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History of Science, Medicine & Technology

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*Concourse Exhibition Center, San Francisco*

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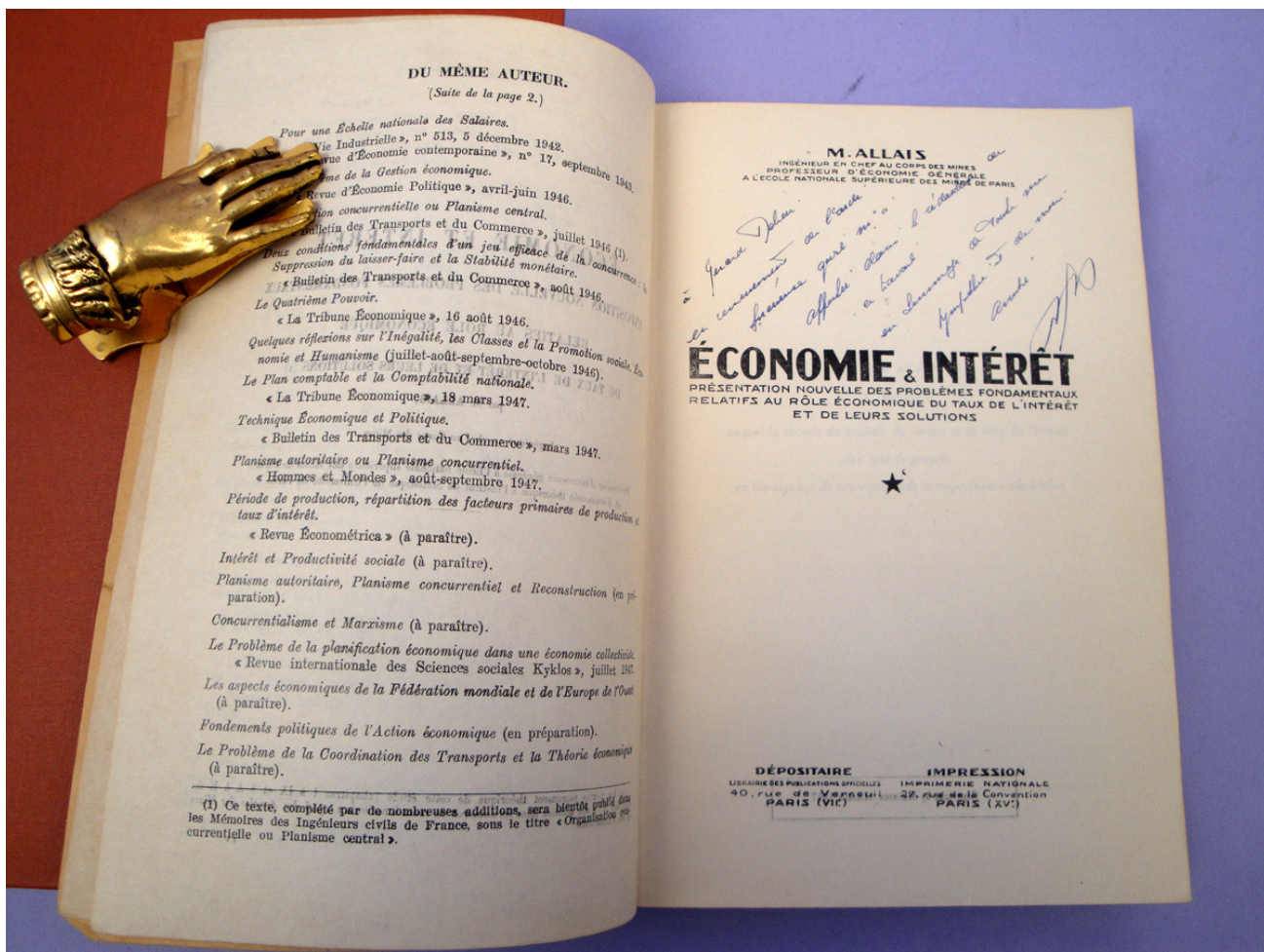
Novato, CA 94948

Voice: (415) 892-3181

Fax: (415) 276-2317

Email: [orders@jnorman.com](mailto:orders@jnorman.com)

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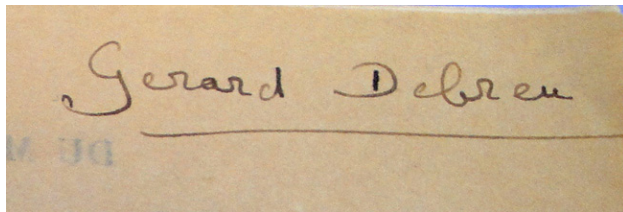
*Inscribed to Gerard Debreu, Who Assisted in the Writing: A Double Nobel Association Copy*

**I. Allais, Maurice** (1911–2010). *Économie et intérêt*. 2 volumes. 422; [6], 429–800pp. Paris: Imprimerie nationale, 1947. 237 x 157 mm. Original printed wrappers, rebacked, upper margin of Vol. I repaired; boxed. Very good to fine. *Presentation copy, inscribed by Allais to Nobel Prize-winning economist Gerard Debreu* (1921–2004) on the title to Vol. I: “à Gerard Debreu en remerciement de l’aide [...] qu’il m’a apportée dans le rédaction de ce travail / en hommage de toute ma sympathie et de mon amitié M. Allais” [To Gerard Debreu in gratitude for the [...] help he gave me in editing this work / in honor of my sympathy and friendship M. Allais]. With

Debreu’s signature on the first leaves of both volumes and his initials on the last leaves.

\$8500

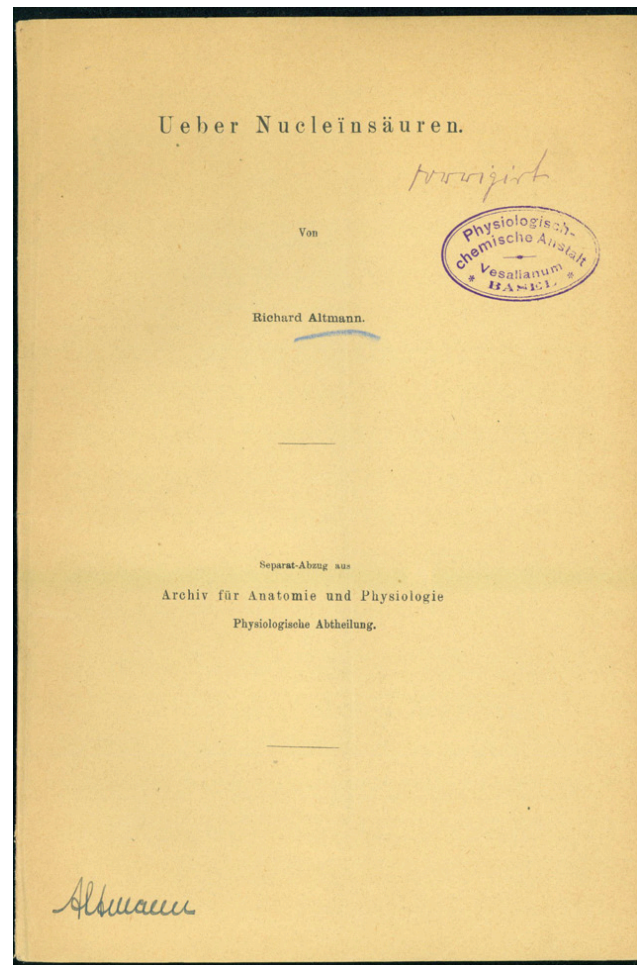
**First Edition.** One of the most influential economists of the twentieth century, Allais was awarded the Nobel Memorial Prize in economics in 1988 “for his pioneering contributions to the theory of markets and efficient utilization of resources.” In two major works published in the 1940s—*A la recherche d’une discipline économique* (1943) and *Economie et intérêt* (1947)—Allais “provided the groundwork for much of the Paretian system, including the first proofs of the Fundamental Welfare Theorems in both a static and intertemporal framework. . . . Among his contributions in 1947 was the invention of the now-famous ‘overlapping generations’ (OLG) model . . . Allais also introduced the ‘Golden Rule’ for optimal growth (long before Phelps, but after von Neumann). The Baumol transactions demand for money rule was also anticipated by Allais in 1947” (“Maurice Allais.” *The New School A New York University | College*. Web. 21 Jan. 2011.). Allais also did pioneering work in behavioral economics, and in 1953 introduced what is now known as the Allais paradox to demonstrate an



inconsistency between expected utility theory and actual observed choices.

Allais acted as a mentor to Gerard Debreu, an originator of the modern conception (the Arrow-Debreu model) of general equilibrium in economics, and author of *Theory of Value: An Axiomatic Analysis of Economic Equilibrium* (1959), one of the most important works in mathematical economics. Trained as a mathematician, Debreu dedicated himself to economics in the late 1940s, after “[meeting] with the mathematical theory of general economic equilibrium, founded by Léon Walras in 1874–77, in the formulation given by Maurice Allais in his book, *A la recherche d’une discipline économique*” (Debreu, “Autobiography”). For his fundamental work on general equilibrium theory Debreu received the Nobel Memorial Prize in economics in 1983—five years before Allais was so honored. This may have been because Debreu, who became a naturalized American citizen, published all of his important economic work in English, while Allais was averse to writing in English or having his work translated.

As indicated by Allais’s presentation inscription, Debreu helped Allais in the preparation of *Economie et intérêt*. Allais acknowledged Debreu’s contributions twice in the work: in the note to page 14, which states that “nous devons tout particulièrement remercier MM. Boiteux et Debreu, agrégés de mathématique, qui ont bien voulu nous apporter leur aide si efficace pour la correction de ses épreuves” [we ought to thank in particular MM. Boiteux and Debreu, associates in mathematics, who have given us their kind and extremely effective help in correcting the proofs]; and in the note to page 633, which reads “nous sommes heureux de remercier ici tout particulièrement de ses observations et suggestions M. Debreu, agrégé de mathématiques, qui a bien voulu refaire et vérifier avec le plus grand soin tous les calculs de ces annexes” [We are pleased to thank in particular for his comments and suggestions M. Debreu, associate in mathematics, who has kindly redone and checked with the utmost care all the calculations of these schedules.] Allais, “Maurice Allais – Autobiography.” *Nobelprize.org*. Web. 19 Jan. 2011. Debreu, “Gerard Debreu – Autobiography.” *Nobelprize.org*. Web. 18 Jan. 2011. 41095



### Miescher's Copies of Altmann's Papers on Nucleic Acids

**2. Altmann, Richard** (1852–1900). (1) Ueber Nucleinsäuren. Offprint from *Arch. Anat. Phys.* (1889). 524–536pp. Original printed wrappers, creased vertically. Stamp of the Vesalianum, Physiologisch-chemisches Anstalt, Basel on the front wrapper. (2) Die Structur des Zellkernes. Offprint from *Arch. Anat. Phys.* (n.d.). 409–411pp. Original printed wrappers, creased horizontally, small wax stain on front cover. Booklabel and stamp of **Johann Friedrich Miescher** (1844–95). (3) Zur Theorie der Bilderzeugung. Offprint from *Arch. Anat. Phys.* (1880). 111–118pp. Plate. Original printed wrappers, slightly soiled. Upper right corner of first leaf cut away. Stamp of the Vesalianum, Physiologisch-chemisches Anstalt, Basel on the front wrapper. Together 3 offprints. Very good. \$7500

**First Editions, Offprint Issues.** Altmann coined the term “nucleic acid,” which he introduced in his 1889 paper “Ueber Nucleinsäuren,” and developed a convenient and general method for its preparation. Altmann’s work on nucleic acids represents an early stage in the development of molecular biology.

Altmann was a student of Johann Friedrich Miescher, who in 1869 discovered a hitherto unknown substance in the cell nucleus that he named nuclein; we now know it as DNA. Altmann worked with Miescher at Miescher’s institute in Basel, called the “Vesalianum” after the great 16th-century anatomist. At the time Miescher was performing biochemical investigations of salmon sperm, from which he had succeeded in isolating protamine, an important constituent of spermatazoa. However, Miescher

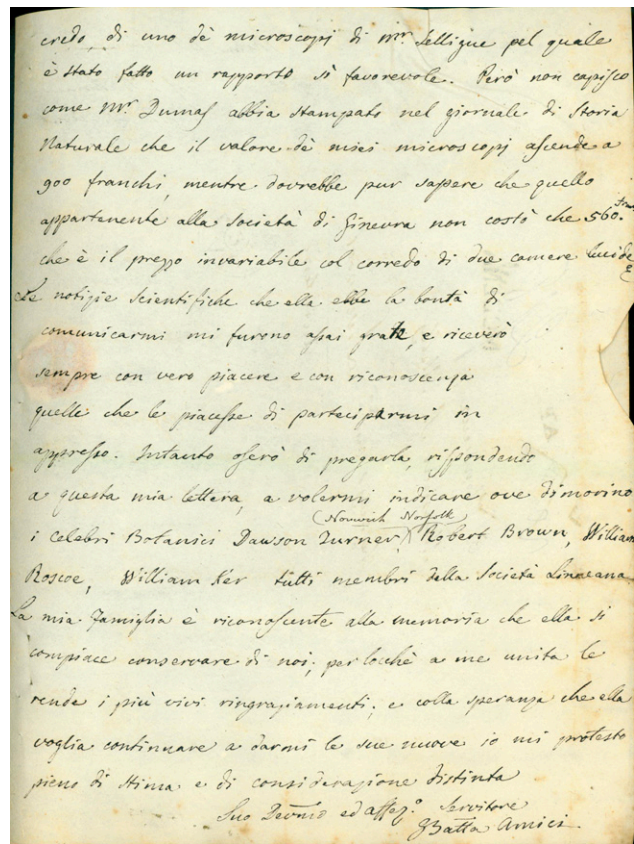
fell into an error: he detected purine bases in the protamine he had isolated by the murexide reaction, no doubt caused by contamination with adhering DNA. Later, Miescher requested that [his associate] Piccard re-investigate this question. Piccard also detected purine bases in the acid extract of spermatazoa from which protamine was isolated. However, he concluded (correctly) that nuclein also contained purine bases. This confusion was not resolved until R. Altmann in 1889 separated protein (free of purine bases) from nuclein (called by him nucleic acid), containing xanthine bases (Wolf).

Our copy of Altmann’s paper on nucleic acid bears the stamp of Miescher’s Vesalianum, as does the third offprint in the collection, a paper on the theory of imaging. The second offprint, on the structure of the cell nucleus, is from Miescher’s library, with his stamp and booklabel. Garrison-Morton 713 (no. [1]). Fruton, *Proteins, Enzymes, Genes*, p. 400. Wolf, “Friedrich Miescher, the man who discovered DNA.” *Bizgraphic CD Content*. Web. 19 Jan. 2011. Portugal and Cohen, *A Century of DNA*, pp. 20-21. 40022

**3. Amici, Giovanni Battista** (1786–1868). Autograph letter signed, in Italian, to A[ndré] Melly (1802–51). Modena, June 20, 1825. 3pp. plus address. 245 x 184 mm. Pin-holes in upper margin, small lacuna in blank margin of second leaf where seal was cut (not affecting text), faint spotting, but fine, and elegantly penned. Docketed. English translation provided.

\$3750

Amici, a designer and maker of optical instruments, made significant contributions to the development of the compound microscope. In the early nineteenth century compound microscopes were much less accurate than simple microscopes, suffering from strong chromatic aberrations and a limited resolving power. In 1818,



following the pioneering work of Beeldsnijder and van Deyl, Amici succeeded in building a catadioptric microscope with an elliptical reflecting mirror, which represented a vast improvement in magnification and resolution over earlier instruments. This improved microscope allowed Amici to add appreciably to the knowledge of the circulation of sap in *Chara* cells, and to discover the pollen tube. Amici announced these findings in two papers published in the *Memorie di Matematica e di Fisica*, Volume XVIII (1820).

Amici’s unusually interesting letter to the Swiss-born entrepreneur André Melly discusses a microscope that Amici had built for Melly, and touches on the state of microscopy in the early nineteenth century, and reflects the role that Melly played in the business of science in England in the early decades of the nineteenth century. The letter refers to the British chemist and physicist William Hyde Wollaston (1766–1828), discoverer of the elements palladium and rhodium, and inventor of both the *camera lucida* and of the meniscus lens for the *camera obscura*. Wollaston suffered from hemianopia, the loss of half the vision in both eyes, and his published description of this disease, which Amici mentions in his letter, was the most comprehensive account that had yet appeared. Amici also refers to Jean Louis Prévost (1790–1850) and Jean Baptiste André Dumas (1800–1884), who performed microscopic investigations on fertilized frog eggs, proving that the egg is fertilized by the penetration of spermatazoa;

A Miraculous PROOF of the Resurrection:  
OR,  
The LIFE to come Demonstrated.

Being a Strange but True Relation of what hapned to  
Mrs Anna Atherton:

Who lay in a Trance 7 days, and had burning Coals applied to her feet, but no  
life appeared: and liv'd comfortably 2 years after: with her Speech to her  
Mother when she came to life, *verbatim*, as it came from her Brother Dr. Atherton,  
Physician in Caermarthen.

Published, now seasonably, as an Invitation to an Holy Life in Maidens, in this Adulterous,  
and Atheistical Generation, wherein neither God, Christ, Soul, Heaven nor Hell are mention'd,  
but drinking, whoring, swearing, lying, &c. to be a Curse to Vice, & encourage Virtue.

Mrs Anna Atherton



THIS Maid being about fourteen years of Age fell sick in November 1669. Whereupon several Physicians were called to her Assistance, who consulted about her Distemper; and judg'd it to be something of an Ague, though the Symptoms thereof (as they confessed) were somewhat different from those which are usual in that Distemper.

2. Her Disease, whatever it was, prov'd too hard for their Skill and Medicines, and brought the Patient to a thinness of Body, paleness of Countenance, and Stupidness to any thing but her Devotion. She was before of a full Habit of Body, of a brisk and lively Temper, and prone to all kind of Exercise befitting her Age.

3. Under this strong Alteration she continued till the Beginning of February ensuing, when by little and little she felt a sensible Decay of her whole Body, which daily increasing, prevailed at length upon all the Organs of Life and Motion; so that in appearance she lay void of either, whereupon she was concluded to be really dead.

4. The Women who came to do their last Office to her Body, perceived more Heat and Warmth in her, than they thought to be usual in dead Bodies, upon which they desisted a while; And, because the Room was close, and a fire had been always in it, (thinking the unusual Warmth might proceed from thence) they opened the Casements to let in what Air they could, and put out the Fire, and then left her some time to her self.

5. But returning, they found the same Warmth to continue; then they left her in this manner one whole day, yet could find no alteration: whereupon they applied a Looking-glass to her Mouth, but not the least Cloud appear'd: they put live Coals to her feet, which discovered not the least sign of Life or Sense.

6. Notwithstanding her Mother (it being so ordered by Providence) was very timorous, which made her delay her Burial, and kept her uncoffined till seven days were expired, at the end of which time, her heat which before was so languid and obscure, that it could scarcely be discerned, began (like some sparks of fire raked up in Embers) to glow, and more manifestly discover it self.

7. Upon which, Rubbings and other artificial Helps were used, which did not prove ineffectual; for, in a short time, they found a trembling Vibration of the Pulse, afterwards she began to breathe, and so at last gradually recovered all her Senses. The first thing that she spoke of, was that she desired to see her Mother, who coming to her, she thus interced her mind:

A Looking glass apply'd to her mouth, & coals to her feet. Comes in herself, & calls for her Mother.



The Maids Speech when she came out of her Trance.

8. Mother! Since I was absent from you, I have been in Heaven, an Angel went before me to conduct me thither: I pass'd through three several Gates, and at length I came to Heaven Gate, where I saw things very glorious and unutterable, as Saints, Angels, and the like, in glorious Apparel; and heard Unparalleled Musick, Divine Anthems and Hallelujahs.

9. I would fain have entred that glorious place; but the Angel, that went before me, withlood me, yet I thought myself half in: but he told me, I could not be admitted now, but I must go back, and take leave of my Friends, and after some short time, I should be admitted.

10. So he brought me hither again, and is now standing at the Beds-foot; Mother! You must needs see him, he is all in white. Her Mother told her, it was but a Dream or Fancy, and that she knew not what she said: whereupon she answered with a great deal of Vehemency, That it was as true, as that she was there at present: She took notice also of several persons in the Room by their Names, to shew she did not dream, but spoke with Understanding.

11. But for the greater Confirmation, she told them of Three or Four Persons that were dead, since she was deprived of her Senses, and named each Person; (one of them was dead, and they knew not of it before they sent to enquire) it she said, she saw them passing by her while she stood at the Gate.

12. One whom she named was reputed a Vicious Person, came as far as the Gate, but was sent back again another way. All the Persons she named, dyed in the time she lay in this Trance.

13. She lived about two Years after this, enjoying a perfect Health, and then dyed in great Assurance of her Salvation; speaking comfortable Words, and giving wholesome Instructions to all who came to visit her. It is worthy Observation, that during the whole time of her first Sickness, which was about a quarter of a year, she neither eat nor drank any thing, besides the juice of an Orange and the yolk of an Egge.

't is then necessary all Persons be kept 48 hours before burial, lest they should be buried alive.

London, Printed by T. Dawks in Black-friers, who was as desirous to be satisfied in the truth of this Relation as any Reader can be, and was to before he did dare to publish it. *See Reader*, be pleased to be advertised that from the said T. Dawks may be had (1) The Pictures of the prime Discoverers, *Gen. Bede* and *Dove-Ant*, with Verbes declaring their Reasons for discovering this damnable Popish PLOT: (2) *Keats* his Murder made Visible, in a large sheet, with a Copper plate in colors or plain being an Ornament for all Possessors of Families. (3) A Chronology of the Growth of Popery, showing who, and who brought Superstition in. (4) The Rise, Discovery and Demonstration of the PLOT in 52 Copper Figures, with a Book to explain them. (5) Also Samuel's Universal Dispensatory a Companion not only for the chiefest Physicians of this time, but for the most ingenious Ladies and Gentlewomen, furnishing them with the Nature & Virtues of Roots, Herbs, Plants, Flowers, &c. Physical use of Insects, Animals & their parts, Proverbs, Observations, &c. (6) *His Herbs Medicinable*, being a new Method of Calculating Nativities, Brief and Admirable for Verity, which certainly will become, when known, the practicablest Book on that Subject, at the whole Universe. (7) *His Symp. Medicina*, with 24 Copper plates, will certainly be published, this Term, 1680. Fine things have oft been taught of, and sent for into most Counties, but are deny'd by ill humour'd men; if there were no such Books, when they may always be had there for Cheapness. *Reader*, be aware of a little evill'd penny book, is now dyed with your money, make your eyes, & judiciously commended in a little evill'd penny book, is now dyed with your money, make your eyes.

their paper on this subject was published in 1824 (see G-M 474.1). Amici also asks for the addresses of four English botanists: Dawson Turner (1775-1858), discoverer of four new lichen species and author of several works on botany; Robert Brown (1773-1858), who named the cell nucleus and described the molecular phenomenon known as Brownian motion; William Roscoe (1753-1831), founder of Liverpool's Botanic Gardens and author of a monograph on monandrian (single-stamen) plants; and William Ker, whom we have not been able to identify

André Melly, the recipient of Amici's letter, was a Swiss entrepreneur who emigrated to England in 1822, where he appears to have made part of his living acting as an agent for museums and others interested in putting together collections in natural history. Melly was a keen entomologist; a collection of beetles he assembled and mounted is still in the museum of Geneva. He ended up becoming a prominent businessman in Liverpool. He served as agent to the Viceroy of India and then to the Egyptian Government, dying of fever while on a tour of the Nile in 1851.

Autograph letters by Amici are extremely rare on the market. The only letters by him that have appeared at auction since 1975 were receipts for microscopes. 40159

Extremely Rare 17<sup>th</sup> Century Account of a  
"Near-Death Experience"

4. [Atherton.] A miraculous proof of the Resurrection: Or, the life to come demonstrated. Being a strange but true relation of what hapned to Mrs Anna Atherton . . . as it came from her brother Dr. Atherton, physician in Caermarthen. Folio. [4]pp. (the first and last pages blank). Woodcut illustrations. London: T. Dawks, [1680]. 296 x 186 mm. (uncut). Disbound, small stab-holes in gutter margin. Fine apart from light dust-soiling. \$2000

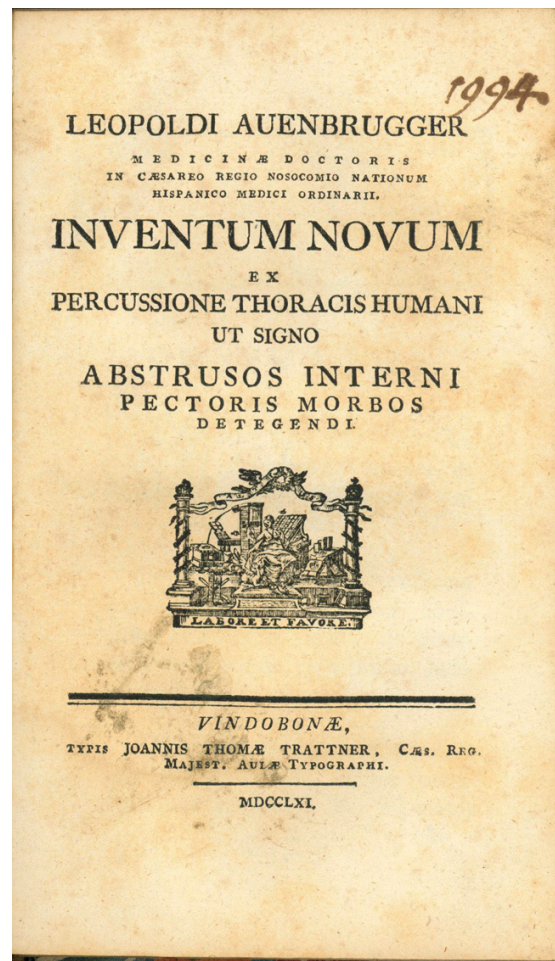
Extraordinarily Rare, with only one copy recorded in Wing (Bodleian Library, Oxford) and another recorded in the British Library's online catalogue; OCLC cites only microform and electronic copies. Two variant editions of this work, both equally rare, were printed by T. Dawks in 1680, one with the title as above, and the other with title beginning "The resurrection proved: or, The life to come demonstrated . . ." (copies recorded at the Huntington Library and the Bayerische Staatsbibliothek).

This ephemeral work, intended for a popular audience, describes the apparent death and subsequent resurrection of Anna Atherton, a 14-year-old girl who became ill in November 1669 and after several months fell into a week-long stupor—“she felt a sensible decay of her whole body, which daily increasing, prevailed at length upon all the organs of life and motion; so that in appearance she lay void of either, whereupon she was concluded to be really dead.” Although exhibiting no signs of life, the girl’s body remained warm to the touch and her burial was put off for seven days, at which time she was successfully revived. Upon regaining consciousness Anna spoke of what she had experienced during her trance: An angel had taken her to Heaven, where she passed through several gates and saw saints, angels and the spirits of recently dead acquaintances, but “[the angel] told me, I could not be admitted now, but I must go back, and take leave of my friends, and after some short time, I should be admitted.” Anna survived two more years, “enjoying a perfect health,” before dying “in great assurance of her salvation.” To a 21st-century reader Anna’s story has many of the hallmarks of the classic “near-death experience”; to a 17th-century audience it was presented as both proof of the resurrection of the body and as “an invitation to an holy life in maidens, in this adulterous, and atheistical generation.” The three woodcut illustrations show Anna before her illness, Anna on her deathbed, and her revival. Wing (2<sup>nd</sup> ed.) M2216A. 41004

## Percussion

**5. Auenbrugger, Leopold** (1722–1809). *Inventum novum ex percussione thoracis humani ut signo abstrusos interni pectoris morbos detegendi*. 8vo. 95, [1]pp. Vienna: Johann Thomas Trattner, 1761. 195 x 116 mm. Modern marbled boards, leather spine label. Light browning and foxing, but very good. \$12,500

**First Edition, First Issue**, without the errata on the verso of the last leaf. G–M 2627. Auenbrugger founded the practice of chest percussion, a method that gave a new and dependable foundation to the diagnosis of chest diseases by permitting determination of disease-caused changes in the lungs and hearts of living patients (the discovery appears to have been based on the analogy between the chest cavity and wine casks, which Auenbrugger, the son of an innkeeper, had learned to thump as a means of determining their fullness). A gifted amateur musician (he wrote the libretto for Antonio Salieri’s opera *The chimney sweep*), Auenbrugger used his trained ear to identify the various tones— tympanitic, dull, or obscure— produced by tapping diseased chests, and to distinguish these from the drum-like sound given off by a healthy chest wall. He spent seven years researching these



findings, confirming them by dissection and experiment, before presenting them in his *Inventum novum*, which describes the special uses of his method and includes fourteen case histories.

Auenbrugger’s discovery at first met with a tepid reception, despite a few positive reviews. It was ignored by most of the leading Viennese physicians of the day and lost its chief proponent, Dr. Maximilian Stoll, to premature death. The method survived in a few German medical schools, however, and finally found an advocate in Jean-Louis Corvisart, who first learned of it through the writings of Stoll in the late 1790s. After several years of practicing percussion in his own clinical work, Corvisart was so convinced of its efficacy that he prepared a new, greatly expanded edition of the *Inventum novum*, which finally convinced the medical community of the value of Auenbrugger’s discovery. Both the first and second issues of Auenbrugger’s classic have been rare books for over a hundred years, the first issue especially so. Norman 81. DSB. Lilly, p. 127. Heirs of Hippocrates 954. Willius & Keys, pp. 190–213. 40243

difficult to conceive the cause of the increase of its action in this decisive experiment.

I may, in conclusion, mention a fact which seems to puzzle even LE GALLOIS to explain, or conform to his theory. It is, that many cases are recorded of fœtuses having been born, in whom there existed no brain or medulla spinalis. Several instances of this kind have been related, and LE GALLOIS admits that he knows of two instances, in which we are assured that they have been born alive, without either brain or medulla spinalis. This fact is irresistible, and proves, beyond the possibility of a doubt, that if life and the circulation of the blood can exist without these organs, they are not necessary to the action and propulsive power of the heart. That LE GALLOIS should admit this fact, and afterwards offer as an objection to the vis insita, that fœtuses had been born without a brain, is indeed singular. In reality, every circumstance which he has adduced, can be (especially since the discoveries of Messrs. BELL and MAGENDIE) much more easily explained upon the hypothesis of a vis insita, than upon his own theory, however well supported, in appearance, by experiments and observations.

ARTICLE VIII.—Cases Illustrative of the Remedial Effects of Acupuncture. By FRANKLIN BACHE, M. D.

From the attention recently bestowed on this revived remedy, both in England and on the continent of Europe, by practitioners of eminence, and from the numerous cases detailed in the foreign Journals of its efficacy, in various affections, I was favourably impressed in regard to its powers, and determined, on the occurrence of a proper opportunity, to give it a fair trial. My situation, as assistant physician to the State Penitentiary in this city, soon afforded me this opportunity; and the cases which I am about to detail, occurred in my practice among the prisoners.

The cases, in which I used acupuncture, were, for the most part, painful affections, and may be arranged under the four general heads of *Muscular Rheumatism, Chronic Pains, Neuralgia, and Ophthalmia.*

*One of the Earliest American Works on the Alleviation of Pain: First American Study of Acupuncture for Pain, With First English Translation of Ten Rhyne's "De acupunctura"*

**6. (1) Bache, Franklin** (1792-1864).

Cases illustrative of the remedial effects of acupuncturation. In *North American Medical and Surgical Journal* 1 (1826): 311-321. **(2) [Ten Rhyne, Wilhelm** (1648-1700).] *Wilhelmi Ten Rhyne M.D. Transisalano. Daventriensis, Dissertatio de arthritide: Mantissa schematica: De acupunctura, et orationes tres . . .* In *ibid.*: 198-204. Whole volume, 8vo. viii, [2], 495, [3, incl. adverts.]pp. 3 plates. 212 x 133 mm. 19<sup>th</sup> century half calf, marbled boards, leather spine label. Minor foxing and toning, but very good. From

the Svenska Läkaresällskapets Bibliotek, with the library's 19<sup>th</sup> century stamp on the title and front cover and library label inside front cover.

\$4500

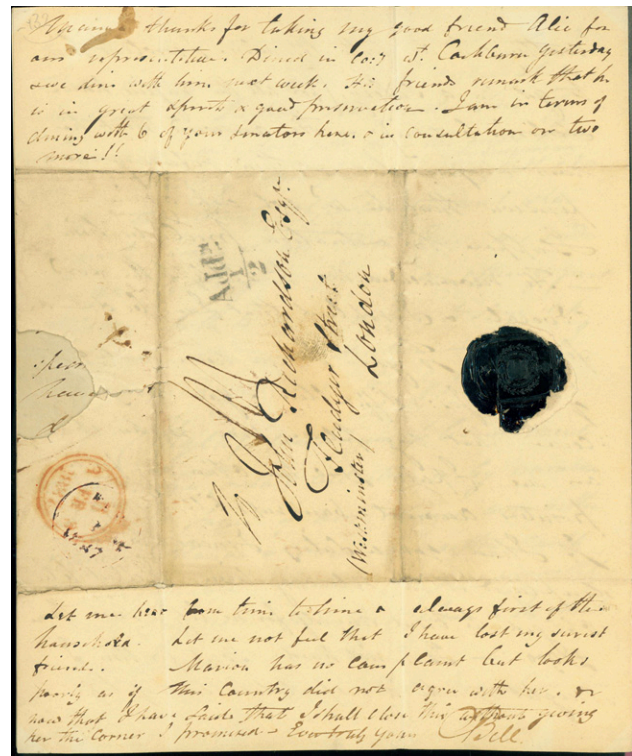
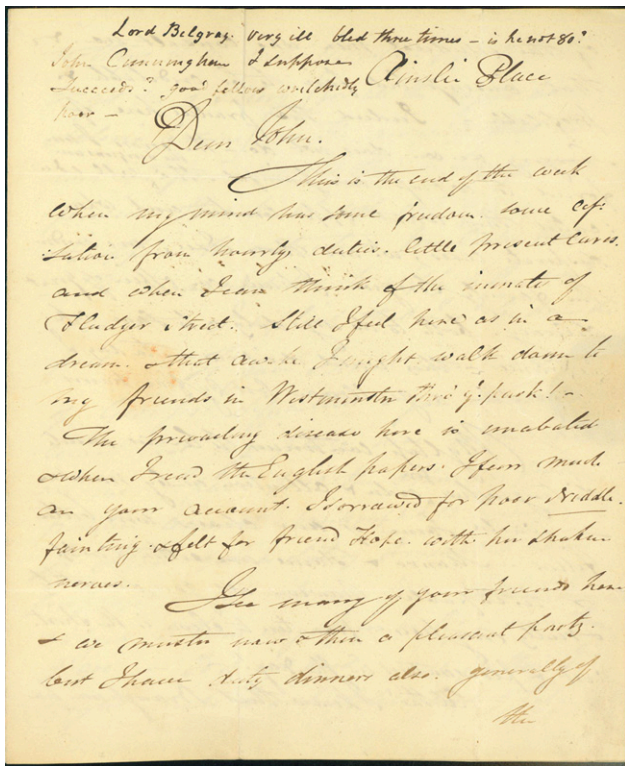
**(1) First Edition of the first original study of acupuncture published in North America, one of the earliest American medical works on the alleviation of pain.** Franklin Bache, great-grandson of Benjamin Franklin, was the first American to perform original research on acupuncture. In 1825 Bache had issued his translation of J. Morand's *Mémoire sur l'acupuncture* (1825) under the title *Memoir on Acupuncturation*; this was the first book on acupuncture to be published in America (see Garrison-Morton 6374.15). The same year, Bache conducted his own experimental study of acupuncture, which he recorded in the present paper.

As assistant physician at the state penitentiary in Philadelphia, Bache determined in 1825 to test acupuncture on the prisoners whom he was called upon to serve. With the aid of a colleague, he used the needles to treat 12 different prisoners who were suffering from highly painful afflictions: three with muscular rheumatism, four with "chronic pains," three with neuralgia, and two with ophthalmia. He also used acupuncture among the prisoners in relieving several lesser pains, including a headache accompanying bilious fever, the head pain of an epileptic, an elastic tumor near the elbow joint, and a dull pain caused by pulmonic inflammation.

Bache reported varying successes. In summarizing 17 subsequent cases, some of which were not among the prisoners, he noted that seven "were completely cured, seven considerably relieved, and in the remaining three cases, the remedy produced no effect." Over all, Bache was convinced that the measure offered great promise for "removing and mitigating pain." He concluded that it could well be "a proper remedy in almost all diseases, whose prominent symptom is pain" (Cassedy, pp. 894-895).

Bache was one of the very few American physicians in the early nineteenth century to adopt acupuncture as a method of pain relief, despite the fact that the practice was enjoying a considerable vogue in Europe at the time. This volume of the *North American Medical and Surgical Journal* includes several brief abstracts from European journals on the uses of acupuncture; see pp. 225-227 and 448-449.

**(2) First English Translation** of Ten Rhyne's aphorisms on acupuncture, originally included in his *Dissertatio de arthritide* (1683; see Garrison-Morton 6374.10). Ten Rhyne's "De acupunctura" represents the first detailed description of acupuncture published in the West. The anonymous translators added a brief historical introduction and a copy



of Ten Rhyne's illustration of an acupuncture needle and hammer.

Volume 1 of the *North American Medical and Surgical Journal* is very rare on the market. Nor have we ever heard of an offprint of this work. This is the first copy we have handled in 40 years of trading. Cassidy, "Early uses of acupuncture in the United States, with an addendum (1826) by Franklin Bache, M.D.," *Bulletin of the New York Academy of Medicine* 50 (1974): 892-906. "Wilhelm Ten Rhyne's *De acupunctura*: An 1826 translation," *Journal of the History of Medicine and Allied Sciences* 34 (1979): 81-92. Lu & Needham, *Celestial Lancets*, p. 299. 40833

**7. Bell, Charles** (1774-1842). Autograph letter signed to John Richardson (1780-1864). Ainslie Place [Edinburgh], February 3, 1837 [date from postmark]. 4pp., including address leaf. 229 x 189 mm. Marginal lacuna where seal was broken, affecting two words, small marginal tear in second leaf, minor soiling, but fine otherwise, and with Bell's wax seal intact. Complete transcription included. \$6000

An extraordinarily candid and revealing letter from surgeon and anatomist Charles Bell, whose pioneering experiments in neuroanatomy led to the discovery of the Bell-Magendie law (stating that the anterior branch of spinal nerve roots contain only motor fibers and the posterior roots contain only sensory fibers), as well as the

first description of Bell's palsy (facial paralysis due to a lesion of the facial nerve).

Bell, a native of Edinburgh, received his medical degree from Edinburgh University in 1799 but spent most of his career in London, where he ran the Great Windmill Street School of Anatomy (established by William Hunter) and helped to found the Middlesex Hospital Medical School. In 1836 he returned to Scotland to take the position of professor of surgery at Edinburgh University. The present letter, sent about six months after Bell's departure from England, was written to John Richardson, one of Bell's oldest and closest friends, a lawyer who, like Bell himself, had left Scotland to seek his fortune in London. In the letter Bell spoke frankly about some of the difficulties he was experiencing in his new situation, including ongoing financial troubles and the inadequacies of his surgical colleagues. The overall tone of the letter is critical and somewhat depressed, which may be why it was not included in the *Letters of Sir Charles Bell* (1870).

In the letter Bell expresses his dissatisfaction with the state of surgical practice in Edinburgh:

... Indeed the practice here of surgery &c &c does not do—the errors I am forced to witness are painful. Tho the surgeons are well educated they want opportunities and when desperate cases, which are those I see, are under the family surgeon I have an office of great delicacy, both to do my duty & to save appearances—they want decision [i.e. lack

decisiveness]—today I have seen a gentleman lost by five hours delay.

