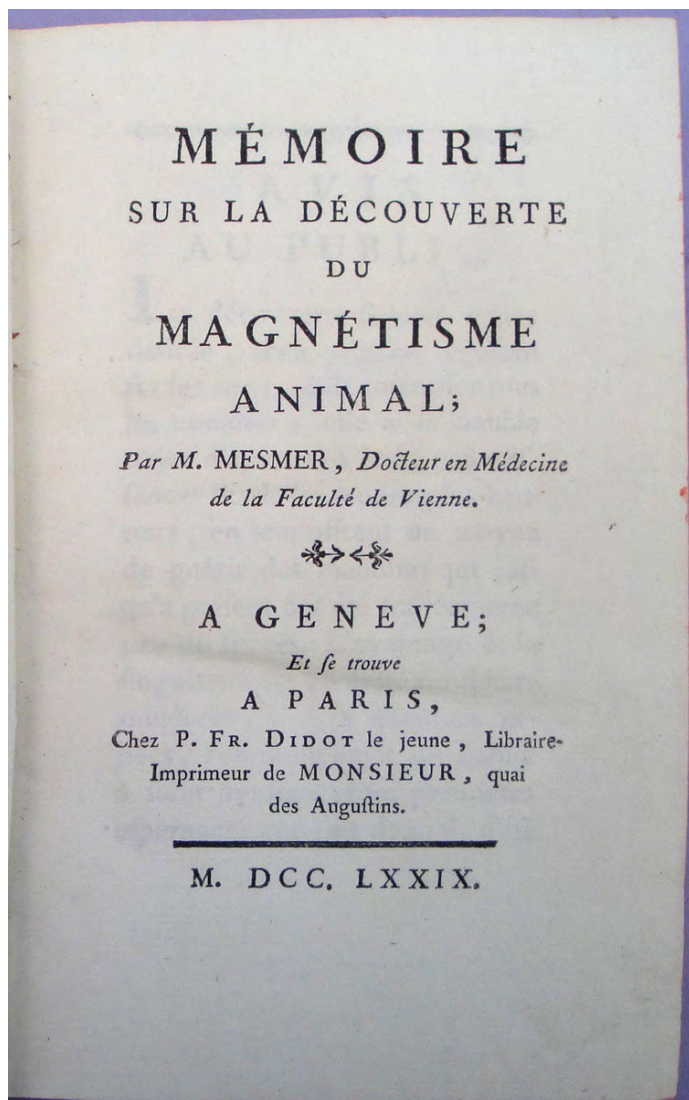


## Maxwell's Field Equations for Electromagnetism

**56. Maxwell, James Clerk** (1831–1879). A dynamical theory of the electromagnetic field. In *Philosophical Transactions* 155, part I (1865): 459–512. Whole volume. 796, 29pp. 300 x 230 mm. 41 plates, including 1 in color. Quarter morocco, gilt, in period style. Very good copy. \$6500

**First Edition.** In this culminating paper on the foundations of electromagnetic theory Maxwell developed twenty field equations of electromagnetism. “A dynamical theory of the electromagnetic field” clinched the theory that light was a form of electricity. Maxwell had already found in 1862 a link of a purely phenomenological kind between electromagnetic quantities and the velocity of light, but the present paper provided a new theoretical framework for the subject, based on experiment and a few gen-

eral dynamical principles, from which the propagation of electromagnetic waves through space followed without special assumptions about molecular vortices or forces between electrical particles. “A generation later, Einstein’s work on relativity was founded directly upon Maxwell’s electromagnetic theory: it was this that led him to equate Faraday with Galileo and Maxwell with Newton” (*Printing and the Mind of Man* 355). *Dictionary of Scientific Biography*. Dibner 68. Norman 1465. 42154



## Mesmerism

**57. Mesmer, Franz Anton** (1734–1815). (1) *Mémoire sur la découverte du magnétisme animal*. 8vo. [2], vi, 85, [3]pp. Geneva & Paris: Didot, 1779. **Bound with:** (2) **Eslon, Charles d'** (1750–1786). *Observations sur le magnétisme animal*. 8vo. [4], 151pp. London & Paris: Didot [etc.], 1780. Together 2 works. 167 x 105 mm. Bound with a third unrelated work in 18th century quarter sheep gilt, boards, top of spine expertly repaired. Fine. \$5000

(1) **First Edition.** The manifesto of animal magnetism. On the eve of the French Revolution, Mesmer captured the imagination of the Parisian public with his remarkable ability to effect cures by throwing his patients into “mesmeric” trances. As much a social movement as a medical practice,

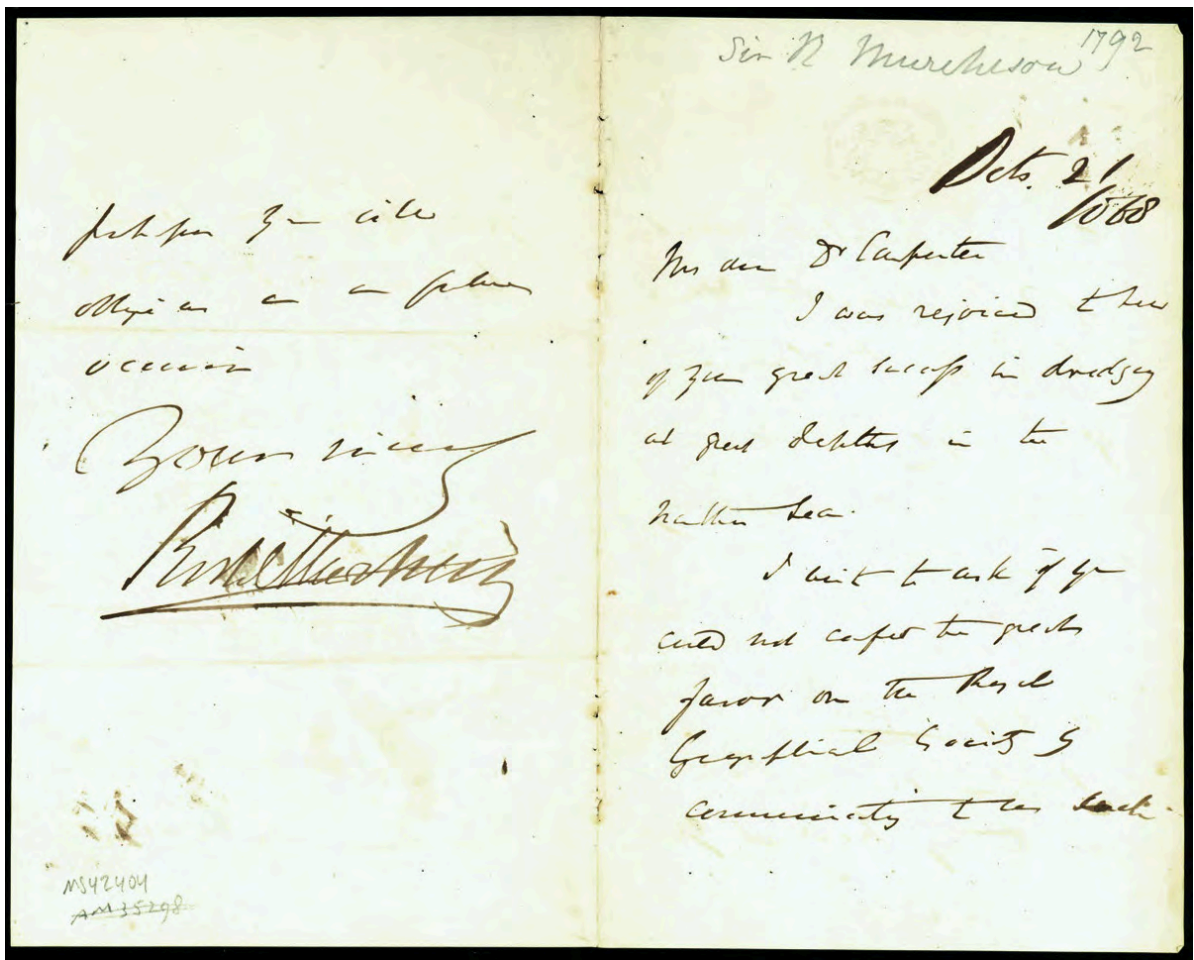
mesmerism spread quickly throughout Europe and America, and became such a mania in pre-Revolutionary France that between 1779 and 1789 more literature was generated on mesmerism than on any other single topic. At first Mesmer used actual magnets to perform his cures but later dispensed with



these on the ground that nearly all substances could be magnetized by touch. He employed either direct contact between physician and patient, or contact via the “baquet,” a tub-like apparatus which could be charged with the universal fluid like a Leyden jar. Mesmer always insisted on the physical nature of his cures, which he initially ascribed to magnetic forces or electricity; later he devised the theory of a “universal fluid” acting on the nervous system, which was susceptible to this fluid on account of its inherent property of “animal magnetism.” Mesmer’s discovery of what would later be called hypnosis led to the large-scale investigation of psychological phenomena, and is thus an ancestor of psychopathology and psychotherapy. Crabtree 10. Garrison-Morton 4992.1. *Printing and the Mind of Man* 225. Norman M4.

(2) **First Edition.** The present work is Eslon’s major treatise on magnetism, describing his first encoun-

ter with animal magnetism and how he became convinced of its efficacy. It also gives the details of eighteen cases treated by Mesmer under Eslon’s observation, one of the patients being Eslon himself. Eslon, a docteur régent of the Faculté de Médecine, was the first important Parisian convert to mesmerism. His outspoken support and practice of Mesmer’s techniques caused dissention within the Faculté and so antagonized its conservative majority that he was eventually expelled. Eslon later broke with Mesmer and set up a rival mesmeric treatment center in Paris, where he practiced his own version of animal magnetism. When the royal commission to investigate mesmerism was formed, it was Eslon’s practice and theory of animal magnetism that the commission examined, much to the displeasure of orthodox mesmerists. Crabtree 12. Norman M77 (citing 1781 ed.). 41474



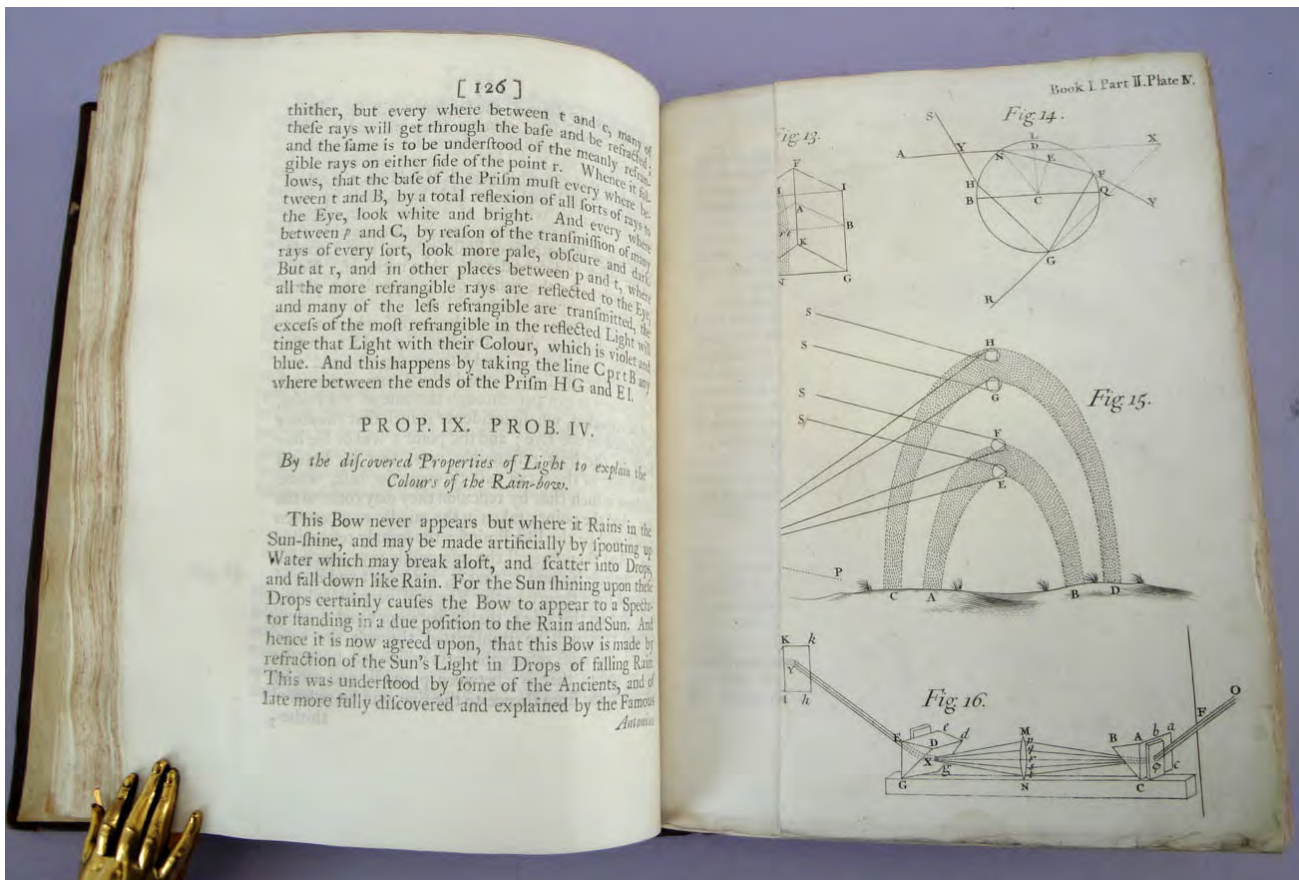
“Your Memoir would be a Godsend to Us”