My class continues to be as much distinguished for order & attention as by members—would some of our chairs were better filled—Monro & Home are either careless or incapable. However all goes smoothly & really my hour from ten to eleven is the shortest & pleasantest in the day!

“Monro” refers to Alexander Monro *tertius* (1773–1859), who succeeded his grandfather and father as professor of anatomy at Edinburgh University. Monro’s lack of ability as a teacher and administrator had led to a significant decline in enrollment at the university’s medical school. We have not been able to identify “Home,” but the reference cannot be to Sir Everard Home, who died in 1832.

In the next portion of the letter Bell discusses the worrying state of his finances. While in London Bell had been able to earn between £1,400 and £2,400 a year, but the professorship at Edinburgh paid only £400 annually and Bell spent the last six years of his life struggling to supplement this meager income. His anxieties over money are clearly expressed here:

Altho’ I knew that Brougham has nothing to do with the Minister, I wrote to him to get me a salary (for all the rogues have salaries but me)—. He answered that he was so provoked at them refusing me a pension that he wd not ask again—. I suppose his situation precludes him. He recommended me to apply to the Lord Advocate & I replied that I wd. be d\_\_\_d [damned] first.

To you I have never made a [secret?] of Geo: Jos: difficulties & you might [per]ceive that my place here makes it rough on me. I paid £140 the other day for a printers account—bankrupt bill business. If I had got a salary I meant to have employed it in relieving him. I expect to be obliged to bind myself for no less a sum than £900. —Is it not hard. But for this I might make a respectable end of life.

Lord Brougham (Henry Peter Brougham, 1st Baron Brougham and Vaux [1778–1868]), another Edinburgh native, was a high-ranking British statesman who served as Lord Chancellor of England from 1830 to 1834. Brougham and Bell were old friends, and had collaborated on an annotated edition of William Paley’s *Natural Theology*, published in 1836. Bell obviously hoped that Brougham would be able to pull some strings in his favor, either to increase his salary or to obtain him a government pension; however, at the time this letter was written Brougham had been out of office for three years and his political influence was diminished.

In the following paragraph Bell refers to expenses incurred by his brother George Joseph (1770–1843) in connection with the elder Bell’s work for the Scottish government.

In 1833 George Joseph had been made head of a royal commission to inquire into Scottish bankruptcy law, and it was he who was largely responsible for writing and issuing the commission’s reports. It is evident from Charles Bell’s letter that the commissioners were expected to pay their own printing costs for “bankrupt bill business,” and that George Joseph was unable to do this without his brother’s help.

In the remainder of the letter Bell mentions more old friends: his brother-in-law and former pupil Alexander (“Alic”) Shaw (1804–90), a surgeon at Middlesex Hospital and author of *An Account of Sir Charles Bell’s Discoveries in the Nervous System* (1860); and Henry Thomas Cockburn (1779–1854), a Scottish judge and one of the leaders of Scotland’s Whig party. He ends the letter with these poignant words:

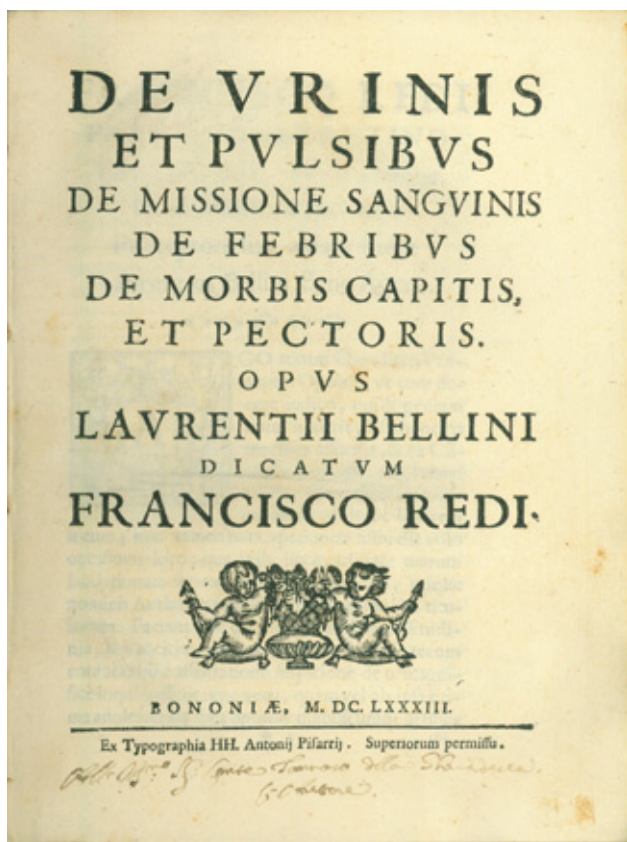
Let me hear from time to time & always first of the household. Let me not feel that I have lost my surest friends. . . .

Gordon-Taylor, *Sir Charles Bell: His Life and Times*.  
*Dictionary of National Biography*. 40980

### *Inscribed Presentation Copy of a Seventeenth-Century Cardiology Classic— Exceptionally Rare*

**8. Bellini, Lorenzo** (1643–1704). *De urinis et pulsibus de missione sanguinis de febris de morbis capitis, et pectoris*. 4to. [20], 606 [i.e., 608] pp. Woodcut ornaments. Bologna: ex typographia HH. Antonij Pissarii, 1683. 216 x 161 mm. Vellum c. 1683, title hand-inked on spine. Leaf Aaaa2 torn and repaired at an early date without loss of text, otherwise a fine copy. *Presentation copy from the author, inscribed at the foot of the titlepage*: “All’ Illmo Conte Tommaso della Gherardesca. l’Autore.” \$7500

**First Edition, inscribed by the author. This is the first inscribed copy of a major seventeenth century medical classic that has been on the market in more than a decade.** Bellini, professor of anatomy and medical theory at Pisa, was one of the Italian founders of iatromechanics, a system that framed physiologic events such as the circulation of the blood in terms of mathematical and physical principles. Bellini’s *De urinis et pulsibus* represents one of the first attempts to systematically apply iatromechanics to medical theory. “William Harvey’s theory of the circulation was of fundamental importance to Bellini and other proponents of iatromechanism. Bellini asserted that good health depended on optimal



function of the circulation of the blood, and that disease was a manifestation of an inefficient circulation. Rejecting ancient humoral pathology, he viewed blood as a physical fluid with specific properties that could be interpreted in terms of mathematical and physical principles. . . . Bellini emphasized that disease was often due to alterations in the elasticity or ‘tone’ of the solids, or in the density of the fluids which hindered their motion. This, in turn, could cause local congestion or stagnation. Bellini’s enthusiastic support of therapeutic bleeding reflected this pathophysiologic concept. He tried to prove that this phlebotomy increased the velocity of the circulation, thereby washing away ‘morbid matter’ and restoring health” (Fye, pp. 181-82).

In the book’s section on diseases of the chest, Bellini reported “several forms of heart disease, especially of the syncopal type . . . in his book *De urinis et pulsibus*, Bellini discusses the state of the coronary arteries and admits that the condition which he calls ‘pressio’ is dangerous and may cause the contraction of the heart to be abolished (p. 541). He also has in mind external pressure by tumors, fat and so on. However, an intra-arterial coronary impediment of blood-flow by calcification was clearly described by this author. Bellini reported of a patient who died of a condition similar to the clinical picture of coronary disease as we now understand it, in whose coronary arteries he found a ‘stone.’ It seems quite reasonable to deduce that

Bellini saw in the post-mortem a coronary occlusion” (Leibowitz, *History of Coronary Heart Disease*, p. 71).

Bellini’s work is also important in the history of urology, as it marks the first important contribution to the chemical analysis of urine. Recognizing the value of urine as a diagnostic aid, Bellini insisted on its chemical analysis in pathologic conditions.

Bellini presented this copy of *De urinis et pulsibus* to Count Tommaso della Gherardesca (1654-1721), a distinguished member of an important Tuscan aristocratic family and as such a likely patron of scientific and medical research at the time. Gherardesca was appointed bishop of Fiesole in 1702 and archbishop of Florence in 1703; he also founded the Seminario Maggiori di Firenze in 1712. The rarity of this inscription by Bellini cannot be overestimated. This is the first inscribed book by Bellini we have seen on the market in more than 40 years and it is also the first inscribed copy of a major seventeenth century classic on any aspect of medicine that we have seen on the market in more than a decade, possibly longer. In addition this copy is clearly in the original binding in which it was presented, and with the exception of one leaf, which was inexplicably torn through and repaired, the copy is in fine, even very fine condition for a work of this period. Garrison-Morton 762.1, 4162. Fye, “Lorenzo Bellini,” *Clinical Cardiology* 20 (1997): 181-82. *Dictionary of Scientific Biography*. Willis & Dry, *History of the Heart and the Circulation*, p. 64. Murphy, *History of Urology*, pp. 147-48. 40699

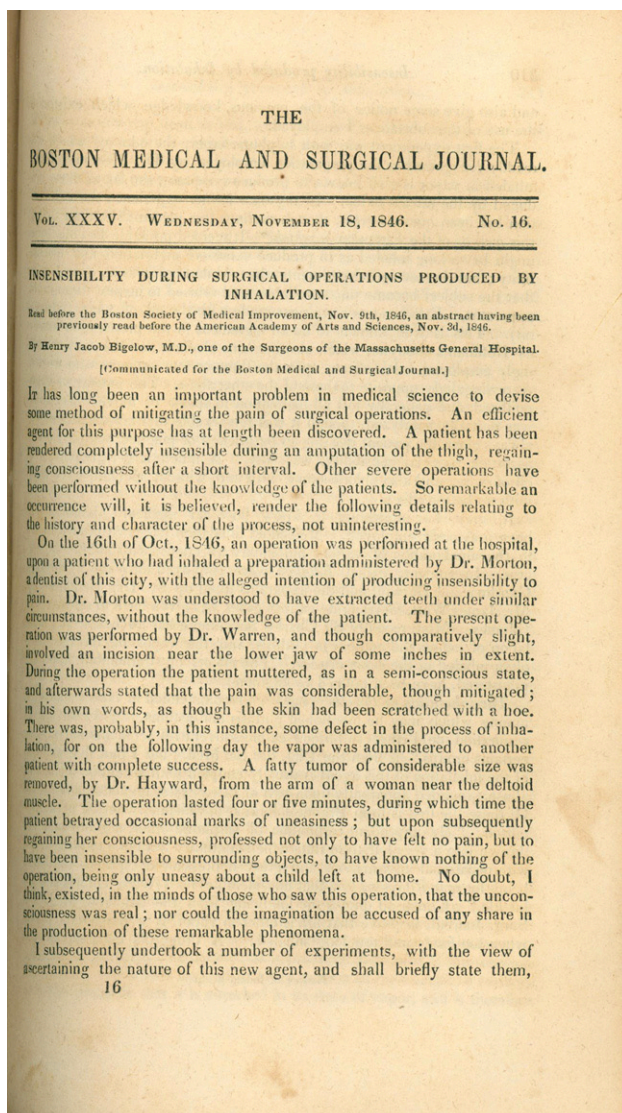
## Discovery of Surgical Anesthesia

### 9. Bigelow, Henry Jacob (1818-90).

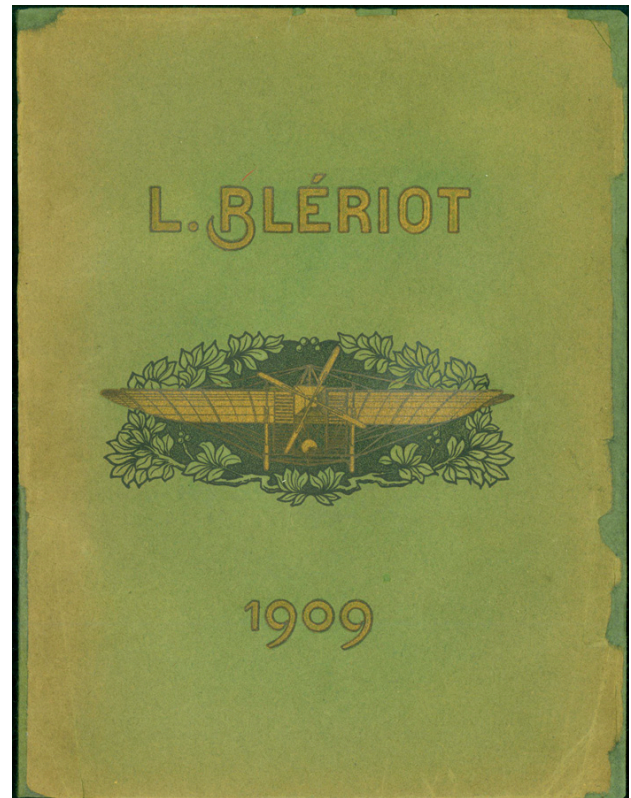
Insensibility during surgical operations produced by inhalation. **In:** *Boston Med. and Surg. J.* XXXV, no. 16 (November 18, 1846): 309-17 & no. 19 (December 9, 1846): 379-82. Whole volume, 8vo, bound with Vol. XXXIV. 8, iv, 528; 544pp. Boston: David Clapp, 1846. 230 x 137 mm. The two volumes bound together in 19th cent. marbled boards rebacked in calf, leather corners, light rubbing. Slight foxing & browning. Fine.

\$9500

**First Edition.** G-M 5651. The formal announcement of the discovery of surgical anesthesia, probably the greatest medical discovery made in America during the nineteenth century. The Boston dentist W.T. G. Morton, after experimenting with ether anesthesia in his dental practice, obtained permission from John Collins Warren, chief of surgery at Massachusetts General Hospital, to attempt anesthesia on a surgical patient. On October 16, with Morton administering the ether, Warren successfully



no. 16 also contain several articles on anesthesia by other authors, attesting to how quickly the news of the discovery spread after Bigelow's initial article. Fulton & Stanton IV.1. Norman / Grolier Medical Hundred 64A, noting that the separate offprint of Bigelow's work is printed from completely reset type, and omits the last 7 paragraphs of the original article. Wolfe, *Tarnished Idol*, pp. 75-83. 38000



removed a portion of a vascular tumor from the neck of his patient. The following day, Morton again administered ether to a patient undergoing an operation to remove a fatty tumor from her arm. At this point the surgeons at Massachusetts General refused to employ Morton's "Letheon" any further unless Morton revealed its exact nature—which he had hitherto kept secret in the hopes of patenting it—and allowed its free use at the hospital. On November 6, on the advice of Henry J. Bigelow, Morton at last divulged that his "Letheon" was in fact sulfuric ether. On November 7, Morton administered ether to a patient undergoing amputation of the leg; with the success of this operation, "the value of ether as an anesthetic was established once and for all" (Wolfe, pp. 80-81).

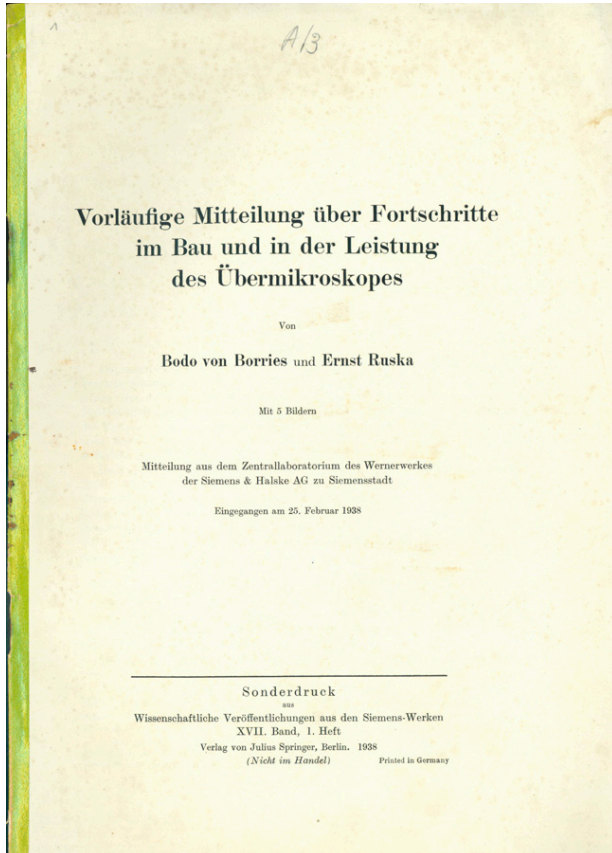
Bigelow's account of Morton's discovery, written after the November 7 operation, is contained in Vol. 35, no. 16 of the *Boston Medical & Surgical Journal*. His follow-up paper, contained in no. 19, contains his responses to challenges brought by J. F. Flagg. The journal numbers following

**10. Blériot, Louis** (1872-1936). *Recherches aéronautiques*. 50, [2]pp. Text illustrations. Paris: L. Blériot, 1909. 230 x 178 mm. Original printed wrappers, repaired at spine and front margin; boxed. Small marginal tear in pp. 9-10, otherwise very good. \$6000

**First Edition** of the first catalogue of the Blériot aircraft manufacturing company. Blériot, a French aviator and engineer, invented the first successful monoplane in 1907; on July 25, 1909, using an improved version of his monoplane (the Blériot IX), he became the first to fly across the English Channel. The Channel crossing sparked a great demand for the Blériot IX and Blériot went into the aircraft manufacturing business, producing Blériot monoplanes in four categories: training, sport or touring, military, and racing. The Blériot IX planes were made of oak and poplar wood, with flying surfaces covered with

cloth; its pioneering cast-iron landing gear allowed it to be landed in crosswinds.

The present catalogue is divided into three sections: “Accessoires et pièces détachées” (accessories and detachable units); “Matières premières: Bois, toiles, aciers et alliages spéciaux, appareils de mesure et d’éclairage” (raw materials: wood, canvas, steel and special alloys, gauges and lighting); and “Aéroplanes.” Page 31 contains an illustration of Blériot’s historic Channel crossing. **Rare**—OCLC cites copies at only three libraries (U. Chicago, Duke University, Paris CNAM). 41010



## *Electron Microscope*

### **II. Borries, Bodo van & Ernst Ruska.**

**(1)** Vorläufige Mitteilung über Fortschritte im Bau und in der Leistung des Übermikroskopes. Offprint from *Wiss. Veröffentlich. aus d. Siemens-Werken* 17 (1938). 99–106pp. Original printed self-wrappers, green backstrip. Light foxing and creasing. Accompanied by a signed photograph of Ernst Ruska. **(2)** **Davidovits, Paul & M. David Egger.** Scanning laser microscope. Offprint from *Nature* 223, no. 5208 (1971). [3] pp **(3)** **Davidovits & Egger.** Scanning laser

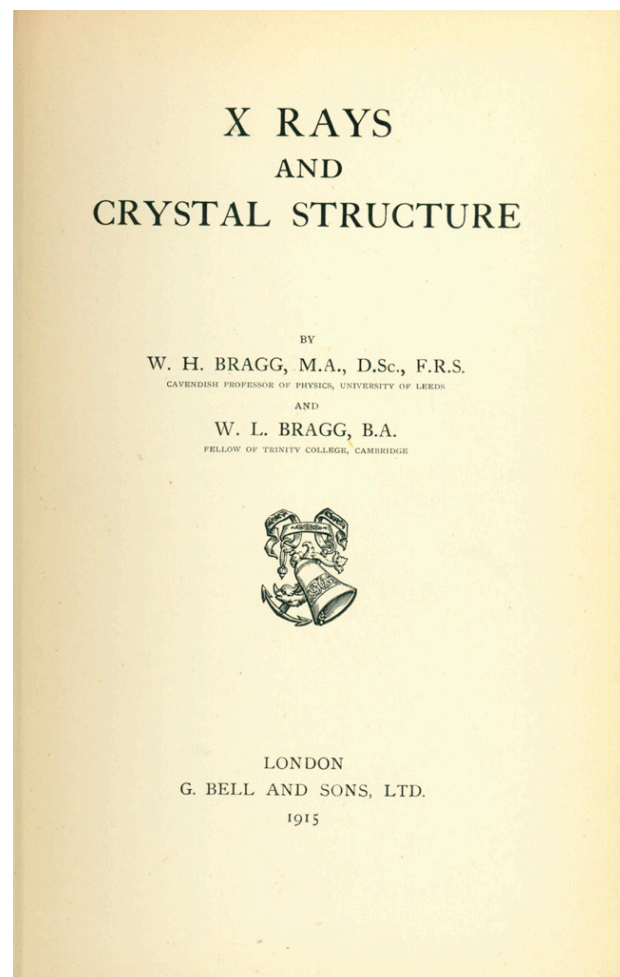
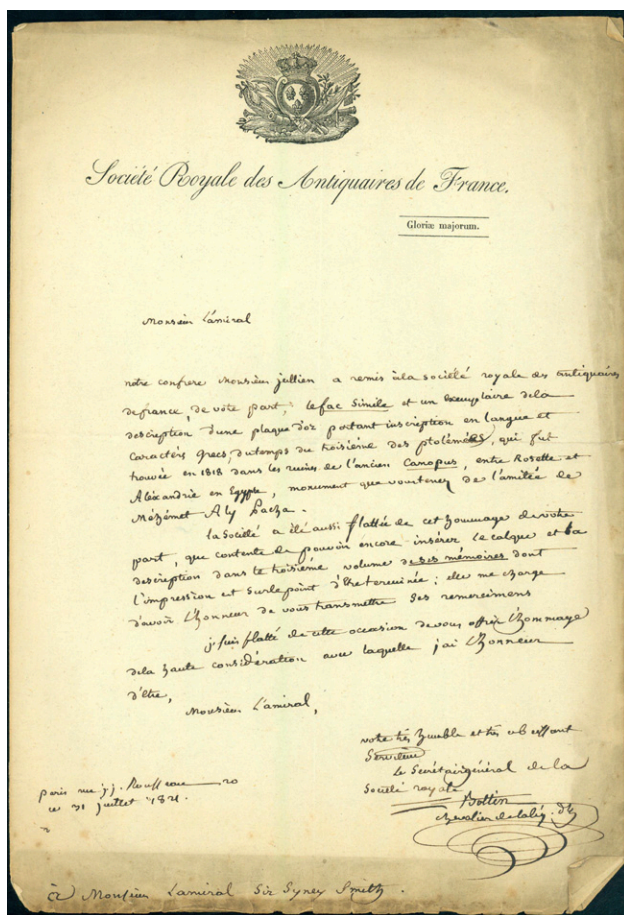
microscope for biological investigations. Offprint from *Applied Optics* 10 (1971). 1615–1619pp. 2 copies, one in original yellow printed wrappers, the other without wrappers but inscribed by Davidovits to Andras Gedeon. Together three items plus related materials, all preserved in a folding box. \$2500

**(1) First Edition, Offprint Issue** of this seminal paper on electron microscopy. It was at Siemens and Halske’s Laboratory for Electron Optics that Borries and Ruska developed the electron microscope, and around 35 different apparatuses were mass-produced for research purposed up until 1945. When Borries left the laboratory in 1949 Ruska succeeded him as director and continued to contribute substantially to the improvement of the electron microscope in subsequent years. Ruska received the Nobel Prize in physics in 1986 “for his fundamental work in electron optics, and for the design of the first electron microscope.” In this paper, Ruska and von Borries present “preliminary results obtained with a prototype electron microscope . . . Images such as those of bacteria at 20,400 times magnification illustrate the performance of the instrument” (Gedeon, *Science and Technology in Medicine*, p. 429).

**(2) & (3). First Editions, Offprint Issues.** 40249

**12. Bottin, Sébastien** (1764–1853). **(1)** Autograph letter signed to Admiral Sir [William] Sidney Smith (1764–1840). Paris, July 31, 1821. 1 page plus integral blank, on stationery of the Société Royale des Antiquaires de France. 317 x 219 mm. **(2)** Description d’une plaque d’or portant une inscription en lange et caractères grecs, du tems du troisième des Ptolemés . . . Manuscript in an unidentified hand, possibly that of Smith. N.p., n.d. [1821]. 2–1/2pp. 309 x 202 mm. Minor marginal fraying and spotting, a few small tears along folds. \$1250

From the secretary of the Société Royale des Antiquaires de France to British Admiral Sir Sidney Smith, thanking Smith for the gift of a facsimile of an ancient Egyptian artifact. The original artifact, dating from the reign of Ptolemy III in the third century B.C.E., was a golden plaque measuring 6 x 2.5 inches, with an inscription in Greek commemorating Ptolemy III’s dedication of a temple to Osiris. This plaque, discovered by Egyptian workers in the ruins of Canopus in 1818, came into the possession of Egypt’s ruler, Mehmet Ali Pasha. Mehmet Ali sent the artifact to Admiral Sir Sidney Smith, who had played a major role in the defeat of invading French forces in Egypt during the Napoleonic Wars. Smith



settled in France after Napoleon's final defeat at Waterloo and remained there for the rest of his life; it is thus not surprising that he presented his gift to a French institution rather than an English one.

The enclosed manuscript description of the plaque and facsimile, possibly written by Smith, goes into further detail about the plaque and the circumstances of its discovery and provenance. It gives the dimensions of the original plaque ("6 pouces de longueur par 2 ½ de largeur") and translates the inscription as "Le Roi Ptolomé [fils] de Ptolomé et Arsinoé frères déifiés, et la Reine Berenice sœur et femme [du dit] [consacrent ou dédient] ce Temple, à Osiris" [King Ptolemy (son) of deified brothers (?siblings?) Ptolemy and Arsinoë, and Queen Berenice sister and wife (of same) (consecrate and dedicate) this temple to Osiris]. Also noted is the fact that the plaque was discovered "sur une pierre fondamentale, entre deux tuiles de matière vitrifiée" [on a foundation stone, between two glazed tiles], and that the glazes on the tiles, one blue and one green, had been analyzed by chemists to discover the nature of their coloring agents. 40473

**13. Bragg, William Henry (1862–1942) and William Lawrence Bragg (1890–1971). X rays**

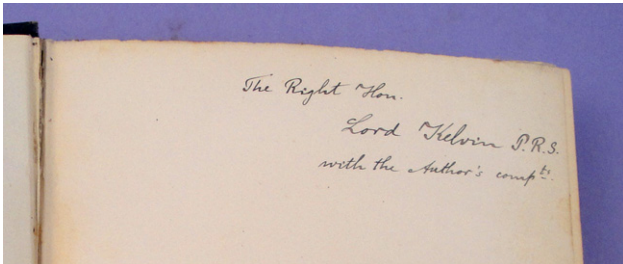
and crystal structure. vii, 228, [4] pp. 4 plates, text illustrations. London: G. Bell and Sons, 1915. 218 x 140 mm. Original cloth, gilt-lettered spine (a bit faded), light wear. Very good copy, from the library of Raymond T. Birge (1887–1980), with his signature, dated Oct. 1915, on the front endpaper and his marginal notes throughout.

\$1500

**First Edition** of the Braggs' first book on x-ray crystallography. The Braggs, father and son, are best known for originating the field of x-ray crystallography, which has become an essential analytic tools of physics, chemistry and molecular biology. Prior to 1912, scientists had very little knowledge about the solid state of matter, but in 1912 came the Friedrich-Knipping-Laue paper showing that x-rays can be diffracted by crystals. The Braggs used Laue's discovery to determine the actual positions of atoms in crystals, with Lawrence Bragg providing the theoretical basis for crystal structure analysis and William Henry Bragg contributing the x-ray spectrometer, which measures the strength of an x-ray beam reflected from a crystal face.

In 1915 the Braggs shared the Nobel Prize for physics for their studies of crystal structure by means of x-rays.

This copy of the Braggs' work is from the library of Raymond T. Birge, chairman of the physics department at the University of California, Berkeley from 1932 to 1955; "more than any other person, Birge [was] responsible for the building in Berkeley of an outstanding Department of Physics" ("University of California: In Memoriam, 1980." *Content.cdlib.org*. Web. 27 Dec. 2010). *Printing and the Mind of Man* 406b. 41077

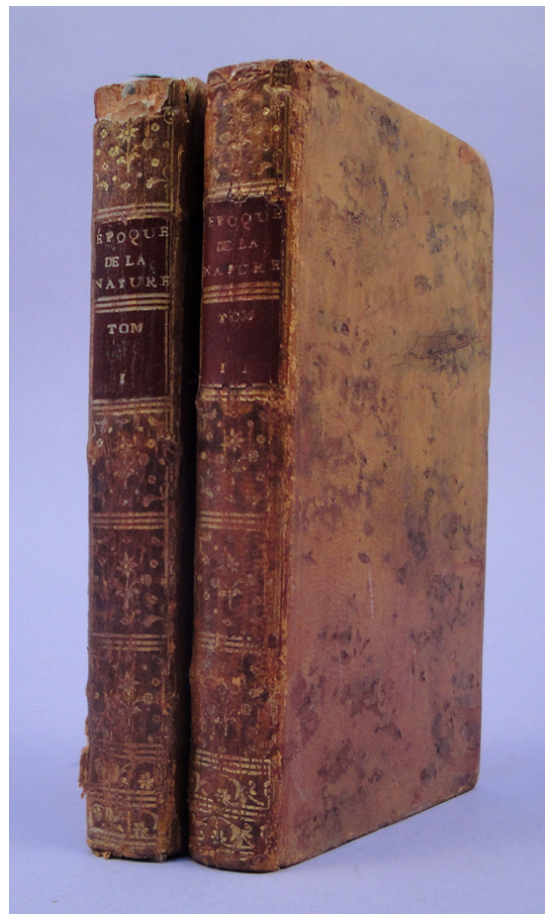


**14. [Brahe, Tycho (1546-1601).] Dreyer, J. L. E.** Tycho Brahe: A picture of the scientific life and work in the sixteenth century. xvi, 405, [3, incl. pubs. ads.]pp. Frontispiece portrait, 4 plates. 225 x 141 mm. Orig. cloth, gilt spine, a little rubbed. Presentation copy, inscribed by the author on the half-title to **Lord Kelvin (1824-1907)**: "The Right Hon. Lord Kelvin P. R. S. with the Author's compts." \$750

**First Edition.** "The best single treatment of Tycho's life and work" (*Dictionary of Scientific Biography*). This copy bears the author's inscription to William Thomson, Lord Kelvin (1824-1907), one of the greatest physicists of the nineteenth century. 40318

**15. Buffon, Georges Luis LeClerc, Comte de (1707-88).** *Les époques de la nature*. 2 vols. Vol. 1: [4], 168, 171-246 pp. 6 engraved plates. Vol. 2: [4], 264 pp. 2 folding engraved maps. 166 x 99 mm. Paris: Imprimerie Royale, 1780. 18th century mottled sheep gilt, light rubbing and wear. Very good copy, from the library of Alpine explorer Marc Théodore Bourrit (1739-1819), with Bourrit's notes on the front and back pastedowns of Vol. II. Bookseller's ticket of Paul Barde, Geneva, who was Bourrit's publisher. First separate edition. \$4500

**First Separate Edition.** *Les époques de la nature*, first published in 1778 as a supplement to the *Histoire naturelle*, contains Buffon's fully developed theory of the



earth, his division of earth history into seven geologically and biologically based epochs, and his attempt to establish a universal chronology based upon observation and experiment. Buffon developed his theory out of his initial *Théorie de la terre* which had appeared in the first volume of his *Histoire naturelle* (1749). Assuming that the earth had cooled to its present temperature from a molten state, Buffon extrapolated the earth's age—75,000 years—from his observations of the cooling times of balls of various sizes and materials heated to incandescence. (After studying sedimentation phenomena, Buffon revised his estimate of the earth's age to 3,000,000 years, but did not publish this figure for fear of being misunderstood.) In Buffon's system, life first appeared nearly 35,000 years ago, but man's time on earth had lasted only 6,000 years—a period intentionally coincident with systems of biblical chronology accepted in Buffon's time.

Buffon's treatment of the chronology of earth and human history was important in several respects. First he denied the applicability of the biblical chronology to earth history and substituted in its place a very different and empirically derived set of dates . . . Second, Buffon popularized a means of retaining Scripture and the Mosaic chronology, even while arguing for a lengthy earth history. . . . By treating

the chronology of Moses as applying only to people, and the days of Genesis as allegory, Buffon had allowed himself free movement in dealing with the history of the earth up to the time of the creation of humankind, and gave to Scripture the task of dealing only with the history of our own species. That history covered the last 6000 to 8000 years, and was marked at the outset by the appearance of people on a physically modern, or nearly modern, earth.

These three themes—an ancient earth, the origination of people some 6000 years ago, and the correlation between the appearance of people and the appearance of a physically modern earth—were to play crucial roles in the interpretation of human antiquity for the next eight decades. Buffon's *Epochs of Nature* was the first substantial work by a scientist of major renown in which this combination of themes appeared. (Grayson 1983, pp. 35-36).

The first separate edition of *Les époques de la nature* is very rare. This copy is from the library of Swiss writer and Alpine explorer Marc Théodore Bourrit, who was the first to attempt the ascent of Mont Blanc. Bourrit met Buffon in 1781, the year after the publication of Buffon's work. Bourrit's note on the front pastedown of Vol. II cites a reference to himself on p. 143 of the volume. 41042

**16. Cant, Arent** (1695-1723). *Impetus primi anatomici ex lustratus cadaveribus nati. . . .* Large folio. [6] 28pp. Engraved title vignette, 6 folding engraved plates after drawings by the author. Leiden: for the author by Pieter vander Aa, 1721. 504 x 372 mm. Speckled calf c. 1721, gilt spine, a little worn & spotted, spine and corners repaired. Fore-edge of plate 6 repaired, a few tears and chipping to some margins, some damp stains mainly confined to final blank end-leaves, but otherwise very good. Russian library stamp on the verso of the title. From the library of Ira M. Rutkow, with his pencil signature on the rear flyleaf. \$5500

**First Edition.** Cant, a pupil of Frederik Ruysch, was a skilled anatomist and artist whose ambitious plan to publish a great anatomical work was interrupted by his premature death at the age of 28. The present work represents the only volume of Cant's projected anatomy; it contains six large folding plates, drawn by the author, illustrating the anatomy of the head, heart, stomach, shoulder and knee joints, thoracic duct, etc. Cant was one of the few early anatomists to make use of the "grid-reference" identification system devised by Eustachius (1510/20 - 1574), in which anatomical structures are located by means of numbered borders at the side and top



of each plate; this method allows the anatomist to illustrate his figures without superimposed lettering or numbering. Lindeboom, *Dutch Medical Biography*, col. 325. Roberts & Tomlinson, *Fabric of the Body*, p. 191. 40092

**17. Carpenter, William B.** (1813-85). Autograph letter signed to Mr. [John] Paget [1811-98]. [London] 56 Regents Part Rd. N.W., June 2, 1879. 4pp. 178 x 114 mm. A few tiny pinholes, but fine otherwise. \$950

From English physiologist and naturalist William B. Carpenter, who "helped shape the modern life sciences in Britain" (Oxford DNB) through both his writings and his work as a teacher and administrator at what is now the University of London. Carpenter 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. Carpenter is also recognized as one of the founders of the modern theory of the adaptive unconscious—he observed that the human perceptual system and the mechanism of human thought operates almost completely outside of conscious awareness.

on Mr Bruce, that he at once commutes the sentence; and the family were so sensible that the lad was not fit to take care of himself, that they expressed no disappointment at his not having received a free pardon. I shall be glad if you will return this document to me at your convenience and I shall try to get from Knowles my letter to Mr Bruce, which contains a reference to your book. It is rather curious that the memorial does not give the year I think it must have been a long time before I was turned out my papers at the University today, I have come upon a document which I forward to you, containing the Father's statement of his Son's relation to the "Brompton Murder" case, with full particulars.

Carpenter's letter, which discusses a false confession to murder made by a mentally unbalanced young man, reads in part as follows:

... I have come upon a document which I forward to you, containing the Father's statement of his Son's relation to the "Brompton Murder" case, with full particulars of the latter's confession, and its inconsistency with the facts.

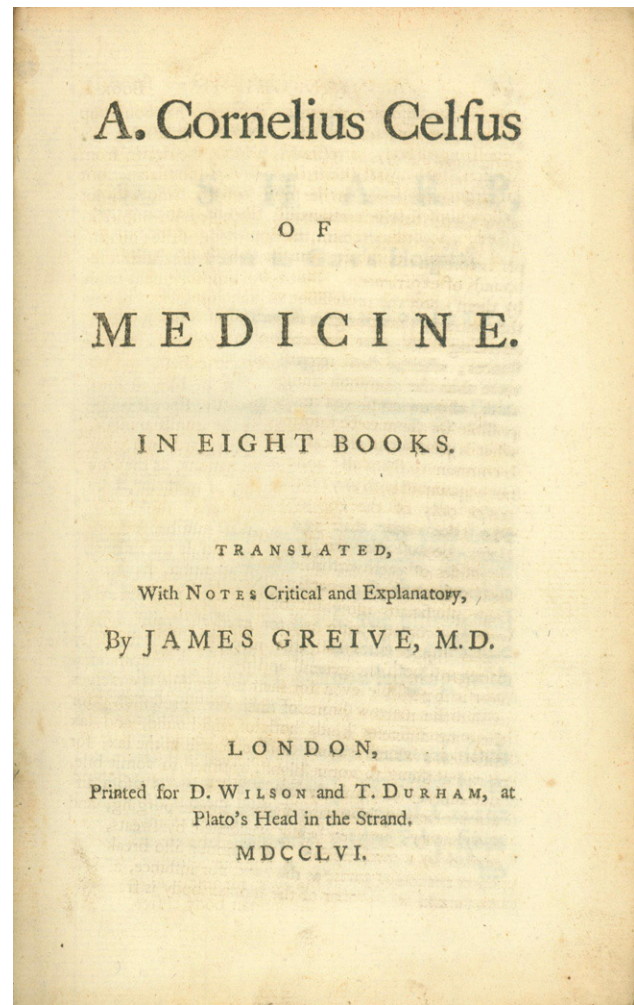
I believe that I did not send in this to the Home Secy.; but that what I specially urged upon him was the evidence with which Knowles had supplied me, of the "cracky" nature of the youth's mind, and of the obviously hereditary tendency to brood, as shown in the father and aunt—the latter an old servant of Knowles. . . .

This altogether made so strong an impression on Mr. Bruce, that he at once commuted the sentence; and the family were so sensible that the lad was not fit to take care of himself, that they expressed no disappointment at his not having received a free pardon. . . .

Carpenter's correspondent was the police magistrate and author John Paget, whose *Paradoxes and Puzzles*, published in 1874, included accounts of a number of sensational crimes. We have not been able to identify the murder case to which Carpenter refers in his letter. 41099

### Origin of the Medical Term "Cancer"

**18. Celsus, Aulus Cornelius** (fl. 1st cent. A.D.). Of medicine. In eight books. Translated, with notes critical and explanatory, by James Greive, M.D. 8vo. xxxii, 519, [7]pp. London: D. Wilson and T. Durham, 1756. 208 x 131 mm. Calf c. 1756, rebacked, corners repaired, endpapers



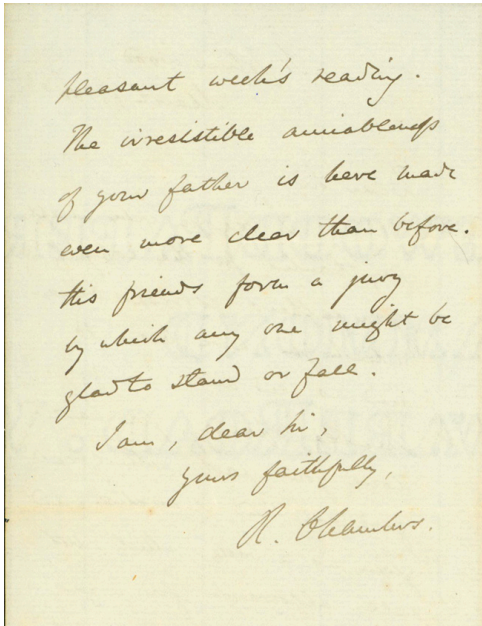
renewed. Light toning, occasional spotting, but very good. 18<sup>th</sup> century owner's signature ("George Howell January 21 1757") on the front flyleaf. \$3750

**First Edition in English.** Celsus' *De medicina*, written circa 30 C.E., is the oldest Western medical document after the Hippocratic writings, the earliest major medical treatise written in Latin to survive, and the first of the treatises on medicine from the ancient world to be published in English. Celsus remains the most important source of present-day knowledge of medicine in the Roman empire. *De medicina* was originally part of a larger encyclopedic work covering agriculture, military science, rhetoric, government, law, philosophy and medicine, but only the eight books on medicine survived intact.

Book I of *De medicina* contains a historical overview of medicine; Book II deals with the course and general treatment of diseases; Books III and IV with special therapy; Books V and VI with pharmacology (drugs and medication); Book VII with surgery; and Book VIII with

bone diseases. Celsus is credited with recording the cardinal signs of inflammation: *calor* (warmth), *dolor* (pain), *tumor* (swelling) and *rubor* (redness and hyperaemia). He goes into great detail regarding the preparation of numerous ancient medicinal remedies including the preparation of opioids. In addition, he describes many first-century Roman surgical procedures which included removal of a cataract, treatment for bladder stones, and the setting of fractures.

In compiling *De medicina* Celsus drew heavily upon the Hippocratic corpus, referencing some 80 Greek medical writers, some of whom are now known only from Celsus's work. He translated Greek medical terms into Latin, and many of these Latin terms have remained standard in medicine to the present day. Included among these terms is the word "cancer" (Latin for the Greek *karkinos* [crab]), which Celsus used to describe various types of non-malignant ulceration such as erysipelas and gangrene. In discussing malignant disease Celsus used the words *carcinoma* and *carcinode*, terms derived directly from the Greek. *Dictionary of Scientific Biography*. Pioreschi, *A History of Medicine*, vol. III, pp. 182-211. Garrison-Morton 21 (note). 40803



**19. Chambers, Robert** (1802-71). Autograph letter signed to an unidentified correspondent. 2pp. St. John's Wood, March 16, 1862. 181 x 114 mm. Light soiling along folds, two small marginal tears along central fold, otherwise fine.

\$ 500

From the author of *Vestiges of the Natural History of Creation* (1844), the first full-length exposition in English of an evolutionary theory of biology. Chambers was also

the author of numerous other works, a partner with his brother William in the publishing firm W. & R. Chambers, and a joint editor of *Chambers's Edinburgh Journal*. He was highly influential in the mid-19<sup>th</sup> century in both scientific and political circles.

Chambers' letter reads as follows:

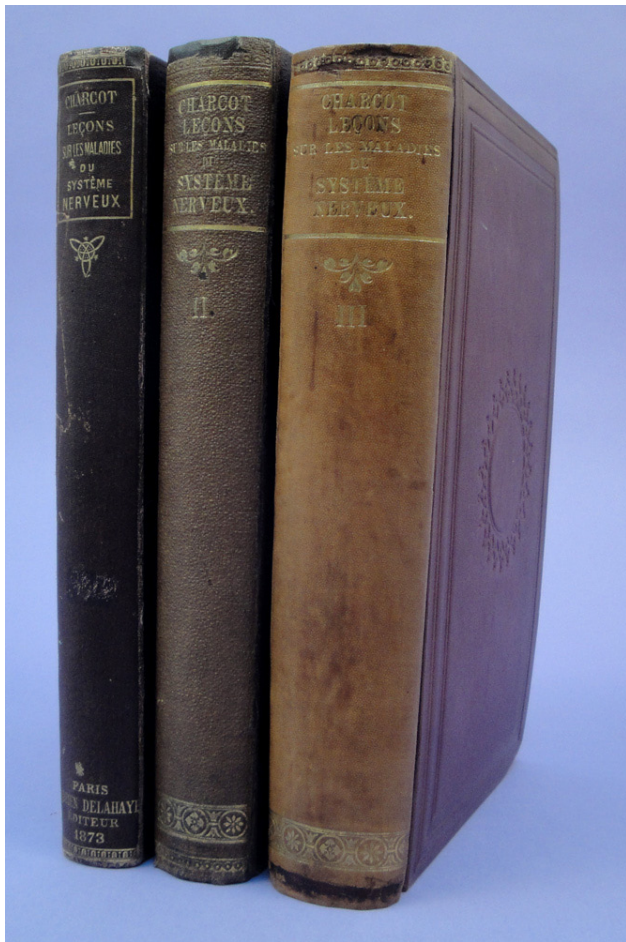
Dear Sir, I beg you will accept my thanks for the copy of your father's correspondence which you have been so kind as send me. In my humble opinion, you have done your part with great good taste and discretion, and given as a book, which, with all allowance for a few painful shades, delicately touched on, makes a very pleasant week's reading. The irresistible amiableness of your father is here made even more clear than before. His friends form a jury by which any one might be glad to stand or fall. I am, dear Sir, Yours faithfully, R. Chambers.

40848

**20. Charcot, Jean Martin** (1825-93). *Leçons sur les maladies du système nerveux faites à la Salpêtrière*. 3 vols. 3 vols. Vols. I-II edited by Desiré Magloire Bourneville (1840-1909); Vol. III edited by MM. Babinski et al. [8], 368; [8], 496; [4], 518, [2]pp. 8 chromolithographed plates in Vol. I; 10 plates, including 4 mounted photographic prints, in Vol. II; text illustrations. Paris: Adrien Delahaye, 1872-73 [Vol. I]; Bureaux du Progrès Médical, Adrien Delahaye, 1877 [Vol. II]; Bureaux du Progrès Médical, A. Delahaye and E. Lecroisnier, 1887 [Vol. III]. 218 x 136 mm. Original blind-stamped plum cloth, gilt-lettered spines (not uniform), rebacked, light wear, spine of Vol. III faded. Minor foxing, but very good. Haskell F. Norman bookplate. \$3750

**First Edition** of Vols. I-II, **First Edition** of all but the first part of Vol. III. The volumes were originally published in fascicles; the first fascicle in Vol. III bears the notation "(2e. éd.)" in the signature notation on the first leaf, but the remaining fascicles do not have this notation. Complete sets in the original binding are *extremely rare*.

*Leçons sur les maladies du système nerveux* was one of Charcot's most influential works. Charcot and his Salpêtrière school brought a new legitimacy to the scientific study of neuroses, which had been held in disrepute by the French Academy of Sciences since the days of Mesmer and animal magnetism. The second volume contains Charcot's four stages of hysteria major and the classic description of *tabes dorsalis* (slow degeneration of the sensory neurons caused by untreated



syphilis), the “lightening pains” of which Charcot was the first to describe. The third volume lists Charcot’s four stages of hypnosis. Garrison-Morton 4546. Norman 445. *Dictionary of Scientific Biography*. 41041

**21. Charcot, Jean Martin** (1825–93).

Docteur J. M. Charcot. Cast bronze medallion by **Frédéric Vernon** (1858–1912), together with smaller medallion of the Salpêtrière. Charcot medallion signed “F.Vernon 1883” in the metal. Charcot medallion measures 75 mm. in diameter, Salpêtrière medallion measures 54 mm. in diameter. Both medallions mounted on velvet-covered board, velvet a little worn. \$5000

**Rare** medallion by the noted French sculptor Frédéric Vernon, the obverse showing Charcot’s head in profile looking to the right (the reverse is blank). This is the first of two medallions by Vernon commemorating Charcot; the second medallion, made after Charcot’s death, is of gilt bronze and is slightly smaller. Jacobs, in his forward to M. E. Abbott’s *Classified and Annotated Bibliography of Sir William Osler’s Publications* (2<sup>nd</sup> ed. 1939),



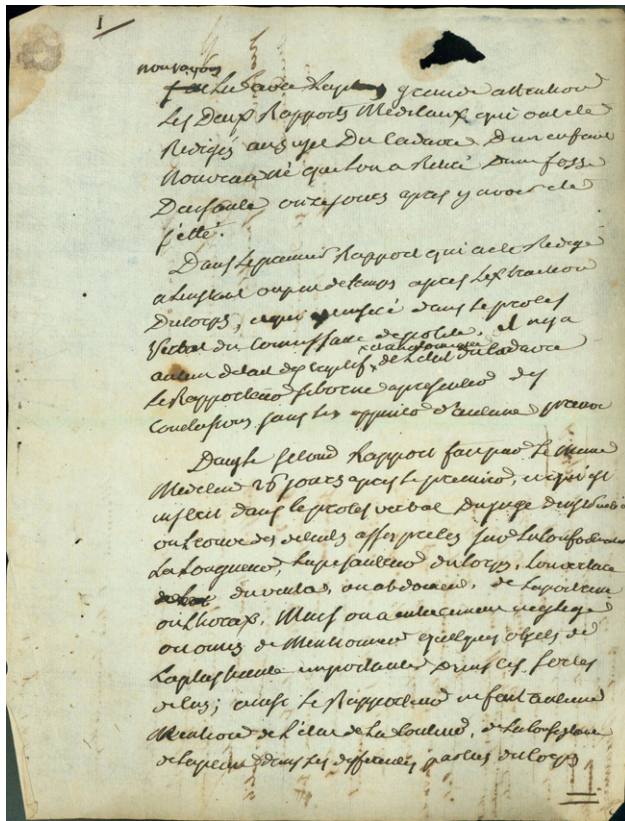
notes that Sir William Osler was persuaded to sit for Vernon in 1905 after being shown a medal of Charcot’s likeness—possibly a copy of this 1883 medallion.

Charcot, known as the “founder of modern neurology,” taught at the Salpêtrière Hospital in Paris for 33 years. He is associated with at least 15 medical eponyms, including Charcot-Marie-Tooth disease (peroneal muscular atrophy) and amyotrophic lateral sclerosis. Charcot had a great influence on the developing fields of neurology and psychology, both through his own work and through that of his students, among whom were Sigmund Freud, Pierre Janet, William James, Georges Gilles de la Tourette and Alfred Binet. Storer, *Medicina in nummis*, 603. 40704

*Critique of Two Forensic Medical Reports on the Death of an Infant, Written on the Back of Recamier’s Humorous Invitation to Dinner*

**22. Chaussier, François** (1746–1828).

Autograph manuscript draft. 10pp. on 10 numbered leaves. [Paris:] 3 February 1822.



Written on the backs of several printed and manuscript documents, including the following: **Recamier, Joseph** (1774-1852). Autograph letter signed to Chaussier. 1 page plus integral address leaf. [Paris:] 17 January 1822. Together two items. 254 x 201 mm. A few lacunae where seals were broken, a few pin-holes, minor marginal fraying, but very good. \$3500

Chaussier, a pioneer in forensic medicine, introduced the teaching of legal medicine in France in 1790. He began his medical career in Dijon, where he taught anatomy, chemistry and material medica at the Dijon Academy. In 1794, at the request of the French government, Chaussier went to Paris to help reorganize the country's system of medical education through the creation of the Écoles de Santé. He afterwards served as professor of anatomy in the new school, taught the course of chemistry and medicine at the École Polytechnique, and worked as a physician at the Hospice de la Maternité, where he conducted research on teratology and forensic medicine. During his long and distinguished medical career Chaussier earned a reputation as an expert in legal medicine, giving consultations, writing forensic reports, and publishing several works on the subject, including *Manuel médico-légal des poisons* (1824), *Recueil de mémoires, consultations, et rapports sur divers objets de*

*médecine légale* (1824) and *Mémoire médico-légal sur la viabilité de l'enfant naissant* (1826).

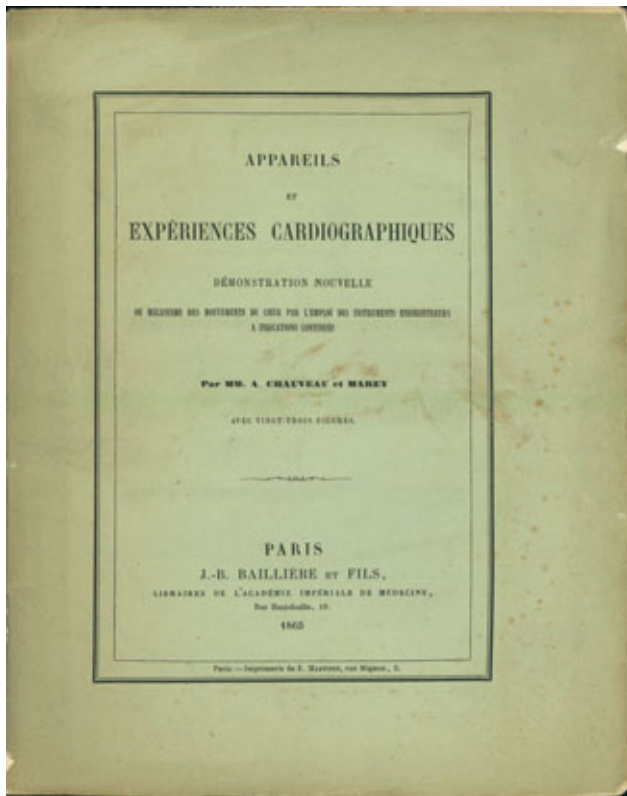
This is the only autograph manuscript by Chaussier we have handled in more than forty years of trading. It is also the only manuscript we have ever handled in which the author wrote his draft on the back of other documents. The manuscript is a draft of a review of two earlier medical reports concerning the case of a newborn infant found dead in a cesspool. Chaussier's handwriting is difficult to read and we have not been able to decipher all of the draft; however, we have been able to determine that much of the draft is devoted to discussing the state of the dead infant's lungs, in an attempt to determine whether the infant had begun to breathe before its demise. Chaussier describes the appearance of the lungs of dead infants in similar cases, notes that the infant's umbilical cord was not present, and mentions the possibility that gas present in the infant cadaver's lungs might be the result of putrefaction, given the fact that the body had been in the cesspool eleven days before its discovery.

Chaussier wrote this draft of his report on the backs of several printed or manuscript documents, including a letter sent to him a few weeks earlier by Joseph Recamier, chief physician at the Hôtel-Dieu, a pioneer in gynecological surgery (see Garrison-Morton 6033), and a cancer specialist who came up with the modern definition of metastasis. Recamier's letter is most likely a jocular invitation to dinner, referring humorously to a proposed forensic investigation into the deaths of a deer and a truffle-stuffed turkey, a discussion of poisoning by oysters, and "the question of mushrooms." Burton, *Napoleon and the Woman Question* (2007), pp. 97-98. 40393

### Introduction of Cardiography

**23. Chauveau, Auguste** (1827-1917) and **Marey, Étienne Jules** (1830-1904). *Appareils et expériences cardiographiques. Démonstration nouvelle du mécanisme des mouvements du coeur par l'emploi des instruments enregistreurs à indications continues*. Offprint from *Mémoires de l'Académie impériale de Médecine* 26 (1863). [4], 52 pages, including half-title. 23 text illustrations, mostly of cardiac tracings. Original wrappers, backstrip and cover edges chipped in several places, front cover and preliminaries foxed, but very good. \$2250

**First Edition, Offprint Issue.** Marey pioneered the use of graphic methods to record physiological phenomena; his friend Auguste Chauveau, *chef de service* of physiology and anatomy at the Veterinary Institute



of Lyons, was an expert on the equine cardiovascular system. Their collaboration, described as “one of the most important cooperative ventures in medical history” (Braun, p. 18), resulted in the world’s first cardiographic recording.

Chauveau’s experience in cardiac physiology combined with Marey’s skill and knowledge of instrumentation produced a revolutionary monitoring and recording technique: they radically extended the possibilities of cardiac catheterization by using it to record changes in intracardiac pressure. Experimenting on a horse (chosen because of the large size of the animal’s heart), Chauveau introduced thin rubber bulbs that Marey had fashioned into two of the horse’s heart chambers. Marey had attached each of the two bulbs to another outside the horse’s body by means of a long rubber tube and had connected each of these exterior bulbs to a stylus. As one chamber of the heart expanded, the displacement of the first bulb was transmitted to the second and to the stylus, pushing it upward against a sheet of paper wrapped around a cylinder. As the chamber contracted, the line made by the stylus descended, forming the characteristic curve of the cardiogram. The expansion and contraction of the second chamber, alternating with that of the first, was recorded in the same way, and the result was two sinuous lines that not only showed the pressure changes in each of the heart’s two chambers, but also recorded their exact sequence. With this procedure,

for the first time a reliable indication was given both of the moments of contraction and distension for each heart chamber and of the order in which these changes in pressure occurred. . . .

They published their cardiographic tracings in 1861 and 1862; in 1863, with improvements made to their recording procedures, they published graphs that demonstrated cardiac hemodynamics in complete detail. These remarkable tracings and the accompanying summary table of their experiments on the horse won them the physiology prize given by the Académie des Sciences that year. . . . The accuracy of their records was surpassed only in 1931 when electronic tracing of human subjects was introduced (Braun, pp. 19–20).

Braun, Marta, *Picturing Time: The Work of Etienne-Jules Marey (1830-1904)* (1994), pp. 18–20. Garrison–Morton 816. 40800

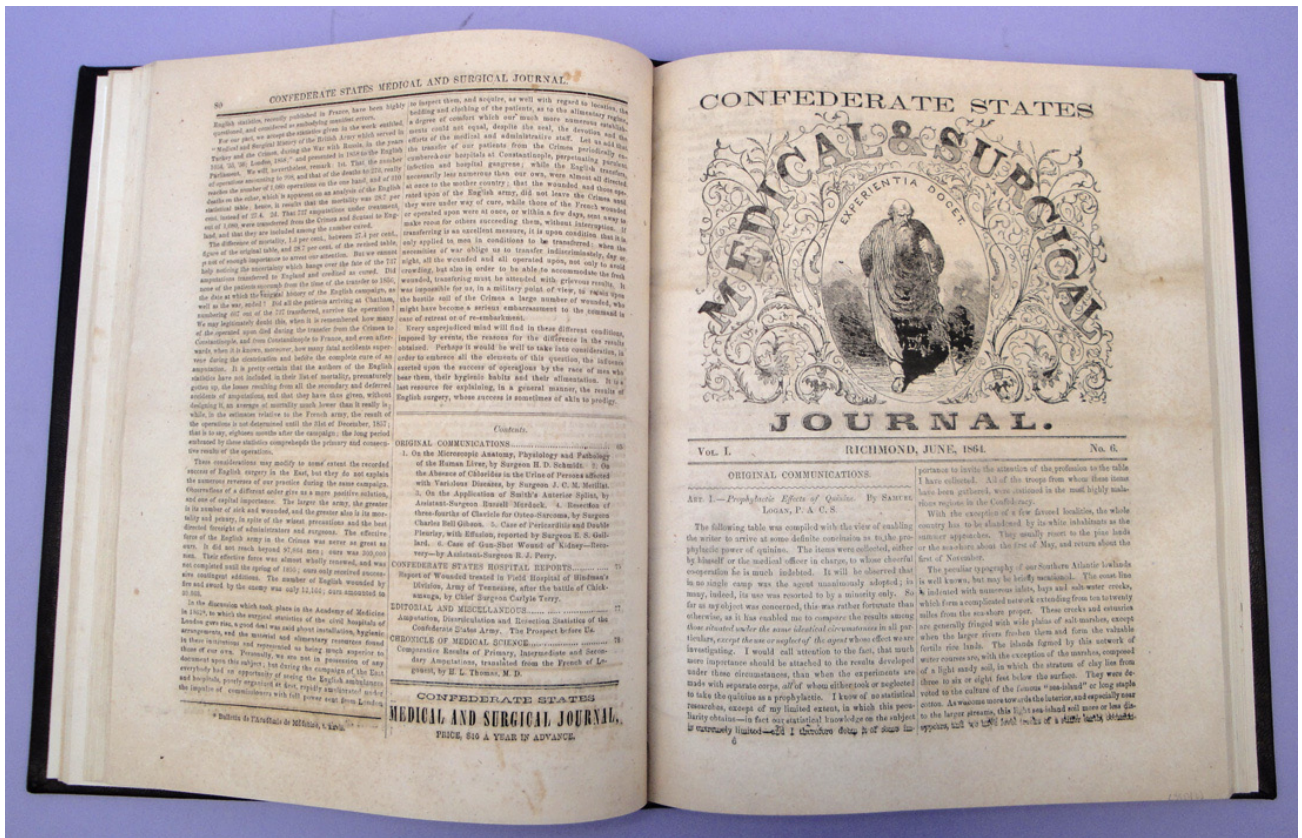
#### 24. Confederate States Medical & Surgical Journal. Vol. I, nos. 1–6, 8–12; Vol. II, nos. 1–2.

(Vol. II, no. 2 lacking pp. 33–48.) 95, 113–224; 32pp. Text wood-engravings. Richmond, Virginia, January 1864–February 1865. 295 x 232 mm.

Full morocco, gilt, in period style. several leaves gnawed with minor text loss, paper restored. Handbill prospectus for Vol. II tipped in. The first pages of several numbers bear the pencil signature “Surgn. J. L. M Merrillar Genl. Hospl.” (on two of the numbers the signature reads “Dr. J. L. M. Merrillar Staunton Va”); Vol. I, no. 8 also bears the inscription “From Dr. J. Rob Ward Med. Soc.” \$30,000

**First Edition** of the **only medical journal published under the Confederacy.** *Extraordinarily rare in any condition*; this is the first near-complete run on the market in at least 40 years. The included prospectus for Volume 2 is of even greater rarity.

“The [Confederate] Surgeon-General’s records were lost during the fire that destroyed Richmond after its defense was abandoned in April 1865, and no Confederate equivalent to the *Medical and Surgical History of the War of the Rebellion* could have been written, had the reconstruction government permitted one. A primary source for Confederate medical history remains the fourteen monthly issues of the short-lived, and now excessively rare, *Confederate States Medical and Surgical Journal*, published in Richmond from January 1864 until February 1865. It was a semi-official publication, under military auspices, and Surgeon General Samuel Preston Moore was editor in fact if not in name.



“...The *Journal* published original papers by Confederate physicians and surgeons, reviewed British and Continental journals and meetings of learned societies, and disseminated statistical and administrative information for the Confederate States Army Medical Department and Hospitals.

“The level of the *Journal* is at least as high as that of its contemporaries, despite its extremely succinct style. . . . Original papers are for the most part case reports, statistical analyses and clinical lectures, some of which are models of their kind. . . . The ‘Chronicle of Medical Science’ covers the whole field of medical writing, including medical history, and reviews both the publications and meetings of scientific and learned societies in England and on the Continent. This foreign coverage is as complete as that of any of the Northern journals of the time. . . .

“We do not know the size of the *Journal’s* press run, but it seems safe to suggest that it had only a limited circulation within the Confederacy and, except for a few copies which went to England, probably none outside it. Northern periodicals knew of the *Journal*, if at all, only at second hand . . .” (Sharpe, pp. v, xii).

The above quotation was taken from the introduction to the reprint edition of the *CSM&SJ* published by the New York Academy of Medicine in 1976. An editor’s note indicates that exemplars from five institutional collections

were used to produce the reprint, due to problems of condition and the scarcity of complete runs. When we prepared our own reprint roughly twenty years later we were also unable to obtain a complete run from any single source.

It is very likely that the number of copies printed of the issues in volume 2 were even fewer than those in volume 1. By this time virtually all commodities were scarce in the Confederacy, especially because of the blockade of Southern ports. As the prospectus for the “Second Year” states: “Owing to the scarcity and high price of paper, it is absolutely necessary that the publishers should ascertain, as early as practicable, the probable size of the January edition, and hence, all persons intending to subscribe for the year 1865 are earnestly requested to forward their names and subscriptions, either by express, or, if in the army, through the Surgeon General’s office, before January 1<sup>st</sup>. They will be careful to state exactly name and post office, or army corps to which they are attached. Subscription for the year 1865, \$20, invariably in advance. All express charges will be paid by the publishers, and the postage to army subscribers will be paid at the Richmond office.” *Confederate States Medical and Surgical Journal. With an Introduction by William D. Sharpe, M.D.* (1976), pp. v–xii. *Confederate States Medical and Surgical Journal*, ed. Ira Rutkow. Rutkow, *Hist. Surg. U.S.* II, 29. Crandall 5149. 39542

*course the Duke of  
 Sussex. Would you  
 or your brother kindly  
 think of this?  
 Shakespeare must make  
 my apology for thus  
 troubling you.  
 Allow me to take this  
 opportunity of saying that  
 I entertain a very grateful  
 recollection of your polite  
 attention to me in London  
 and that I remain,  
 Yours Dear Sir Very sincerely  
 J. Conolly.*

**25. Conolly, John** (1794-1866). Autograph letter signed to an unidentified correspondent. Warwick, May 12, 1835. 3pp. 188 x 113 mm. Fine. \$950

From British psychiatrist John Conolly, champion of the non-restraint system of treating the insane. "Conolly and his work for the 'non-restraint system' with which his name is inseparably linked marked the successful conclusion of a movement which commenced with Pinel and which created a new epoch in the lives of the insane and a new approach to insanity not only in the British Isles but throughout the civilised world" (Hunter & Macalpine, p. 1031). Conolly made other important contributions to psychiatry: His *Inquiry Concerning the Indications of Insanity* (1830) was the first book to draw parallels between normal and abnormal mental states in an attempt to understand insanity, and he was the first to suggest the idea of a mental health service to provide both in-patient and home care for the mentally ill.

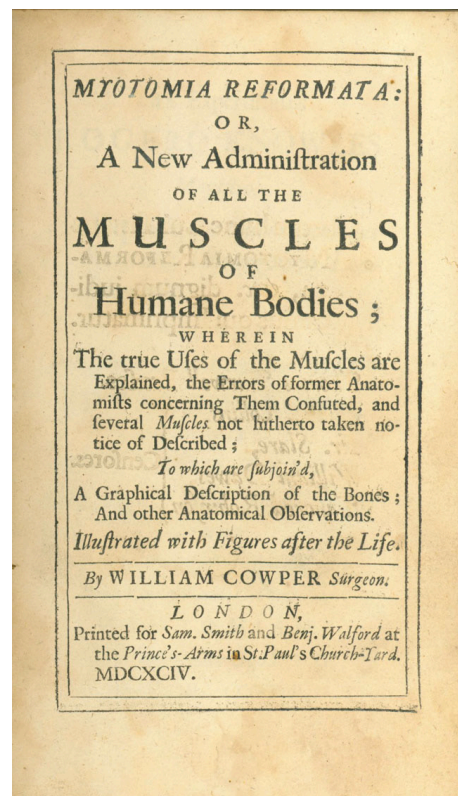
Along with his professional interests, Conolly devoted much time and energy to Stratford-on-Avon's "Shakespeare industry," working to establish Shakespeare memorials and writing his own *Study of Hamlet* (1863), in which he argued that Shakespeare's purpose in writing the

play was to represent in Hamlet "a peculiar and medically known kind of actual insanity" (Allibone, *Critical Dictionary of English Literature* [1891]). The letter we are offering here deals with Conolly's Shakespearean activities:

The Stratford Committee are very anxious to ensure the interest of literary men as regards their plans set forth in the enclosed prospectus. I know no one more likely to help us in this way than yourself, if you do not think our scheme unworthy of consideration.

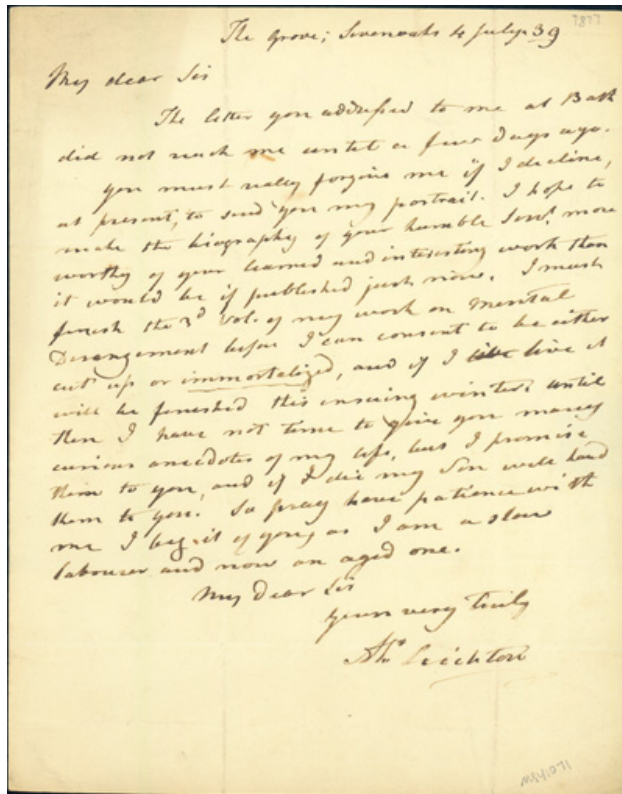
We place our chief reliance on men of letters, but there is one lover of liberal learning of high rank whose name would do our list great honour, and who, I doubt not, would feel interested in our design of doing honour to the remains of Shakespeare—I mean of course the Duke of Sussex [i.e., Prince Augustus Frederick (1773-1843), sixth son of George III]. Would you or your brother kindly think of this? Shakespeare must make my apology for thus troubling you.

40997



**26. Cowper, William** (1666-1709). *Myotomia reformata*. . . . 8vo. [24], 280pp. 10 folding engraved plates. London: Sam. Smith & Benj. Walford, 1694. 192 x 111 mm. Paneled calf c. 1694, rebacked, endpapers renewed. Minor foxing & staining. \$2500

**First Edition.** The original octavo version of Cowper's anatomy of the muscles. Cowper produced the most significant anatomy of the muscles since the Renaissance; he was particularly concerned with correcting the English writers Molins and Browne then in vogue. After the publication of the 1694 edition, Cowper worked until his death on an enlarged version, which was published posthumously in 1724 as a sumptuous folio atlas with 66 plates (some after Rubens and Raphael). Russell 209. Wing C 6700. 40085



**27. Crichton, Alexander** (1763–1856). Autograph letter signed to Thomas J. Pettigrew (1791–1865). Sevenoaks, 4 July 1839. 1 page plus integral address leaf. 229 x 180 mm. Small lacuna where seal was broken, not affecting text, a few spots, but very good. \$1500

Rare letter from British psychiatrist Alexander Crichton, author of *An Inquiry into the Nature and Origin of Mental Derangement* (2 vols., 1798), an important work on mental illness that “broke new ground in psychiatry in a number of ways . . . [combining] the latest philosophical ideas, that is psychological knowledge, with accumulated medical experience of mental disease, that is psychiatry, into a ‘philosophy and pathology of the human mind’” (Hunter & Macalpine, p. 559). Crichton’s treatise was the first in English to discuss forensic aspects of psychiatry; it also contained the earliest description of what is now

known as ADHD (attention-deficit hyperactivity disorder), and was the first to recognize aphasia as a “disturbance of memory” rather than a symptom of paralysis or insanity. Crichton’s letter indicates that he intended to publish a third volume of his *Mental Derangement*, a project on which he was currently working. The letter reads as follows:

You must really forgive me if I decline, at present, to send you my portrait. I hope to make the biography of your humble servt. more worthy of your learned and interesting work than it would be if published just now. I must finish the 3d vol. of my work on Mental Derangement before I can consent to be either cut up or immortalized, and if I live it will be finished this ensuing winter . . .

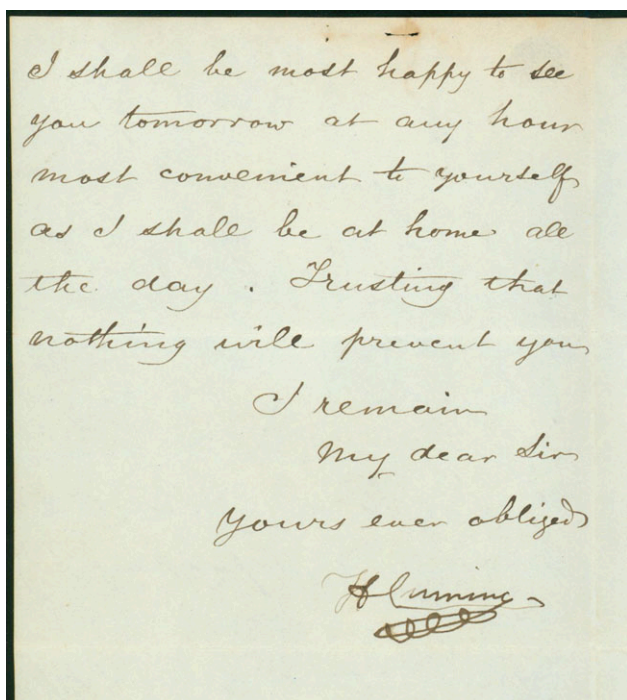
The third volume of Crichton’s *Mental Derangement* was never published.

The recipient of Crichton’s letter was physician and antiquary Thomas J. Pettigrew, best known as the author of *History of Egyptian Mummies* (1834), the first authoritative work in English on the subject. In 1838 Pettigrew began publishing his *Medical Portrait Gallery: Biographical Memoirs of the Most Celebrated Physicians, Surgeons, &c. &c.*, issued in monthly parts between 1838 and 1840. It would appear that Pettigrew had solicited Crichton for biographical material in connection with this project. Hunter & Macalpine, *Three Hundred Years of Psychiatry 1535-1860*, pp. 559–64. 41071

**28. Cuming, Hugh** (1791–1865). Autograph letter signed to James Donnet (1816–1905). Bedford Square [London], Jan. 21, 1850. 1–1/2pp. plus integral blank (docketed by recipient). 184 x 113 mm. Tiny pin-holes in upper margin, a few faint rust stains, but fine otherwise. \$375

From Hugh Cuming, conchologist and collector/dealer of natural history specimens. After traveling extensively in South America and the Pacific, Cuming set himself up as a dealer in London and enjoyed some success. His shell collections, which for a time were far superior to those in the British Museum, were described by such eminent naturalists as W. J. Broderip, G. B. Sowerby (who named a genus of bivalve shells *Cumingia* after Cuming), and L. A. Reeve, author of the 20-volume *Conchologia iconica* (1843–78).

Cuming’s correspondent was most likely British Royal Navy surgeon James Donnet (later Inspector-General of Fleets and Hospitals), whose *Notes on Yellow Fever*, published in the 1860s, helped to advance the treatment of this disease. His many voyages, which took him from the tropics to the Arctic, would have given him an excellent opportunity to collect shells, and it appears from Cuming’s letter that Donnet may have wanted to sell or donate some of his specimens.



Cuming's letter reads in part as follows:

On Saturday evening I had the pleasure to receive your letter, and at about 9 o'clk the shells came safely to hand. This morning I have done myself the pleasure of unpacking them, and I have seen a number of fine specimens, much superior to those I have in my cabinet, but I did not observe many new and undescribed species. . . .

41090

**29. Cushing, Harvey** (1879-1939). **Fulton, John F.** Harvey Cushing: A biography, by John F. Fulton. Springfield, IL: Charles C. Thomas, 1946. Original cloth, slightly worn and shaken. *Presentation copy, inscribed by Fulton on the front free endpaper: "Inscribed with great pleasure for an incorrigible Oslerian Ruth Worthington John F. Fulton April 8 1953—H.C.'s 84th birthday."*

\$150

**First Edition**, second printing (1947). 40891

**30. Dalton, John** (1766-1844). A.L.s. to Abraham Bosquet. N.p., June 15, 1807. 3pp. plus address, on single sheet measuring 202 x 323 mm. Tears where seal was broken mended at an early date, another small hole minimally affecting one



word, light wear along creases, minor foxing, but very good otherwise. Docketed by recipient.

\$4750

An excellent letter from one of the founders of modern chemistry, discussing both scientific and social matters, and ending with a somewhat risqué bit of political verse, revealing an ease and sense of humor in marked contrast to Dalton's "quiet and reserved" public manner. Dalton is best known for his chemical atomic theory, "which for the first time gave significance to and provided a technique for calculating the relative weights of the ultimate particles of all known chemicals" (DSB); he also, early in his career, made significant contributions in physics, discovering the law of gaseous expansion at constant pressure (also known as Charles's law), and the law of partial pressures in gaseous systems. The letter we are offering here dates from the year that Dalton's interests shifted from physics to chemistry: in April 1807 (three months before the date of this letter) Dalton gave a lecture course in Edinburgh in which he made the first direct mention of "indivisible particles" or atoms, and set forth the groundbreaking ideas that he would begin to publish the following year in his *New System of Chemical Philosophy* (1808-27).

Dalton's letter reveals his interest in medicine and anatomy: he prescribes a regimen of diet and exercise to a friend he thinks is "making fat too fast," and boasts of having acquired "a very fine arm & leg most famously & scientifically dissected" on which he could practice dissection. Dalton's postscript verse, lampooning the "bad luck" of "Bonapart," may refer to the Battle of Eylau

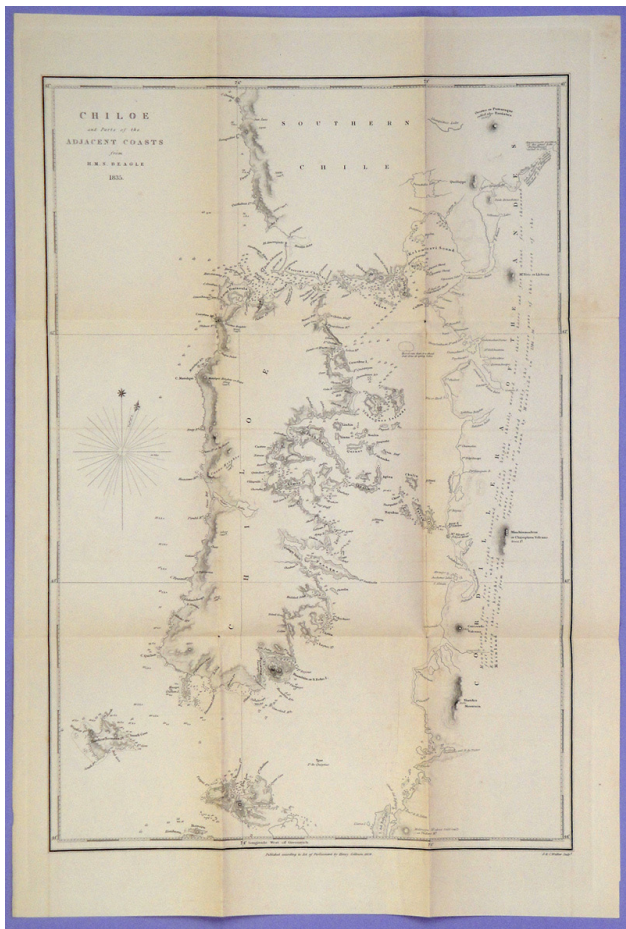


(February 7-8, 1807), which ended in bloody stalemate and marked the first significant check to the advance of Napoleon's *Grande Armée*. Ironically, Dalton wrote the present letter one day after Napoleon's decisive victory in the Battle of Friedland (June 14, 1807), an event of which Dalton could not yet have been informed.