**58. Murchison, Roderick Impey** (1792–1871). Autograph letter signed to William B. Carpenter (1813–85). 4pp. N.p., October 21, 1868. 185 x 116 mm. Light wear along central fold, a few tiny pinholes, but very good. \$750

From Scottish geologist Roderick Impey Murchison, best known for his identification of the Silurian geologic period and system, to English physiologist and naturalist William B. Carpenter, who performed valuable researches in marine zoology and was directly influential in persuading the British Admiralty to sponsor the *Challenger* expedition, the first major scientific study of the deep oceans. Murchison here writes to Carpenter on behalf of the Royal Geographical Society, which he had helped to found in 1830; he served as the Society's president for several terms, the last being from 1862 to 1871:

... I am rejoiced to hear of your great success in dredging at great depths in the Northern Sea. I write to ask if you could not confer the great favour on the Royal Geographical Society of communicating . . . a popular account of your results bearing on the Science of Geography which could be read at our Evening Meeting. We are somewhat in need of a good paper to open our session on the 4 Nov. & your memoir would be a Godsend to us . . .

42404



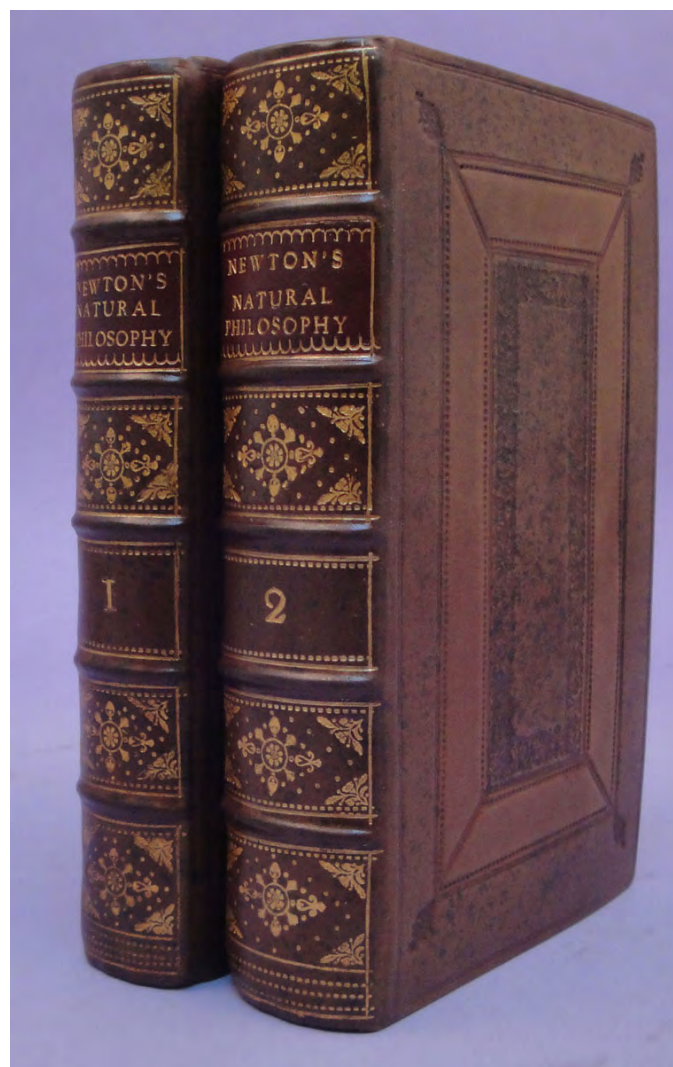
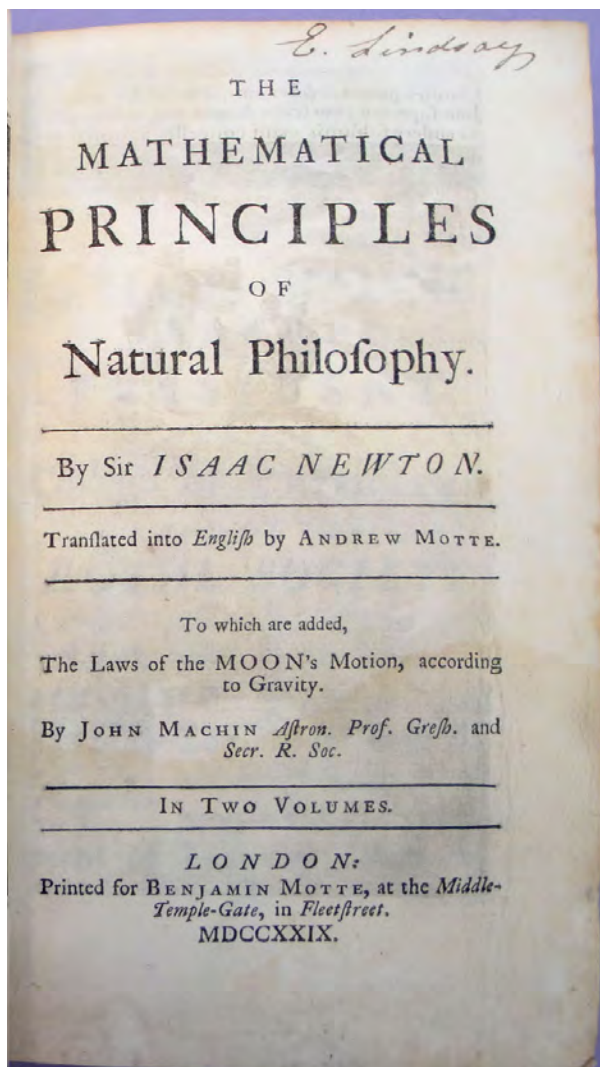
## Optics and Color Theory

**59. Newton, Sir Isaac** (1642–1727). *Opticks*. . . . 4to. [4], 144, 211, [1]pp. 19 engraved plates. London: printed for Sam. Smith, and Benjamin Walford, 1704. 247 x 191 mm. Paneled calf, gilt spine c. 1704, spine repaired, endpapers renewed (endpaper sheets watermarked with date 1802). Insignificant worming in gutter margin of last few leaves, but a fine, clean copy, preserved in a quarter morocco drop-back box. \$60 ,000

**First Edition** of the most famous book on optics ever written in the English language; **First Issue**, without Newton's name on the title and with the two additional mathematical treatises. The *Opticks* expounds the corpuscular theory of light developed by Newton, which was the dominant theory until modern times when it was combined with the wave theory developed by Newton's contemporary Huygens. The *Opticks* also contains a full explanation for the rainbow, an explanation of "Newton's rings," and consideration of double refraction in Iceland spar. In color theory, the *Opticks* provides the starting point for modern concepts. Newton proved experimentally that all colors are contained in white light and devised the first organized color circle to show his

concept of seven primary colors. The color circle, illustrated in fig. 11, pl. 3, Bk. 1, pt. 2, has been made use of in virtually all later treatises on color theory.

Unlike most of Newton's works, *Opticks* was originally published in English, with the Latin version following in 1706. As an appendix to the *Opticks* are two mathematical treatises in Latin which Newton issued in response to Leibniz relative to their dispute over priority in the invention of the calculus. These are Newton's first published works in mathematics. Boyer, *The Rainbow* (1959) 233–68. Birren, *History of Color in Painting* (1965) 21ff., 139. Horblit 79b. Dibner 148. *Printing and the Mind of Man* 172. Norman 1588. Babson 132. 41426



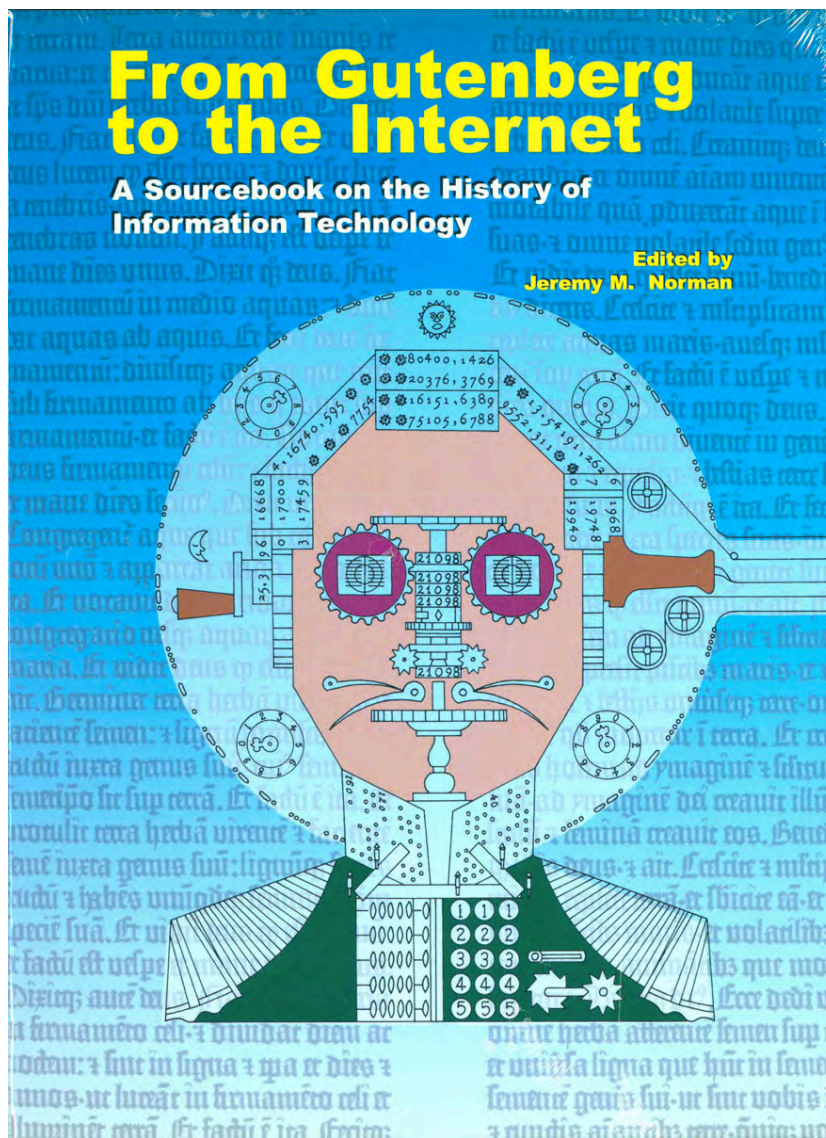
*“Principia” in English*

**60. Newton, Isaac** (1642–1727). The mathematical principles of natural philosophy. Translated into English by Andrew Motte (d. 1730). 2 vols., 8vo. [38], 320; [2], 393, [13], viii, 71pp. Engraved frontispieces and headpieces by Motte, 47 engraved plates, 2 folding tables. London: for Benjamin Motte, 1729. 201 x 121 mm. Full Cambridge-style paneled calf gilt, raised bands, in period style. Minor damp-staining, small wormhole in lower margin of last few leaves of Vol. I, with lower margin of last plate in the volume repaired, otherwise very good. 19th century owner’s signature (E. Lindsay) on Vol. I title.