Dalton's letter was written to Dr. Abraham Bosquet, author of treatises on marine technology and on dueling. The letter is not cited in Smyth's bibliography of Dalton's works, which includes a section on Dalton's correspondence. DSB. 40062

**31. [Darwin, Charles (1809-82).]**  
**Arrowsmith, John (1780-1873).** South America from original documents, including the survey by the officers of H. M. ships *Adventure* and *Beagle*. Engraved map. London: John Arrowsmith, 18<sup>th</sup> May 1839. 650 x 556 mm. A few tiny tears along folds, otherwise very good. \$1500

**First Edition.** Arrowsmith's large and finely detailed map of South America was one of the most significant products of the survey of the coast of South America by



the crew of the HMS *Beagle* on which Darwin served as naturalist. It was one of two maps inserted loose in pockets in the first volume of the *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle* (3 vols., London, 1839), edited by Captain Robert Fitzroy. As is well known, Charles Darwin's *Journal and Remarks* (now known as *The Voyage of the Beagle*) formed the third volume of the *Narrative*. See Freeman 10. 41102

**32. [Darwin, Charles (1809-82).]** Chiloe and parts of the adjacent coasts from H. M. S. *Beagle* 1835. Engraved map by J. & C. Walker. London: Henry Colburn, 1839. 537 x 365 mm. Tiny tears along folds, but very good. \$500

**First Edition.** This detailed map of Chiloe, an island off the coast of Chile, was one of two charts inserted loose in pockets in the second volume of the *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle* (3 vols., London, 1839), edited by Captain Robert Fitzroy. As is well known, Charles Darwin's *Journal and Remarks* (now known as *The Voyage of the Beagle*) formed the third volume of the *Narrative*. See Freeman 10. 41103



**33. Darwin, Charles (1809-82).** Autograph envelope signed, addressed to Mr. Dorrell. With stamp (2 pence) and postmark (illegible). N.d. 114 x 211 mm. Tears repaired, light soiling. **Framed with:** The late Charles Darwin. Cabinet photograph portrait of Darwin by William Luks, mounted on card. London, n.d. (1882 or after). 115 x 94 (card mount measures 168 x 110). Tiny chips in upper and lower left corners of photograph, small crease in lower margin, but very good. \$3750

The envelope, addressed in Darwin's hand, reads:

Book Post  
C. Darwin of  
Down, Bromley, Kent

Mr. Dorrell  
at Msrs. Clowes  
Duke St  
Stamford St  
Blackfriars S.

Mr. Dorrell was a "head man" (probably in charge of typesetting) at the firm of William Clowes & Sons, printer to Darwin's publisher, John Murray. The online "Darwin

Correspondence Project” includes the following letter referencing Mr. Dorrell, tentatively dated 1866:

Many thanks for your note & kind desire for me not to answer.— The case seemed worth enquiry, so I wrote to Mr Dorrell, a head man in Messrs. Clowes enormous establishment & he assures me that the difference in apparent length of arms is by no means common with compositors, & that when it occurs it is only apparent from one shoulder drooping. Hence compositors often walk with one arm retained in a peculiar position. He says when the apparently unequal arms are measured there is no real difference in their length.— File-makers, I may add, get into a habit of standing in so peculiar a position, that they always speak of one of their legs as the hind leg, even when not at work. . . .

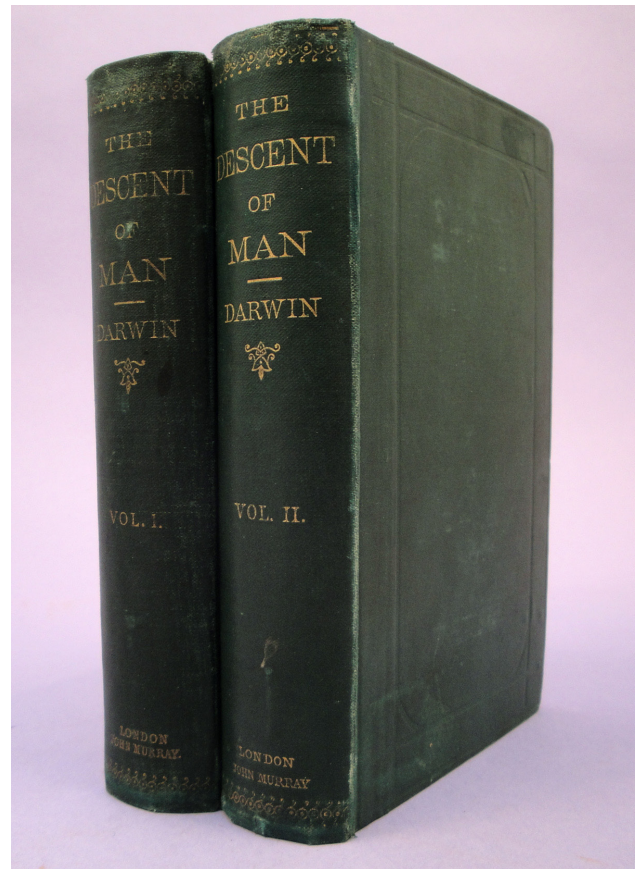
It is possible that the present envelope was used to cover the letter to Dorrell referenced above. Darwin discussed modifications to the body parts of animals in relation to their use or disuse in *Origin of Species* (1859), *Variation of Animals and Plants under Domestication* (1868) and *Descent of Man* (1871), where he considered the effects of different occupations on the human physique.

The envelope is framed with one of the last photographs taken of Darwin, published after his death. The photograph, a head-and-shoulders view, shows Darwin in three-quarter profile. 40604

### *The Origin of Man—Presentation Copy*

**34. Darwin, Charles** (1809–1882). The descent of man, and selection in relation to sex. 2 vols., 8vo. viii, 423 [1], 16pp pub. adverts.; viii [2], 475 [1]pp., 16 pp. pub; adverts. Text wood-engravings. London: John Murray, 1871. 185 x 124 mm. Original green cloth, gilt-lettered spines, Vol. I recased, one leaf starting from Vol. II. Some foxing but very good otherwise. *Presentation copy*, inscribed “From the Author” in a secretarial hand on the front flyleaf of Vol. I, and with the edges of both volumes trimmed before binding; see below. Boxed. \$17,500

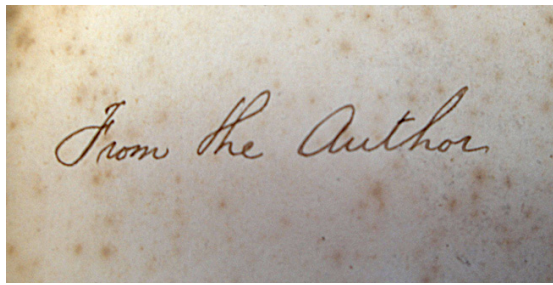
**First Edition, First Issue**, distinguished by the presence of the “Postscript” leaf in Vol. II tipped in after p. viii, and “transmitted” appearing as the first word on p. 297 of Vol. I. Twelve years after the publication of the *Origin*, Darwin made good his promise to “throw light on the origin of man and his history” by publishing the present work, in which he compared man’s physical and psychological traits to similar ones in apes and other animals, and showed how even man’s mind and moral sense



could have evolved through processes of natural selection. In discussing man’s ancestry, Darwin did not claim that man was directly descended from apes as we know them today, but stated simply that the extinct ancestors of *Homo sapiens* would have to be classed among the primates. This statement was (and is) widely misinterpreted by the popular press, however, and caused a furor second only to that raised by the *Origin*. Darwin also added an essay on sexual selection, i.e. the preferential chances of mating that some individuals of one sex have over their rivals because of special characteristics, leading to the accentuation and transmission of those characteristics.

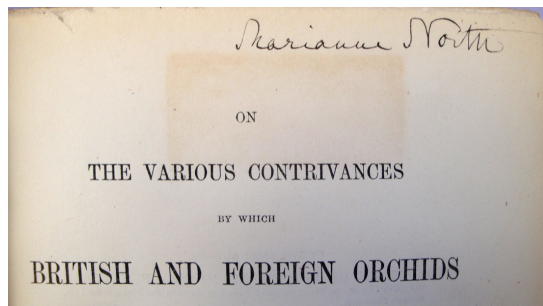
This copy was specially prepared for presentation by having its edges trimmed by the binder, resulting in a book shorter and narrower than the regular version. The original cloth binding is also comparatively shorter than that of the regular version. It was one of Darwin’s idiosyncrasies that he despised books that had to be opened with a paper knife before they could be read; in the *Life and Letters* (Vol. iii, p. 36), his son Francis wrote of this characteristic:

This was a favourite reform of my father’s. He wrote to the Athenaeum on the subject, Feb. 5, 1867, pointing out that a book cut, even carefully, with a paper knife collects dust on its edges far more than a machine-cut book. He goes on to quote the case of a lady of his acquaintance who was in the habit



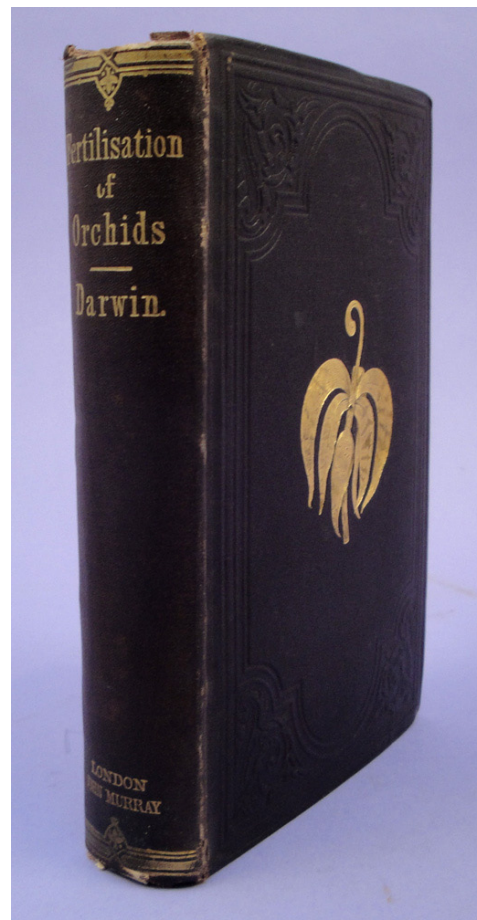
of cutting books with her thumb, and finally appeals to the Athenaeum to earn the gratitude of children “who have to cut through dry and pictureless books for the benefit of their elders.” He tried to introduce the reform in the case of his own books but found the conservatism of booksellers too strong for him. The presentation copies of all his later books were sent out with the edges cut.

Freeman 937. G-M 170. DSB. Norman 599. 40449



### *Marianne North's Copy*

**35. Darwin, Charles** (1804–82). On the various contrivances by which British and foreign orchids are fertilised by insects, and on the good effects of intercrossing. vi, 365pp., plus 16-page publisher's catalogue dated May 1872. Folding wood-engraved plate and wood-engraved text illustrations by George Brettingham Sowerby (1812–1884). London: John Murray, 1862. 197 x 125 mm. Original purple blind-stamped cloth, gilt orchid on front cover, gilt-lettered spine (Freeman variant b), light wear and chipping to head and foot of spine, inner hinges cracking. Very good copy. From the library of English naturalist and botanical artist Marianne North (1830–90), with her signature on the title; bookplate of English poet and



reformer John Addington Symonds (1840–93); leather bookplate of Howard Lehman Goodhart.

\$4000

**First Edition**, second issue. The first of Darwin's volumes of evidence supporting his theory of evolution through natural selection. Having concluded, from his initial studies of plants, that “flowers are adapted to be crossed, at least occasionally, by pollen from a different plant,” he directed his attention to orchids, which have evolved elaborate specialized mechanisms, involving the attachment of pollen sacs to the probosci of visiting insects, to insure that cross-pollination takes place. His studies led Darwin to make two important generalizations concerning flowers: first, that the structure of all irregularly shaped flowers is governed in relation to insects; and second, that flowers pollinated by the wind do not have bright-colored petals or sweet-smelling nectaries. This is the only one of Darwin's works that Murray issued in purple cloth.

This copy was originally owned by the noted naturalist and botanical artist Marianne North, best known for her paintings of the flora of the world made during her extensive travels around the globe. In 1880, at Darwin's suggestion, North traveled to Australia and New Zealand where she spent a year studying and painting. Her



botanical paintings, remarkable for their scientific accuracy, are now housed in the Marianne North Gallery of Botanic Art in Kew Gardens. The copy was subsequently in the library of English poet, literary critic and leading pioneer of sexual and social reform, John Addington Symonds, as well as noted collector Howard Lehman Goodhart. Freeman 800. Norman 565. 41085

*Inscribed by the Author*

**36. Delondre, Auguste & Bouchardat, Apollinaire** (1806–86). *Quinologie: Des quinquinas*. . . . 4to. [4] 48pp. 23 hand-colored lithographed plates (each with tissue guard), double-page hand-colored engraved map. Paris: Germer Baillière, 1854. 340 x 257 mm. Marbled boards, cloth backstrip c. 1854, somewhat rubbed & faded, small splits in front hinge. Minor foxing, but very good. *Inscribed by Delondre* on the flyleaf: “à Monsieur Dublanc Membre de l’Académie Impériale de Médecine &c. &c. / Souvenir bien affectueux / Gravelle-Havre 8 novb. 1856 / Auguste Delondre.” \$1250

**First Edition.** “This work contains twenty-three good coloured plates, exhibiting all the barks then met with in commerce” (Flückiger & Hanbury, quoted in Waring, p. 355). Delondre, a pharmacist and quinine manufacturer, was interested in both the scientific and commercial aspects of quinine; his book illustrates and describes 33 different varieties of both true and false cinchona from the mountainous regions of South America, which at the time were the sole source of cinchona bark. Drug manufacturers continue to extract quinine from cinchona even today, as it is not commercially feasible to synthesize it in the laboratory. NUC ND 0152557 (DNLM, MH-A, PPAN, PBL). 34516

**37. Devèze, Jean** (1753–1826?). Autograph letter signed, in French, to Theodore Charles Mozard (1755–1810). Philadelphia, 2 pluviôse, an 5 (January 24, 1797). 1 page plus integral address leaf. 230 x 188 mm. Portion of letter (approx. 40 x 80 mm.) torn away from left margin when opened, affecting 4 lines of text, smaller portion of address leaf torn away when seal was broken, not affecting text. Very good otherwise. \$1250

Rare autograph letter from French émigré physician Jean Devèze, best known for his feud with Benjamin Rush

philadelphie de a phisic au siens

Je vous annonce avec grand plaisir mon très cher fils à confère  
 que vous avez été reçu hier au soir membre de la Société  
 philosophique de cette ville, une mauvaise nouvelle que l'on  
 me fit dans le temps sur le bruit qu'ont les membres de  
 propos des candidats, ma force a des formalités et retardé  
 votre admission qui qu'à ce moment, vous ne devez pas douter  
 du plaisir que j'ai de être membre de la même Société que  
 vous, la retrouver une occasion qui me met à même  
 d'embrasser les contentions que vous m'avez inspirés lorsque  
 je vous voir pour la première fois  
 Je vous envoie votre mon de baptême  
 afin que je puisse vous faire expédier  
 votre Diplôme, que je vous enverrai lorsque je saurai  
 en règle ce qui ne peut se faire sans avoir ce que je vous  
 demande  
 qui que la confraternité d'est un moyen qui  
 unit les hommes les plus éloignés de nos contrées  
 elle ne saurait rien ajouter aux contentions d'hommes  
 de des lieux que j'avais déjà pour vous et avec de quel je ne  
 cessai d'être  
 Votre très dévoué fils à confère  
 mo Duff et, a esige officiel de l'acte  
 de 1793 chef des amis français  
 milberry Paris 1796. a. philadelphie.

over the treatment of yellow fever during Philadelphia epidemic of 1793, to Theodore Charles Mozard, regarding the latter's admission to the American Philosophical Society. Devèze was then chief physician of a French military hospital established in Philadelphia; he had been admitted to the American Philosophical Society the year before. His letter can be translated in part as follows:

It is with great pleasure, my dear son and confrere, that I announce to you that you were elected a member of this city's Philosophical Society yesterday evening. An unfortunate quarrel between me and another over a member's right to propose candidates forced me to observe formalities and delayed your admission until this moment. You should not doubt my pleasure in being a member of the same society as yourself . . . [I beg you] to send me your baptismal name . . . so that I can expedite your diploma, which I will send you as soon as I have it in hand . . .

Devèze had arrived in Philadelphia from Santo Domingo (now Hispaniola) in the summer of 1793, during the yellow fever epidemic that was then devastating the city. Because of his extensive experience with the disease on Santo Domingo, he was immediately appointed head of Bush Hill, a yellow fever hospital in Philadelphia, where he treated patients by keeping them comfortable and clean and administering quinine and stimulants. Devèze's conservative treatment regimen contrasted sharply with that of Benjamin Rush, who advocated extensive bloodletting to combat the disease. Both Devèze and Rush



published accounts of the yellow fever epidemic in 1794, but Devèze's went largely ignored for sixty years, until brought to light in La Roche's *Yellow Fever Considered in its Historical, Pathological and Therapeutical Relations* (1855).

Devèze's correspondent Mozard was Consul of the French Republic at Boston. Unlike Devèze, who ended up settling in the United States (where his descendants changed their name to Dewees), Mozard left the country in 1798 after having his consulship revoked by President John Adams. Myrsiades, *Medical Culture in Revolutionary America* (2009), pp. 94-99. 40916

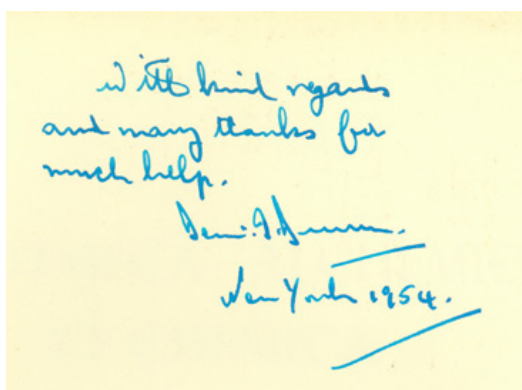
### *First Book on Television in English*

**38. Dinsdale, Alfred.** *Television: Seeing by wireless.* 8vo. 62pp. London: W. S. Caines for Sir Isaac Pitman & Sons, 1926. 186 x 125 mm. Original printed paper boards, pictorial dust-jacket. Very fine copy. \$9500

**First Edition** of the *first book in English on television.* Dinsdale discusses the technical challenges faced by early experimenters (Jan van Szczepanik, Boris Rosing, Denoys von Kihaly and others), but focuses primarily on the work of the Scottish engineer John Logie Baird

(1888–1946), the first person to produce televised pictures of objects in motion. In February 1924 Baird produced the first television image in outline, and in April 1925 he transmitted the first pictures between two televisions. By the following October Baird had succeeded in transmitting images with gradations of light and shade, and on January 27, 1926, he successfully transmitted recognizable human faces between two rooms by television. Of Baird's early experiments, Dinsdale writes: "Baird's weird apparatus—old bicycle sprockets, biscuit tins, cardboard discs and bullseye lenses, all tied together with sealing wax and string—failed to impress those who were accustomed to the shining brass and exquisite mechanism of the instrument maker. The importance of the demonstration was, however, realized by the scientific world . . ." (p. 49). Although he did not succeed in producing a viable system of television, Baird paved the way for future technical developments. Television reached a state of technical feasibility in 1931, and the first high-definition broadcasting system was launched in London in 1936 by the BBC.

The copy we are offering is in nearly pristine condition, and is the finest copy we have seen in our four decades in business. The Richard Green copy, with a tape repair on the back panel of the dust-jacket and some minor rubbing, sold at Christies' on June 17, 2008 for \$16,250.00. Shiers, *Early Television: A Bibliographic Guide to 1940*, 841. 40292



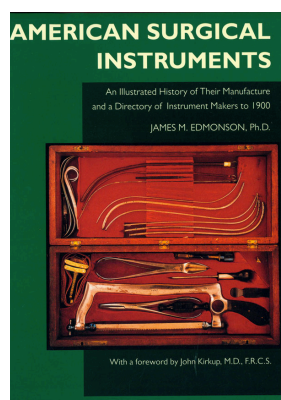
**39. Duveen, Denis I.** *Bibliotheca chemica et alchemica*. An annotated catalogue of printed books on alchemy, chemistry and cognate subjects . . . vii, 669pp. 16 plates on 8 plate leaves. London: E. Weil, 1949. One of 200 copies. 248 x 183 mm. Original cloth, spine a bit worn and faded. *Presentation copy, inscribed on the front free endpaper*: "With kind regards and many thanks for much help. Dennis I. Duveen. New York 1954." Laid in is a typed letter signed from

Duveen to Mary C. Ritter at Argosy Book Store, dated February 2, 1955.

\$450

**First Edition** of this standard bibliographical reference. Duveen's letter to Mary Ritter discusses the publishing history of Macquer's *Chimie théorique* (1749). 41067

**40. Edmondson, James M.** *American surgical instruments: An illustrated history of their manufacture and a directory of instrument makers to 1900*. With a foreword by John R. Kirkup,



M.D., F.R.C.S., Honorary Curator, Surgical Instrument Collection, Royal College of Surgeons. 352pp. 293 illus., incl. 16 color plates. Cloth, dust jacket, acid-free paper. ISBN 978-0-930405-70-0. Norman Surgery Series, No. 9.

\$175

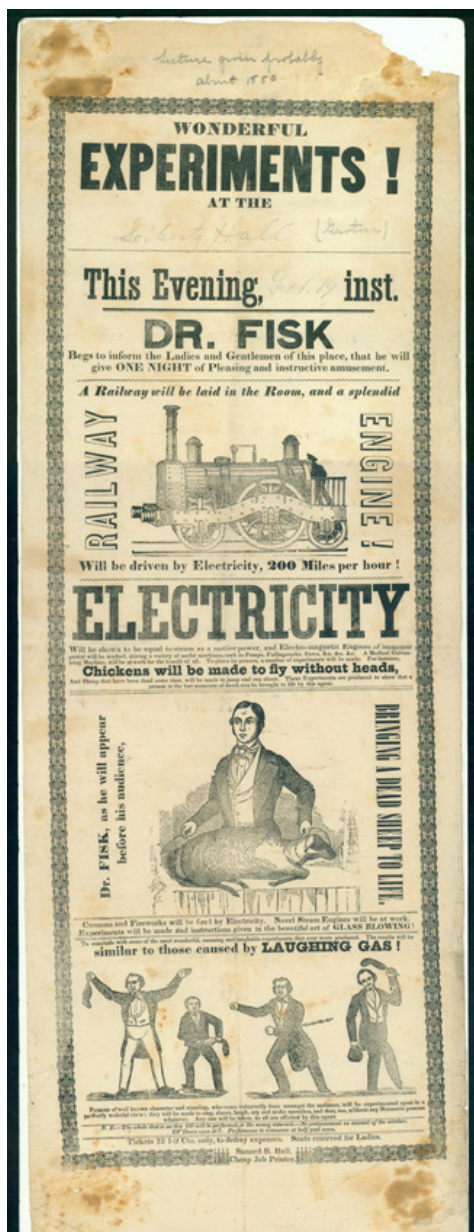
The most comprehensive and authoritative directory to date of surgical instrument makers in the United States prior to 1900, by the curator of the Dittrick Museum of Medical History. The companion essay assesses the relative quality of the instruments and identifies the most important makers and their work. 31378

*"Chickens Will Fly without Heads; Sheep Dead for Some Time Will Jump and Run About!!"*

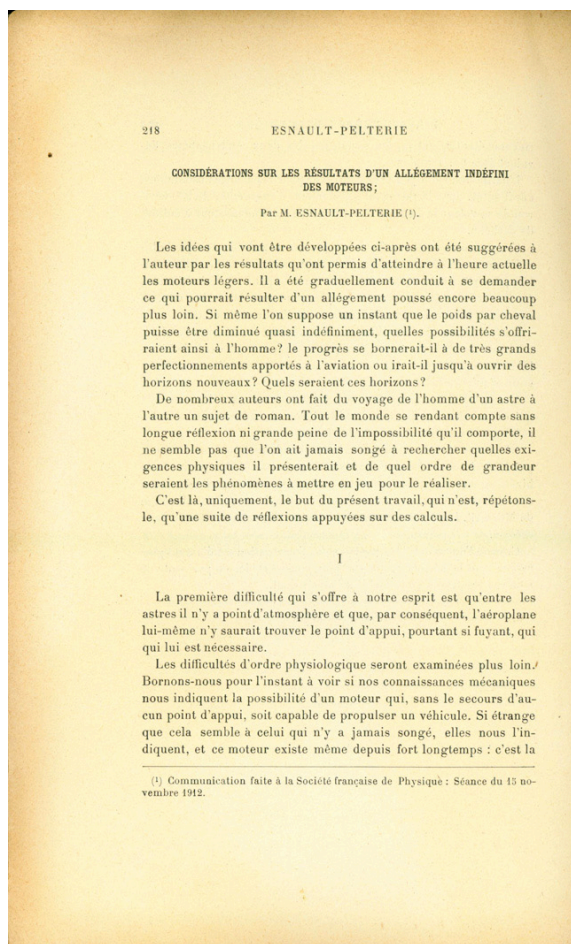
**41. [Electricity.]** Wonderful experiments! At the [Liberty Hall (Groton)] this evening, [Feb. 19] inst. Dr. Fisk begs to inform the ladies and gentlemen of this place, that he will give one night of pleasing and instructive amusement . . . Broadside. Woodcut illustrations. N.p.: Samuel B. Hall, n.d. [ca. 1850]. 627 x 225 mm. Small portion of one corner torn (not affecting text), some creasing, minor stains, but very good.

\$2500

Rare, possibly unique nineteenth-century American broadside advertising Dr. Fisk's traveling show offering a "pleasing and instructive" demonstration of the many and varied uses of electricity. Among the marvels promised were



“a splendid railway engine . . . driven by electricity, 200 miles per hour,” “electro-magnetic engines, of immense power . . . driving a variety of useful machines,” and “cannons and fireworks . . . fired by electricity.” The broadside also proclaims that “a medical galvanizing machine will be at work for the benefit of all,” which Dr. Fisk (whom we have not been able to identify) would use to make “chickens . . . fly without heads,” and “sheep that have been dead some time . . . jump and run about. These Experiments are produced to show that a person in the last moments of death can be brought to life by this agent.” The broadside has blank spaces for inserting the place and date of Dr. Fisk’s performance, which have been filled in with the words “Liberty Hall (Groton [Connecticut])” and “Feb. 19” in pencil in a nineteenth-century hand. 40877



## Foundation of Theoretical Astronautics

### 42. Esnault-Pelterie, Robert (1881-1957).

Considérations sur les résultats d’un allègement indéfini des moteurs. In: *Journal de physique théorique et appliqué*, cinquième série, 3 (1913), pp. 218-230. Paris: Bureau du Journal de Physique, 1913. 253 x 167 mm. Original blue printed wrappers, chipped, spine repaired. Moderate toning, edges a bit frayed, but very good.

\$1250

**First Edition.** Esnault-Pelterie’s lecture on “the unlimited lightening of engines,” delivered in 1912 in both St. Petersburg and Paris, was the first to demonstrate theoretically that space travel was possible; it marks the beginning of theoretical astronautics. “The lecture contains all the theoretical bases of self-propulsion, destroying the myth that rockets need atmospheric support and giving the real equation of motion. Anticipated is the use of auxiliary propulsion for guidance and complete maneuverability of rockets. Also contained are calculations of the escape velocity, the phases of a round-trip voyage to the Moon, and the times, velocities, and durations, of trips to the

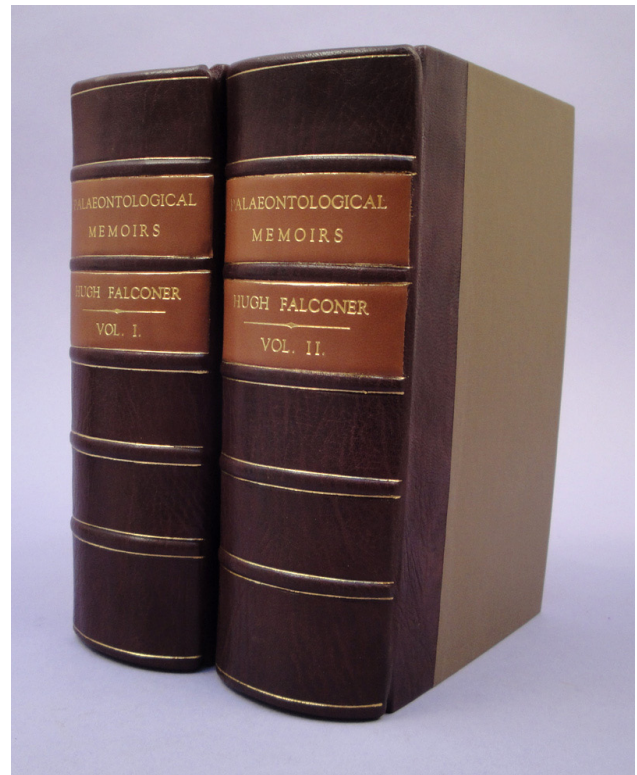
Moon, Mars, and Venus, as well as thermal problems related notably to the surface facing the sun . . . This 1912 lecture is the first purely scientific study marking the birth of astronautics. While Tsiolkovskiy had the prescience and talent to first suggest, in 1903, rocket propulsion to space, REP was the first to develop the equations of the problem and to establish the mathematical theory of interplanetary flight. REP is thus the founder of theoretical astronautics” (Blosset, p. 9).

As noted above, the use of rockets for space travel had been discussed by the Russian scientist Konstantin Tsiolkovskiy (1857-1935) in his *Exploration of Cosmic Space by Means of Reaction Devices* (1903). Tsiolkovskiy’s work was published only in Russian, however, and remained almost completely unknown to Western scientists until the 1920s. Esnault-Pelterie did not refer to Tsiolkovskiy’s work in his 1912 paper, but had become aware of it by 1930; see the historical introduction (pp. 17-38) of his *L’Astronautique*. Why Esnault-Pelterie was invited to speak on this advanced topic in Russia is unclear. Nor is it likely that Tsiolkovskiy, a man of very modest means, could have afforded to travel from Moscow to St. Petersburg to hear Esnault-Pelterie speak if he even knew about the lecture in advance. Perhaps Tsiolkovskiy was the only person in Russia at the time who would have truly understood the lecture. In *L’Astronautique* Esnault-Pelterie mentions that his speech was never published in Russia.

Esnault-Pelterie’s lecture first appeared in print in the *Journal de physique théorique et appliqué*, but in abridged form, due to both space considerations and the trepidations of the *Journal’s* editor, who was shocked by Esnault-Pelterie’s ideas on space travel. “REP deplored the exaggerated condensation of the lecture, which was the cause for an apparent divergence between Goddard’s and his own opinions concerning the possibility at the time of building vehicles capable of escaping from the earth’s gravitation. In fact, Goddard wanted only to send a projectile loaded with powder to the moon and observe its arrival by telescope. REP considered the conditions necessary for transporting living beings from one celestial body to another and returning them to the earth; his more pessimistic conclusions were based on considerations of the substantial initial mass required for a rather small final mass, in view of the limited means available at the time” (Blosset, p. 9). Blosset, “Robert Esnault-Pelterie: Space pioneer,” in Durant and James, *First Steps toward Space* (Washington DC: Smithsonian Institution Press, 1974), pp. 5-31; pp. 23-31 contain an English translation of the unabridged lecture. Norman 713. Von Braun & Ordway, pp. 74-75. 40970

### 43. Falconer, Hugh (1808–65).

Palaeontological memoirs and notes of the late Hugh Falconer, A.M., M.D. . . . Compiled and edited by Charles Murchison, M.D., F.R.S. 2 vols.



Vol. I: lvi, 590pp. 34 plates, text illustrations. Vol. II: xiii, [77], 675pp. 38 plates, text illustrations. 215 × 140 mm. London: Robert Hardwicke, 1868. Modern quarter morocco, marbled boards. Library stamps on verso of title pages of both volumes, small stamp on the title of Vol. II, faint stamps on the edges of Vol. I. Marginal repairs to frontispiece and first 7 leaves of Vol. I, a few pencil marks in the margins, light toning, but very good. \$3000

**First Edition.** The collected paleontological works, both published and previously unpublished, of the Scottish geologist and botanist Hugh Falconer, whose extensive studies of India’s fossil mammals earned him and his colleague Proby Cautley the London Geological Society’s prestigious Wollaston Medal. Falconer became interested in paleontology while stationed in India as an employee of the British East India Company. In the early 1830s he discovered the Siwalik fossil beds in the southernmost part of the Himalayas, where he and Cautley excavated an enormous variety of now-extinct specimens, including the mastodon, sivatherium, saber-toothed tiger and the giant tortoise *Colossochelys Atlas*. Falconer’s observations of the evolutionary history preserved in the Siwalik strata—long periods of stasis followed by short periods of rapid change—led him to introduce the evolutionary theory known as punctuated equilibrium, a theory further

developed in the twentieth century by Niles Eldredge and Stephen Jay Gould.

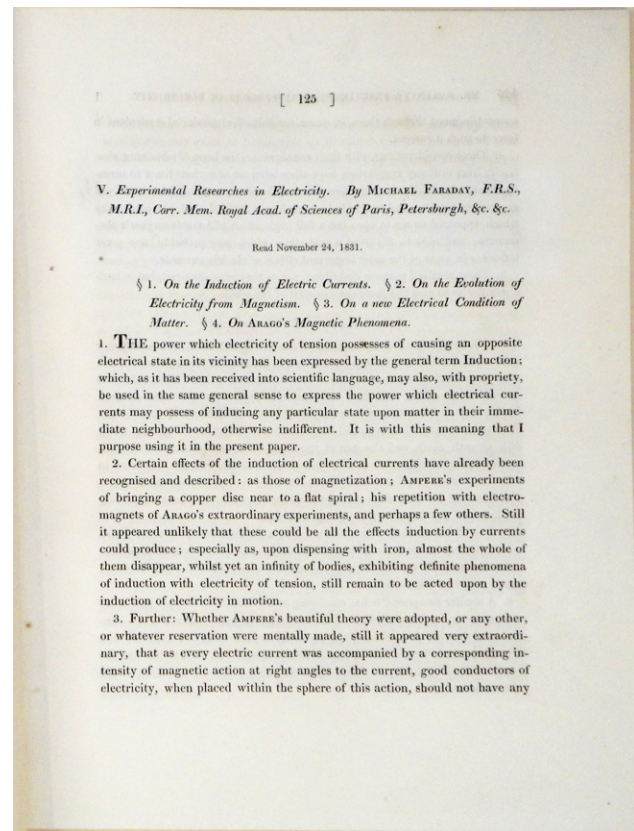
Upon his retirement and return to London in 1855 Falconer devoted all of his time to paleontological and geological pursuits, and became involved in the question of the antiquity of man. Together with Pengelly, Falconer was one of the first two scientists to visit Brixham Cave after its discovery in 1858, and he was instrumental in obtaining the necessary funding and scientific personnel for its excavation. Falconer's letter of 10 May 1858 to the Geological Society informing them of the Brixham Cave site is included in Volume II of the *Palaontological Memoirs*, together with his report on the results of the cave excavations delivered on 9 September. We have not been able to find any evidence that this letter and report were published prior to their inclusion in the *Palaontological Memoirs*. The excavation of Brixham Cave culminated in what Falconer's biographer Charles Murchison called "the great and sudden revolution in modern opinion, respecting the probable existence at a former period of man and many extinct mammalia" (p. 486).

Falconer left a large portion of his paleontological researches unpublished on his death, while many of his earlier papers had appeared only in such hard-to-find periodicals such as the *Journal of the Asiatic Society of Bengal*. The present collection brings together all of Falconer's memoirs on paleontology, with the first volume containing his work on the fossil zoology of the Siwalik formations and the second his later paleontological researches, including his investigations on the antiquity of man and his important memoir on the fossil rhinoceros, published here for the first time. *Dictionary of Scientific Biography*. 40957

#### 44. Faraday, Michael (1791-1867).

Experimental researches in electricity. 1st - 30th series, plus supplement to the 11th series. 31 extracts from *Phil. Trans.* (1832-56). 4to. Various sizes (the largest 287 x 218 mm.). Each extract in modern wrappers with facsimile labels; preserved in a marbled drop-back box with label on front cover. Minor occasional spotting, some of the plates browned, otherwise fine. \$12,500

**First Editions.** An extremely rare, fine complete set of Faraday's epochal papers on electricity, as they originally appeared in the *Philosophical Transactions* over 24 years. Between 1832 and 1856, Faraday published in the *Philosophical Transactions* a series of 30 papers entitled "Experimental researches in electricity," in which his major discoveries relating to electricity and magnetism were first announced to the world. The first 29 of these papers were collected and published in three volumes between 1839



and 1855; the 30th paper, published in 1856, never appeared in book form.

The "First series" of the "Experimental researches," published in 1832, is Faraday's single most important scientific paper: it reports his discovery of the means for generating electricity by electro-magnetic induction and his invention of the dynamo. Regarding Faraday's invention of the dynamo, his biographer L. Pearce Williams has this to say:

... it was impossible to realize at the time the revolution in man's life that would be worked by future developments of this apparatus. . . . From this simple laboratory toy was to come the whole of the electric power industry and the benefits to everyone that have followed upon the ability to transport electricity to even the smallest village or farm. Faraday did realize that here was a possible source of cheap electric current, but he was too immersed in discovery to think of pursuing the practical aspects. . . . The story is told that Sir Robert Peel, the Prime Minister, visited Faraday in the laboratory of the Royal Institution soon after the invention of the dynamo. Pointing to this odd machine, he inquired of what use it was. Faraday is said to have replied, "I know not, but I wager that one day your government will tax it" (Williams, *Michael Faraday*, pp. 195-96).



The “Second series” of the “Experimental researches,” which deals with terrestrial electromagnetic induction and the force and direction of electromagnetic induction generally, is of almost equal importance to the “First series,” as it represents the birth of the field concept. Through his experiments, Faraday had made the surprising discovery that the lines or curves of force generated by a magnet are independent of their source. Williams writes that

in the same paper [i.e., the “Second series”] in which Faraday had noted the independence of the magnetic lines of force, he also introduced a new concept. This was the idea of the field of force generated in time and extending progressively through space. . . . For the next thirty years [Faraday] was to search for essentially two things: the way in which electric and magnetic forces were transmitted through space, and the relation between these forces and ponderable matter. It is no exaggeration to say that a fundamentally new way of looking at physical reality was introduced into science in this Second Series of the *Experimental Researches*. Hitherto all that had been really attended to was the effects of forces acting upon matter. Henceforth, the problem of the way in which the force was transmitted between particles of matter or even through empty space was to loom ever larger. Out of the successive answers given by

Faraday, James Clerk Maxwell and Albert Einstein was to emerge modern field theory (pp. 204-6).

It is difficult to determine how many plates should be present here. Jeffreys does not give plate counts, but a set of extracts that we sold earlier had 18 plates as opposed to this set's 13. The book-form edition has 17 plates. Jeffreys, *Michael Faraday, A list of his lectures and published writings* (1960) 187, 191, 207, 215, 218, 220-21, 227, 234, 241, 273, 277, 279-80, 285, 299, 313, 341, 371, 381, 384, 394, 398, 427. See PMM 308 and Horblit 29 (both citing the book-form edition). 38090

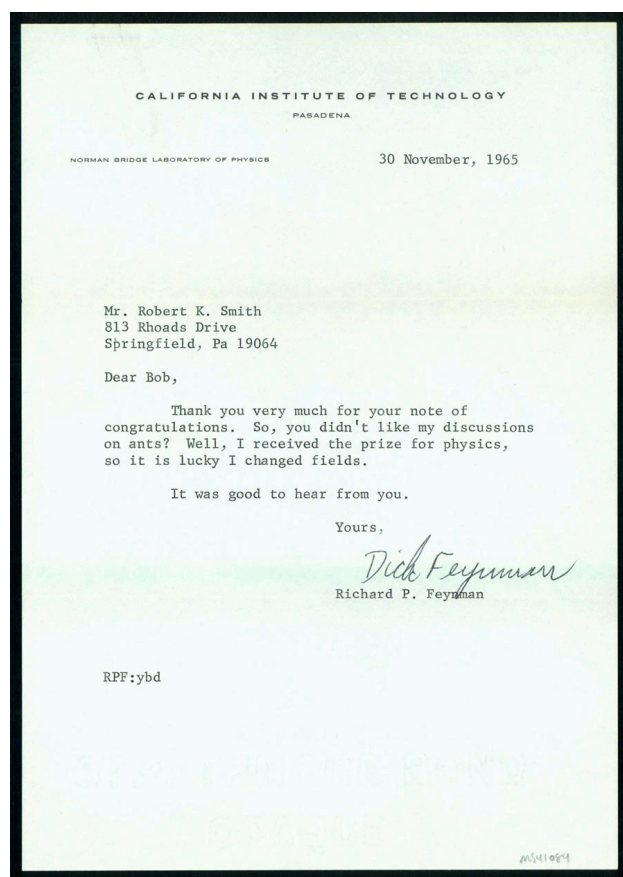
*First Systematic Treatise on Pathology, which also Named Pathology & Physiology Peiresc – Fouquet Copy*

**45. Fernel, Jean** (1497?-1558). Medicina. Folio. [12], 250 (misprinted 248), [14], 238, [18], 90, [10] pp. Woodcut portrait in text. Paris: André Wechel, 1554. 338 × 226 mm. Limp vellum c. 1554, a.e.g., two binder's cords broken in upper spine, very unusual 15th-century Latin inscriptions, music and cartoons visible on inside front and back covers and inner flaps. Margins of last 10

leaves a trifle gnawed, but a fine and completely unrestored tall copy, in a full morocco suedelined box by Lobstein. “Double-phi” cipher penned on upper margin of title, reminiscent of those of bibliophiles **Nicolas Claude Fabri de Peiresc** (1580–1637), scholar and patron of the sciences, and **Nicolas Fouquet** (1615–80), finance minister to Louis XIV. From the renowned, but undocumented library of the French non-practicing physician, music publisher, and connoisseur, Jean Blondelet. Contemporary marginalia, including index of diseases related to biblical names on final flyleaf. \$17,500

**First Edition.** G-M 2271. The first systematic treatise on pathology, which also introduced the names for the sciences of pathology and physiology. In the second part of the above, entitled “Pathologia” (a term Fernel introduced), Fernel provided the first systematic essay on the subject, methodically discussing the diseases of each organ. The result was a succinct summary of the best available knowledge of organic abnormality in disease. Fernel’s predecessor Benivieni, whose *De abditis* (1507) represents the foundation of modern pathology, had presented a collection of case histories without any attempt at a logical or methodical system. Fernel’s contributions to the study of aneurysms were particularly noteworthy. He was the first to associate arterial dilatation with aneurysm and he differentiated true from false aneurysms. Fernel also attributed the cause of arterial aneurysms to syphilis, which was pandemic during the Renaissance.