\$25,000

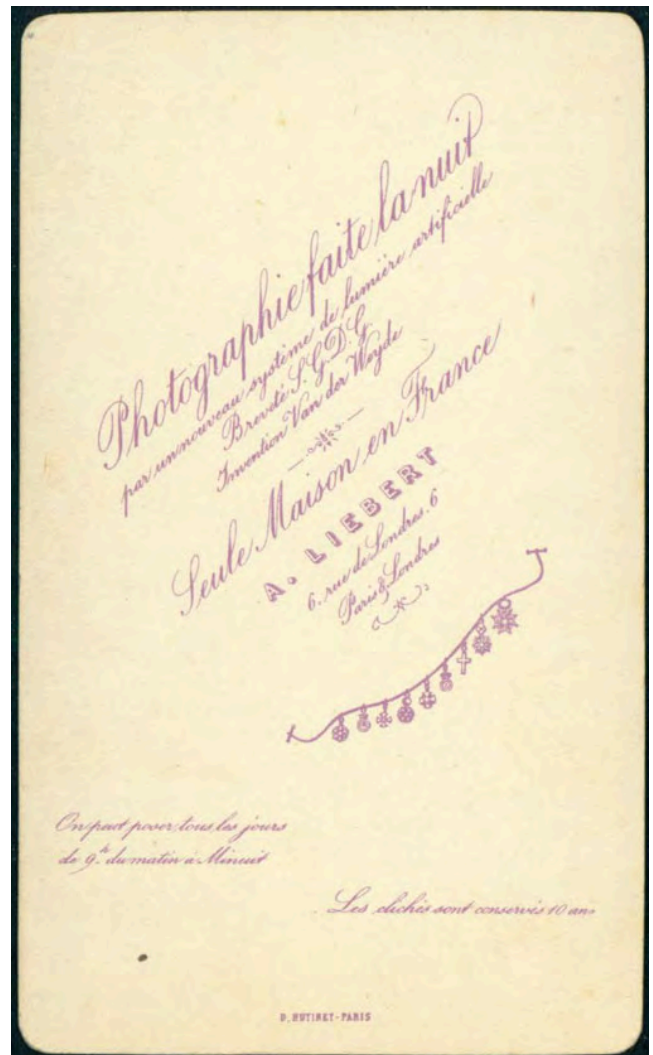
**First Edition in English** of “the greatest work in the history of science . . . The *Principia* provided the greatest synthesis of the cosmos, proving finally its physical unity. Newton showed that the important and dramatic aspects of nature that were subject to the universal law of gravitation could be explained, in mathematical terms, with a single physical theory. With him the separation of the natural and supernatural, of sublunar and superlunar worlds disap-

peared. The same laws of gravitation and motion rule everywhere; for the first time a single mathematical law could explain the motion of objects on earth as well as the phenomena of the heavens” (*Printing and the Mind of Man* 161). Motte’s translation of the *Principia* remained the only English version for 270 years, until the publication of I. Bernard Cohen and Anne Whitman’s translation in 1999. Babson 20. Norman 1587. 41443



**61. Norman, Jeremy M.**, editor. *From Gutenberg to the Internet: A sourcebook on the history of information technology*. xvi, 899pp. Illustrated. Novato: Historyofscience.com / Norman Publishing, 2005. 8-1/2 x 11 inches. Pictorial boards, laminated. \$89.50

Presents 63 original readings from the history of computing, networking and telecommunications, arranged thematically by chapters. Most of the readings record basic discoveries from the 1830s through the 1960s that laid the foundation of the world of digital information. With an illustrated historical introduction, timeline, and introductory notes. 38950

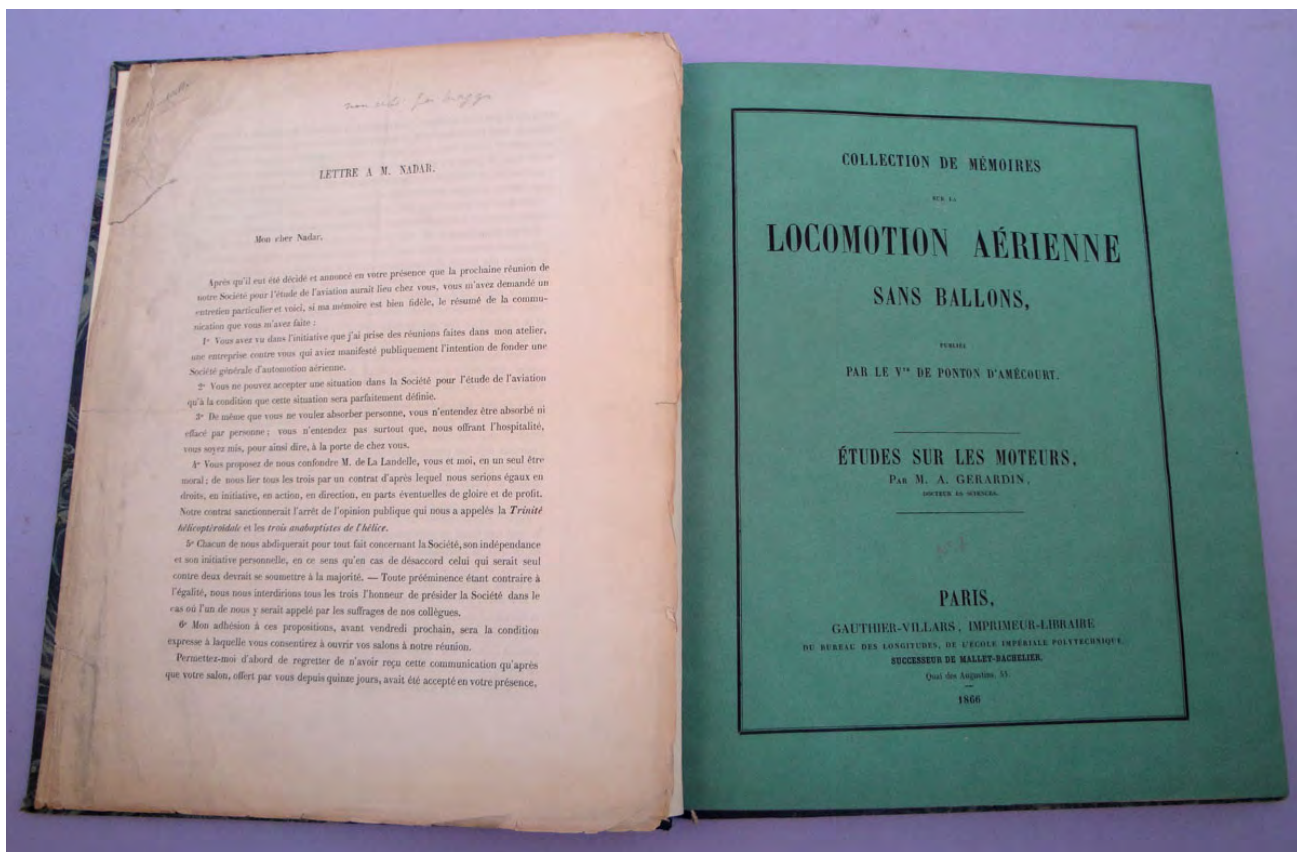


### Rare Signed Photograph

**62. Pasteur, Louis** (1822–95). Signed portrait photograph of Pasteur in middle age, by A[lp]h[on]se Liébert (1827–1914). Paris, n.d. (1879 or later). 93 x 62 mm., mounted on printed card measuring 106 x 64 mm. Pasteur’s signature (“L. Pasteur”) at the foot of the card. Very fine. \$7500

**Excellent and rare signed photograph** of Pasteur. Signed photographs of Pasteur are very scarce; those that are advertised as signed often in fact contain printed signatures. This is the first authentic autographed photograph of Pasteur that we have handled in forty years. The verso of the mount is printed with an advertisement for Liébert’s “Pho-

graphie faite la nuit”; i.e. photographs taken with artificial electric light. Liébert began advertising this service in 1879. Liébert spent some time in the American West; see Palmquist and Kailbourn, *Pioneer Photographers of the Far West* [2000], pp. 369–370. 42205



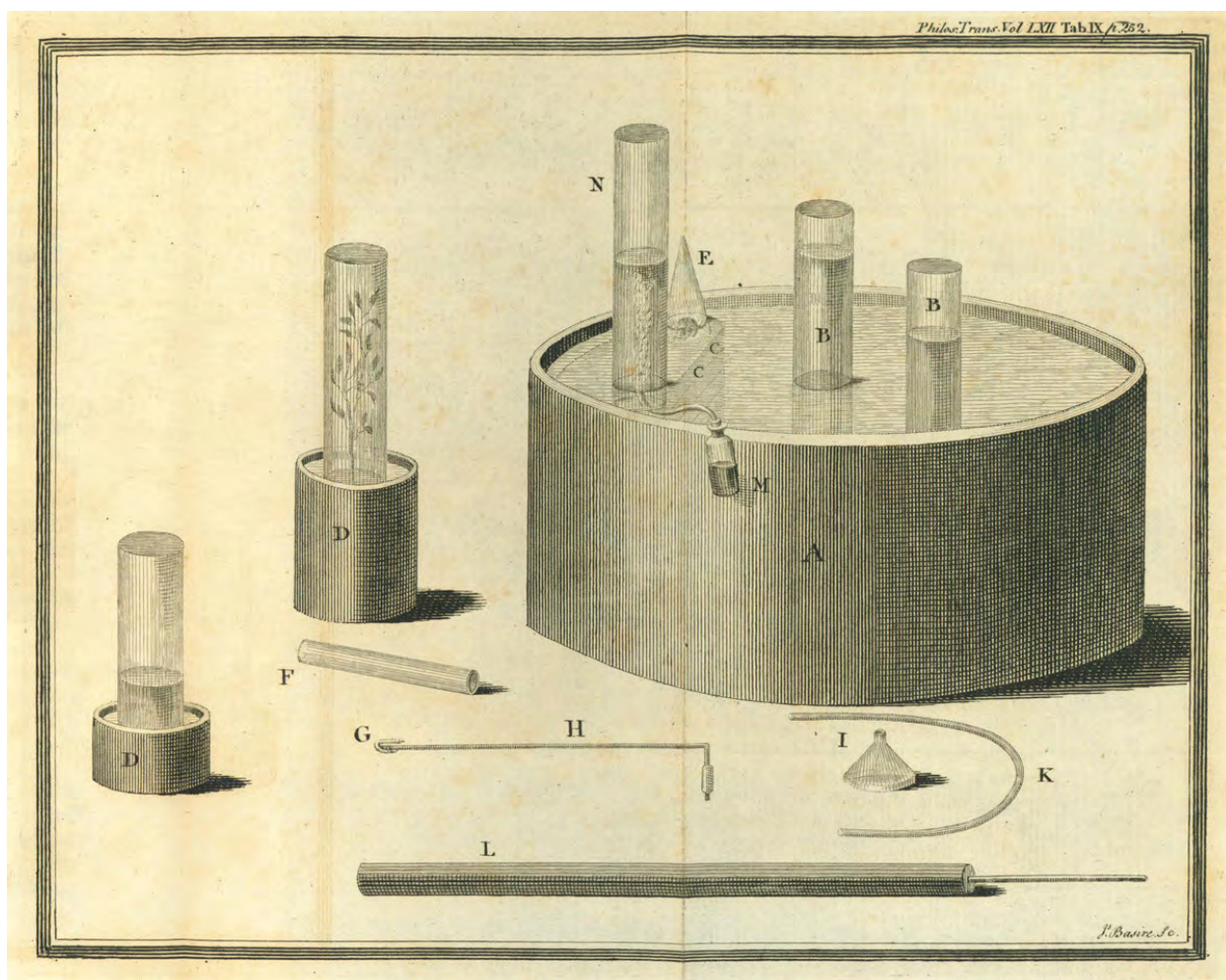
## The Helicopter

**63. Ponton d'Amécourt, Gustave, Vicomte de** (1825–88), ed. Collection de mémoires sur la locomotion aérienne sans ballons. 6 parts (continuously paginated). viii, 152pp. Text illustrations. Paris: Gauthier-Villars, 1864–67. 275 x 217 mm. 19th or early 20th century boards, cloth backstrip, original printed wrappers bound in. Bound with: Gerardin, M.A. *Études sur les moteurs*. 10, [2]pp. Paris: Gauthier-Villars, 1866. Original printed wrappers bound in. Light foxing, but very good. Laid in is a printed open letter from Ponton d'Amécourt to M. Nadar [i.e., Gaspard Félix Tournachon (1820–1910)]; 4pp.; Trilport, 12 January 1864 (soiled, edges frayed, a few tears along center fold). \$1500

**First Edition.** In 1863, after the failure of the 6000 cubic-meter balloon *Le Géant*, Jules Verne, aerial photographer Félix Tournachon (known by his nickname “Nadar”), and engineers Ponton d'Amécourt and Gabriel de la Landelle formed the “Society for the Encouragement of Aerial Locomotion by Means of Heavier-than-Air Machines.” In that same year Ponton d'Amécourt constructed a model helicopter with counter-rotating propellers and a steam engine, using “what was then a new material, aluminum . . . The steam engine drove two rotors, each of two blades, mounted one above the other. While this model did not fly successfully, the inventor exhibited and patented the idea in both France and England” (Boyne, *How the Helicopter Changed Modern Warfare*

[2011], p. 304). Ponton d'Amécourt coined the term “helicopter” to describe his new machine, forming the term from the Greek words “helicoeioas” (spiral) and “pteron” (wing). The machine is described in his “La conquête de l'air par l'hélice,” which appears on pp. 1–18 of the Collection.

This collection contains the six parts of the “Collection of memoirs on aerial locomotion without balloons” edited by Ponton d'Amécourt, together with a separate offprint of Gerardin's *Études sur les moteurs*, which appeared in the sixth part of the *Collection*. Also included is a printed letter from Ponton d'Amécourt to Nadar Tournachon regarding the formation of the Heavier-than-Air Society. 42424



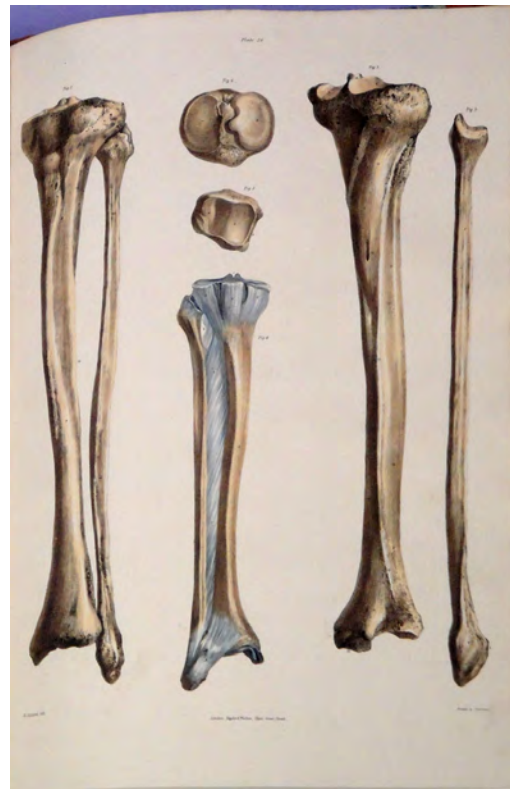
## *Pneumatic Chemistry*

**64. Priestley, Joseph** (1733–1804). Observations on different kinds of air. In: *Philosophical Transactions* 62 (1772): 147–264, 1 folding copperplate. Whole volume, 4to. xiv, 494, [2, including errata]pp. 12 (of 13) folding copperplates, lacking Plate III (not affecting the Priestley paper). London: Davis, 1772. 222 x 171 mm. Full antique calf, gilt, in period style. Small, almost invisible library blind-stamp on first and last leaves. Light foxing and toning, a few small tears in plates repaired, occasional offsetting from plates, but very good. \$3000

**First Edition.** The first of Priestley's remarkable papers on pneumatic chemistry. "In this essay Priestley showed that in air collected after the processes of combustion, respiration or putrefaction, one-fifth of the volume disappeared. He had also observed that mint grew vigorously in air tainted by animal respiration and that evidently plants reversed the process of polluting the air as respiration did. In this paper he also announced two new gases that he had obtained— nitrous oxide and carbonic oxide; these won him the Royal Society's Copley medal" (Dibner

40). Priestley's hundreds of experiments on different types of "air," carried out over several years, led to the identification of numerous gases, including ammonia, nitrogen dioxide and (most importantly) oxygen, which Priestley obtained in 1774 by heating mercuric oxide. Priestley's experiments with gases led Cavendish and Watt to discover the compound nature of water, and it was this revelation, coupled with Priestley's isolation of oxygen, that formed the experimental basis of Lavoisier's new oxidation chemistry. *Printing and the Mind of Man* 217. 42148



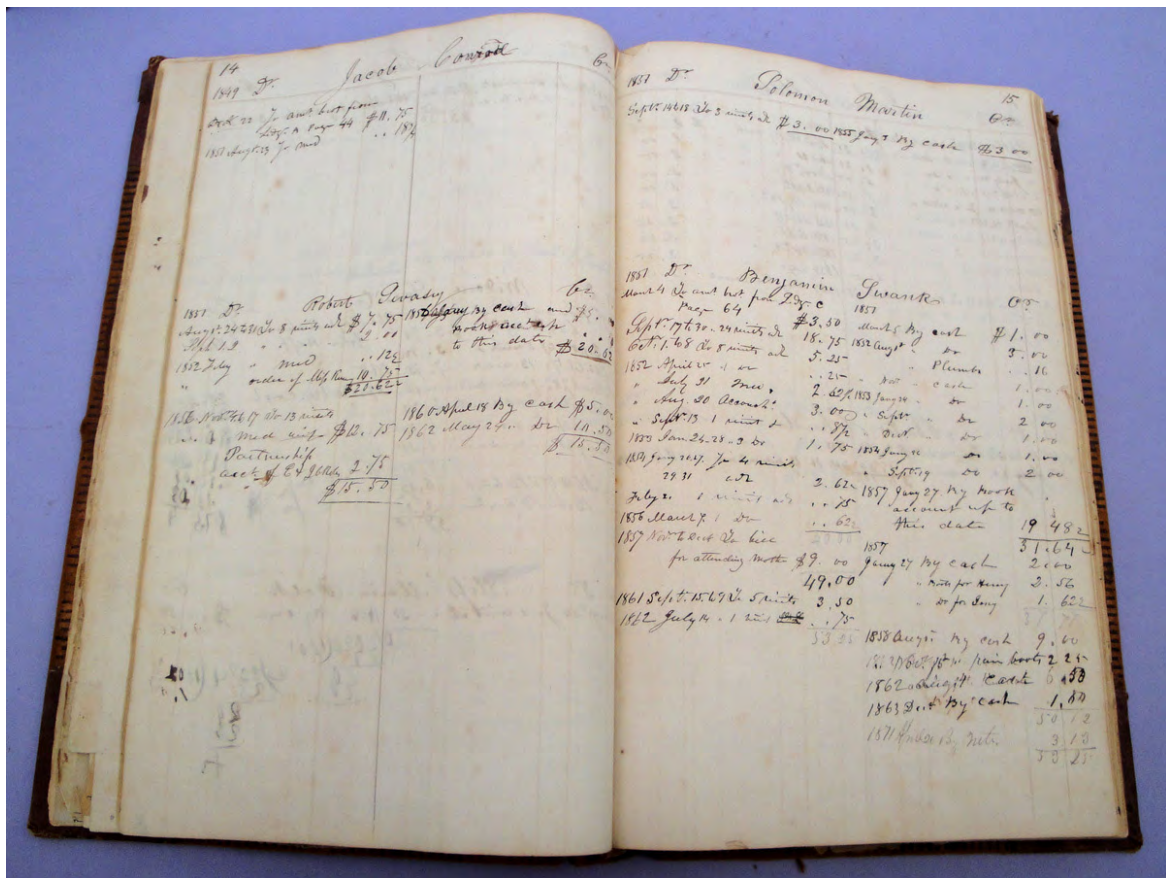


*Five Large Folio Volumes with Hand-Colored Plates*

**65. Quain, Jones** (1796-1865) & **Erasmus Wilson** (1809-84). [A series of anatomical plates.] Folio. 5 parts, separately paginated. 200 mostly hand-colored lithographed plates, by William Fairland, et al., plus a splendid lithographed frontispiece in black & white on India-paper, by Fairland after Michaelangelo. London: Taylor & Walton, 1836-42. 502 x 311 mm. Modern half calf, 19th century style. Light browning, a few minor marginal tears, inner margins of one or two plate images slightly affected by tight binding, but overall very good to fine. \$9500

**First Edition**, from parts. The most ambitious English anatomy in lithography and one of the best atlases of the nineteenth century. Most sets are uncolored, and often incomplete; our complete hand-colored set is exceptional. The five parts, published over six years, describe the muscles, blood vessels, nerves, viscera, and bones and ligaments. The section on the the brain and nerves is a classic of nineteenth century anatomy; this section has thirty-eight plates, including ten elegant colored plates of the brain and spinal cord,

and a stunning colored plate showing the distribution of the eighth pair of nerves. Quain produced in 1828 one of the most important anatomy textbooks of the era, which saw eleven editions to 1929 (see Garrison-Morton 410). Wilson, who co-edited the last four volumes and supervised the artists, is also known for his role in putting an end to flogging in the British military. Choulant / Frank 404. Garrison / McHenry 158, singling out the section on the anatomy of the nerves. *Heirs of Hippocrates* 1550. 41914



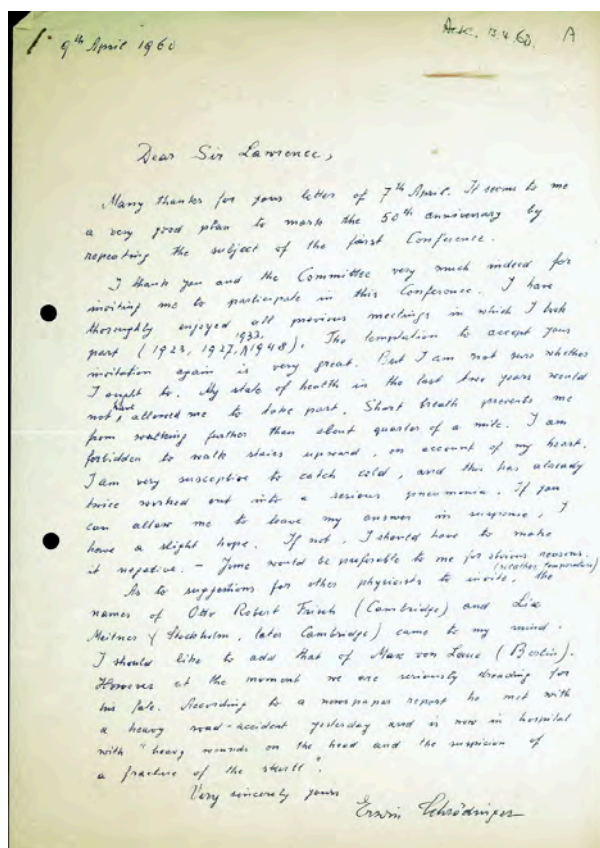
*Pennsylvania Medical Ledger*

**66. Robin, Joseph Craven** (1806–93). Manuscript medical daybook / ledger. Approx. 260pp., 19 or 20 pages pasted with clippings (primarily poetry). Northumberland County, PA, 1849–62. 328 x 203 mm. Original reverse calf stamped in black, worn. A few leaves in front loose, light toning and spotting, but a very good example. \$3500

Medical ledger and daybook of Dr. Joseph Craven Robin, the first physician to locate and practice in Elysburg, Pennsylvania. “He first read medicine with his brother William at Sunbury, completing his professional preparation at the University of Pennsylvania, and in 1828 began practice at Sunbury. The following year he removed to Elysburg, at which point he was the first physician to locate permanently, and he was in active practice there for forty-two years, his field covering all the eastern part of Northumberland County and the adjoining portions of Montour, Columbia and Schuylkill counties. He was of the old ‘saddle-bag’ doctors, and in spite of the hardships of a physician’s life in his day survived all his fellow practitioners who were in practice at the time his career began, living to the advanced age of eighty-seven years. He retired from active professional labors about 1870” (Floyd’s Northumberland County Genealogy).