Although Fernel’s earlier treatise, *De naturali parte medicinae* (1542; PMM 68), has long been considered the earliest work devoted exclusively to physiology, Fernel actually named that science “Physiologia” as the title to the revised edition of it which forms the first part of the *Medicina*. Within six years after his graduation from medical school Fernel became one of the most famous physicians in France. His reputation at the court of the dauphin (later Henri II) became firmly established when he saved the life of Henri’s mistress, Diane de Poitiers. Fernel was however less successful with François I, Henri’s father, who died of syphilis in 1547. See the classic *Endeavour of Jean Fernel* (1946) by Sir Charles Scott Sherrington. DSB. Long, *Hist. Path.*, pp. 38–41. Willius & Dry, *History of the heart and circulation* (1948) 40–41, 372. Acierno, *History of Cardiology* (1994) pp. 48–50, 97–99. Durling 1459. Norman 785. Waller 2993. Wellcome I, 2195. 34703



### *Mentioning His Nobel Prize and His Work on Ants*

**46. Feynman, Richard** (1918–88). Typed letter signed, with postmarked cover, to Robert K. Smith. Pasadena, November 30, 1965. 1 page. 217 x 153 mm. Tears in cover mended with clear tape, otherwise fine. \$6500

Excellent and characteristically humorous letter from Richard Feynman, who received a share of the 1965 Nobel Prize for physics for his part in developing the theory of quantum electrodynamics (QED), described as “perhaps the most nearly perfect theory in physics” (Weber, *Pioneers of Science*, p. 201). He also worked on the Manhattan Project, where he was head of the theoretical division at Los Alamos. “Widely known for his insatiable curiosity, gentle wit, brilliant mind and playful temperament” (Chandler, “Richard Feynman, Nobel laureate in physics,” *Boston Globe* [17 February, 1988], 81), Feynman became famous outside the scientific world for his irreverent personality and his quirky and humorous books and lectures on popular science. Letters from Feynman are rare; this is only the second one we have seen on the market in our 40 years in business.

Feynman's letter, written a few weeks after he had received notification of his Nobel award, was a response to a friend's note of congratulations (we have not been able to further identify the recipient). The letter reads as follows:

Dear Bob, Thank you very much for your note of congratulations. So, you didn't like my discussions on ants? Well, I received the prize for physics, so it is lucky I changed fields. It was good to hear from you.  
Yours, Dick Feynman

"Discussions on ants" refers to Feynman's studies of ant behavior made while he was in graduate school at Princeton and after he began teaching at the California Institute of Technology; he included an amusing account of these ant studies in his autobiography, *Surely You're Joking, Mr. Feynman!* One of Feynman's investigations—on how ants in an ant trail create a straight path between two points—has some bearing on his work on quantum electrodynamics. Feynman described this investigation in his autobiography:

One question that I wondered about was why the ant trails look so straight and nice. The ants look as if they know what they're doing, as if they have a good sense of geometry. Yet the experiments that I did [at Princeton] to try to demonstrate their sense of geometry didn't work. Many years later, when I was at Caltech . . . some ants came out around the bathtub . . . I put some sugar on the other end of the bathtub . . . The moment the ant found the sugar, I picked up a colored pencil . . . and behind where the ant went I drew a line so I could tell where his trail was. The ant wandered a little bit wrong to get back to the hole, so the line was quite wiggly, unlike a typical ant trail.

When the next ant to find the sugar began to go back, I marked his trail with another color . . . he followed the first ant's return trail back, rather than his own incoming trail. (My theory is that when an ant has found some food, he leaves a much stronger trail than when he's just wandering around.) This second ant was in a great hurry and followed, pretty much, the original trail. But because he was going so fast he would go straight out, as if he were coasting, when the trail was wiggly. Often, as the ant was "coasting," he would find the trail again. Already it was apparent that the second ant's return was slightly straighter. With successive ants the same "improvement" of the trail by hurriedly and carelessly "following" it occurred. I followed eight or ten ants with my pencil until their trails became a neat line right along the bathtub (Feynman, pp. 95-96).

The ants' process of arriving at a straight path, as Feynman described it, bears a strong similarity to Feynman's concept of how particles move in a straight line from point A to

point B, a key part of his contribution to the theory of quantum electrodynamics:

Now, we ordinarily think of particles (such as photons) as traveling in straight lines from A to B, but Feynman's concept was that, in a sense, a particle follows all possible paths, and it just so happens that the lengths of nearly straight paths are not very sensitive to slight variations of the path, so they all have nearly identical lengths, meaning they have nearly the same phase, so their amplitudes add up. On the other hand, the lengths of the more convoluted paths are more sensitive to slight variations in the paths, so they have differing phases and tend to cancel out. The result is that the most probable path (by far) from A to B is the straight path ("Feynman's Ants." *MathPages*. Web. 12 Jan. 2011).

Feynman, *Surely You're Joking, Mr. Feynman* (1985). 41084

**47. Feynman, Richard** (1918-88). Autograph letter signed to Henri Corbière. N.p. [Pasadena], April 1970 (docketed "27/4/70" in recipient's hand). 1 page. 295 x 210 mm. Slight fraying at edges, but very good. \$12,500

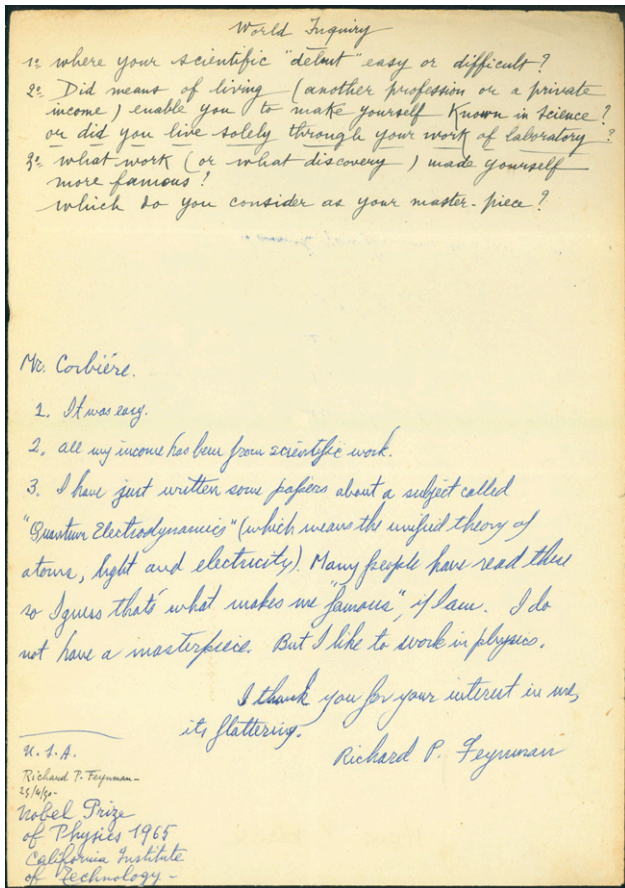
Extraordinarily rare autograph letter from Feynman, who received a share of the 1965 Nobel Prize for physics for his part in developing the theory of quantum electrodynamics (QED), described as "perhaps the most nearly perfect theory in physics" (Weber, *Pioneers of Science*, p. 201). Feynman mentions his work on QED in his letter to Corbière, a European autograph collector who had sent Feynman a list of questions about his scientific work and career; Feynman's response, written on the same sheet, answers Corbière's questions in order. Corbière asked Feynman the following:

1. Where [sic] your scientific "debut" easy or difficult?
2. Did means of living (another profession or a private income) enable you to make yourself known in science? Or did you live solely through your work of laboratory?
3. What work (or what discovery) made yourself more famous?

Which do you consider your masterpiece?

Feynman responded in his characteristically playful way:

1. It was easy.
2. All my income has been from scientific work.
3. I have just written some papers about a subject called "Quantum Electrodynamics" (which means the unified theory of atoms, light and electricity). Many people have read these so I guess that's what makes



me "famous," if I am. I do not have a masterpiece. But I like to work in physics.

I thank you for your interest in me, it's flattering.

Richard P. Feynman

40927

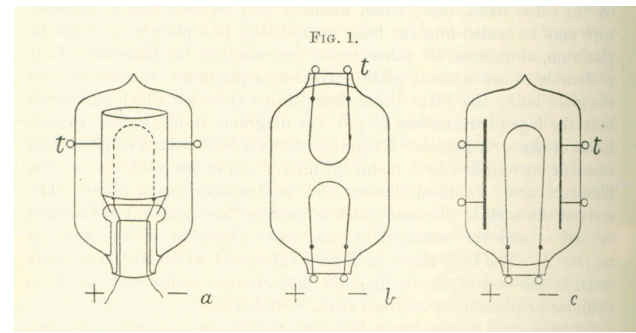
## Beginning of Electronics

### 48. Fleming, John Ambrose (1849-1945).

On the conversion of electric oscillations into continuous currents by means of a vacuum valve. In *Proc. Roy. Soc.* 74 (1905): 476-487. Whole volume, 8vo. [66, variously paginated], 580pp. Plates, text illustrations. Later library buckram, very minor rubbing and wear. Book-label and stamps of the Liverpool Athenaeum. \$2000

**First Edition, Journal Issue.** PMM 396. Fleming's paper introduced the basic principle of the modern wireless valve. Fleming, an electrical engineer and physicist who had worked with Thomas Edison's company in London,

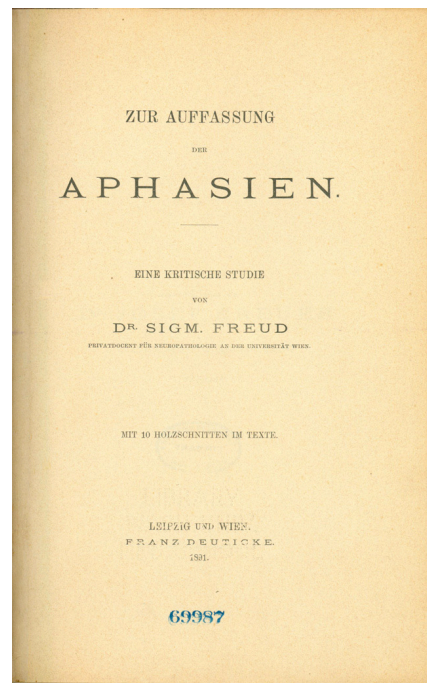
invented and patented the two-electrode vacuum-tube rectifier, which he called the oscillation valve.



It was also called a thermionic valve, vacuum diode, kenotron, thermionic tube, or Fleming valve. . .

This invention is often considered to have been the beginning of electronics, for this was the first vacuum tube. Fleming's diode was used in radio receivers and radars for many decades afterwards, until it was superseded by solid state electronic technology more than 50 years later (Wikipedia).

Fleming's invention paved the way for Lee DeForest and others to perfect the broadcasting of wireless signals. 40296



### Freud's Rare First Book

**49. Freud, Sigmund (1856-1939).** Zur Auffassung der Aphasien. 8vo. [4] 107 [1]pp. Leipzig & Vienna: Deuticke, 1891. Modern cloth. Light browning, small ink & perforated library stamps on title, but very good. Library bookplate.

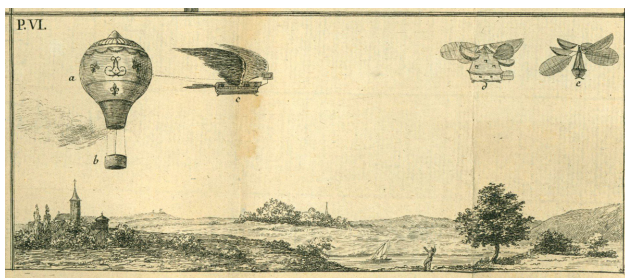
\$3250



Nous n'avons qu'une seule variété de petites vaches, c'est le zébu ou la petite vache à bosse de l'Inde : il est certain que l'on aura vu ces petits animaux. C'est le privilège des males d'avoir des grosses bosses à dos : les femelles sont à cet égard plus mignonnes. . .

[We only have one variety of small cow, which is the zebu or small humped cow of India: you will have certainly seen these animals. The males are privileged to have large humps on their backs; the females are daintier in this regard . . .

Geoffroy's correspondent was Léon de Wailly, one of the most notable natural history artists of the period (see Baratray and Hardouin-Fugier, *Zoo: A History of Zoological Gardens in the West* [2002], p. 80 for an example of his work). He was an illustrator of La Cépède's monumental *La menagerie du Muséum national d'histoire naturelle* (1800-1801), one of the finest examples of 18<sup>th</sup> century French natural history illustration. The Musée du Jardin des Plantes preserves hundreds of de Wailly's watercolors. *Dictionary of Scientific Biography*. Benezit for de Wailly. 40915



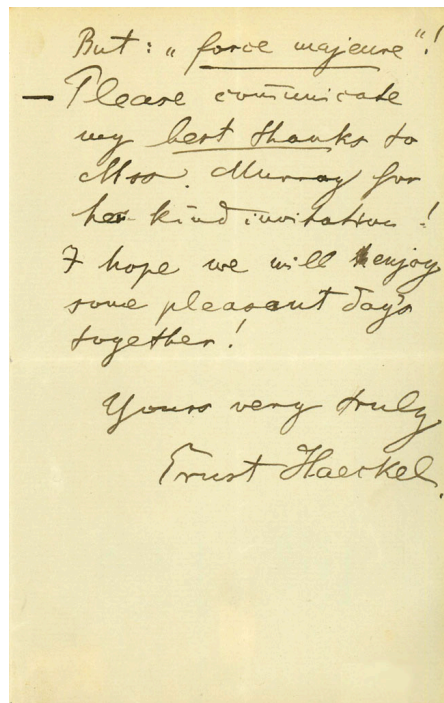
### Bird Flight and Aerial Navigation

**52. [Gérard, Laurent Gaspard.]** *Essai sur l'art du vol aérien*. 8vo. iv, 178, [2], xv pp. Engraved folding plate. Paris: La veuve Duchesne; Brunet, 1784. 182 x 107 mm. (uncut). Original plain wrappers, worn at spine, minor dampstaining. Light browning & occasional foxing, some fore-edges frayed, but very good. Boxed.

\$3750

**First Edition.** The first book after the invention of balloons to investigate the flight of birds in connection with the problem of aerial navigation. Included is a discussion of the use of wings to steer lighter-than-air craft and the possibility of heavier-than-air craft powered by beating wings (ornithopters). About one-third of the book is devoted to discussions of the physics of flight, a comparison of the flight methods of birds and insects, and the design and construction of a human-powered ornithopter; the final chapter describes a new type of balloon powered by inflammable gas (probably hydrogen). Gérard also discusses the evil consequences that might

result from man's gaining the ability to fly, and sets forth seven highly restrictive suggestions for state control of flying machines—including the rule that “an individual would be permitted to use his flying machine only for the benefit of himself, his wife, and his family,” and a proposal suggesting that “on each flight the hirer [of a flying machine] be accompanied by a government-nominated co-pilot . . . who would ensure that the hirer did not deviate from his stipulated route” (quoted in Hart, *Prehistory of Flight*, pp. 120-21). 40964



**53. Haeckel, Ernst** (1834-1919). Autograph letter signed, in English, to Scottish oceanographer John Murray (1841-1914). Jena, August 10, 1891. 3pp. 1823 x 115 mm. Small traces of former mounting on blank verso of second leaf, otherwise fine. \$950

Letter from the German biologist and comparative anatomist Haeckel, promoter of Darwin's work in Germany, and coiner of numerous biological terms including *phylum*, *phylogeny*, and *ecology*. His correspondent, John Murray, was one of the founders of modern oceanography; a member of the famous *Challenger* oceanographic expedition (1872-76), Murray was the first to note the existence of the Mid-Atlantic Ridge and oceanic trenches such as the Marianas Trench, and in 1884 he established the Marine Laboratory in Edinburgh, the first institution of its kind in Britain. Murray and Haeckel met while Murray was editing and published the voluminous reports on the *Challenger* expedition's findings—Haeckel, an expert on invertebrate anatomy,

had been asked to contribute the reports on radiolaria, medusae, siphonophores and sponges. Haeckel's *Challenger* reports, comprising Vols. 14, 18, 28 and 32 of the collected reports of the expedition, were issued between 1882 and 1889.

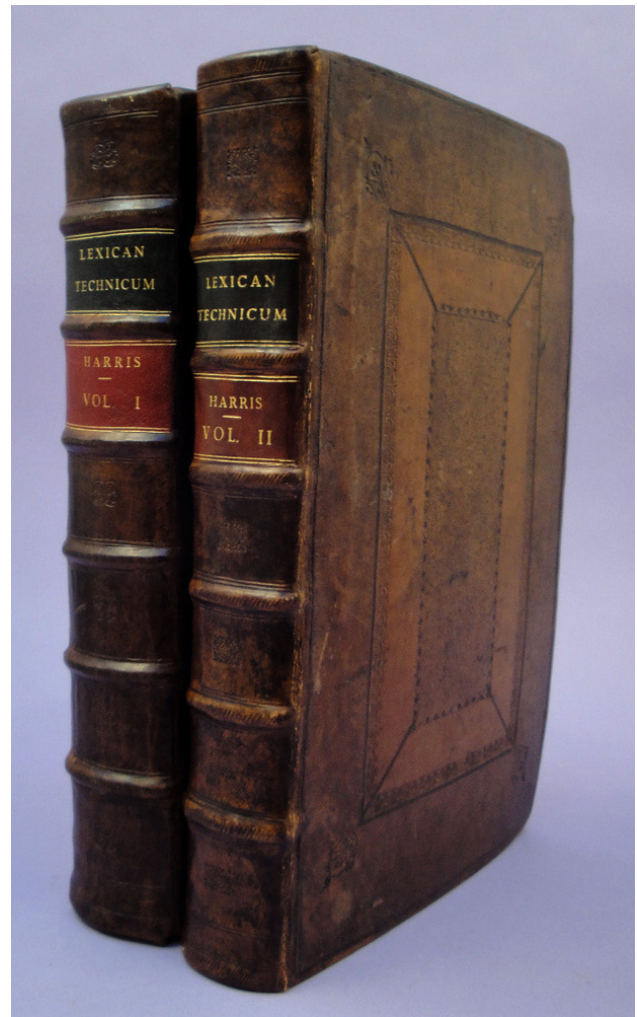
Haeckel's letter, written in his somewhat eccentric English, reads as follows:

Dear Murray! Best thanks for your kind letter!  
I had all things arranged for depart to yesterday.  
Unfortunately, before yesterday, walking in the dark from a stall, I had a contusion of my left foot, so that I am obliged to remain lying in the canapee for some days. But I hope to be able again of walking in about a week, so that I may start from here about the 17 or 18 Aug. Than I will go directly to Hamburg, and write you, what day I will arrive at Edinbrough. I am very anxious on this disagreeable delay! But: "force majeure"! Please communicate my best thanks to Mrs. Murray for her kind invitation! I hope we will enjoy some pleasant days together! Yours very truly  
Ernst Haeckel.

Richards, *The Tragic Sense of Life: Ernst Haeckel and the Struggle over Evolutionary Thought* (2008), pp. 76-77. 41087

**54. Harris, John** (1666?-1719). *Lexicon technicum: Or, an universal English dictionary of arts and sciences: Explaining not only the terms of art, but the arts themselves.* 2 vols., folio. Unpaginated. Engraved portrait frontispiece by G. White after R. White in Vol. I, 14 engraved plates, text woodcuts. London: Dan Brown, Tim. Goodwin, John Walthoe [etc.], 1704-1710. 320 x 205 mm. Paneled calf ca. 1704-10, rebacked, endpapers renewed. A few plates toned, but a fine copy. Armorial bookplate of John Manley, Esq. in Vol. II. \$15,000

**First Edition.** The first English dictionary of arts and sciences, and the earliest modern encyclopedia of science. Harris was the first to make the distinction between "word-books" (dictionaries) and "subject-books" (encyclopedias), and his *Lexicon Technicum* is the first English encyclopedia to be arranged in alphabetical order. Harris relied heavily on the writings of Isaac Newton as a source, quoting lengthy excerpts from them under such headings as "Attraction," "Colour," "Fluxions," "Gravity," "Light," and "Motion." The introduction to Vol. II contains the first printing (in Latin and English) of Newton's "De natura acidorum," his only published work on chemistry; and the articles "Quadrature" and "Curves" give the first English translations of the "Two treatises" from Newton's



*Opticks*. The subscription list in Vol. II has Newton down for a large paper copy of the *Lexicon*.

Complete sets of the first edition of *Lexicon Technicum* are **extremely rare on the market**. Babson Supplement, p. 55. Collison, p. 99. Horblit 25a. Norman 992. *Printing and the Mind of Man* 171a. Wallis 383.5-383.501. 40876

### "Mathematical History"

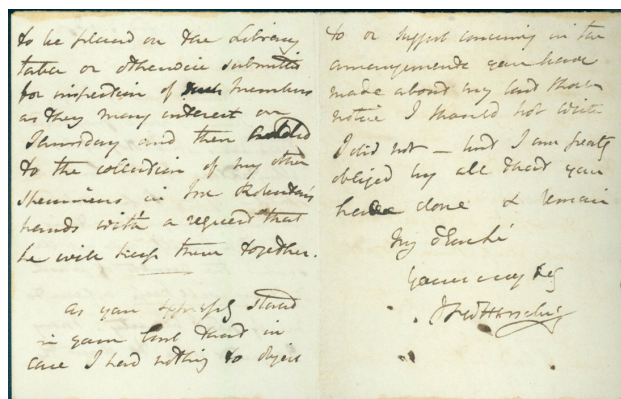
**55. Heilbronner, Johann Christoph** (1706 – ca. 1747). *Historia matheseos universae a mundo condito ad seculum p. C. n. XVI.* 4to. [8], 924, [66]pp. Text diagrams. Leipzig: Joh. Friedrich Gleditsch, 1742. 230 x 177 mm. 18<sup>th</sup> century calf gilt, small cracks in hinges, light wear at extremities and corners. Some foxing and browning, but very good. Macclesfield Library bookplate (19<sup>th</sup> century) and embossed stamps.

\$2450



**First Latin**, and most probably the **First Complete Edition** (a German version, described as “Erster Theil” [first part] and consisting of only 204 pages, was published in 1739). Heilbronner’s work, in both its German and Latin versions, was the first to use the term “mathematical history.” It is one of the earliest histories of any science, predating Montucla’s *Histoire des mathématiques*, which began publication in 1758.

Heilbronner’s complete Latin edition contains chapters on mathematics and its uses, 602 biographies of famous mathematicians, bio-bibliographies of mathematical textbook writers, a chapter on Chinese mathematics, and a special study of arithmetic, including sections on arithmetical writers and even arithmetical poetry and divination. Of particular interest is a section listing mathematical manuscripts in important Italian, French, German and British libraries; some of the materials cited here may no longer be extant. 40967



### “I Have Prepared Specimens of Photographs . . .”

**56. Herschel, John F. W.** (1792–1871).

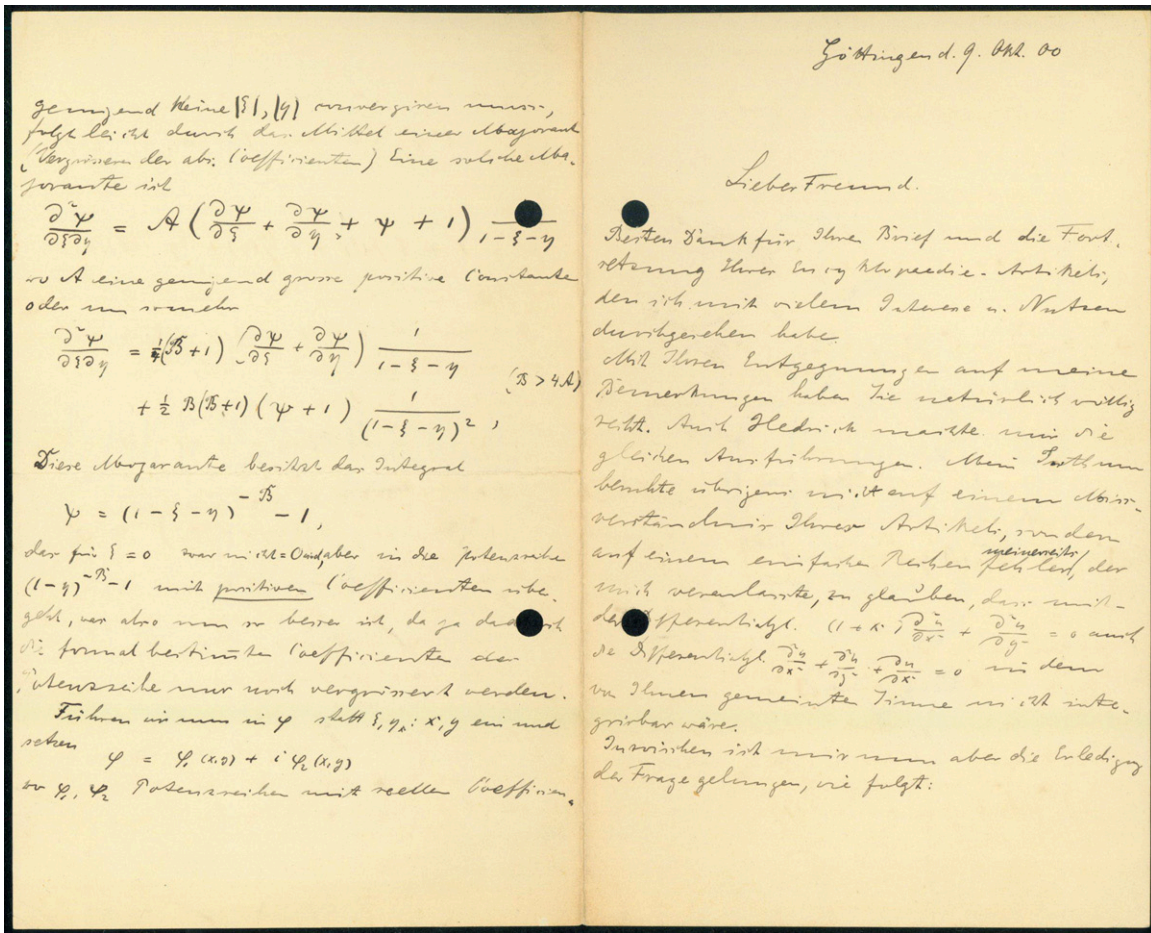
Autograph letter signed to an unidentified correspondent [Samuel Hunter Christie (1784–1865)]. Collingwood [House, Hawkhurst], December 21, 1842. 3pp. 122 x 98 mm. Very good. \$2500

Excellent letter discussing photographic researches from Sir John Herschel, whose intensive investigations in photography and photochemistry during the late 1830s and early 1840s led to enormous advances in the field in its earliest days. Herschel coined the terms “photography,” “positive,” and “negative,” invented new photographic processes and improved existing ones, and experimented with color reproduction.

Herschel’s letter begins with a discussion of his latest photographic work:

Having had 2 days fine sun I have prepared specimens of photographs illustrative of the last paragraphs of my paper about the mercurial preparations and of a process not yet described that results of which if they will keep appear to me of great beauty. May I request you to direct them to be placed on the library table or otherwise submitted for inspection of such members as they may interest on Thursday and then added to the collection of my other specimens in Mr. Robertson’s hands with a request that he will keep them together.

Herschel refers here to one of the two important papers on photography that he submitted to the Royal Society in 1842: “On the action of the rays of the solar spectrum on vegetable colours, and on some new photographic processes” (*Philosophical Transactions* 132 [1842]: 181–214) and “On certain improvements on photographic processes described in a former communication, and on the parathermic rays of the solar spectrum” (*Philosophical Transactions* 133 [1843]: 1–6). These papers discussed



Herschel's photochemical experiments with a wide range of organic and metallic materials, and announced his invention of two new photographic processes: the gold-based chrysotype and the cyanotype, an iron-based method using potassium ferricyanide. This last process, which produces white images on a blue ground directly onto paper, is the ancestor of the modern blueprint. Herschel described the working details of these processes fully in his second paper, to which he is likely referring in the present letter. The "process not yet described" probably refers to Herschel's experimental and ultimately unsuccessful mercury-based photographic process, which he christened "celanotype." Herschel's correspondent was mathematician and physicist Samuel Hunter Christie, who made important contributions to the study of magnetism; he served as secretary of the Royal Society from 1837 to 1843. See Schaaf, *Out of the Shadows* (1992), chs. 3–5 for a detailed discussion of Herschel's photographic researches, including excerpts from his unpublished scientific notebooks. Hannavy, *Encyclopedia of Nineteenth-Century Photography* (2008), p. 655. 40222

### Autograph Letter Signed, with Significant Mathematical Content

**57. Hilbert, David** (1862–1943). Autograph letter signed, in German, to an unidentified correspondent. Göttingen, 9 October 1900. 6pp. 182 x 113 mm. Holes punched in inner margins, minimally affecting the text, creased horizontally, but fine otherwise. English translation included.

\$7500

Excellent mathematical letter from David Hilbert, one of the most influential mathematicians of the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. Hilbert made fundamental discoveries and contributions in many areas, including invariant theory, proof theory and mathematical logic; his work in geometry "had the greatest influence in that area after Euclid" (O'Connor and Robertson); and he formulated the theory of Hilbert spaces, one of the foundations of functional analysis.

Hilbert wrote this letter two months after giving his famous lecture on "The Problems of Mathematics" at the Second International Congress of Mathematics on August 8, 1900. In this lecture, and in a following paper, Hilbert

presented 23 unsolved problems in mathematics, many of which had great influence in 20<sup>th</sup> century mathematics. Aspects of Hilbert's problems continue to be of interest today.

The letter, written to one of Hilbert's mathematical colleagues, is almost completely mathematical in content. It begins as follows:

Thanks very much for your letter and the continuation of your Encyclopedia article, which I reviewed with great interest and benefit.

You are obviously completely correct in your objections to my remarks. Hedrick [i.e., American mathematician Earle Hedrick (1878-1943)] also made the same comments to me. By the way, my mistake was not due to a misunderstanding of your article, but rather because of a simple computational error on my part . . .

Hilbert then goes on to demonstrate this mathematically, using upwards of 20 separate equations and providing a narrative of his progression through the mathematics involved. He concludes by telling his correspondent that "it thus seems that all of your wonderful developments are well founded, and especially your Greens function and your exchange theorem . . ." O'Connor, J. J., and E. F. Robertson. "David Hilbert." MacTutor History of Mathematics. July 1999. Web. 22 Oct. 2010. 40125

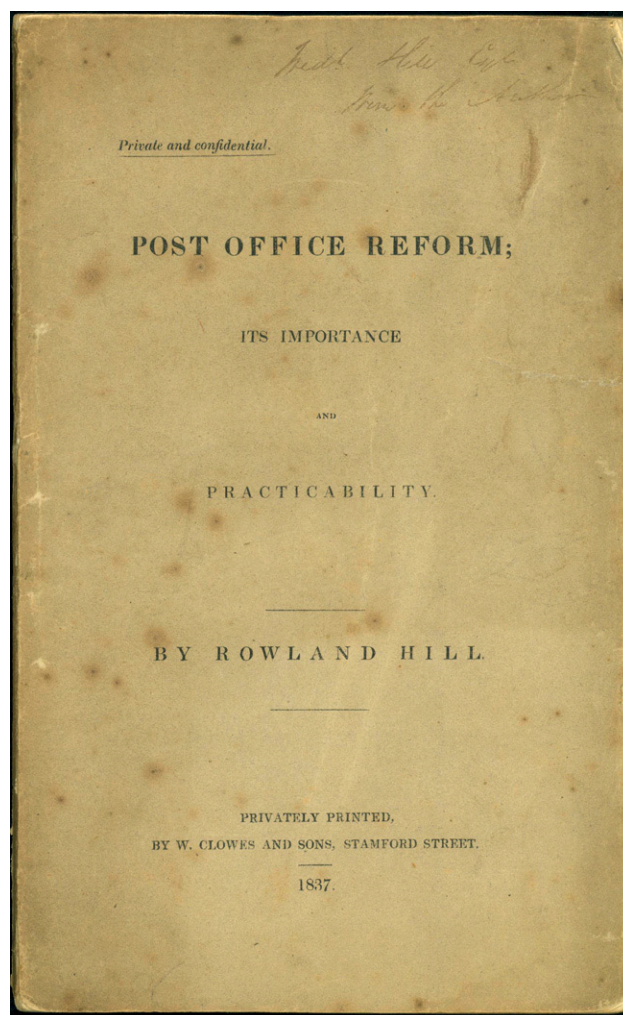
## Postal Reform

**58. Hill, Rowland** (1795-1879). Post Office reform. 8vo. 73pp. Original printed wrappers, spine and one corner repaired, in cloth drop-back box. [London], 1837. 217 x 134 mm. *Inscribed by the Author* to Fred[er]ic Hill on front wrapper, with autograph letter signed to same, 2pp., May 28, 1846, laid in. Fine copy in the original state.

\$20,000

**First Edition.** The rare privately printed pamphlet outlining postal reform in Britain which became standard throughout the world. Hill's proposals included the first use of postage stamps.

The penny post inaugurated and administered by Rowland Hill required the adoption of four novel principles: (1) prepayment of postage, (2) payment by weight instead of by the number of sheets, (3) the use of envelopes, (4) the use of adhesive stamps on letters. Prior to this reform, for example, the use of an envelope would have been a novelty to most letter-writers and entailed double postage (*Printing and the Mind of Man*).



The accompanying letter, on London & Brighton Railway stationery, requests the attendance of the addressee at the Testimonial to be given to Hill in June. The Testimonial, a substantial monetary gift raised by public subscription, was given in recognition of Hill's work after he had been dismissed from the postal service without reward by an opposing minister. The event was one of the most memorable in his career. *Printing and the Mind of Man* 306a. 40286

**59. Hohmann, Walter** (1880-1945). Die Erreichbarkeit der Himmelskörper. [2], iv, [2], 88pp. Text diagrams. Munich and Berlin: R. Oldenbourg, 1925. 225 x 180 mm. Original tan printed wrappers, light wear at spine. Minor faint foxing, but very good. \$1500

**First Edition,** variant with tan printed wrappers (the work was also issued in dark blue wrappers with a pictorial design in white). Hohmann discovered what is now called the "Hohmann transfer orbit," an orbital maneuver using two engine impulses to move



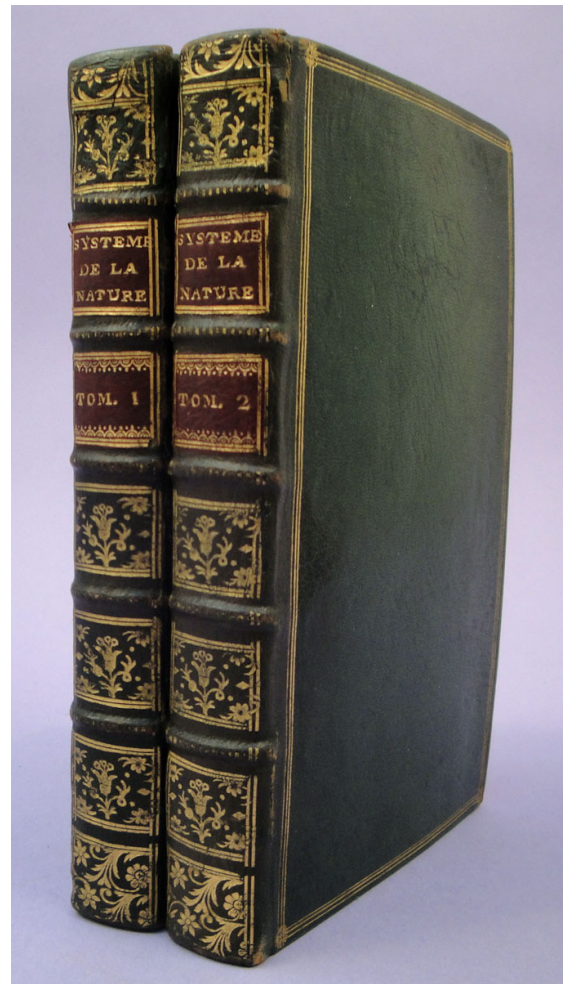
a spacecraft between two coplanar circular orbits. This maneuver, described in Hohmann's *Die Erreichbarkeit der Himmelskörper*, uses a minimum-energy trajectory consisting of an ellipse tangent to the two orbits; this is the most fuel-efficient path for moving a spacecraft between two different orbits.

“Walter Hohmann’s great contribution to astronomical progress was the discovery of a new use for an old object, the ellipse. However, his involvement in the development of concepts for space travel extended well beyond that discovery: energy and mass requirements; spacecraft design; atmospheric modeling; maneuver analysis; crew safety; extraterrestrial in-situ propellant production, and more. In addition to conducting research, Hohmann belonged to *Verein für Raumschiffahrt* (Society for Space Travel), or VfR, and participated in its work” (McLaughlin, “Walter Hohmann’s roads in space,” *Journal of Space Mission Architecture* (Fall 2000): 1–14. 40971

## *Atheism*

**60. Holbach, Paul Henry Thiery, Baron d’** (1723–89). *Système de la nature. Ou des loix du monde physique & du monde moral.* Par M. Mirabaud. 2 vols., 8vo. [6], 370; [4], 412pp.

46



London [i.e., Amsterdam: Marc-Michel Rey], 1770. 195 x 119 mm. Crushed green morocco gilt ca. 1770, all edges gilt, extremities lightly rubbed. First and last leaves browned, a few spots. Ownership signature of V. C. Auffret in Vol. I.

\$12,500

**First Edition.** *Printing and the Mind of Man* 215. The Baron d’Holbach, one of the first self-proclaimed atheists in Europe, was the author of a number of philosophical works advocating materialism and attacking religion as detrimental to the moral advancement of humanity. His most famous work was the controversial *Système de la Nature*, in which he

rejected the Cartesian mind-body dualism and attempted to explain all phenomena, physical and mental, in terms of matter in motion. He derived the moral and intellectual faculties from man’s sensibility to impressions made by the external world, and saw human actions as entirely determined by pleasure and pain. He continued his direct attack on religion by attempting to show that it derived entirely from habit

and custom. But the *Système* was not a negative or destructive book: Holbach rejected religion because he saw it as a wholly harmful influence, and he tried to supply a more desirable alternative (*Printing and the Mind of Man*).