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Robins apparently shared his practice with another physician, Dr. S. C. Rotherwell (also spelled Roderwell). His ledger records patient names, charges due and payments made, and the trades of several of his patients (e.g. mason, tinner, tanner, miller, blacksmith). Robins seems to have been a lover of sentimental verse, as he pasted dozens of examples cut from newspapers and magazines into his ledger. One of the first few leaves has a large printed image of a hymnbook pasted to it (obscuring some earlier manuscript entries); the following pages have tipped-on cuttings illustrating a train wreck. “Floyd’s Northumberland County Genealogy Pages 611 Thru 634.” USGenWeb Archives – Census Wills Deeds Genealogy. Web. 26 Jan. 2012. 42428



### From One Nobel Laureate to Another

**67. Schrodinger, Erwin** (1887-1961). Autograph letter signed, in English, to [William] Lawrence Bragg (1890-1971). 1 page. Vienna, 9 April 1960. 302 x 210 mm. Staple in upper left corner, two holes punched in left margin (not affecting text), otherwise fine. With carbon typescript of Bragg's letter to Schrodinger of 7 April, to which the present letter is a response. \$5000

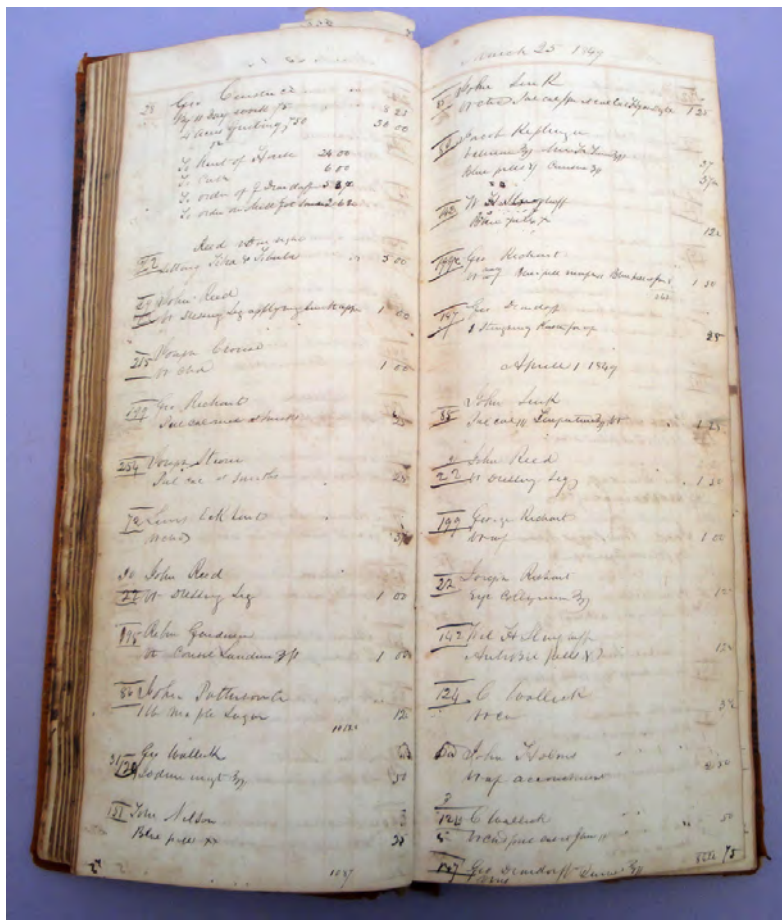
A fine autograph letter from one Nobel laureate to another—Schrodinger received a share of the 1933 physics prize (together with Paul Dirac) for his discovery of new productive forms of atomic theory, including the development of wave mechanics; and Bragg shared the 1915 prize with his father, William Henry Bragg, for their contributions to the analysis of crystal structure by means of x-rays. On 7 April 1960 Bragg wrote to Schrodinger to invite him to the 12th Solvay Conference, planned for June or October 1961, and also asked him to suggest some appropriate invitees. Schrodinger, who was 73 and in poor health, replied that he would likely not be able to attend:

I have thoroughly enjoyed all previous meetings in which I took part (1923, 1927, 1933, 1948). The temptation to accept your invitation again is very great. But I am not sure whether I ought to. My state of health

in the last two years would not have allowed me to take part. Short breath prevents me from walking further than about quarter of a mile. I am forbidden to walk stairs upward, on account of my heart. I am very susceptible to catch cold, and this has already twice worked out into a serious pneumonia . . .

As to suggestions for other physicists to invite, the names of Otto Robert Frisch (Cambridge) and Lise Meitner (Stockholm, later Cambridge) came to my mind. I should like to add that of Max von Laue (Berlin). However at the moment we are seriously dreading for his fate. . . .

Laue had been in a serious automobile accident on April 8; he died of his injuries two weeks later. Schrodinger himself died in early 1961. 42420



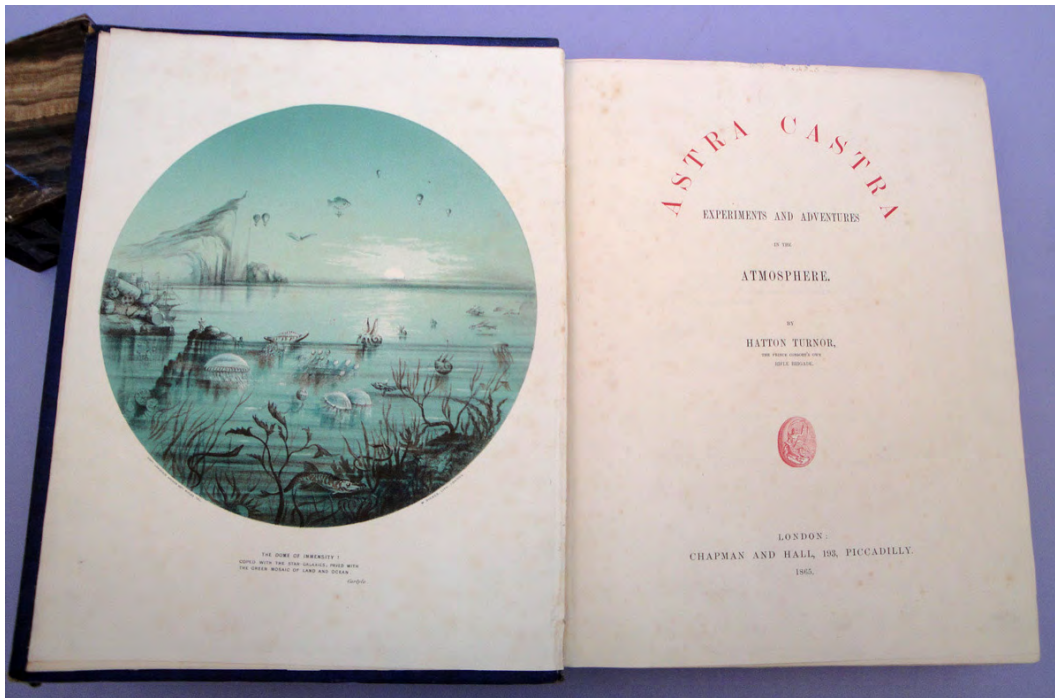
## Ohio Medical Ledger

**68.** [Slingluff, Joseph(?)]. Manuscript medical ledger. Ca. 450pp., the first 137 with manuscript page numbers. Dover, Ohio, September 1847 – August 1854. 385 x 160 mm. Original reverse calf stamped in black, worn and rubbed. One leaf (pp. 46-47) torn out, light soiling and toning, upper portion of front flyleaf cut away but a very good example. Several manuscript sheets with text and figures laid in.

\$2750

The manuscript ledger of an extremely active physician and landowner in Dover, Ohio, most likely Dr. Joseph Slingluff, who began his medical practice at Dover in 1828 and served as the town's first mayor when it was incorporated in 1842. Slingluff belonged to one of Dover's founding families: The initial settlement land (2175 acres) was purchased from Col. James Morrison of Kentucky in 1806 by Jesse Slingluff and his brother-in-law Christian Deardorff. The Deardorff and Slingluff names feature prominently in our ledger. Dover's prosperity increased dramatically with the building of the Erie Canal, as the canal's

only tolling station was located there; the population grew from 46 in 1820 to nearly 600 in 1840, and the town became a flour mill and warehouse center. This prosperity is reflected in Dr. Slingluff's ledger, which records that he often saw more than 10 patients a day; the ledger also contains records of real estate owned by the doctor (including a small plat map) and the construction costs of his house. At the back are two pages recording difficult obstetric cases. Mansfield, *The History of Tuscarawas County, Ohio* (1884), p. 543 and *passim*. 42427



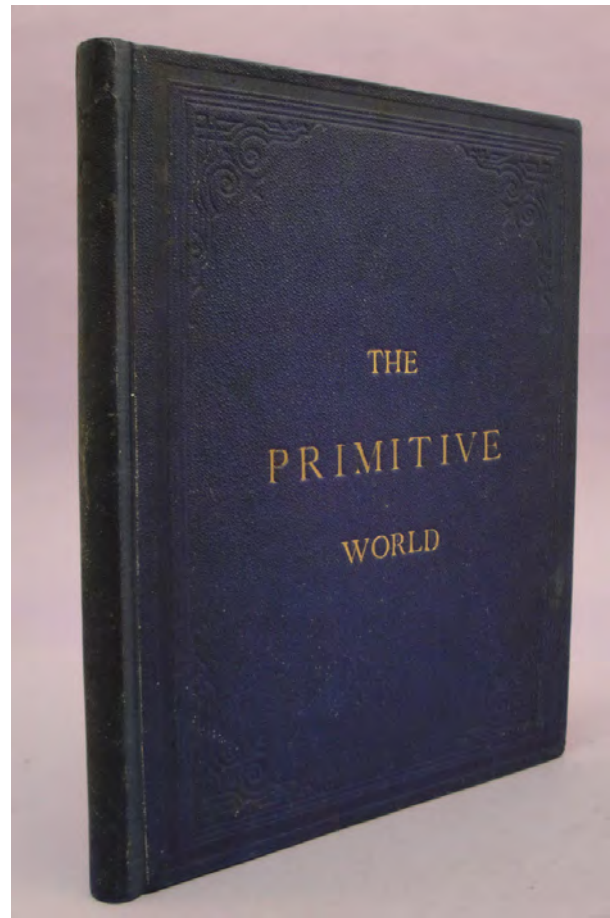
Edmund Turner from his affec<sup>ate</sup>  
 brother Hatton -  
 In lieu of many letters that  
 would have been written during the  
 years 1863-64 whilst he was travelling  
 in India, Australia, & New Zealand.

### *Presentation Copy of a Rare Aviation Work*

**69. Turnor, [Christopher] Hatton** (1840-1914). *Astra castra: Experiments and adventures in the atmosphere*. xxiii, 530pp. 35 plates, including chromolithograph frontispiece, photographic print tipped to dedication page, text illustrations. London: Chapman and Hall, 1865. 326 x 252 mm. Original cloth stamped in gilt and blind, some wear at spine and corners, light spotting. Frontispiece starting, minor insect damage to upper margin of title, light foxing, but very good. *Presentation Copy*, inscribed by the author on the front flyleaf: "Edmund Turner from his affecate brother Hatton—In lieu of many letters that would have been written during the years 1863-64 whilst he was travelling in India, Australia & New Zealand." Bookplate of Turnor's son, Christopher Turnor (1873-1940). \$2750

**First Edition.** A vast and remarkable Victorian compendium of aeronautical literature from mythological times to the 1860s. Turnor focused primarily on ballooning and other lighter-than-air flight, although there are a few references to heavier-than-air flight attempts. The work contains 22 portraits of balloonists, and lists the names of the first 500 people to ascend in balloons, giving the dates and places of

their first ascents and noting that only ten of them had been killed in ballooning accidents. Turnor presented this copy to his brother, Edmond Turnor (1838-1903), a Conservative Party politician who served in the House of Commons from 1868 to 1880. The copy was later in the library of Hatton Turnor's son, Christopher Turnor, the noted architect and social reformer. 42425