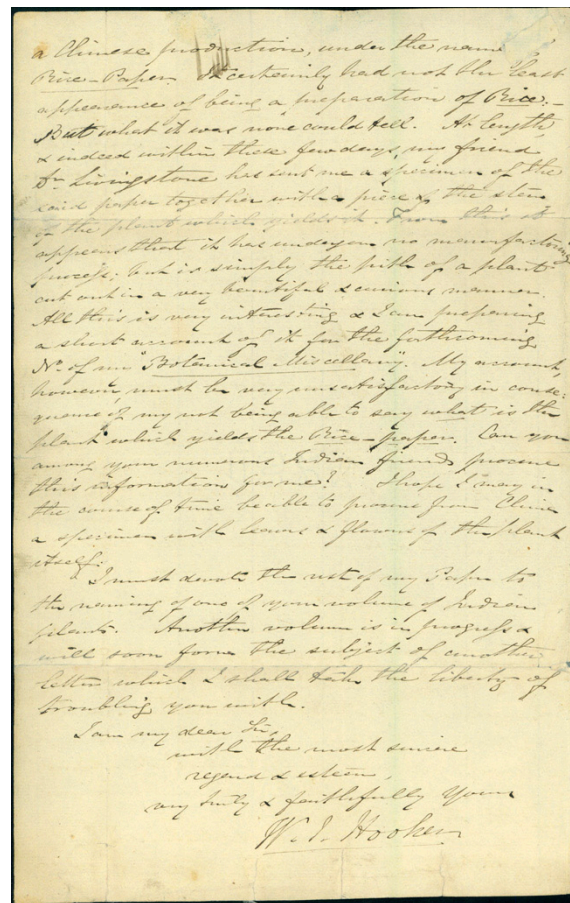
The radical ideas expressed in the *Système* came under widespread attack, and even the free-thinking Voltaire was moved to refute the *Système's* arguments in his own *Dictionnaire philosophique*. D'Holbach issued the work pseudonymously under the name of the late Jean-Baptiste de Mirabaud and had it published in Amsterdam in order to avoid censure. Wikipedia. 40299.

**61. Hook, Diana H. and 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: Historyofscience.com, 2002. 8-1/2 x 11 inches. Cloth, 80-pound acid-free paper. ISBN 978-0-930405-85-4. Limited to 500 copies. Norman Bibliography Series no. 5. \$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

**62. Hooker, William Jackson** (1785–1865). Autograph letter signed to an unidentified recipient. Glasgow, April 7, 1828. 2pp. 323 x 202 mm. Tears along horizontal creases and in margins repaired, small hole in upper left corner (not affecting text), traces of mounting on verso. Very good. \$1500

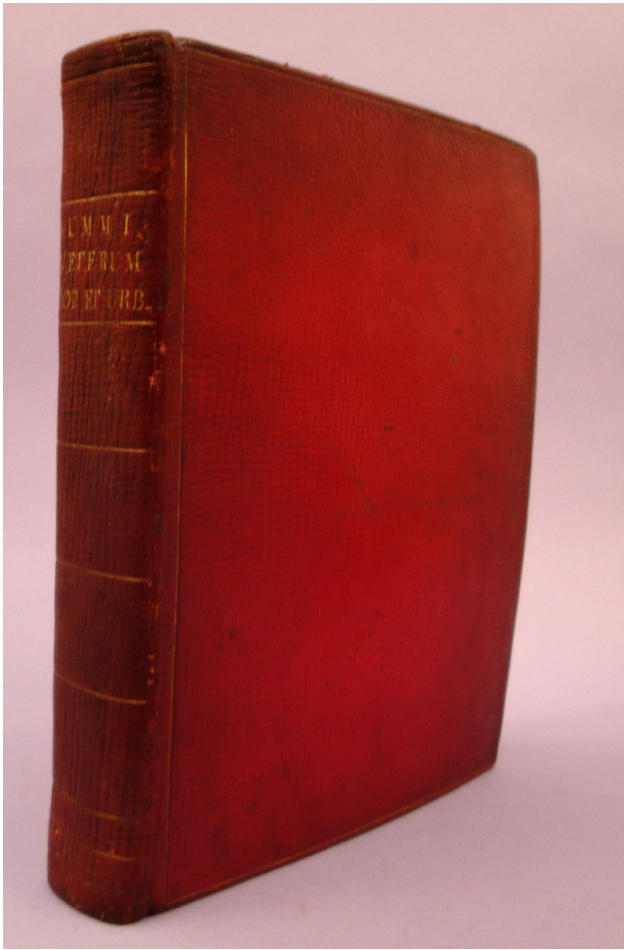
Letter with excellent scientific content from W.J. Hooker, the first full-time director of the Royal Botanic Gardens at Kew. Hooker devoted himself to the study of botany from an early age, specializing in mosses, liverworts and other cryptogamia. He served as regius professor of botany at the University of Glasgow from 1820 to 1841, when he was appointed to head Kew Gardens. Under Hooker's leadership Kew grew from eleven acres to its present size of nearly 300 acres, and its collections vastly increased, largely due to a network of Hooker's former students who brought in specimens from around the world. Hooker's own herbarium, which contained some



4000 volumes and one million dried plant specimens, was purchased by the British government for the nation after Hooker's death. Hooker was the author of over two dozen works on botany, including *British Jungermanniae* (1816), which established hepaticology (the study of liverworts) as a separate field; he also edited several botanical journals.

Hooker's letter, written during his tenure at the University of Glasgow, includes a discussion of the "rice-paper plant" (*Tetrapanax papyrifera* [Hook.] Koch), a subject of lasting interest to him. The pith of this plant, which can be sliced into very thin sheets, was used in China as an alternative to paper, and in the 1820s the Chinese began producing pith-paper paintings and other artifacts for the European market. Hooker had just received a sample of this "rice paper" from a Dr. Livingstone, who in 1805 brought the first examples of the material to England. Hooker noted in his letter that "I am preparing a short account of [rice paper] for the forthcoming No. of my 'Botanical Miscellany.' My account, however, must be very unsatisfactory in consequence of my not being able to say what is the plant which yields the Rice-paper." Hooker's short account, titled "Some account of the substance commonly known under the name 'Rice Paper,'" appeared in Vol. 1 of the *Botanical Miscellany* (1830). Between 1850 and 1856 Hooker published four more papers on the "rice paper" plant, which he named *Aralia Papyrifera*, Hook.,

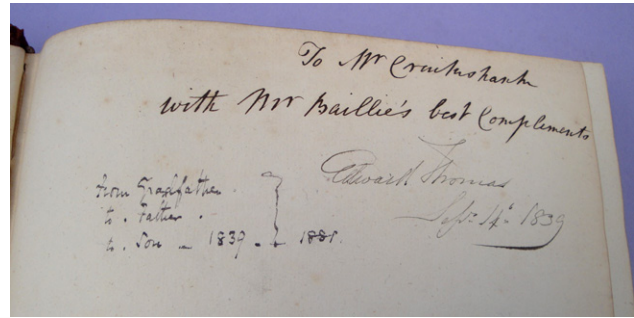




Calcutta in 1857. He was a close friend of Hooker's son, the naturalist Joseph Dalton Hooker (1817-1911). 40458

*Inscribed by Baillie to Cruikshank*

**65. Hunter, William** (1718-83). *Nummorum veterum populorum et urbium, qui in museo Gulielmi Hunter asservantur, descriptio figuris illustrata. Opera et studio Caroli Combe . . .* 4to. xi, [1], 354, [2, errata]pp. 68 engraved plates. London: J. Nichols; sold by T. Cadell; P. Elmsley, G. Nichol & J. Murray, 1782. 286 x 228 mm. Red crushed morocco gilt ca. 1784, a.e.g., slight wear at edges, evidence of bookplate removal inside front cover. Fine copy apart from some foxing to the plates. *Inscribed by Matthew Baillie* (1761-1823) *to William Cruikshank* (1745-1800) on the front flyleaf: "To Mr. Cruikshank with Mr. Baillie's best Compliments." 19<sup>th</sup> cent. ownership signature of



Edward Thomas, dated Sept. 14, 1839, and later note, presumably by a Thomas descendent.

\$5000

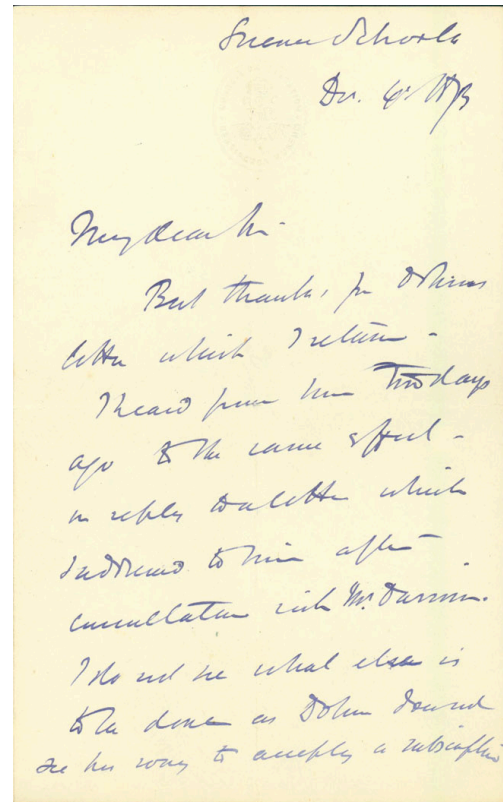
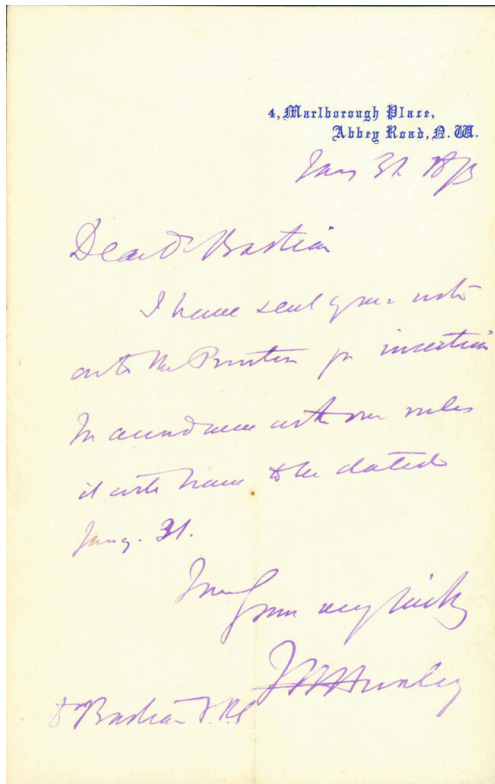
**First Edition** of the first and only published installment of the catalogue of William Hunter's magnificent collection of coins, a collection regarded as one of the finest in the world. Hunter began collecting coins around 1770, and by the time of his death had spent over £22,000 on this pursuit—an enormous sum of money by the standards of the day. After Hunter's death, by the terms of his will, the coin collection, together with Hunter's books, pictures and anatomical models, remained in the care of three trustees for thirty years, after which time they became the property of the University of Glasgow. In 1807 the collections were sent to Glasgow, where they now represent the core of the University's Hunterian Museum.

*Nummorum veterum populorum et urbium* was compiled by Charles Combe (1743-1817), a physician and coin dealer who became acquainted with Hunter in 1773, and greatly assisted Hunter in forming his collection. Combe was one of the three trustees appointed in Hunter's will to administer his collections, the other two being Dr. George Fordyce and Dr. David Pitcairne. Combe had originally intended to prepare a catalogue of the complete Hunterian coin collection, but was able to publish only this installment. The work is illustrated with 68 plates that Combe took care to make "more faithful to the original coins than the illustrations in previous numismatic works" (*Dictionary of National Biography*).

Our copy of *Nummorum veterum populorum et urbium* has an outstanding association, being inscribed by Hunter's nephew Matthew Baillie to Hunter's assistant William Cruikshank. Baillie and Cruikshank took over the administration of Hunter's Windmill Street anatomy school after Hunter's death. Hunter bequeathed the use of his collections to Baillie for a term of thirty years; had Baillie died during this time, the use of the collections would have passed to Cruikshank. Both men made lasting contributions to medicine. Baillie is best known as the author of *The Morbid Anatomy of Some of the Most Important Parts of the Human Body*, the first systematic study of pathology and the first publication in English

on pathology as a separate subject (see Garrison-Morton 2281). Cruikshank, together with John Hunter and William Hewson, laid the foundation of modern knowledge of the lymphatic system, as described in Cruikshank's *Anatomy of the Absorbing Vessels of the Human Body* (1786; see Garrison-Morton 1103). *Dictionary of Scientific Biography*. Simmons and Hunter, *William Hunter 1718-1783*, ed. C. H. Brock, p. 27. 40362

stating that "since living matter must have arisen from nonliving matter at an early stage in evolution, such a process could still be taking place" (*Dictionary of Scientific Biography*). He can thus be seen as one of the first to consider the question of the origins of life from a scientific standpoint. Huxley found Bastian's views unacceptable and clashed with him over his beliefs and experimental methodology; see Desmond, *Huxley*, pp. 392-93. 40184



**66. Huxley, Thomas Henry** (1825-95). Five autograph letters signed to Henry Charlton Bastian (1837-1915). May 15, 1865 – Jan. 31, 1873. 12pp. total. Various sizes. Portion torn from upper corner of one letter, affecting the date, a few tears along folds. \$2250

Five letters from Huxley to Bastian, a physician who made notable contributions to the emerging specialty of clinical neurology, and a pioneer writer on theories of the origin of life. Bastian published important papers on aphasia (see G-M 4622, 4629) and was the first to demonstrate "Bastian's law": that complete section of the upper spinal cord abolishes reflexes and muscular tone below the level of the lesion. Bastian is best known, however, for his defense of the doctrine of spontaneous generation (abiogenesis) in the face of accepted biological and bacteriological opinion. Bastian argued that there was no fixed boundary between organic and inorganic life,

**67. Huxley, Thomas Henry** (1825-95). (1) Autograph letter signed to Albert George Dew-Smith (1848-1903), together with stamped cover. South Kensington, Oct. 28, 1873. 3pp. 185 x 115 mm. (2) Autograph letter signed to Dew-Smith, together with stamped cover. [London] Science Schools, Dec. 4, 1873. 2pp. 185 x 113 mm. (3) Autograph letter signed to Dew-Smith, together with stamped cover. N.p., Dec. 4, 187[5?] [cover postmarked "De 4 75"]. 1 page. 187 x 112 mm.

\$2500

Three letters from Huxley to the photographer and instrument maker A. G. Dew-Smith, co-founder with Horace Darwin (Charles Darwin's youngest surviving son) of the Cambridge Scientific Instrument Company. The letters touch on Huxley's activities as a science educator and promoter of Darwin's theory of evolution; Darwin is

mentioned in the Dec. 4, 1873 letter, which reads in part as follows:

Best thanks for Dohrn's letter which I return—

I heard from him two days ago to the same effect—in reply to a letter which I addressed to him after consultation with Mr. Darwin. I do not see what else is to be done as Dohrn does not see his way to accepting a subscription.

Foster had put the matter of your going out rather too strongly—He told me you thought of going & I said that I thought such a course very desirable—for I really was anxious about Dohrn's silence—at present there does not seem to be any emergency. Ever yours very faithfully THHuxley.

“Dohrn” refers to **Anton Dohrn** (1840–1909), a student of Ernst Haeckel and a prominent Darwinist. In September 1873 Dohrn founded the Stazione Zoologica, an international biological research institute located in Naples, Italy that is still operating today; its purpose, according to Huxley's biographer, was “to unravel the embryology and evolution of life” (Desmond, p. 424). Huxley, who was very interested in this project,

liaised with [**Charles**] **Darwin** to raise £500 from the “land of fogs” to fund the Mediterranean enterprise. It was collected from “each according to his ability”: which meant that Darwin put in £75 while Huxley had “no cash to spare” (Desmond, p. 424).

In the present letter to Dew-Smith, Huxley may be referring to a letter Dohrn sent in response to Huxley's letter to him of Oct. 17, 1873 discussing raising funds for Dohrn's institute (see Huxley, *Life and Letters* [1903], 2, p. 116). 40183

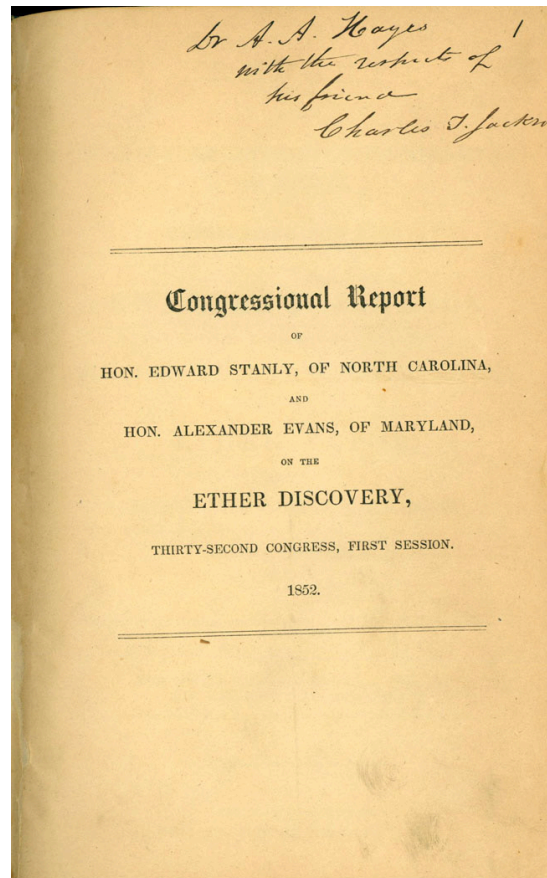
**68. Huxley, Thomas** (1825–95). Autograph letter signed to Gerald Massey (1828–1907). London, March 22, 1881. 2pp. plus integral blank, on Huxley's embossed stationery. 177 x 115 mm. Light soiling along folds, but very good.

\$ 500

To poet and Egyptologist Gerald Massey, thanking Massey for the gift of one of his publications:

Dear Sir, Accept my best thanks for the copy of your “Book of the Beginnings” which you have been kind enough to forward to me. I am yours very faithfully T. H. Huxley. Gerald Massey, Esq.

*A Book of the Beginnings* (1881) was the first of Massey's quasi-mystical works drawing parallels between ancient Egyptian mythology and Christianity. Interestingly, Massey believed that civilization had originated in equatorial Africa and spread from there to Egypt. 41088

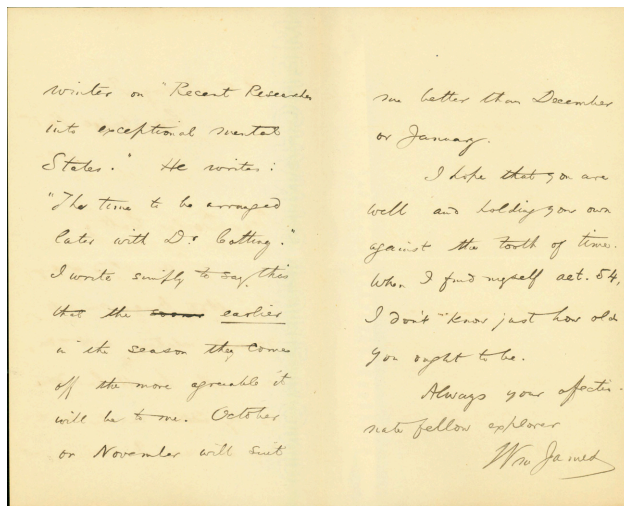


### *Ether Controversy*

**69. [Jackson, Charles Thomas** (1805–80)]. **Stanly, Edward** and **Alexander Evans**. Report to the House of Representatives of the United States of America, vindicating the rights of Charles T. Jackson to the discovery of the anaesthetic effects of ether vapor, and disproving the claims of W. T. G. Morton to that discovery. 57pp. [Boston: Rand, Avery & Frye, 1853.] 221 x 145 mm. Quarter morocco, marbled boards in antique style, original front wrapper preserved. Very good copy, *inscribed by Jackson* on the front wrapper: “Dr. A. A. Hayes with the respects of his friend Charles T. Jackson.” \$2000

**First Edition**, issue with front cover title reading “Congressional report . . .” The “Ether Controversy,” a rancorous dispute between W. T. G. Morton, Charles T. Jackson and Horace Wells over who deserved credit for discovering inhalation anesthesia, began in 1847 and ended only with Morton's death in 1868. In late November 1851 Morton, who had hoped to make his fortune from ether anesthesia, made his third petition to Congress for a monetary reward for the discovery. Morton's claims to

priority were reviewed by a congressional committee headed by William H. Bissell. The Bissell committee issued a report in favor of Morton, but two dissenting members, Edward Stanly and Alexander Evans, authored the present minority report supporting Jackson's priority. There are two issues of the report, one with the front wrapper title beginning with the words "Congressional report," and the other reading "The ether controversy." Jackson presented this copy to his friend Augustus A. Hayes, a Boston chemist who developed a method of distilling concentrated chloric ether for use as an anesthetic; see Warren, J. M., *Surgical Operations with Cases and Observations* (1867), p. 618. Wolfe, *Tarnished Idol*, ch. 17. 40867



### "I Have Reason to Consider the Lectures a Success"

**70. James, William** (1842-1910). 4 autograph letters signed to Dr. Benjamin E. Cotting (1812-97), plus 4 pencil drafts in a secretarial hand of Cotting's replies. Cambridge, Mass., May 15 - November 15, 1896. Various sizes. Traces of mounting on the blank versos of several letters, but fine otherwise. \$950

A series of letters from psychologist and philosopher William James to Dr. Benjamin E. Cotting, curator of the Lowell Institute from 1843 to 1897, in connection with James' 1896 Lowell Lectures. The correspondence also includes drafts of Cotting's replies, thus shedding light on the negotiations involved in planning the lecture series. James had been acquainted with Cotting since his student days at Harvard—Cotting was the brother-in-law of noted naturalist Louis Agassiz, one of James's professors, and both Cotting and James took part in Agassiz's 1865 scientific expedition to the Amazon. In his May 15 letter to Cotting,

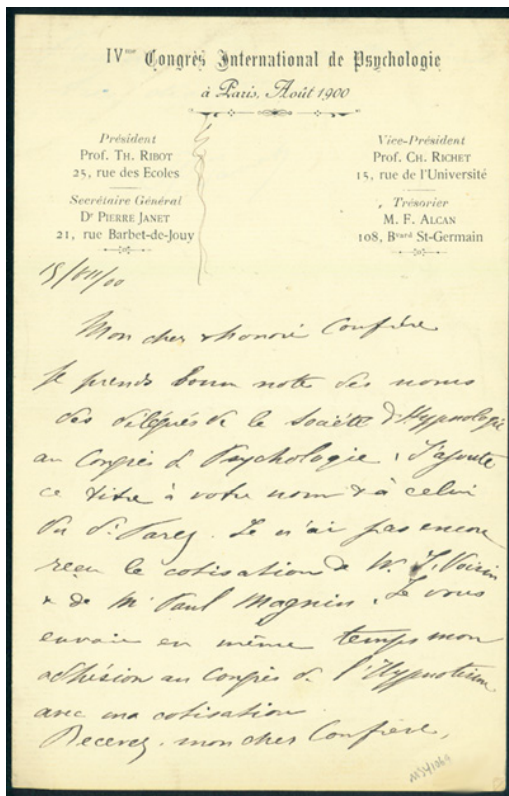
James signed himself "Always your affectionate fellow explorer."

In the spring of 1896 James was invited by Augustus Lowell, the head of the Lowell Institute, to deliver eight lectures on the topic of "Exceptional Mental States." This was the second of three courses of lectures James had been invited to give at the Lowell Institute, following his 1878 lecture series on "The Brain and Mind" and preceding his 1906 series on pragmatism. In his May 15 letter to Cotting James states that "I am glad of anything that brings me into renewed relations with you, and Mr. Lowell has done so by inviting me to give 8 lectures next winter on 'Recent Researches into exceptional Mental States.'" In the first three letters James set forth his preferred lecture schedule, requesting "October or November" and "either Wednesday & Saturday or Tuesday and Friday of the same weeks (preferably Wed. & Sat.)." He also asked Cotting to furnish him with extra tickets for the lectures, and to make sure that the lecture hall was not overheated—"when I have been there (rarely) in the past few years it has been a foretaste of hell for heat & non-ventilation." In the fourth letter, written after the series had concluded, James expressed his gratification over the lectures' reception: "The audience last night almost filled the seats, and I have reason to consider the lectures a success."

Despite the success of James's 1896 lectures, they remained unpublished until 1982, in large part because "they were on heretical topics rejected by psychology as a developing reductionist science, religion as an exclusively Christian and theistic enterprise, and philosophy as primarily a logical and analytic endeavor . . . The first four lectures [on "Dreams and hypnotism," "Automatism," "Hysteria" and "Multiple personality"] appeared to be the outline of a dynamic psychology of the subconscious, while the second four [on "Demoniacal possession," "Witchcraft," "Degeneration," and "Genius"] largely demonstrated the pathological working out of the subconscious in the social sphere" (Taylor, p. 13). Taylor, "Metaphysics and consciousness in James's Varieties," in Carrette, ed., *William James and The Varieties of Religious Experience: A Centenary Celebration* (2005), pp. 10-25. 41092

**71. Janet, Pierre** (1859-1947). 4 autograph letters signed to an unidentified correspondent (or correspondents). Paris, 1900-1929. 4pp. total, on 4 sheets, three on Janet's letterhead and one on the letterhead of the IVme Congrès International de Psychologie. Minor dust-soiling, penciled list in another hand on one of the letters, but very good. \$500

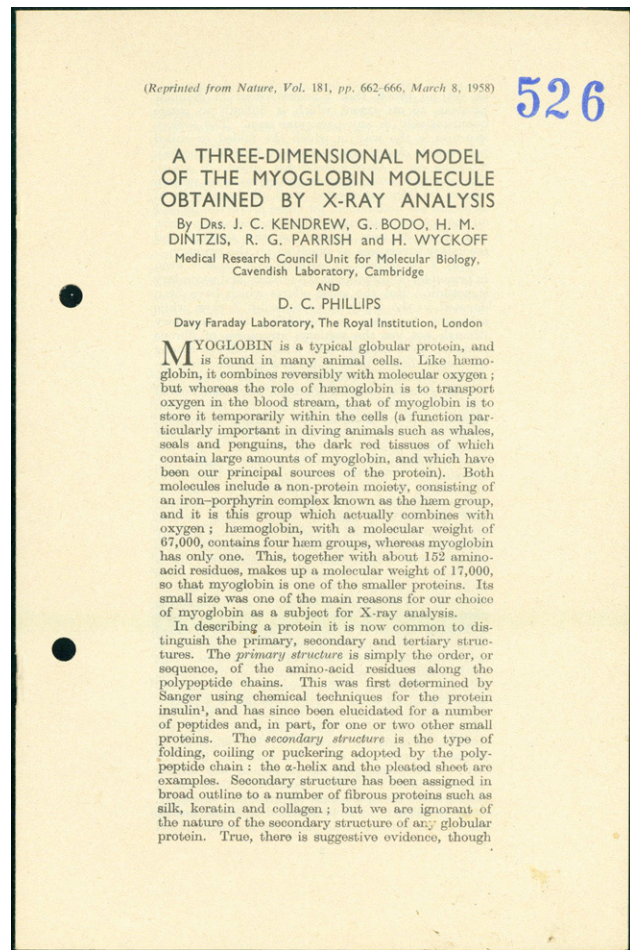
A group of autograph letters from the pioneering French psychologist and psychotherapist, coiner of the terms "dissociation" and "subconscious," whose



*L'Automatisme psychologique* (1889) anticipated Freud and Breuer's announcement of the causes of hysterical symptoms by four years (see Garrison-Morton 4976.1). The letters are indicative of Janet's involvement in professional organizations such as the Société de Psychothérapie and the Fourth International Congress of Psychology (Paris, 1900), for which he served as general secretary. 41069

*"The First Protein to be Solved"*

**72. Kendrew, John** (1917-97). **(1)** A three-dimensional model of the myoglobin molecule obtained by x-ray analysis (with G. Bodo, H. M. Dintzis, R. G. Parrish, H. Wyckoff). Offprint from *Nature* 181 (1958). 10, [1]pp. Illustrated. 213 x 140 mm. Without wrappers as issued. Holes punched in left margin (not affecting text), small glue spot on verso of last leaf. From the library of British chemist and crystallographer Jack David Dunitz (1923- ), with his docketing stamp on the first page. **(2)** Structure of myoglobin: A three-dimensional Fourier synthesis at 2 Å resolution (with R. E. Dickerson, B. E. Strandberg, R. G. Hart, D. R. Davies, D. C. Phillips, V. C. Shore). Offprint from *Nature* 185 (1960). 13, [1]pp.



Illustrated. 213 x 140 mm. Without wrappers as issued. **(3)** Collection of 17 offprints, pamphlets, etc., including a presentation copy, an item from Kendrew's library, and items from the libraries of Max Perutz (1914-2002), J. D. Dunitz, and Peter Pauling (1931-2003). Complete listing available. Overall very good to fine. \$15,000

**First Editions** of the first solution of the three-dimensional molecular structure of a protein, for which Kendrew received the 1962 Nobel Prize in chemistry, together with his friend and colleague Max Perutz, who solved the structure of the related and more complex protein, hemoglobin, two years after Kendrew's achievement. Kendrew's discovery was one of the greatest landmarks in the history of molecular biology. Understanding the means of storing the genetic information in the cell nucleus, and the means of transferring the genetic information (the double helical structure of DNA, messenger RNA, the genetic code), solving the structure of proteins which construct themselves following instructions from the nucleus, and recombinant DNA and its technological applications, remain central elements of molecular biology. Today

roughly 100,000 people worldwide are involved in scientific research solving the structure of proteins, which evolved out of Kendrew's and Perutz's pioneering work.

Kendrew began his investigation into the structure of myoglobin in 1949, choosing this particular protein because it was "of low molecular weight, easily prepared in quantity, readily crystallized, and not already being studied by X-ray methods elsewhere" (Kendrew, "Myoglobin and the structure of proteins. Nobel Prize Lecture [1962]," pp. 676-677). Protein molecules, which contain, at minimum, thousands of atoms, have enormously convoluted and irregular formations that are extremely difficult to elucidate. In the 1930s J. D. Bernal, Dorothy Hodgkin and Max Perutz performed the earliest crystallographic studies of proteins at Cambridge's Cavendish Laboratory; however, the intricacies of three-dimensional protein structure were too complex for analysis by conventional X-ray crystallography, and the process of calculating the structure factors by slide-rules and electric calculators was far too slow. It was not until the late 1940s, when Kendrew joined the Cavendish Laboratory as a graduate student, that new and more sophisticated tools for attacking the problem became available. The first of these tools was the technique of isomorphous replacement, developed by Perutz during his own researches on hemoglobin, in which certain atoms in a protein molecule are replaced with heavy atoms. When these modified molecules are subjected to X-ray analysis the heavy atoms provide a frame of reference for comparing diffraction patterns. The second tool was the electronic computer, developed during World War II, which Kendrew introduced to computational biology in 1951. In 1951 Cambridge University was one of only three or four places in the world with a high-speed stored-program electronic computer, and Kendrew took full advantage of the speed of Cambridge's EDSAC computer, and its more powerful successors, to execute the complex mathematical calculations required to solve the structure of myoglobin. Kendrew was the first to apply an electronic computer to the solution of a complex problem in biology.

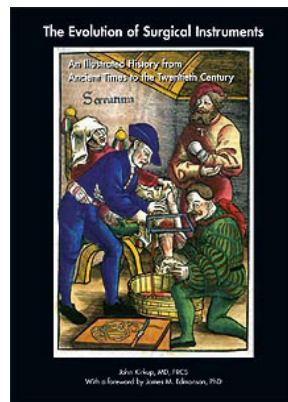
Nevertheless, even with the EDSAC performing the calculations, the research progressed remarkably slowly. It took Kendrew and his team until the summer of 1957 before they were able to succeed in creating a three-dimensional map of myoglobin at the so-called "low resolution" of 6 angstroms. Myoglobin thus became "the first protein to be solved" (Judson, p. 538). "A cursory inspection of the map showed it to consist of a large number of rod-like segments, joined at the ends, and irregularly wandering through the structure; a single dense flattened disk in each molecule; and sundry connected regions of uniform density. These could be identified respectively with polypeptide chains, with the iron atom and its associated porphyrin ring, and with the liquid filling the interstices between neighboring molecules. From the map it was possible to 'dissect out'

a single protein molecule . . . The most striking features of the molecule were its irregularity and its total lack of symmetry" (Kendrew, "Myoglobin," p. 681).

The 6-angstrom resolution was too low to show the molecule's finer features, but by 1960 Kendrew and his team were able to obtain a map of the molecule at 2-angstrom resolution. "To achieve a resolution of 2 Å it was necessary to determine the phases of nearly 10,000 reflections, and then to compute a Fourier synthesis with the same number of terms . . . the Fourier synthesis itself (excluding preparatory computations of considerable bulk and complexity) required about 12 hours of continuous computation on a very fast machine (EDSAC II)" (Kendrew, "Myoglobin," p. 682).

We are offering here a collection containing Kendrew's initial papers describing his 6-angstrom and 2-angstrom myoglobin images, for which he won the Nobel Prize, plus 17 other offprints and related items representative of Kendrew's protein studies from 1949 to 1964. This extensive collection of rare offprints documents the development of Kendrew's work leading to and following up on his key discovery. 1949 to 1964 was Kendrew's most fruitful period from the standpoint of pure science, since shortly after winning the Nobel Prize he abandoned research to found the European Molecular Biology Organization and to take up the post of editor-in-chief of the *Journal of Molecular Biology*. The collection includes one item with Kendrew's presentation inscription, and another from his library. Several of the offprints in the collection are from the library of renowned British crystallographer Jack David Dunitz, who was one of the first people in 1953 to see the double-helix model of DNA constructed by Watson and Crick. Other items in the collection were once owned by Peter Pauling (son of Nobel Laureate Linus Pauling) and Max Perutz, with whom Kendrew shared the Nobel Prize. Judson, *The Eighth Day of Creation*, pp. 535-540. James, *Nobel Laureates in Chemistry*, pp. 428-434. 40991

**73. Kirkup, John.** The evolution of surgical instruments: An illustrated history from ancient times to the 20th century.



Introduction by James Edmonson. xvi, 507pp. Frontispiece, 30 color illustrations, 527 black and white illustrations. Bibliography. Index. Novato: Historyofscience.com, 2006. 8-1/2 × 11". Cloth, dust jacket, acid-free paper. ISBN 978-0-930405-86-1. \$275

With over 500 illustrations, this work describes the evolution of surgical instruments from ancient times to the present, with detailed commentary by an eminent historian of surgical technology. 38632

### *Miescher's Copies of Kossel's papers on Nucleic Acids*

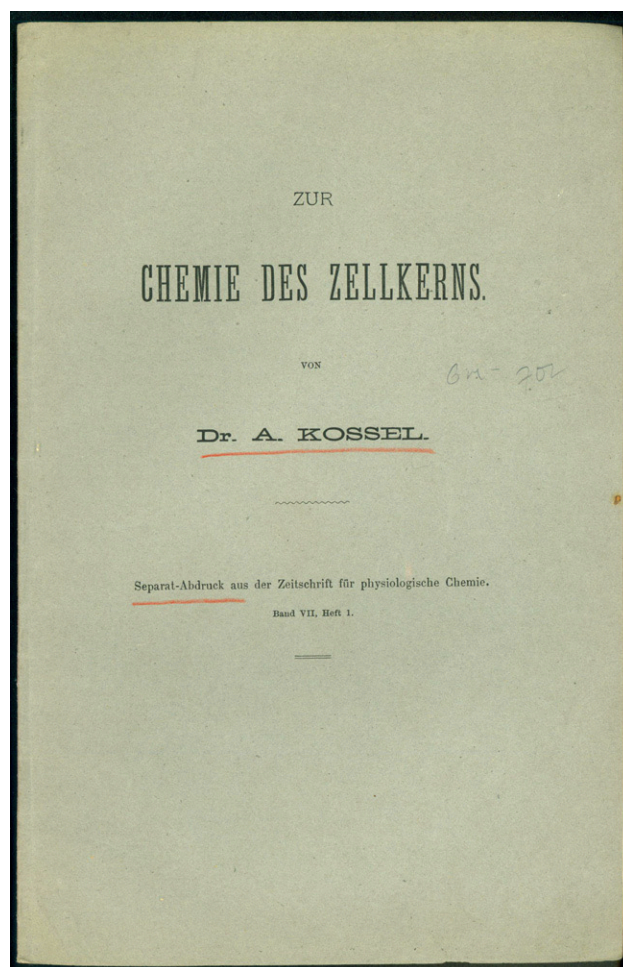
**74. Kossel, Albrecht** (1853–1927). **(1)** Zur Chemie des Zellkerns. Offprint from *Zeitschr. phys. Chem.* 7 (1882). 7–22pp. Original printed wrappers. **(2)** Weitere Beiträge zur Chemie des Zellkerns. Offprint from *Zeitschr. phys. Chemie* 10 (1886). 248–264pp. Original printed wrappers, vertically creased. **(3)** 14 offprints detailing Kossel's researches on nucleins (nucleoproteins). 1879–1912. Complete listing available. One of the offprints is **signed by Kossel**; 8 of the offprints bear the booklabel and stamp of Johann Friedrich **Miescher** (1844–95), discoverer of nuclein; see Garrison–Morton 695.

\$12,500

**First Editions, Offprint Issues.** G–M 702 (nos. [1] and [2]). Kossel was awarded the Nobel Prize in 1910 “in recognition of the contributions to our knowledge of cell chemistry made through his work on proteins, including the nucleic substances” ([nobelprize.org/nobel\\_prizes/medicine/laureates/1910/index.html](http://nobelprize.org/nobel_prizes/medicine/laureates/1910/index.html)). His researches on “nucleic substances” represent an early stage in the development of molecular biology.

In 1869 J. F. Miescher, then working in Felix Hoppe-Seyler's biochemical laboratory in Tübingen, discovered in the cell nucleus an acid-insoluble, alkali-soluble, high-phosphorus containing substance that he named nuclein; we now know it as DNA. Kossel's researches on nuclein, begun ten years after Miescher's discovery, led to the development of reliable methods for isolating, purifying and analyzing the nucleus, identification of the chemical makeup of nuclein, and the discovery of the nitrogen bases adenine, thymine, cytosine and uracil, familiar to us now as some of the fundamental components of DNA and RNA (guanine, the remaining DNA nitrogen base, had been discovered previously). Kossel and his students working in Berlin

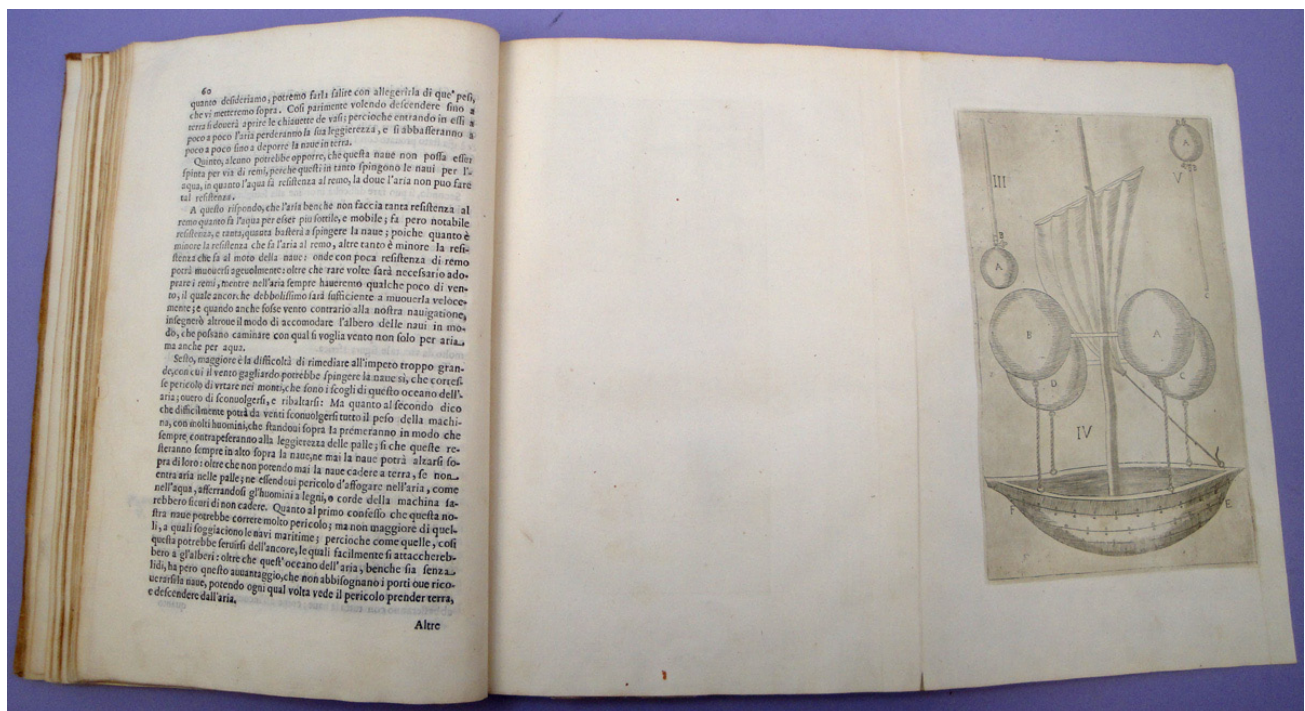
demonstrated that these, together with xanthine, hypoxanthine, and guanine (sarcine), are breakdown products of nucleic acids, which can be used to distinguish between the true nucleins of the cell nucleus and the spurious nucleins found in milk and egg yolk, which he termed “paranucleins.” . . . From physiological studies Kossel correctly concluded



that the function of nuclein is neither to act as a storage substance nor to furnish energy for muscular contraction; rather, it must be associated with the formation of fresh tissue [i.e. the production of proteins] (DSB).

By the end of the nineteenth century, Kossel had characterized nucleins as unique substances—acidic substances, for which Richard Altmann introduced the term “nucleic acid” in 1889. Our collection of offprints includes seven of the papers on nucleins cited in the DSB's article on Kossel (nos. 1, 2, 3, 4, 5, 6, 8 below), plus two of the three papers cited as Garrison–Morton 702 (nos. [1] and [2] above). Kossel never specifically linked his work on nucleic acids to heredity, but he was aware of their general role in the production of proteins. After his receipt of the Nobel Prize he speculated publicly on the source of biological specificity, particularly in his Herter Foundation lecture (no. 14 below), in which he “clearly recognized the potential diversity of polypeptides and saw in the structure of proteins the chemical basis of biological specificity”(DSB).

Eight of the offprints in this collection bear the ownership marks of Miescher, whose discovery of nuclein in 1869



is referenced above. Both Miescher and Kossel had been students of Felix Hoppe-Seyler, a founder of the science of physiological chemistry. Magill, *Nobel Prize Winners* (phys. & med.), pp. 139–47. Wolf, “Friedrich Miescher, the man who discovered DNA.” *Bizgraphic CD Content*. Web. 19 Jan. 2011. 40021

**75. Lana Terzi, Francesco** (1631–1687). *Prodromo ovvero saggio di alcune inventioni nuove premesso all’arte maestra*. Brescia: Rizzardi, 1670. Folio. [8] 1–252 pp. 20 engraved plates. 305 x 210 mm. Vellum c. 1670, all edges gilt., somewhat darkened. Minor original paper flaw on leaf Ooo causing appearance of old minor paper repair, but no repair and no loss of text. Fine, clean, crisp copy. Ownership inscription of the Society of Jesus in Vienna, dated 1671 on title.

\$12,000

**First Edition.** Lana Terzi’s *Prodromo* is best known for presenting the earliest concept of flight derived from demonstrable aerostatic principles. He determined by experiment that a vessel may be made lighter by reducing the air density within it, and proposed to build a “flying boat” suspended from four large spheres of thin copper, from which all or part of the air would be evacuated to achieve buoyancy.

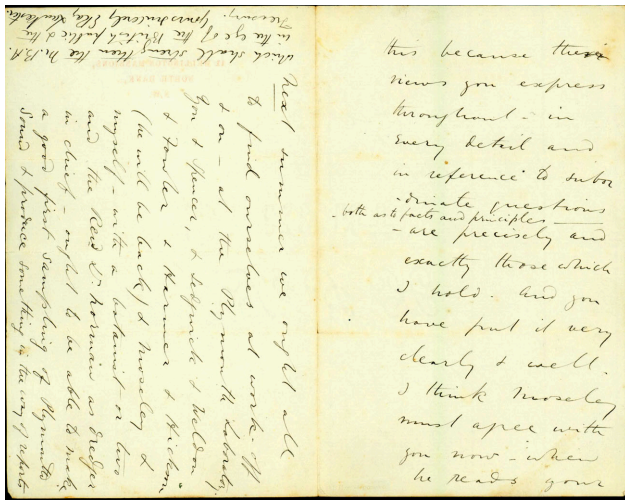
Although the theory behind Lana Terzi’s reasoning was sound, and his work is discussed in virtually every history of flight, his design was unworkable, for, as

Hooke, Leibnitz, Borelli and other scientists pointed out, the copper spheres would not be able to withstand the enormous amount of atmospheric pressure. In any case Lana never attempted to construct his “flying boat,” not because of its impractical design, but because he believed that God would forbid it as inimical to civil government and peace. While Lana apparently originated the method of reducing air density in a vessel by heating it, the implications of this phenomenon in relation to flight were not fully understood until the Montgolfier brothers’ ballooning experiments a century later. Dibner, *Heralds of Science* 176. Davy, *Interpretive History of Flight* pp. 31–33. Haskell F Norman Library 1272. 40919

**76. Lankester, E. Ray** (1847–1929). Autograph letter signed to Gilbert Charles Bourne (1861–1933). Lonson, Sept. 5, n.y. [ca. 1890]. 4pp. Light soiling along creases, but fine otherwise.

\$750

Letter with excellent scientific content from Lankester, invertebrate zoologist, evolutionist and third Director (after Richard Owen and William Flower) of the Natural History Museum in London. A disciple of Huxley, Lankester was Jodrell Professor of Zoology at University College London from 1874 to 1890, served as Linacre Professor of Comparative Anatomy at Oxford from 1891 to 1898, and was Director of the Natural History Museum from 1898 to 1907. He was enormously influential as a teacher of evolutionary theory; among his distinguished students were Edwin S. Goodrich, Julian Huxley and W. F. R. Weldon (see below).



Lankester's correspondent was fellow invertebrate zoologist Gilbert Charles Bourne, coiner of the term "mesogloea" [mesoglea] to describe the translucent, inert substance that makes up most of the bodies of jellyfish, comb jellies and certain primitive sea creatures in the phylum Cnidaria. Bourne introduced the term, which had been suggested to him by Lankester, in an 1887 paper published in the *Quarterly Journal of Microscopical Science* (a journal that Lankester edited). Bourne later contributed to Part II, on the porifera and coelentera, of Lankester's multi-volume *Treatise on Zoology* (1900–1909).

Lankester's letter reads as follows:

My dear Mr. Bourne, I received your MS on my return from Switzerland & have just read your final chapter on "Mesogloea": it is admirable. Perhaps I am led to say this because the views you express throughout—in every detail and in reference to subordinate questions both as to facts and principles—are precisely and exactly those which I hold. And you have put it very clearly & well. I think Moseley must agree with you now—when he reads your statement. I did not remember that I had suggested "mesogloea" and judged of it quite impartially until the last paragraph where you refer to our conversation. I think it hits the nail on the head.

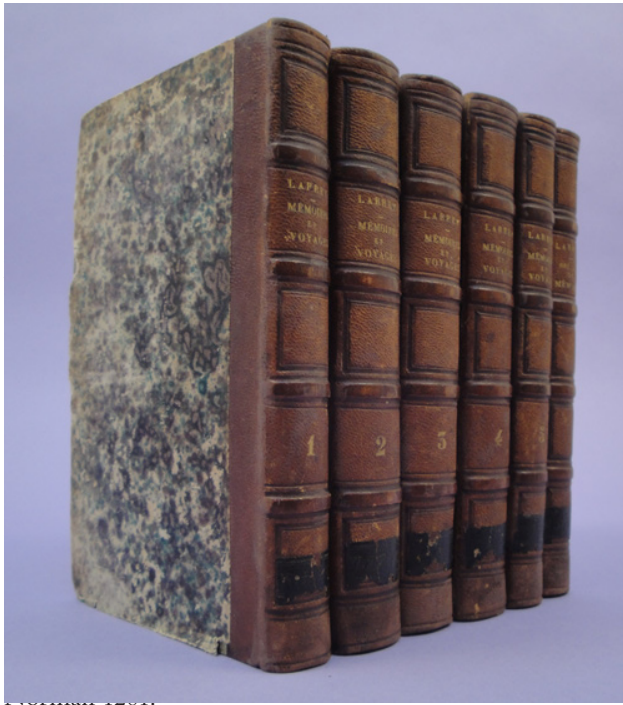
I hope you have been having a pleasant summer. Next summer we ought all to find ourselves at work off & on—at the Plymouth Laboratory. You & Spencer, & Sedgwick & Weldon & Fowler & Harmer & Hickson (he will be back) & Moseley & myself—with a botanist or two and the Revd. Dr. Norman as dredger in chief—ought to be able to make a good first sampling of Plymouth Sound & produce something in the way of reports which shall strengthen the M.B.A. in the eye of the British public & the Treasury. Yours sincerely E. Ray Lankester

In the second paragraph Lankester refers to the Marine Biological Association of the United Kingdom (M.B.A.), which he had helped to found in 1884. The Association is based in Plymouth, where it maintains a laboratory. Among the scientists mentioned in the paragraph are Henry N. Moseley (1844–91), Linacre Professor of Zoology at Oxford; Walter Frank Raphael Weldon (1860–1906), evolutionary biologist and co-founder with Galton of the science of biometry; George Herbert Fowler (1861–1940), Lankester's assistant and interim director of the M.B.A.'s Plymouth laboratory; and zoologist Adam Sedgwick (1854–1913). 41089

### *Rare Complete Set of Larrey's Memoirs of Military Surgery, Reporting on Fifty-Three Years of Service*

**77. Larrey, Dominique Jean, Baron** (1766–1842). **(1)** Mémoires de chirurgie militaire, et campagnes . . . 8vo. 4 vols. xxviii, 382; [4], 512; iv, 500; viii, 500pp. No pp. 481–484 in vol. 4 as usual. 17 plates, incl. folding map. Paris: Smith . . . , 1812–17. **(2)** Recueil de mémoires de chirurgie. 8vo. xvi, 319pp. 4 engraved folding plates, the last printed in 2 colors, with explanation leaves. Paris: Compère jeune, 1821. **(3)** Relation médicale de campagnes et voyages, de 1815 à 1840. [4], 412pp. 2 folding plates. Paris: J.-B. Baillière, 1841. Together 6 volumes, uniformly bound in quarter morocco, marbled boards ca. 1841, light wear to edges and corners. Moderate foxing. Library stamp on title page of Mémoires volume 4. A few leaves of Vol. III carelessly opened, but very good. "W. J. Hoyt" on leather label at foot of spines. \$8500

**(1) First Edition.** The greatest classic in military medicine, with the often-missing fourth volume published five years after the first three. Larrey's *Mémoires*, modeled after those of Paré, combine medicine and military adventure while recounting his experiences Surgeon-in-Chief of Napoleon's Grande Armée—Napoleon said of Larrey that "c'est l'homme le plus vertueux que j'ai connu." The *Mémoires* also describes Larrey's his youthful adventures in North America as chief surgeon on the frigate *Vigilante*, as well as his activities after the defeat of Napoleon. The memoirs provide a fascinating record of the Napoleonic campaigns—including perhaps the best eyewitness account of the disastrous invasion of Russia—along with Larrey's methods of dealing with the numerous medical problems he encountered on the battlefield.

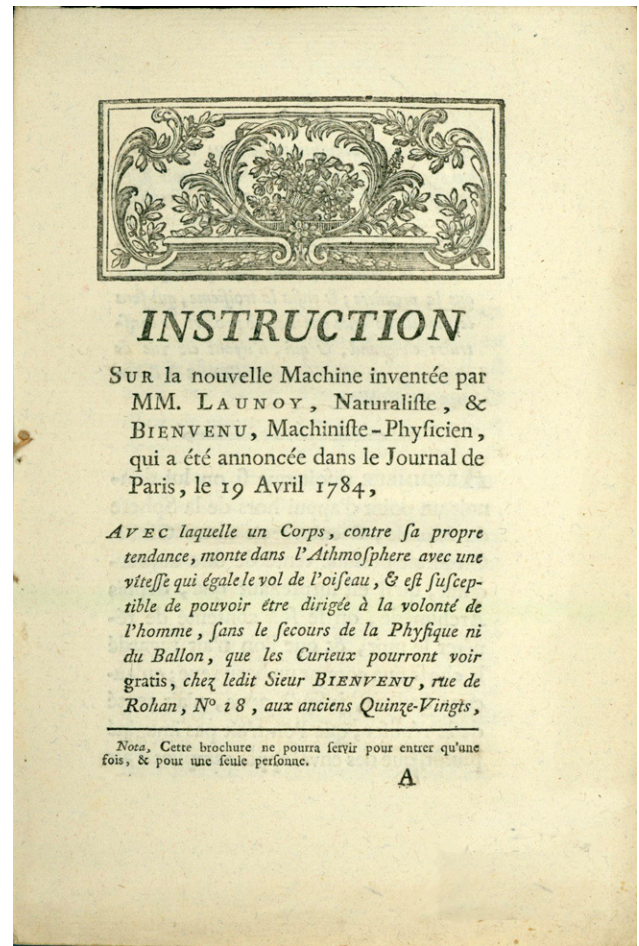


(3) **First Edition.** Issued 24 years after the publication of Volume IV of the *Mémoires*, *Relation médicale* serves as the fifth and final volume of that work. In the opening pages, Larrey states that the work contains “le récit des événements qui se rattachent à ma carrière chirurgicale, et dont j’ai été témoin, depuis le départ de l’empereur Napoléon pour l’île d’Elbe jusqu’à sa translation à celle de Sainte-Hélène, et successivement jusqu’à la fin de décembre 1840. Cette relation, qui ajoute un cinquième volume à l’Histoire de mes campagnes . . . complète pour moi une période de cinquante-trois ans révolus de services effectifs” [the narrative of events connected with my surgical career, and those I have witnessed, from the departure of the Emperor Napoleon to the island of Elba to his removal to St. Helena, and afterwards up to the end of December 1840. This account, which adds a fifth volume to the history of my campaigns . . . completes for me a period of fifty-three years of actual service].

This is the only time in more than 40 years of trading that we have ever seen all six volumes of Larrey’s memoirs offered for sale together in matching bindings. 40966

### *The First Helicopter*

**78. Launoy & Bienvenu.** Instruction sur la nouvelle machine inventée par MM. Launoy, naturaliste, & Bienvenu, machiniste-physicien, qui a été annoncée dans le Journal de Paris, le 19 avril 1784 [caption title]. 8vo. 15 [1]pp. N.p., n.d.



[Paris, 1784]. 195 x 133 mm. Marbled wrappers ca. 1784, tear in front wrapper. Insignificant staining, otherwise fine. Boxed. \$7500

**First Edition**, and *rare*, with no North American copies cited in OCLC (OCLC lists copies in two German libraries and in the Bibliothèque nationale). Description of the first successful European helicopter prototype, a small device or toy consisting of twin two-bladed rotors contra-rotated by a bow-string mechanism. The device was demonstrated before the Académie des Sciences and at the 1784 Paris Exposition by the inventors Launoy and Bienvenu, of whom nothing else is known. Launoy and Bienvenu’s device provided the inspiration for Cayley’s 1796 helicopter design, the first flying machine he ever constructed.

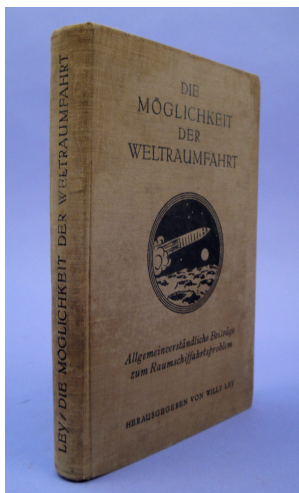
Purchase of this pamphlet granted the buyer entry to the display of three of Launoy and Bienvenu’s flying machines, housed at M. Bienvenu’s residence in Paris. The first machine was the one demonstrated at the Académie des Sciences; the second a larger machine three times the size of the original; and the third a model of a proposed machine, “réservée essentiellement à l’examen du Public” (p. 2). Gibbs-Smith, *Sir George Cayley’s Aeronautics*, pp. 1-3. 40963



**79. Le Clerc, Sébastien** (1637-1714). Engraving depicting Louis XIV's visit to the Academie Royale des Sciences circa 1670, from Claude Perrault's *Memoires pour servir à l'histoire naturelle des animaux* (1671-76). Framed. Visible portion of image measures 417 x 308; frame measures 602 x 484 mm. Fine. \$2750

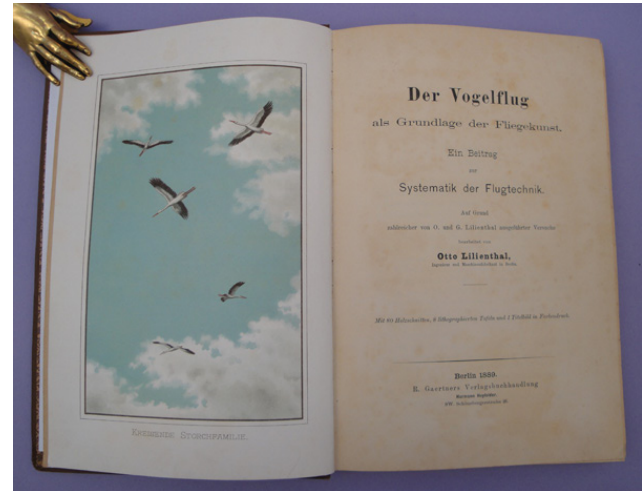
Le Clerc, one of the outstanding artists of the seventeenth century, was Louis XIV's official engraver. 11701

**80. Ley, Willy** (1906-1969). *Die Möglichkeit der Weltraumfahrt*. viii, 344pp. 2 plates, text illustrations. Leipzig: Hachmeister & Thal, 1928. Original cloth, some spotting, light wear, minor finger-soiling. Very good copy, from the library of Frederick I. Ordway III, with his bookplate. \$650



**First Edition** of this pioneering collection of papers on the possibility of

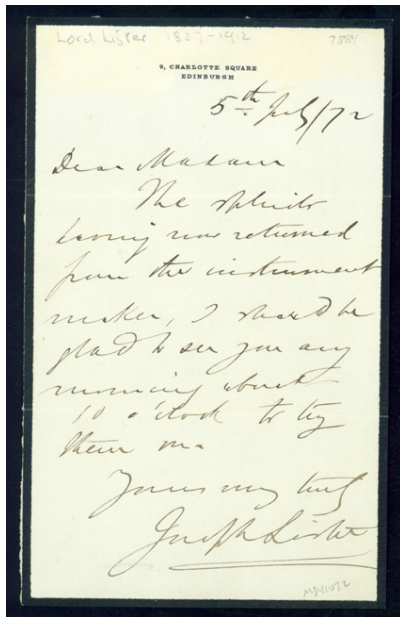
space travel, edited by Willy Ley, one of the founders of Germany's influential Verein für Raumschiffahrt (Rocketry Society) and a highly effective popularizer of spaceflight in the first half of the twentieth century. The collection includes contributions from Karl Debus, Hermann Oberth, Walter Hohmann, Guido von Pirquet and Fr. W. Sander-Wesermünde. This copy was owned by Frederick I. Ordway III, space scientist and well-known author of books on spaceflight. 40951



**81. Lilienthal, Otto** (1848-1896). *Der Vogelflug als Grundlage der Fliegekunst*. viii, 187pp. Chromolithograph frontispiece, 8 lithograph folding plates, text illustrations. Berlin: R. Gaertner, 1889. 229 x 155 mm. Original brown bead-grain cloth stamped in black and gilt, gilt-lettered spine and front cover. Minor foxing, but very good. Ownership inscription of Dr. Paul Pallme König, dated 1908, on front flyleaf; König's annotations and underlining in ink throughout. \$3000

**First Edition.** Lilienthal's study of the method and aerodynamics of bird flight was the first textbook of mechanical flight. Lilienthal applied the results of his bird-flight studies to the problem of human flight, constructing one-man gliders based on the shape of a bird's wing. The experiments he conducted with these from 1891 until his tragic death in a glider accident in 1896 demonstrated the practical application of his theories of flight and inspired others to build upon his initial investigations. "Lilienthal's book [became] one of the chief bibles for the aeronautical world after he demonstrated that his theories could be put into practice. . . . It was the basis on which the Wrights first started building their aerodynamic work, and they were always high in praise of its pioneering value, even when they were led to modify Lilienthal's

findings” (Gibbs-Smith, p. 23). This copy was once owned by Paul Pallme König, a physicist who published a thesis on “The resistance of bismuth in variable magnetic fields and variable measurement currents” (1907), and whose researches on bismuth are cited in the *Annalen der Physik* (Volume 7 [1909], issue 7, p. 337). Brockett, *Bibliography of Aeronautics*, p. 520. Davy, *Interpretive History of Flight*, pp. 116–120. Gibbs-Smith, *The Invention of the Aeroplane (1799–1909)*, pp. 23–25. Norman 1353. 41009



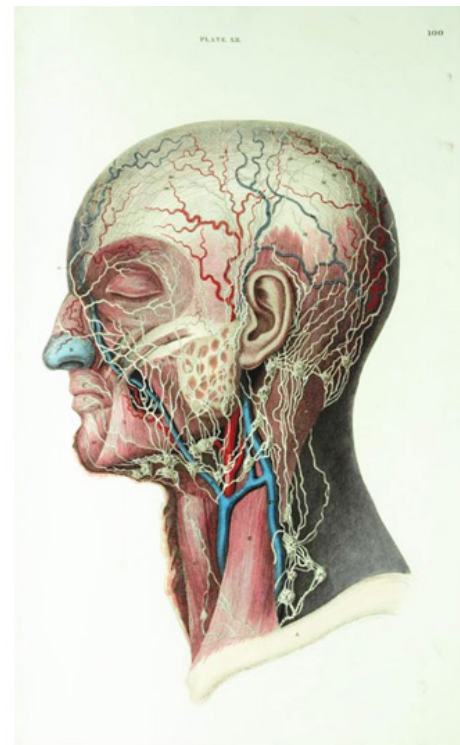
“The Splints Having now Returned from the Instrument Maker . . .”

**82. Lister, Joseph** (1827–1912). Autograph letter signed to an unidentified correspondent. Edinburgh, July 5, 1872. 1 sheet. 160 x 98 mm. Traces of mounting on blank verso, but very good. \$950

From the founder of the antiseptic principle in surgery (see Garrison–Morton 5634, *Printing and the Mind of Man* 316c) and the antiseptic prevention of wound infection (see Garrison–Morton 5635). The letter, which Lister wrote in his professional capacity as a surgeon, reads as follows:

Dear Madam, The splints having now returned from the instrument maker, I should be glad to see you any morning about 10 o'clock to try them on. Yours very truly Joseph Lister.

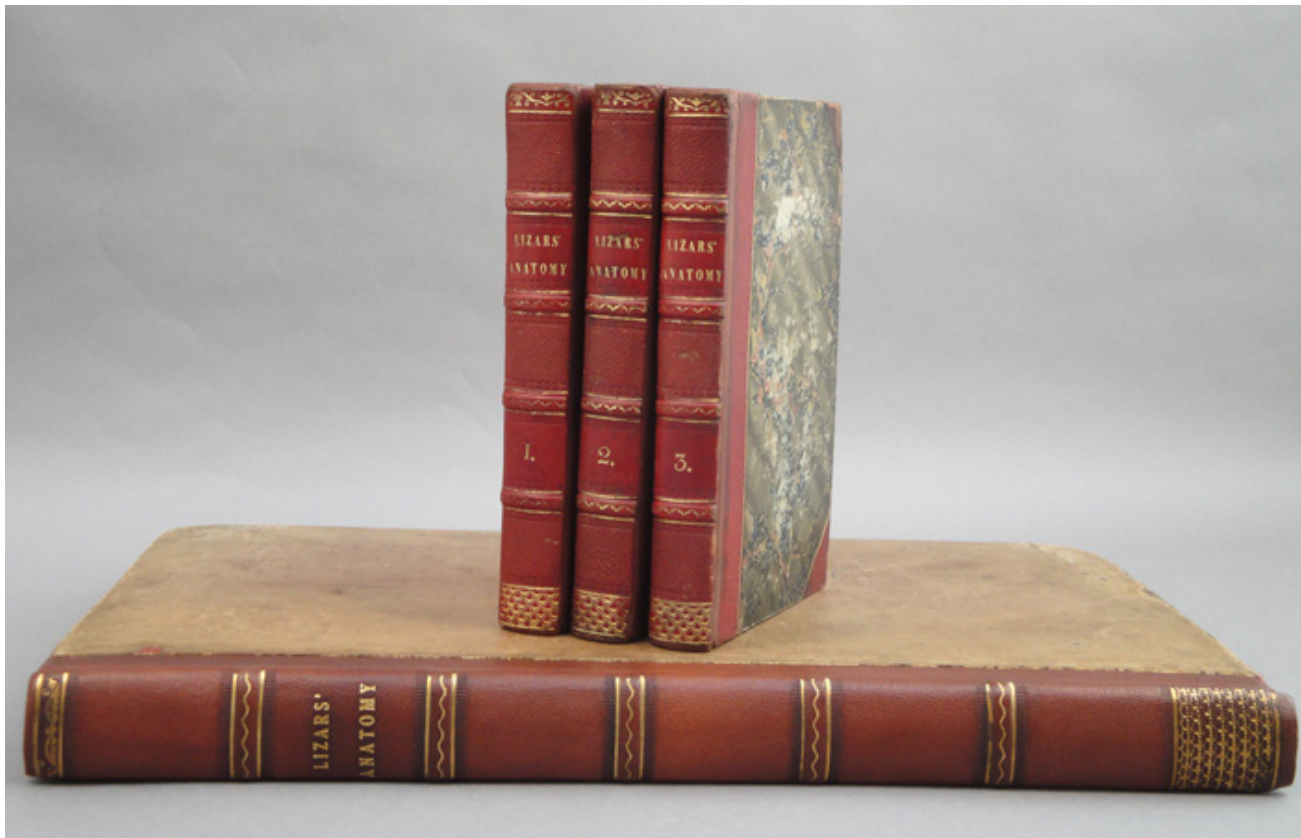
41072



With 101 Spectacular Hand-Colored Plates

**83. Lizars, John** (ca. 1787–1860). A system of anatomical plates of the human body. 8vo text, 12 parts in 3 volumes, plus folio atlas with engraved title and 101 hand-colored plates engraved by **William Home Lizars** (1788–1859); detailed pagination information available on request. Edinburgh: Printed for Daniel Lizars . . . , 1822–26. 214 x 133 mm. (text); 451 x 285 mm. (atlas). Text in 19<sup>th</sup> century half red morocco, marbled boards, rebaced retaining original gilt spines, a little rubbed; atlas in original cloth boards, corners worn, rebaced in red morocco to match text. A few minor dampstains in text volumes, some minor foxing to the plates, plate edges a little dust-soiled and frayed, but a fine copy of this very rare work with the plates in the atlas untrimmed. Small circular stamps of the King’s College, Newcastle medical library on atlas title and plate versos. \$15,000

**First Edition** of this impressive and highly successful collaboration between anatomist John Lizars and his brother William Home Lizars, a talented artist and head of the publishing and engraving firm established by the



brothers' father, Daniel Lizars (1754–1812). John Lizars studied under John Bell and later became a partner in Bell's anatomy school. The partnership with Bell was eventually dissolved but Lizars continued to teach on his own, and also maintained a private surgical practice. In 1825 Lizars became the first surgeon in Britain to perform an ovariectomy (see Garrison–Morton 6026), and in 1831 he was appointed professor of surgery at the Royal College of Surgeons in Edinburgh. Like many other Scottish teachers of anatomy, Lizars was active in the effort to reform Britain's antiquated laws governing the procurement of cadavers for medical schools, the excessive restrictions of which had for decades been forcing anatomists to wink at grave robbing and even murder. To this end he dedicated the atlas of his *System* to George IV, using his dedication as a platform to urge the king to lend his support to the cause. The crisis was finally brought to a head with the sensation Burke & Hare serial murders which took place in Edinburgh from November 1827 to October 1828, only one year after Lizars's atlas was completed.

Lizars's *System of Anatomical Plates* was by far his most successful work, going through many editions; "the sale of the book in its various forms was reported to be immense" (Roberts & Tomlinson, p. 505). The text of the work was originally issued in 12 parts in octavo format, which were then bound together in book form with engraved title; in later editions the text was reset in folio and bound with the plates. We have noted two issues of parts 2 and

3 of the text: this copy of these parts are of the earlier issue, with imprint reading "Printed for Daniel Lizars, 61, Princes Street, Edinburgh; and S. Highley, 174, Fleet Street, London." The later issue's imprint has "Hodges and M'Arthur, Dublin" added at the end; the pagination of the two issues of the text also varies.

The first edition of the folio atlas illustrating Lizars's *System* was issued in both uncolored and hand-colored versions, although the 15 plates devoted to the brain and spinal cord are colored in all copies of the first edition. All copies of the first edition of this work are rare, and because the plates were issued in folio, and the text of the first edition was issued in 12 parts in octavo, most often the first edition of the atlas is not found with the text.

This is the first copy of the first edition with the all the plates hand-colored that we have handled in 40 years of trading. It is probable, because of the high expense of hand-coloring, that only a small number of copies of this edition were issued in this form. In this copy all of the plates are brilliantly, even spectacularly hand-colored, and even the plates of the brain and nervous system—found colored in both the all-colored and the black and white versions—exhibit more detail and shading than those in the regular black and white edition. The plates in this colored copy are also printed on a better grade of paper than that used in the uncolored copies.

Roberts and Tomlinson are incorrect in their suggestion that the plates in Lizars's atlas were printed using W. H. Lizars's "alto rilievo" method, in which copper plates are etched in such a way as to leave the part to be printed in relief (the opposite of the far more commonly used intaglio method, in which the part to be printed is incised into the plate). Roberts and Tomlinson base their speculation on the mistaken observation that "the printed page [of Lizars's atlas] shows no plate marks" (p. 504); however, in our copy of the atlas the plate marks are clearly visible and the inked parts of the image are raised above the surface of the paper, as one would expect to find in a plate printed by the intaglio method. In some copies of the atlas the plates have paste-on numbers 1-101 instead of printed numbers. In our copy the earlier plates are numbered by hand, while the later plates have printed numbers.

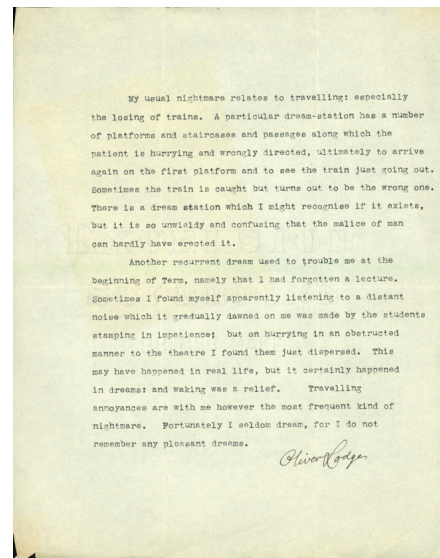
For the artist William Home Lizars see the extensively illustrated article in the Walter Scott Digital Library at the Edinburgh University Library site on the Internet. Lizars's fame as engraver led John James Audubon to engage Lizars to engrave the plates for the elephant folio *Birds of America*; however, after Lizars had engraved the first ten plates, he recommended to Audubon that this enormous project (requiring over 76,000 elephant folio hand-colored plates for the 175 copies in the edition) be turned over to Robert Havell in London. This extremely rare completely hand-colored copy of Lizars's atlas represents the highest quality of artistic production available in Scotland at this date. On our Catalogues and Special Items web page we have posted a downloadable PDF showing all the color images from the Lizars atlas. Roberts & Tomlinson, *The Fabric of the Body*, pp. 504-8. 40902

**84. Lodge, Oliver** (1851-1940). Typed document signed. N.p., n.d. 1 sheet. 261 x 205 mm. Light creasing, a few marginal tears, but very good. \$450

By British physicist Oliver Lodge, best known for his pioneering work in radio—he was one of the first in Britain to demonstrate the transmission of radio signals, and he patented both the tuner and the moving-coil loudspeaker. He is also remembered for his studies of psychic phenomena and his involvement in spiritualism, which intensified after the death of one of his sons in World War I.

Lodge's document describes two recurring dreams—more properly nightmares—that had long troubled him:

My usual nightmare relates to travelling; especially the losing of trains. A particular dream-station has a number of platforms and staircases and passages along which the patient is hurrying and wrongly directed, ultimately to arrive again on the first platform and



to see the train just going out. . . Another recurrent dream used to trouble me at the beginning of Term, namely that I had forgotten a lecture. Sometimes I found myself apparently listening to a distant noise which it gradually dawned on me was made by the students stamping in impatience; but on hurrying in an obstructed manner to the theatre I found them just dispersed. This may have happened in real life, but it certainly happened in dreams; and waking was a relief. Travelling annoyances are with me however the most frequent kind of nightmare. Fortunately I seldom dream, for I do not remember any pleasant dreams.

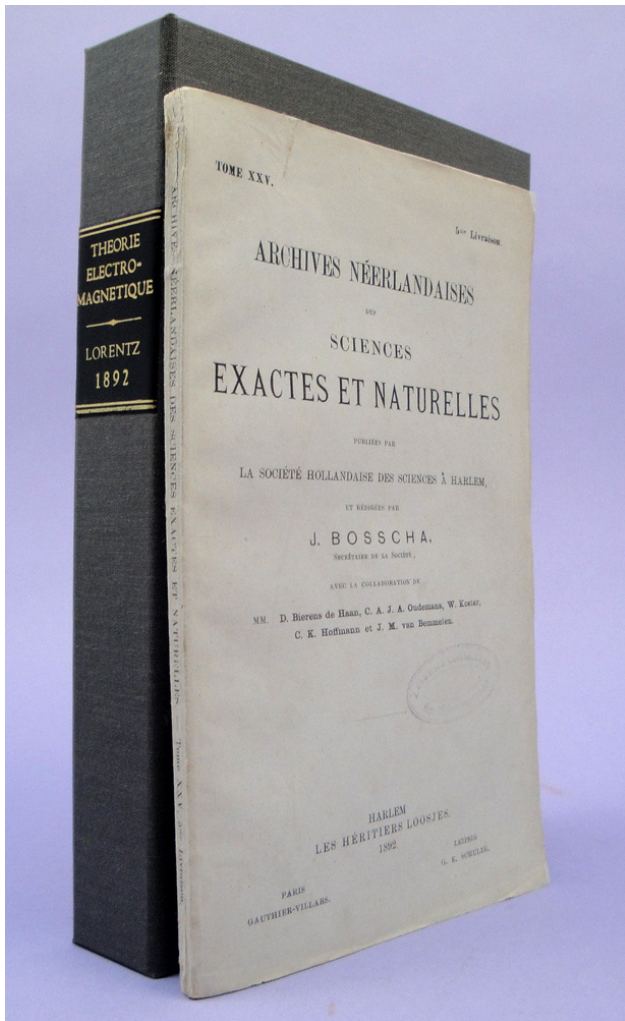
41091

### *The Electron Theory*

**85. Lorentz, Hendrik Antoon** (1853-1928). La théorie électromagnétique de Maxwell et son application aux corps mouvants. In *Archives néerlandaises des sciences exactes et naturelles* 25 (1892): 363-551 [Lorentz's paper occupies the entire number]. 8vo. Harlem: Les héritiers Loosjes, 1892. 241 x 152 mm. (uncut & unopened). Original wrappers, a few minor marginal tears repaired; boxed. Library stamp on front wrapper and first leaf. Fine copy.

\$9500

**First Edition** of Lorentz's seminal paper on the relationship of matter to electricity, appearing in journal form prior to the book-form version cited as *Printing and the Mind of Man* 378a. The book-form version appeared later in 1892, and not in 1893 as PMM states. This paper and Lorentz's paper of 1895 (PMM 378b) embodied the first systematic appearance of the electrodynamic principle of relativity. In applying Maxwell's electromagnetic theories to moving bodies Lorentz made the fundamentally new assumption that the behavior of light and matter could be understood in terms of charged particles. Maxwell (1864) had argued that radiation was produced by the oscillation

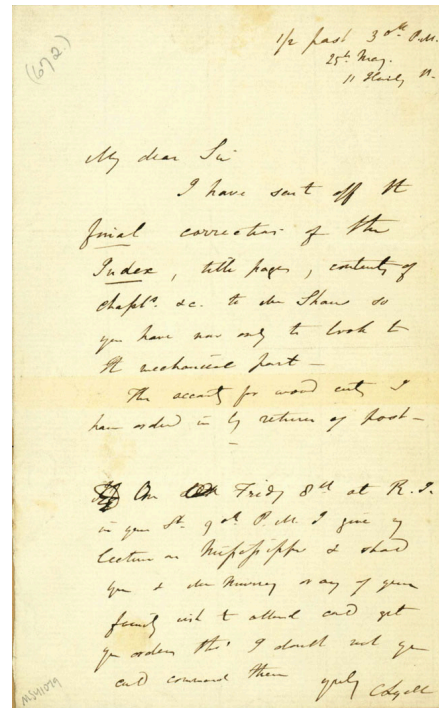


of electric charges, and in 1887 Hertz showed this to be true for radio waves, which he formed by causing electric charges to oscillate. But if light was an electromagnetic radiation after the fashion of radio waves, where were the electric charges that did the oscillating?

By 1890 it seemed quite likely that electric current was made up of charged particles, and Lorentz thought it quite possible that atoms of matter might also consist of charged particles. He hypothesized that visible light was produced by the oscillation of charged particles within the atom; if this was so, then placing a light in a strong magnetic field ought to affect the nature of the oscillations—and therefore the wavelength—of the light emitted. In 1896 Lorentz's hypothesis was demonstrated experimentally by his pupil Pieter Zeeman, who shared the Nobel Prize with Lorentz in 1902.