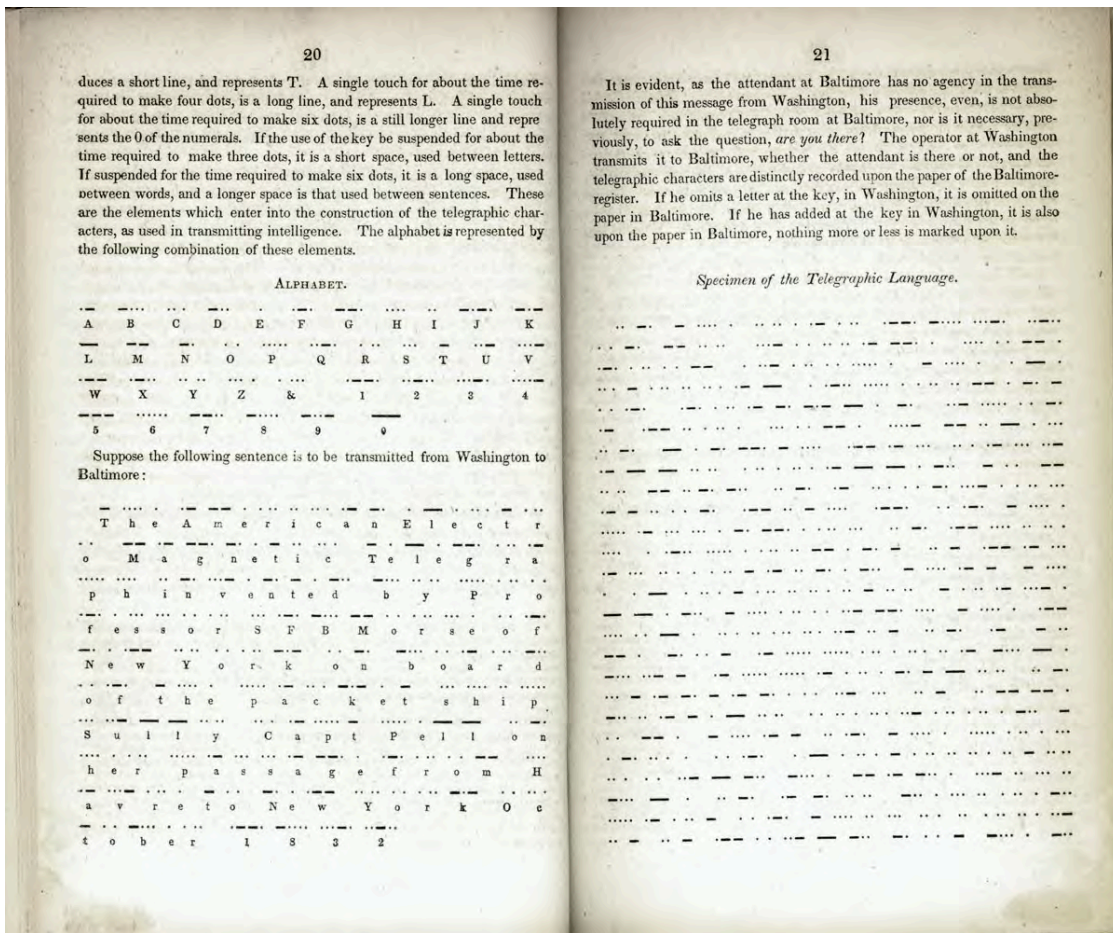
## Victorian Dinosaurs

**70. Unger, Franz** (1800–1870). Ideal views of the primitive world, in its geological and palaeontological phases. Edited by Samuel Highley. Illustrated by seventeen photographic prints. Frontispiece an albumin print mounted on heavy stock, [2,] 8, 15 leaves of heavy stock on which are mounted 16 albumin prints of artist's rendition of geological eras, each with a separate leaf of explanatory text printed on one side. London: Taylor & Francis, [1859 or 1863.] 272 x 210mm. Original cloth, recased, spine repaired, gilt edges. Occasional minor foxing, but a good copy with the photographs in excellent, unfaded condition. One of 250 copies. \$3750

**First Edition in English**, limited to 250 copies so that “the requisite perfection in the photographs may be sustained” (preface). Unger, a Viennese botanist, created a series of 14 tableaux that depicted the “primitive world,” as it might have appeared at various times, such as the “Devonian Period,” or the “Coal Period.” The next to last plate in this work shows the “Diluvium” or the world of the Ice Age. The version of this image in this book is probably the earliest image of the Ice Age published in England.

The frontispiece of the English translation is a photograph of reduced-size recreations of extinct animals by the famous natural history artist Water-

house Hawkins, originally created “life-size” for the Great Exhibition of 1851. No photographs of the life-size versions were ever taken, possibly because of lighting problems; therefore this photograph is the only exact record of the earliest three-dimensional representations of various extinct animals, including “Iguanodon, Pterodactyle, Megalosaurus, Ichthyosaurus, Hylaeosaurus, Plesiosauri, and Labyrinthodon.” The photograph illuminates how scientists at the time conceived of the appearance of these fossil creatures, most of which had been discovered in the early decades of the 19th century. 42252



## Morse Code

**71. Vail, Alfred** (1807–59). Description of the American electro magnetic telegraph: Now in operation between the cities of Washington and Baltimore. 24pp. Woodcut text illustrations. Washington: J. & G. S. Gideon, 1845. 221 x 140 mm. Bound with 2 other works on the telegraph in 19th century boards, cloth backstrip, hand-lettered spine label and library label, corners worn. Light toning but very good. Library bookplate. \$2250

**First Edition.** Probably the first publication of the standardized Morse code, the first widely used data code. On May 24, 1844 Samuel F. B. Morse transmitted the first telegraph message (“What hath God wrought?”) on an experimental telegraph line strung between Baltimore and Washington D.C., using the version of “Morse code” that became standard in the United States and Canada. The recipient of the message was Albert Vail, Morse’s partner in developing the telegraph. Vail, who had worked with Morse since 1837, expanded Morse’s original experimental numeric code (based on optical telegraph codes) to include letters and special characters so that it could be used more generally. Vail determined the frequency of use of letters in English by counting the

moveable type he found in the typecases of a local newspaper. The code consisted of arrangements of shorter marks (“dots”) and longer marks (“dashes”); the letters most commonly used were assigned shorter sequences of dots and dashes. Vail was thus responsible for inventing the most useful and efficient features of Morse code. Vail published the code in 1845 in the present pamphlet and in a 208-page book; the pamphlet most likely preceded the book. This copy of Vail’s pamphlet is bound with two later works on the telegraph: Moses Johnson’s *A Brief and Simple Explanation of the Electro-Magnetic Telegraph* (Cincinnati, 1847); and Gardiner G. Hubbard’s *The Proposed Changes in the Telegraphic System* (Boston, 1873). *Origins of Cyberspace* 208. 41173



## On the Fabric of the Human Body

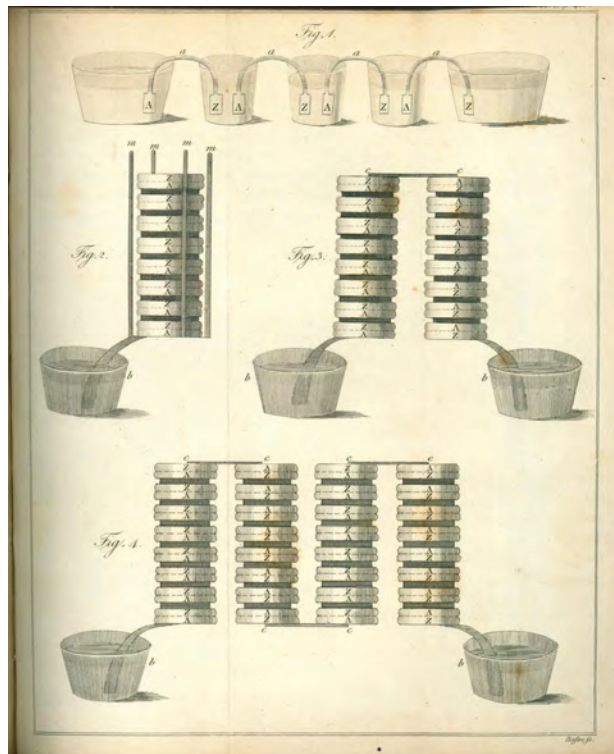
**72. Vesalius, Andreas** (1514–64). De humani corporis fabrica libri septem. Folio. [12], 824, [48]pp. Woodcut title, portrait, 2 woodcut folding plates, text woodcuts. Basel: Oporinus, 1555. Rebound in period style in alum-tawed blind-tooled pigskin over beech boards, brass clasps with catches, by Sean Richards. Repairs to title and a few other leaves, including plates. Very good. \$95,000

Second edition of the founding work of modern anatomy, containing the most beautiful and famous illustrations in the history of medicine, attributed to Jan van Calcar of the school of Titian. The 1555 edition was printed on heavier paper with larger type “with only 49 instead of 57 lines to the page, thus necessitating the recutting of all the small initial letters so that they would now fit seven lines of the new type. Indeed, an entirely new wood-block was cut for the frontispiece . . .

“Vesalius made some definite improvements in the text which have been cited by Garrison, such as con-

cern the ethnic aspects of craniology, but more particularly in connection with his physiological observations in the last chapter, viz., (i) the effect of nerve section [p. 810, lines 22–34], (ii) persistence of life after splenectomy [p. 820, lines 26–31], (iii) collapse of the lungs on puncture of the chest [p. 821, lines 25–31], (iv) aphonia from section of the laryngeal nerve [p. 823, lines 25–31], (v) prolongation of life by artificial intratracheal inflation of collapsed lungs [p. 824, lines 8–14]” (Cushing, pp. 90–92). Cushing, *Bio-Bibliography of Andreas Vesalius*, VI.A.–3. 42429





*Invention of the Electric Battery;  
Discovery of the Infra-Red Rays*

**73. Volta, Alessandro** (1747–1827). (1) On the electricity excited by the mere contact of conducting substances of different kinds. In: *Phil. Trans.* 90, part 2 (1800), pp. 403–31. Folding plate (famous illustration of voltaic pile). **With: Herschel, Frederick William** (1738–1822). (2) Investigation of the powers of the prismatic colours to heat and illuminate objects. Experiments on the refrangibility of the invisible rays of the sun. Experiments on the solar, and on the terrestrial rays that occasion heat. In: *ibid.*, pp. 255–326; 437–538. 12 folding plates. Whole volume, 4to. vi, 238, 26, [4], 239–436, [4], 437–732, [8] pp. 33 plates. London: W. Bulmer for Peter Elmsly, 1800. 218 x 164 mm. Full antique calf, gilt in period style. Light foxing, offsetting and toning, title leaf repaired, margins trimmed causing the loss of several plate numbers but not otherwise affecting the images or text. Very small, almost invisible library blind-stamps on title and last leaves. Very good copy. \$9500

(1) **First Edition.** Volta’s epochal paper (in French), describing the voltaic pile, the first electric battery. In his paper, addressed to Sir Joseph Banks at the Royal Society, Volta described two types of battery (the pile and the “crown of cups” filled with salty or alkaline water and connected by bimetallic arcs), and, in a rebuttal to the Galvanists, represented his apparatus as being fundamentally the same as the natural electricity-producing organs of the torpedo fish. By providing a source of continuous, controllable electric current, Volta’s battery revolutionized the theory and practice of electricity. The voltaic pile made possible the experiments leading to the decom-

position of water, electro-deposition of metal, and creation of the electro-magnet, initiating the electrical age. *Printing and the Mind of Man* 255. Horblit 37b. Dibner 60.

(2) **First Editions** of Herschel’s three papers announcing his discovery of infra-red rays. Herschel “made some delicate experiments at one end of the spectrum with a thermometer and discovered that when sunlight was refracted by a prism, invisible heat-rays fell outside the visible spectrum, being less refracted than red light. He had, in fact, discovered the infra-red rays” (*Printing and the Mind of Man* 254).

42151



## *The Van der Waals Equation*

**74. Waals, Johannes Diderik van der** (1837–1923). *Over de continuïteit van den gas- en vloeistoofstoestand*. 8vo. viii, 134 [2]pp. Fold. plate. Leiden: A. W. Sijthoff, 1873. 227 x 143 mm. Original blind-stamped and embossed cloth, front hinge expertly repaired, very slight wear at extremities and corners. Minor foxing on first and last leaves but otherwise a very good copy. From the library of historian of physics Jagdish Mehra (1931–2008). \$4500

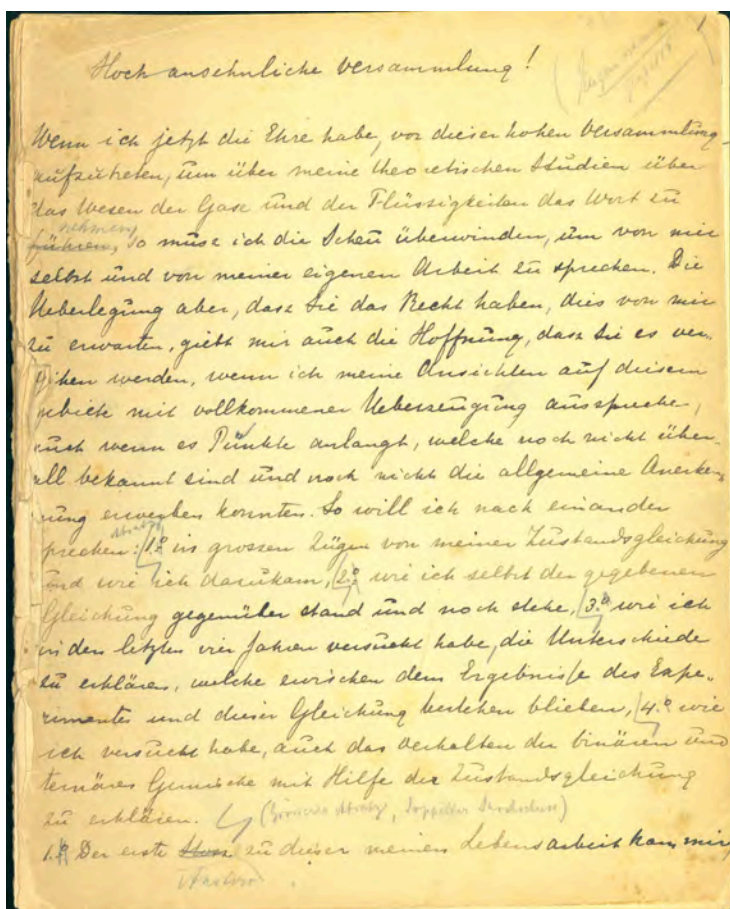
**First Edition** of van der Waals's classic 1873 dissertation on the continuity of gaseous and liquid states, which introduced the van der Waals equation, an equation of state approximating the behavior of real fluids.

Van der Waals' idea of continuity was that there is no essential difference between gaseous and liquid states of matter, although one must consider other factors in addition to motion of the molecules in the determination of pressure. The important factors are the attraction between particles and their proper volume. . . . From these considerations van der Waals arrived at the equation

$$(p + a/v^2) (v-b) = RT$$

where  $a$  expresses the mutual attraction of the molecules, and  $b$  is their volume. . . . Other experimenters have suggested different models and equations of state, but van der Waals's model is probably the most useful because it emphasizes the essential features of molecules that determine liquidity, without introducing too many 'realistic' complications. . . . An important practical application of the theory is the prediction of conditions necessary for the liquefaction of a gas; this was an important guide in the liquefaction of the 'permanent' gases (Weber, *Pioneers of Science*, p. 41; see also p. 40).

Van der Waals was awarded the Nobel Prize for physics in 1910 for his work on the equation of state of gases and liquids described in his thesis. 42399



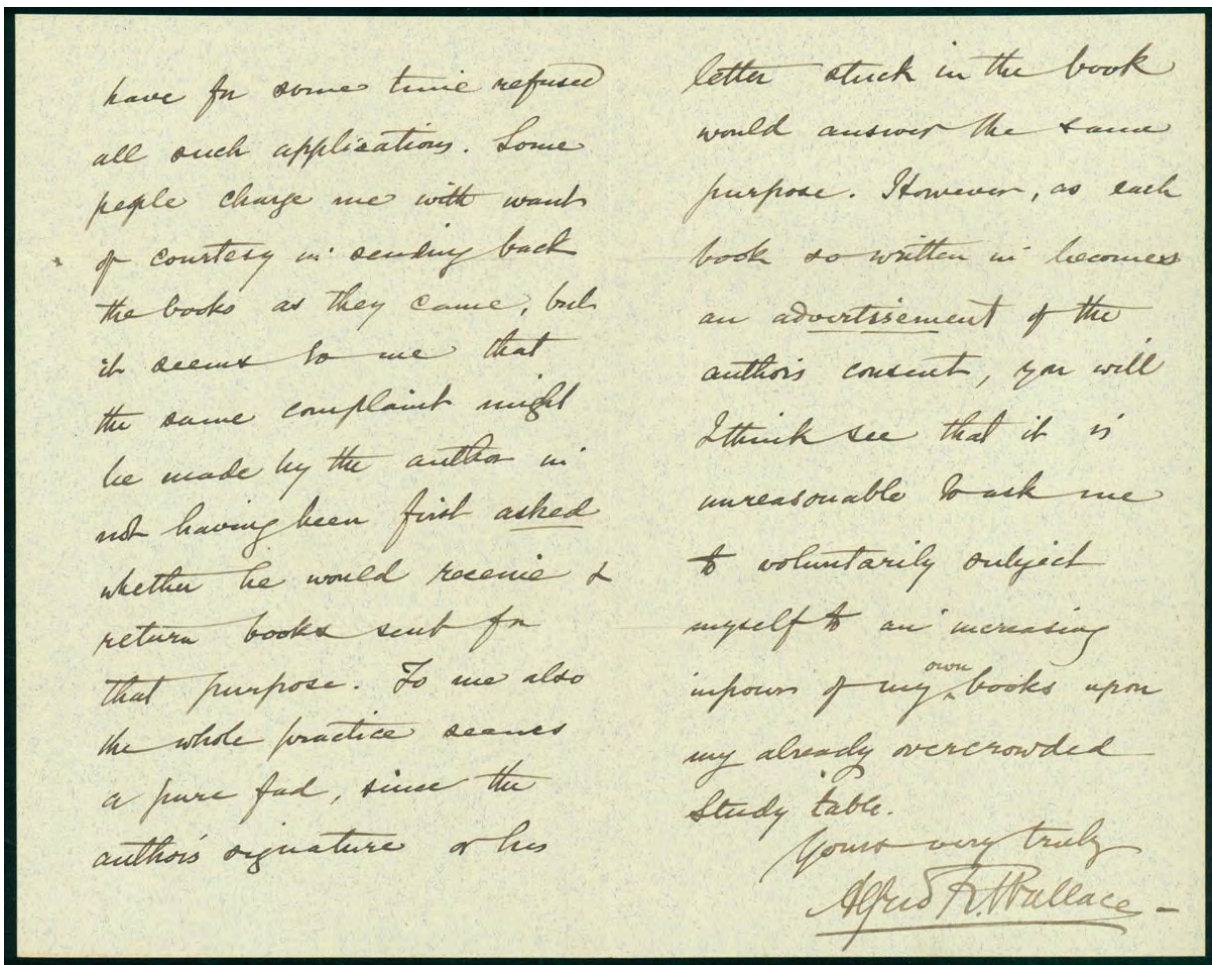
### Autograph Manuscript of van der Waals's Nobel Lecture

**75. Waals, Johannes Diderik van der** (1837–1923). [The equation of state for gases and liquids.] Autograph manuscript in German, written in ink with ink and pencil emendations; marked for use as printer's copy. 24ff. 210 x 171 mm. Light toning, small marginal dampstain on last leaf, left margins a bit frayed minimally affecting text, but very good. \$60,000

**Original Manuscript** of van der Waals's Nobel lecture, delivered in December 1910. Holograph manuscripts of Nobel lectures are very rare, and this is an exceptionally early example from a major figure in the history of modern physics.

Van der Waals was awarded the Nobel Prize for physics that year for his work on the equation of state of gases and liquids, in particular for the “van der Waals equation” approximating the behavior of real fluids, introduced in his classic 1873 dissertation on the continuity of gaseous and liquid states (see above). In his Nobel lecture van der Waals summarized his life's work on equation of state theory, describing how he had come to formulate the van der Waals equation and the equation's experimental corroboration by Sydney Young, an event that had given van der

Waals “great joy.” “The laureate went on to detail his most recent work, which he termed ‘pseudo association’ (the ‘van der Waals force’) to distinguish it from chemical bonding. The only way to achieve agreement between the equation of state and laboratory data, he maintained, was to postulate the existence of large complexes of molecules, especially in liquids. . . . In the conclusion to his address, van der Waals said, ‘In all my studies I was quite convinced of the real existence of molecules . . . I never regarded them as a figment of my imagination, nor even as mere centers of force effects.’ He noted that ‘the real existence of molecules is universally assumed by physicists,’ and that his theory ‘may have been a contributing factor’ (Magill, *The Nobel Prize Winners: Physics*, pp. 150–51. 42419



“Here I Draw the Line”

**76. Wallace, Alfred Russel** (1823-1913). Autograph letter signed to G. M. Philips. Broadstone, Dorset, Jan. 24, 1903. 3-1/2 pp. 183 x 115 mm. Fine. \$1250

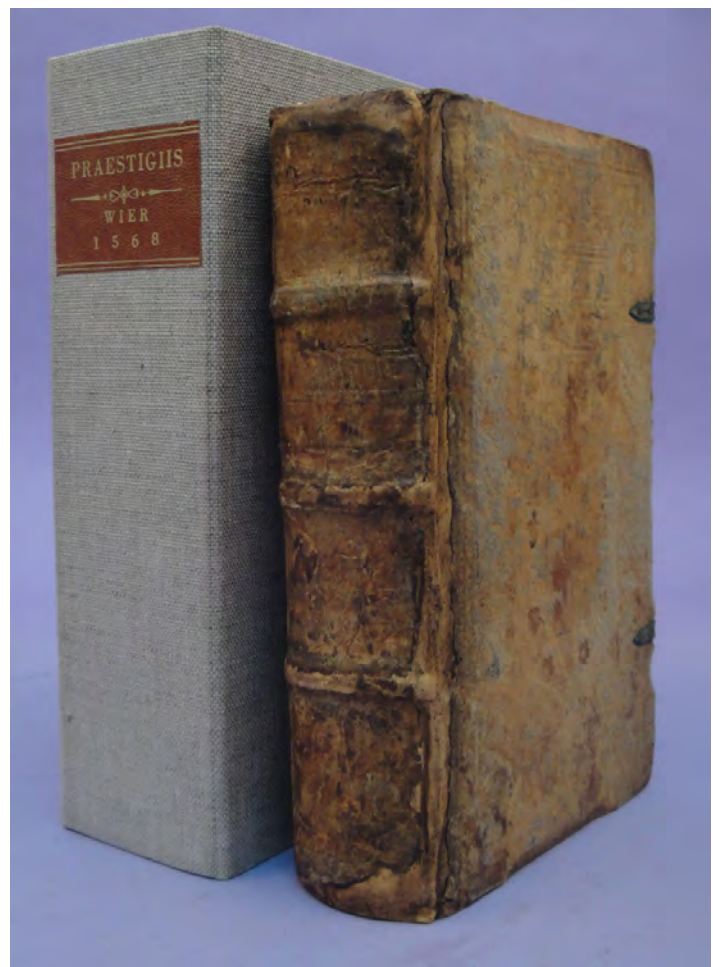
From the eminent British naturalist and co-founder of the theory of evolution by natural selection; a rather testy response to an autograph seeker:

I have frequent applications for my autograph & these I never refuse, but of late years the practice has arisen, in America, of sending their own books to authors for them to write in. Here I draw the line.

The task upon one's time & patience in unpacking such books, writing in them & repacking, amid the large daily correspon-

dence & other work is too much . . . Some people charge me with want of courtesy in sending back the books as they came, but it seems to me that the same complaint might be made by the author in not having been first asked whether he would receive & return books sent for that purpose. . . .

In a postscript to his hapless correspondent, Wallace noted that “you packed the book in such flimsy paper that even the inner cover arrived torn and with holes in the corners!” 42403



**77. Weyer [Wier], Johann** (1515–88). *De praestigiis daemonum, et incantationibus ac veneficiis libri sex, aucti & recogniti*. 8vo. 697, [55, index]pp. Woodcut illustration. Basel: ex officina Oporiniana, 1568. 195 x 122 mm. Blind-tooled pigskin over wooden boards, brass clasps, rebaked retaining original spine, rear endpapers renewed, some staining; boxed. Very good. Copious notes in an early hand on front endpapers, title and verso title. \$4000

Fourth edition, revised and enlarged. Originally published in 1563, Weyer's *De praestigiis daemonum* was the first major European work to take an empirical, scientific approach to the study of mental illness; it also represents one of the most celebrated exposés of the witchcraft delusion. Defying the authorities of the Inquisition and the doctrines of the *Malleus maleficarum*, which assumed the reality of witchcraft and demonic possession, Weyer asserted that most witches were actually suffering from mental illness. He backed his claim with careful descriptions of a number of case histories from his own clinical experience, containing some of the earliest references to purely psychological treatment. To emphasize the superstitious ignorance of doctors who adhered to demonological

theory, Weyer analyzed the effects of the stupefying and hallucinatory drugs used in sixteenth-century medicine, attributing many aspects of witchcraft to their effects. He recognized the relationship between a highly suggestible temperament and mental instability, and described the phenomenon of mass contagion of mental illness. Weyer “was the first clinical and the first descriptive psychiatrist to leave to succeeding generations a heritage which was accepted, developed and perfected into an observational branch of medicine. . . . He reduced the clinical problems of psychopathology to simple terms of everyday life and of everyday, human, inner experience” (Zilboorg & Henry, p. 228). Garrison–Morton 4916 (first ed.). Zilboorg & Henry, pp. 208–235. 41532



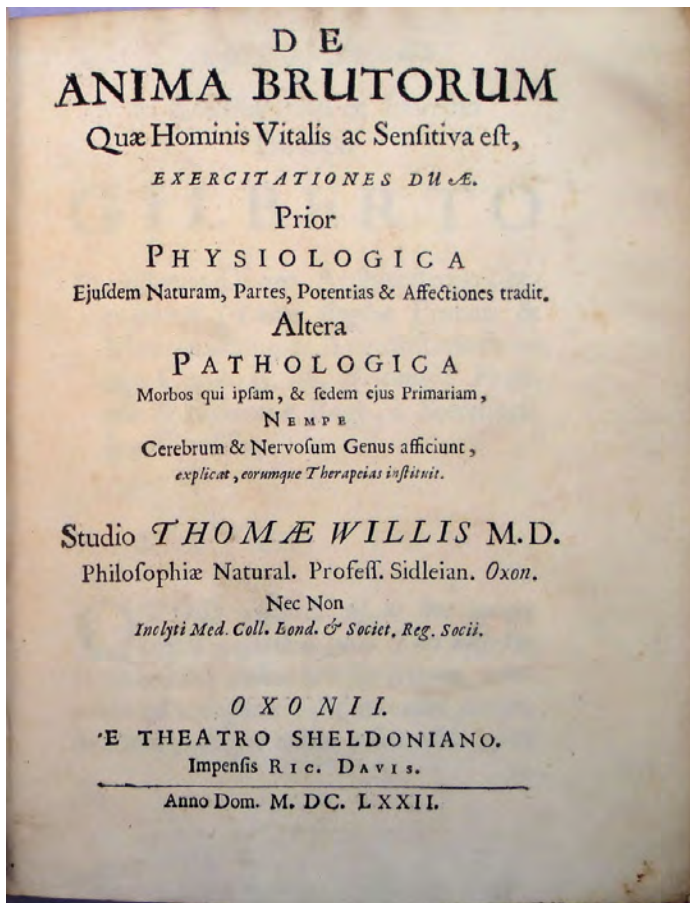
## Introduction of the Term “Neurology”

**78. Willis, Thomas** (1621–75). *Cerebri anatomie: Cui accessit nervorum description et usus*. 8vo. [30, including imprimatur leaf], 240pp. 15 folding plates, unsigned but drawn by Christopher Wren (1632–1723) and Richard Lower (1631–1691), and probably engraved by David Loggan (1635–1692). London: Tho. Roycroft for Jo. Martyn and Ja. Allestry, 1664. 168 x 100 mm. Modern paneled calf in antique style. Small paper flaws in last two leaves, affecting a few words of text, a few tears in plates 9 and 10, small marginal wormhole at end, but very good. \$7500

**First Octavo Edition**, issued a few weeks after the quarto edition (now quite scarce). One of the foundations of neuroanatomy, and the birthplace of the term “neurology.” Dissatisfied with the imperfect and fragmentary descriptions in earlier accounts of the brain, Willis devised a comprehensive and comparative program of brain dissections, which he carried out with the aid of his pupils Christopher Wren, Richard Lower and Thomas Millington. Willis classified and described ten pairs of cranial nerves, six of which are still recognized, and was the first to grasp the physiological significance of the “circle of Willis,” the circle of anastomosed arteries at the base of the brain by which full circulation to all parts of the brain can be maintained even when the carotid or vertebral

arteries are blocked. From his observations of animal brains, Willis hypothesized that the convoluntary complexity of the human cerebral cortex is correlated with man’s superior intelligence, and that the cerebellum, a similar structure in all mammals, is the source of involuntary action.

*Cerebri anatomie* was issued in both a quarto and an octavo edition, the quarto edition appearing a few weeks before the cheaper octavo edition. The copperplates were engraved with the pagination of the quarto edition, which was corrected in manuscript for the octavo publication. Garrison–Morton 1378. Norman 2243 (quarto ed.). Rose & Bynum, pp. 195–203. Wing W-2824. 41450



### *Foundation Work of Neurology*

**79. Willis, Thomas** (1621–75). *De anima brutorum quæ hominis vitalis ac sensitiva est, exercitationes duæ*. 4to. [58, including imprimatur leaf, errata leaf and longitudinal title label], 16, 33–565 [i.e., 563], [II, index]pp. Lacking the 5–page catalogue of books of Richard Davis at the end, as often. 8 engraved plates. Oxford: E Theatro Sheldoniano; impensis Ric. Davis, 1672. 203 x 153 mm. Calf ca. 1672, rebacked and corners repaired, front free endpaper renewed. Fine, crisp copy. \$15,000

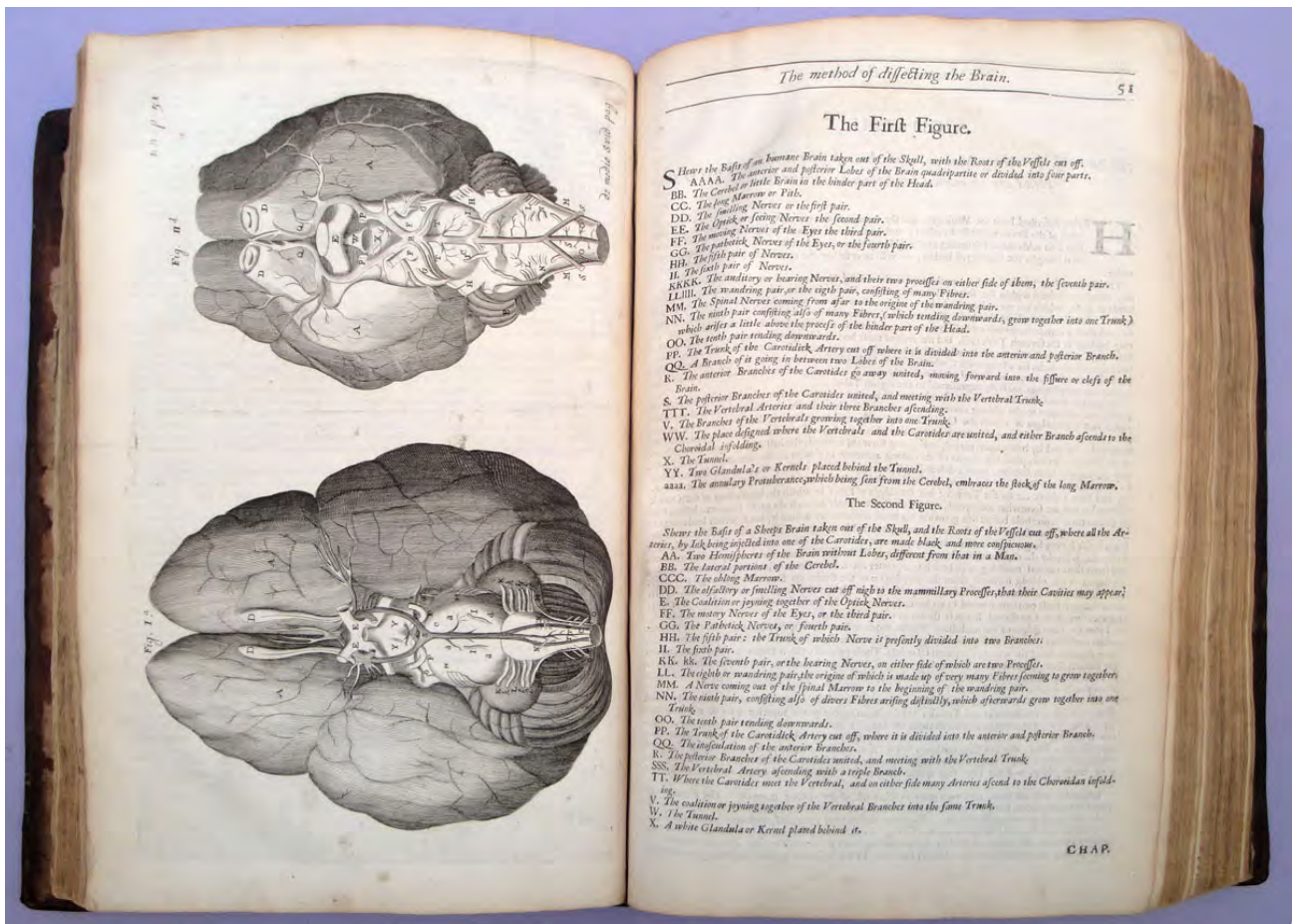
**First Edition, Oxford Issue** of one of the foundation works of neurology. Willis’s anatomical and clinical study *On the soul of brutes* is based upon the matured version of his theory of the soul, a refutation of Cartesian theory. Unlike Descartes, Willis believed that man has two souls, an immortal and uniquely human rational soul, and a mortal animal soul shared by all members of the animal kingdom. In his discussion of the sensitive soul Willis recapitulated the neurological concepts he had introduced in *Cerebri anatome*, particularly localization, and extended them to invertebrates with some of the first detailed dissections made of the oyster, earthworm and lobster. He attributed a wide range of diseases to neurological disturbances, among them headache, lethargy, melancholy, apoplexy, frenzy and paralysis,

but recognized the difference between the symptoms of organic brain disease from those of mental illness, which he attributed to disordered animal spirits. He gave what is probably the first account of general paralysis of the insane (Part II, ch. 9), as well as the first description of schizophrenia (Part I, ch. 8), and described the auditory phenomenon now known as “paracusis of Willis” in his chapter on hearing (Part I, ch. 14). “Willis’s ideas of cerebral localization were the impetus for a line of experimental work traceable into the early nineteenth century. His notion of the corporeal soul in the nervous system, and the disorders to which it was prone, was both a contribution to comparative psychology and the beginnings of modern concepts of neurology. His speculations on the involuntary functions of the ‘intercostal’ and

‘vagal’ nerves provided the foundation of our knowledge of the autonomic nervous system” (*Dictionary of Scientific Biography*).

Wing lists two quarto and two octavo “editions,” each with a different imprint. The two quarto “editions” are actually issues, as they consist of identical sheets bound with different title-leaves (Oxford and London imprints). The quarto issues have traditionally been considered prior to the octavo versions. Clarke & O’Malley, pp. 472-474. Garrison-Morton 1544; 4793; 4966. Hall, *Physiology* I, pp. 321-325. Hunter & Macalpine, pp. 187-192. Norman 2244. Wing W-2825. 41461





## Only Complete Edition in English

**80. Willis, Thomas** (1621-75). Dr. Willis's practice of physick, being the whole works of that renowned and famous physician . . . Folio. [26], 152, [14], 158, [4], 96, [8], 143, [8], 218, 145-160, [8], 96, 105-234, [8]pp. 36 plates on 35 plate leaves. London: T. Dring, C. Harper and J. Leigh, 1684. 312 x 195 mm. Calf c. 1684, rebacked, corners repaired. Marginal repairs to first and last few leaves, light soiling and toning, a few fox-marks, but very good. \$12,500

**First and Only Complete Edition of Willis's Works in English**, translated by the poet Samuel Pordage; the collection includes the **First Edition in English** of Willis's *De anima brutorum*. The volume is divided into six separately paginated sections, each with its own title-leaf. Included are English versions of Willis's three great works on the brain—*Cerebri anatome*, *Pathologiae cerebri* and *De anima brutorum*—as well as his clinical and pharmaceutical treatises. In addition to his invaluable work in the anatomy and physiology of the nervous system, Willis was the first to distinguish true diabetes mellitus, and showed that the polyuria was not due to any

disease of the kidneys. He anticipated the recognition of hormones in the circulation of his suggestion that the phenomena of puberty were due to a ferment distributed through the body from the genitals. He discovered the superficial lymphatics of the lungs, distinguished acute tuberculosis from the chronic fibroid type and gave the first clinical and pathological account of emphysema. Garrison-Morton notes that "the modern treatment of asthma really begins with Willis, who considered it to be of nervous origin" (Garrison-Morton 3165) and that "Willis was probably the first to report an epidemic of cerebrospinal fever" (Garrison-Morton 4673). Wing W-2854. 41473