Lorentz also postulated that there are contractions of length with motion, and that the mass of a charged particle such as an electron depends upon its volume—the smaller the volume, the greater the mass. Arguing that mass increases with velocity led to the conclusion that

the velocity of light in a vacuum is the greatest velocity at which any object can travel. Lorentz's equation describing how mass varies with velocity was adopted by Einstein in his *Special Theory of Relativity* (1905), in which he showed that the Lorentz mass-increase with velocity holds not only for charged particles but for all objects, charged or uncharged. *Dictionary of Scientific Biography*. Weber, *Pioneers of Science*, pp. 12–14. Magill, ed., *The Nobel Prize Winners: Physics*, pp. 35–42. 41098



**86. Lyell, Charles** (1797–1875). Autograph letter signed to an unidentified correspondent (most likely a member of John Murray's publishing firm). [London,] 11 Harley St., 25 May, n.y. [1849]. 1 sheet, mounted. 186 x 114 mm. Fine. \$950

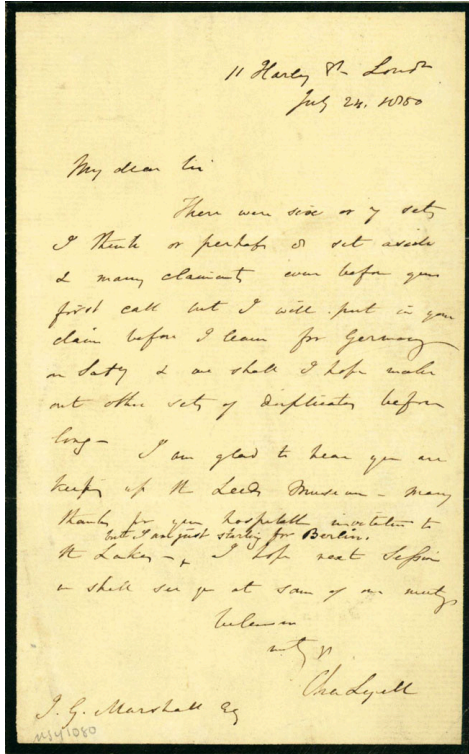
From Charles Lyell, the foremost British geologist of the nineteenth century and author of *Principles of Geology* (1830–33), a work that revolutionized the science and had a profound effect in shaping the scientific thinking of Charles Darwin. The letter was most likely written in connection with the publication of Lyell's *A Second Visit to the United States of North America*, published by John Murray in 1849. The letter reads as follows:

My dear Sir, I have sent off the final corrections of the Index, title pages, contents of chapt. &c. to Mr. Shaw so you have now only to look to the mechanical part—

The account for wood cuts I have ordered in by return of post.

On Friday 8<sup>th</sup> at R. I. in your St. 9<sup>oc</sup> P.M. I give my lecture on Mississippi & should you & Mr. Murray or any of your family wish to attend cd get you orders tho' I doubt not you cd command them. Yrs truly CLyell.

The final paragraph refers to Lyell's lecture "On the delta and alluvial plain of the Mississippi, ancient and modern," delivered at the Royal Institution on Friday, 8 June 1849 (see "Letter 1242 — Darwin, C. R. to Lyell, Charles, [14–28 June 1849] :: Darwin Correspondence Project." :: *Darwin Correspondence Project*. Web. 06 Jan. 2011). 41079



**87. Lyell, Charles** (1797-1875). Autograph letter signed to James Garth Marshall (1802-73). 1 page, docketed on verso of sheet. London, July 24, 1850. 188 x 114 mm. Fine apart from faint soiling. \$850

Lyell's correspondent was the prominent Yorkshire politician James Garth Marshall, M.P. for Leeds from 1847 to 1852. Marshall was also a Fellow of the Geological Society and served as the Leeds City Museum's curator of geology from 1837 until his death.

Lyell's letter reads as follows:

My dear Sir, There were six or 7 sets I think or perhaps 8 set aside & many claimants even before your first call but I will put in your claim before I leave for Germany on Saty. & we shall I hope make out other sets of duplicates before long.

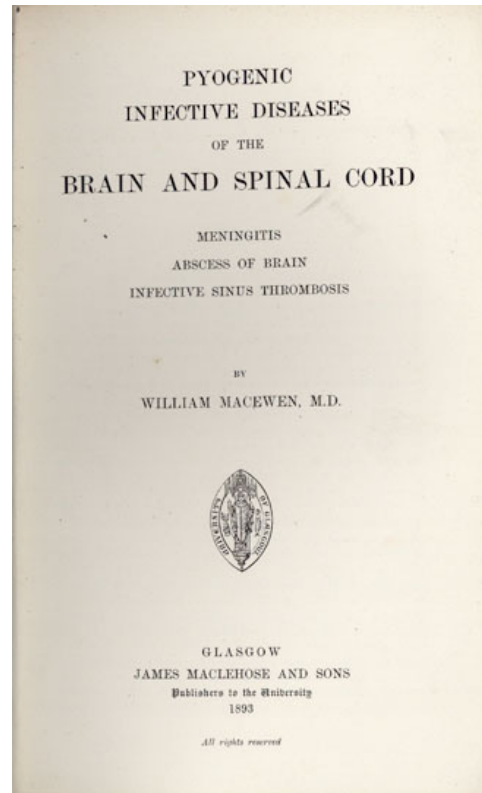
I am glad to hear you are keeping up the Leeds Museum—many thanks for your hospitable invitation to the Lakes but I am just starting for Berlin--& I hope next Session we shall see you at some of our meetings. Believe me truly yrs Cha Lyell.

J. G. Marshall Esq.

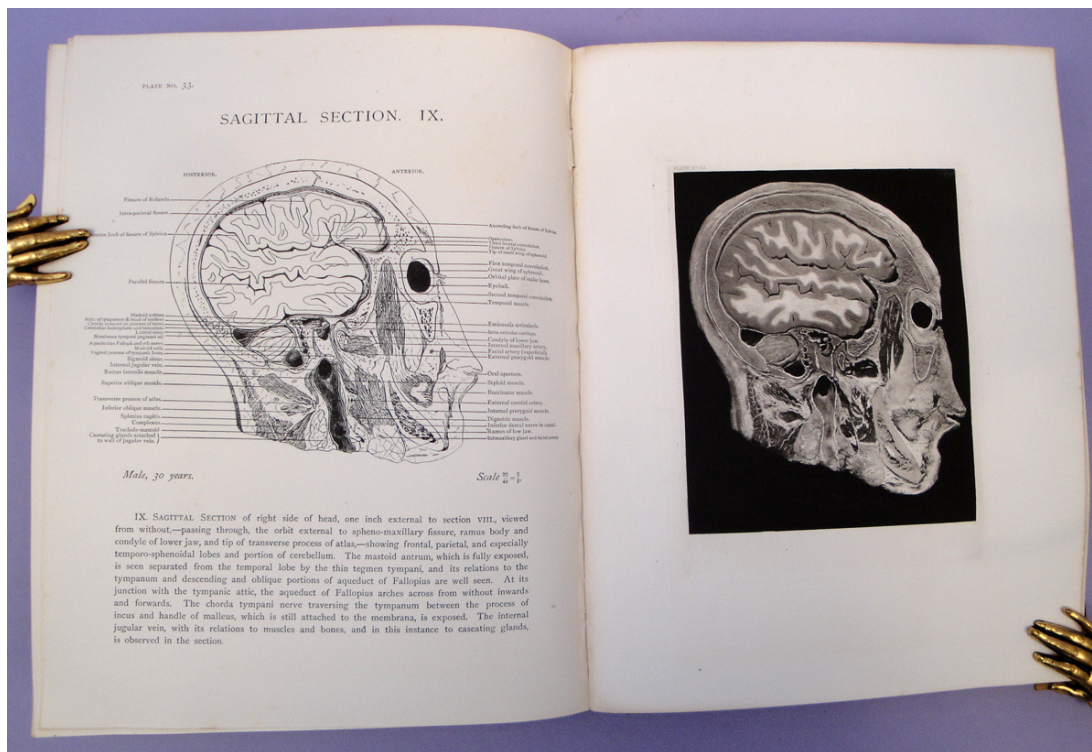
41080

**88. Lyell, Charles** (1797-1875). Autograph letter signed to H. Dixon, Esq. London, March 4, 1863. 2pp. plus integral blank. 145 x 114 mm. Fine. \$500

"I write to ask whether I left my purse in your office as I had it when I paid my cab at the door & immediately on leaving took another cab & found I had no purse. My pocket may have been picked in Cursitor St. . . ." 41093



**89. Macewen, William** (1848-1924). (1) Pyogenic infective diseases of the brain and spinal cord. 8vo. xxiv, 354pp. 37 plates & text illustrations. Glasgow: Maclehoose, 1893. 225 x 145 mm. Original cloth, worn but sound, corners a little bent. Minor dust-soiling and fraying, but very good. Advertisement for Macewen's *Atlas of Head Sections* tipped to the front free endpaper. (2) Atlas of head sections. 4to. xiii pp.,



53 copperplate engravings each with separate printed outline key, 4pp. (index). Glasgow: Maclehose, 1893. 280 x 220 mm. Original cloth. Minor foxing, otherwise fine. Signature of British surgeon George Grey Turner (1877-1951) on the front free endpaper. \$4500

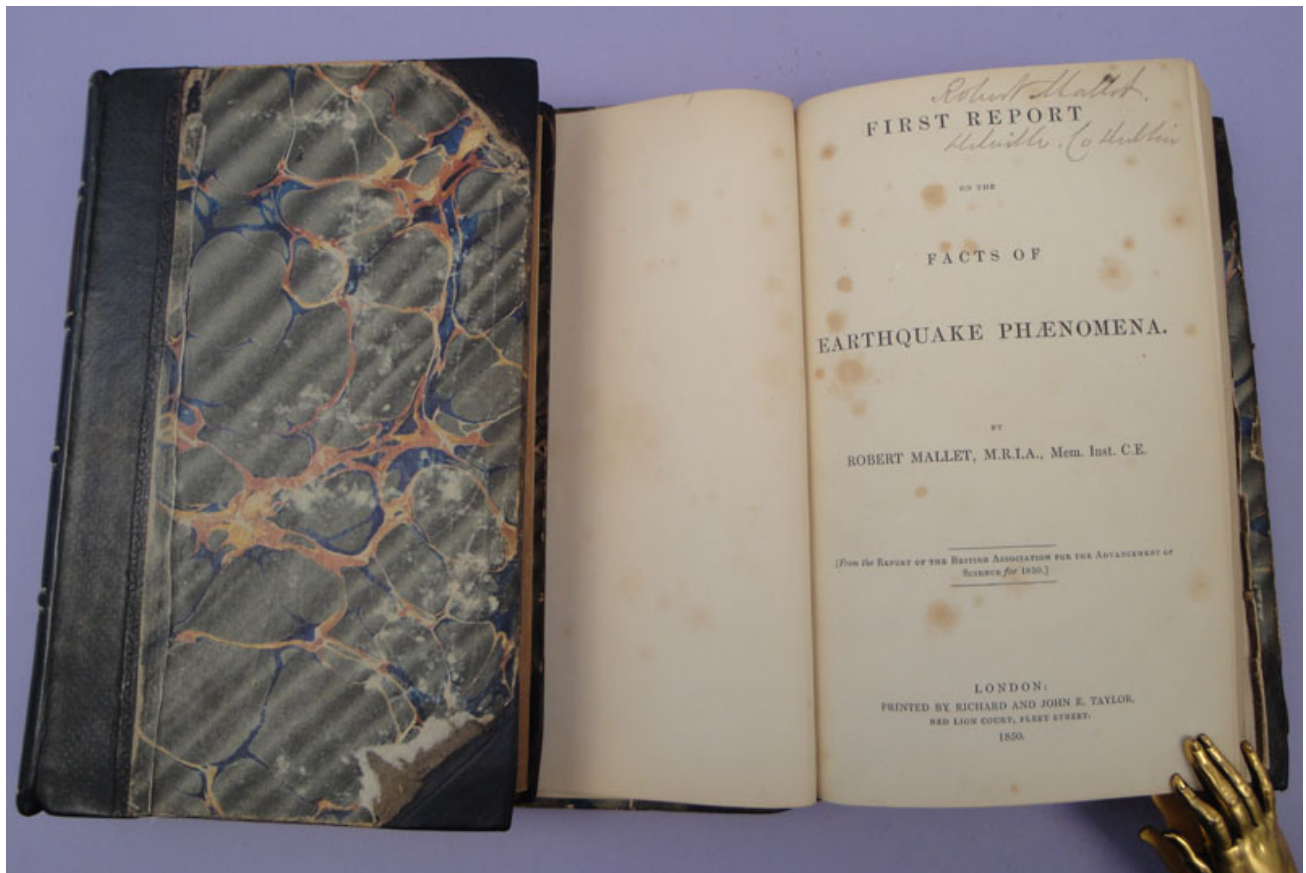
**First Editions.** Garrison-Morton 4872, 431 (*Atlas*). Cushing considered Macewen the “chief pioneer in craniocerebral surgery.” His experience with meningitis, abscess of the brain and infective sinus thrombosis was summarized in his seminal *Pyogenic Infective Diseases of the Brain and Spinal Cord* of 1893, which gave sixty-five detailed cases together with operative procedures. His *Atlas of Head Sections*, published the same year, was intended to supplement and illustrate *Pyogenic Infective Diseases*. This copy of the *Atlas* was once owned by British surgeon George Grey Turner, for whom “Turner’s sign”—local areas of bruising and induration of the skin about the navel and loins in hemorrhagic pancreatitis—is named. 39273

### Foundation Work of Seismology— Author’s Copy

**90. Mallet, Robert** (1810-81). (1) First [-third] report of the facts of earthquake phenomena. Offprints from *Report of the British Association for*

*the Advancement of Science for 1850* (1850), *Report of the British Association for the Advancement of Science for 1851* (1852) and *Report of the British Association for the Advancement of Science for 1852* [-54] (1852-55). [2], 87; [2], 273-320; [2], 176, [1], 118-212, 326pp. 6 plates, numbered 12-17. 218 x 135 mm. Three items in 2, bound in 19<sup>th</sup> century marbled boards rebaked and recorned in calf, slightly rubbed. Light toning, edges of some plates a little frayed, but very good. *Mallet’s copy*, with his signature on the title of the first report; the first two reports interleaved with both autograph and printed corrections inserted throughout; autograph note on p. 153 of the third report. (2) [with John William Mallet.] The earthquake catalogue of the British Association, with the discussion, curves, and maps, etc. . . . Being third and fourth reports. Offprint from *Transactions of the British Association for the Advancement of Science* (1852-58). [2], 176, [1], 118-212, 326, 136pp. 15 plates. 221 x 140 mm. Original boards, cloth spine with paper label, rebaked, one corner bent. Light toning, but very good. \$2750

**First Separate Editions.** Mallet, an Irish engineer and inventor, was a pioneering researcher on earthquakes, and his four reports on earthquakes, published in the



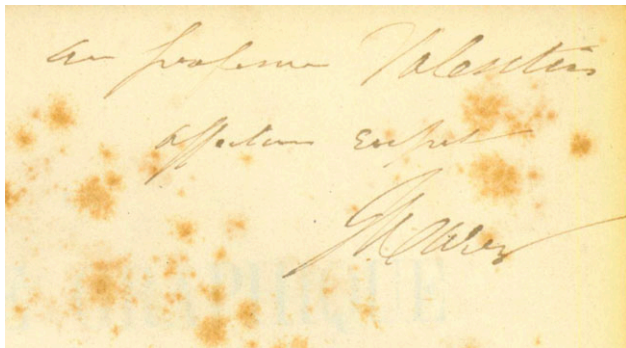
journals of the British Association for the Advancement of Science, represent the first scientific work on the subject. Mallet coined the term “seismology” to describe the scientific study of earthquakes, and was also responsible for the terms “epicenter,” “seismic focus” (the point at which an earthquake originates), “angle of emergence,” “isoseismal line” (contour or line on a map bounding points of equal intensity for a particular earthquake), and “meizoseismal area” (area of maximum earthquake damage). “He produced an experimental seismograph in 1846. Important elements of his model, which was never actually used, were incorporated in the seismograph that Luigi Palmieri made in 1855. Between 1850 and 1861 Mallet set off explosions in different locations to determine the rate of travel of seismic waves in sand (825 feet per second), solid granite (1,665 feet per second) and quartzite (1,162 feet per second). According to A. Sieberg (1924), Mallet should be considered the founder of the physics of earthquakes. . . . Mallet presented his most important seismic results in four Report[s] to the British Association (1850, 1851, 1852–54, 1858) and in four editions of the *Admiralty Manual of Scientific Enquiry* (1849, 1851, 1859, 1871). Between them, they contain an extensive catalog—which he prepared and debated with his son, John W. Mallet—of 6,831 earthquakes reported between 1606 B.C. and A.D. 1858 and his seismic map of the world” (*Dictionary of Scientific Biography*).

We are offering Mallet’s copies of his first, second and third reports, with his corrections and emendations. Accompanying these is the *Earthquake Catalogue of the British Association*, which incorporates Mallet’s third and fourth reports. 41052

**91. Marey, Etienne-Jules** (1830–1904).

La méthode graphique dans les sciences expérimentales et principalement en physiologie et en médecine. xix, 673, [3, incl. errata]pp. Text illustrations. Paris: G. Masson, [1878]. 237 x 155 mm. Quarter cloth, mottled boards ca. 1878, remains of handwritten paper label on spine, light edgewear, spine a bit faded. Light to moderate foxing, but very good. *Presentation copy, inscribed by Marey to Gabriel Gustav Valentin* (1810–83) on the half-title: “A Professeur Valentin affection & respect E. J. Marey.” \$6000

**First Edition.** Marey pioneered the use of graphical recording in the experimental sciences, using instruments (many of his own invention) to capture and display data impossible to observe with the senses alone, and to record visually the progression of such data over time. He began by applying graphical recording methods to problems in

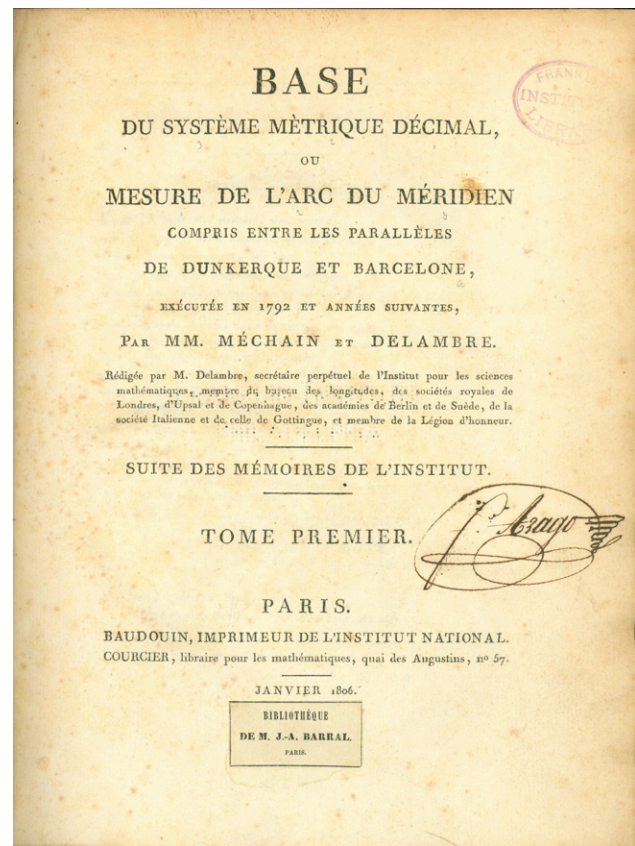


physiology, using machines to investigate the mechanics of the circulatory, respiratory and muscular systems. After 1868 he turned to the study of human and animal locomotion, and in the 1880s he began using cinematography to record animal motion, making him one of the pioneers in this field.

Marey's graphical recording methods, at first looked on askance by the French medical establishment, eventually led to Marey's election to the Académie des Sciences, where he occupied the chair in the medical and surgical section once held by Claude Bernard. In the same year Marey published his *La méthode graphique*,

an encyclopedic summary of all of his research and results so far. It began, as did all Marey's publications, with a scrupulous history in which he enumerated his predecessors and described what he had borrowed from each. He then defined the purposes of his inscribing machines and showed how they were able to describe both movement and force as well as to store the information as material for comparison and research. He described the circulatory and locomotion phenomena he had studied, but this time he focused on methods of recording them. He reviewed the function of the mechanical models he had created, and finally he explained the locomotion of humans, horses, birds and insects and showed the devices for registering their movements. "There is nothing," wrote Marey, "that can escape the methods of analysis at our disposal" (Braun, p. 40).

An unscribed copy of Marey's *Méthode graphique* (together with its 1885 supplement) was sold at the Tufte sale (Christie's Dec. 2, 2010) for \$15,000. We are offering the copy that Marey presented to Gabriel Gustav Valentin, professor of physiology at the University of Bern and co-author, with J. E. Purkyne, of a classic paper on ciliary epithelial motion (see Garrison-Morton 602). *Dictionary of Scientific Biography*. Braun, *Picturing Time: The Work of Etienne-Jules Marey*, pp. 39-40. 41059



*The Metric System, Ex Libris François Arago, Hero of the Project*

**92. Méchain, [Pierre F. A.]** (1744-1804) & **Delambre, [Jean B. J.]** (1749-1822). Base

du système métrique décimal. 3 vols. **With:** **Biot, [Jean Baptiste]** (1774-1862) & **Arago, [François]** (1786-1853). Recueil d'observations géodésiques, astronomiques et physiques.

Together, 4 vols., 4to. c. 2500pp. 30 mostly folding engraved plates. Full period-style calf, elaborately gilt. Minor spotting. From the library of **François Arago**, with his signature on the title and his annotations on some of the folding plates. Bookplate of chemist Jean Augustin Barral (1819-84), who prepared the collected works of Arago, on the titles of all four volumes. Unobtrusive perforated stamp of the Franklin Institute Library on titles of vols. 1-3 & on 2 or 3 other leaves, ink stamp of the library on title of vol. 1 & a few other leaves. Very good set. Paris: Baudouin, 1806-10; veuve Courcier, 1821. \$42,500

**First Edition** of the complete series establishing the metric system, *from the library of François Arago*, who

was responsible for completing the project, and who experienced heroic hardships and adventures to preserve the data. *Printing and the Mind of Man* 260.

In 1788 the French Academy of Sciences, at the suggestion of Talleyrand, proposed the establishment of a new universal decimal system of measurement founded upon some “natural and invariable base” to replace Europe’s diverse regional systems. This project was approved by the National Assembly in 1790 and a basic unit or “meter” of measurement proposed, which was to be one ten-millionth of the distance between the terrestrial pole and the Equator. In 1792 Méchain and Delambre were appointed to make the necessary geodetic measurements of the meridian passing through Dunkirk and Barcelona, from which the meter would be derived. The project was hampered by France’s political revolution, by the death of Méchain in 1804, and by the tedious calculations involved in converting one system to another; it was not until 1810 that Delambre was able to complete the final volume of the *Base du système métrique décimal*.

Méchain and Delambre had determined the length of the meter by taking measurements over a meridian arc of 10 degrees. After Méchain’s death in 1804, the Bureau of Longitudes proposed that the meter’s length be redetermined more accurately by extending measurement of the arc of the meridian south to the Balearic Islands of Mallorca, Menorca and Ibiza. François Arago and Jean Baptiste Biot were assigned to this task. Arago was twenty years old at the start of this project. In 1806 he and Biot journeyed to Spain and began triangulating the Spanish coast. Their work was disrupted by the political unrest that developed after Napoleon’s invasion of Spain in 1807. Biot returned to Paris after they had determined the latitude of Formentera, the southernmost point to which they were to carry the survey. Arago continued the work until 1808, his purpose being to measure a meridian arc in order to determine the exact length of a meter.

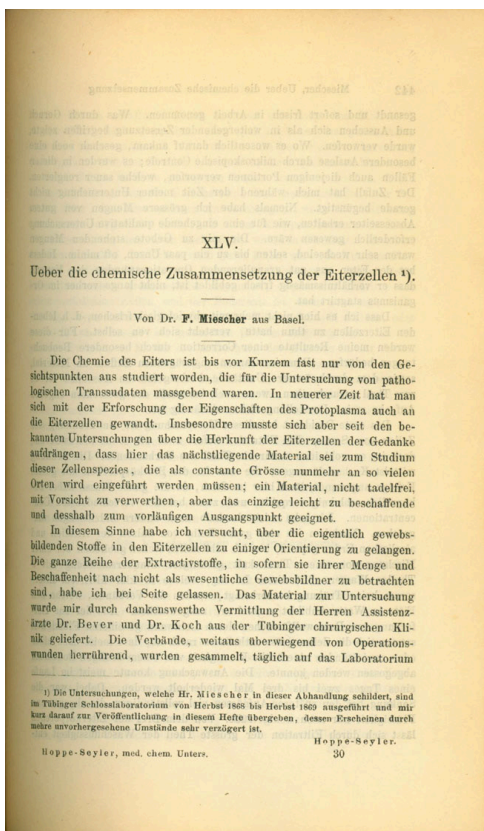
After Biot’s departure, the political ferment caused by the entrance of the French into Spain extended to the Balearic Islands, and the population suspected Arago’s movements and his lighting of fires on the top of mola de l’Esclop as the activities of a spy for the invading army. Their reaction was such that he was obliged to give himself up for imprisonment in the fortress of Bellver in June 1808. On July 28 Arago escaped from the island in a fishing boat, and after an adventurous voyage he reached Algiers on August 3. From there he obtained a passage in a vessel bound for Marseille, but on August 16, just as the vessel was nearing Marseille, it fell into the hands of a Spanish corsair. With the rest the crew, Arago was taken to Roses in Catalonia, and imprisoned first in a windmill, and afterwards in a fortress, until the town fell into the hands of the French, and the prisoners were transferred to Palamós.

After three months of imprisonment, Arago and the others were released on the demand of the dey (ruler) of Algiers, and again set sail for Marseille on the November 28, but when within sight of their port they were driven back by a northerly wind to Bougie on the coast of Africa. Transport to Algiers by sea from this place would have required a delay of three months. Arago, therefore, set out over land, on what had to be a strenuous journey, guided by a Muslim imam, and reached Algiers on Christmas Day. After six months in Algiers, on June 21, 1809, Arago set sail for Marseille, where he had to undergo a monotonous and inhospitable quarantine in the lazaretto before his difficulties were over, roughly one year after he had first been imprisoned. The first letter he received, while in the lazaretto, was from Alexander von Humboldt—the origin of a scientific relationship which lasted over forty years.

In spite of the successive imprisonments, voyages, and other hardships he endured, Arago had succeeded in preserving the records of his survey; and his first act on his return home was to deposit them in the Bureau des Longitudes in Paris. As a reward for his heroic conduct in the cause of science, he was elected a member of the Académie des sciences at the remarkably early age of twenty-three, and before the close of 1809 he was chosen by the council of the École Polytechnique to succeed Gaspard Monge in the chair of analytic geometry. At the same time he was named by the emperor one of the astronomers of the Observatoire royale, which remained his residence till his death, and in this capacity he delivered his remarkably successful series of popular lectures on astronomy from 1812 to 1845. Most of his later scientific contributions were in physics, particularly optics and magnetism: he discovered the phenomena of rotary magnetism (the greater sensitivity for light in the periphery of the eye) and rotary polarization, invented the first polariscope, and performed important experiments supporting the undulatory theory of light. In his capacity as secretary of the Académie des Sciences, he championed the photographic process invented by Louis Daguerre, announcing its discovery to the Académie in 1839, and using his influence to obtain publicity and funding for its inventor.

Arago’s results, together with geodetic data obtained in France, England and Scotland, were published in the *Recueil d’observations géodésiques*, issued as a supplement to Méchain and Delambre’s work 11 years after he carried the data back to France, in 1821. Political opposition to the new system of measurement may have contributed to the unusually long delay in publication. As a tribute to Arago’s contribution, in 1994 the Arago Association and the city of Paris commissioned a Dutch conceptual artist, Jan Dibbets, to create a memorial to Arago. Dibbets came up with the idea of setting 135 bronze medallions (although only 121 are documented in the official guide to

the medallions) into the ground along the Paris Meridian between the northern and southern limits of Paris: a total distance of 9.2 kilometres/5.7 miles. Each medallion is 12 cm. in diameter and marked with the name ARAGO plus N and S pointers. One of these was shown in the film *The Da Vinci Code*. *Dictionary of Scientific Biography* under Biot. Daumas, *Arago: La jeunesse de la science*, ch. IV. Norman 1481. Alder, *The Measure of the World* (2003). 40311

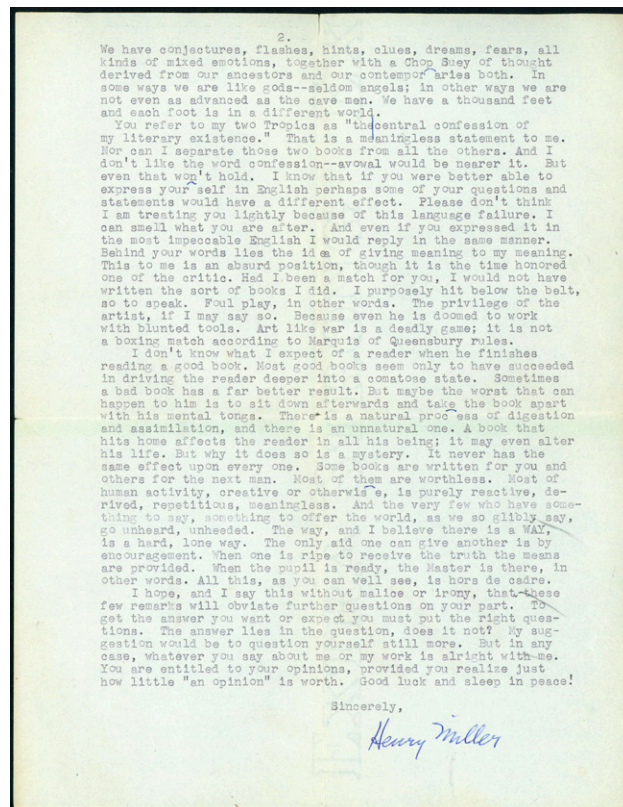


## Discovery of DNA

**93. Miescher, Johann Friedrich** (1844-95). Ueber die chemische Zusammensetzung der Eiterzellen. In Hoppe-Seyler, Felix, ed., *Med.-chem. Untersuchungen*, vol. 4 (Berlin: Hirschwald, 1866-71): 441-60. Whole volume, 8vo. [16, variously numbered], 593pp. 3 lithographed plates. 219 x 138 mm. Quarter morocco, marbled boards in period style. Moderate toning, margins of plates a little foxed. Very good. \$4750

**First Edition.** G-M 695. One of the earliest significant contributions to the field that would eventually be called molecular biology. "Miescher's first and most important discovery was a new class of compounds rich in organic phosphorus and forming the major constituent of cell nuclei. He rightly concluded that these

'nucleins,' as he called them, were as important a center of metabolic activity as the proteins" (*Dictionary of Scientific Biography*). Miescher's "nuclein" (nucleoprotein) was later demonstrated to be the hereditary genetic material (DNA). He also was the first to suggest the existence of a genetic code. 39490



## "I Resist All Explaining"

**94. Miller, Henry** (1891-1980). (1) Very densely typed letter signed with a few autograph ms. corrections, together with postmarked cover addressed in Miller's hand, to Frank Heidtmann. Lausanne, April 19, 1961. 2 pp. typed single space. 270 x 210 mm. A few tiny marginal tears along folds, some small scattered spots, cover torn, with stains from clear tape. Overall very good. (2) Typed letter (carbon) from Heidtmann to Miller. Braunschweig, 7/II/61. I-I/2 pages on single sheet. 298 x 211 mm. Small marginal tear along fold, but very good. (3) Collection of supplementary materials; complete listing available. \$1250

From the author of *Tropic of Cancer* and other groundbreaking literary works, discussing his philosophy of writing, the impossibility of assigning particular meanings

or interpretations to his writings, and the uselessness of literary analysis. Miller's correspondent, Frank Heidtmann, was attempting to write a critical appreciation of Miller's works for German readers, and had written to Miller with several questions about his books. Miller answered him as follows:

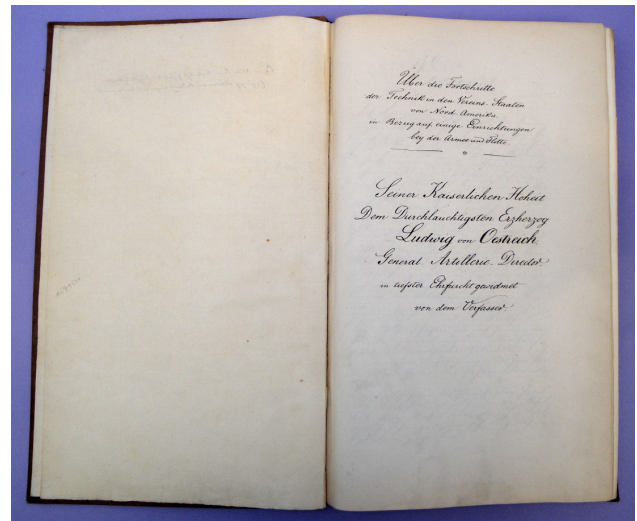
I am trying to give you some answers. But it is difficult. First of all, I only barely understand the questions. That is, I know what the words mean but cannot put them together in a way which makes sense to me. Much of this is due to my inability to grapple with the thinking of intellectuals. Words, for example, like mythos, existentialism, the historical being, and so on, are just words to me . . .

If I wished to, I could play this game with you and others who try so hard, rightly or wrongly, to give meaning to their ideas, ideas which in my opinion are not stateable in words but can only be apprehended in moments of extreme lucidity, trance, intuitive flashes. (Although perhaps a man like Aldous Huxley is capable of putting into language even the most tenuous idea.) Anyway, I am not of that stripe. I do not even know if I understand what I say myself sometimes, particularly when I write. One of the unconscious aims of a writer, it seems to me, is to express what he is incapable of expressing, that is, communicating in a roundabout way, often in an obscure way, or better yet in a purely nonsensical way . . .

Of course I have thought much, at times, about history and the meaning of history—and the “end of history.” And I have also thought of fear, in all its aspects. And about freedom too—though frankly I don't know what “absolute” freedom signifies. Or any absolute. Or for that matter, relativity. Certainly not as these terms are dished out to us by so-called “thinkers.” Maybe I could explain myself better, though I resist all explaining, by saying that I believe—I do not know—that man's thinking is tainted, suspect, the product of a divided being—and this is from time immemorial . . .

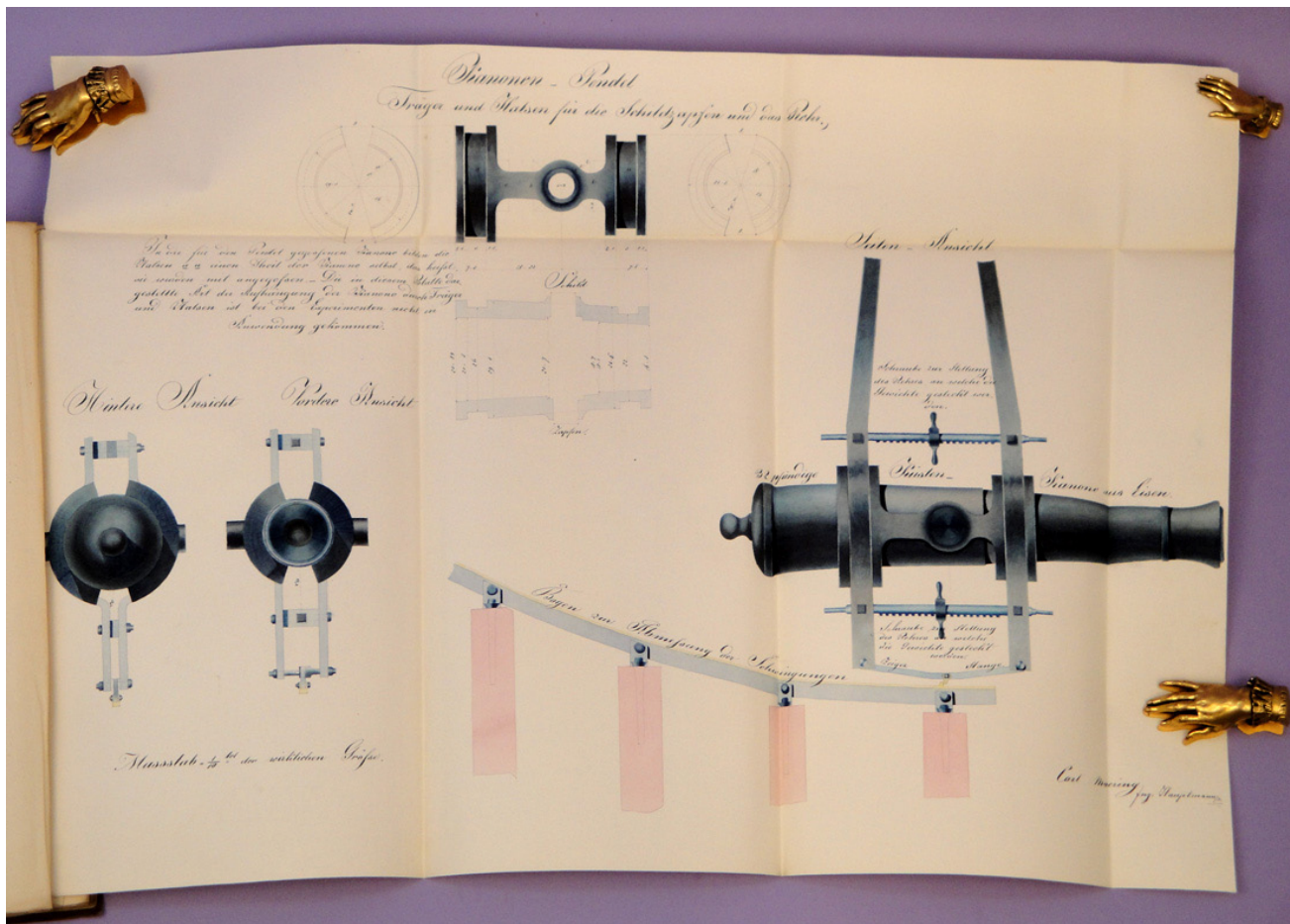
Heidtmann, perhaps discouraged by this reply, abandoned his critical study of Miller and later became a professor of library and information science at the University of Berlin. His response to Miller's letter, included here, expresses his deep respect and admiration of Miller's writings, which at that time were still not well known in his country—“I was and I am still very impressed by your writing and at the same time I was very disappointed that you are widely unknown in Germany and of [sic] you are known, then only sometimes as a writer in obscenity [sic] or something worse like that.”

Miller's letter and Heidtmann's reply are offered here with a collection of related materials; a complete listing is available. 41016



**95. Möring, Karl** (1810–70). Über die Fortschritte der Technik in den Vereins-Staaten von Nord-Amerika in Bezug auf einige Einrichtungen bei der Armee und Flotte [On technological progress in the United States of North America with regard to some mechanisms in the army and navy]. Manuscript signed (probably autograph), in German. 135 numbered pages, 12 beautifully executed and finely detailed folding watercolor and ink paintings each containing several captioned illustrations; mostly signed by Möring. 1844–45. 397 x 242 mm. Cloth c. 1845, spine a bit worn and faded. Light dust-soiling at edges, minor marginal tear in first drawing, otherwise fine. \$25,000

According to a note in the author's hand on the flyleaf, this is one of two copies of this extraordinary manuscript created by the author. The other, which Möring donated to Archduke Ludwig of Austria, is now in Austria's Kriegsarchiv. Karl Möring (his signature appears as “Carl Moering” on p. 135) was an Austrian lieutenant field marshal, diplomat and journalist who played a significant role in the Revolution of 1848 as it played out in the Habsburg Empire. An 1829 graduate of the Ingenieur-Akademie in Vienna, Möring was a member of the Austrian army's engineering corps, participating in military building projects in Milan, Split, Venice and Vienna; he also took part in the Austrian invasion of Syria. During this time he became increasingly disenchanted with the Austrian Empire's corrupt and reactionary regime, headed



de facto by Prince Metternich, and risked the disapproval of his superiors by expressing his liberal ideas on the political, social and economic questions of his day. In 1841-43 Möring was sent on a tour of Western Europe and North America in order to learn about technological advances in these regions. His observations of the technological innovations he saw while visiting American military bases and arms factories are recorded in the present manuscript; they were also published in 1848 under the title *Armee und Flotte der Vereins-Staaten bezüglich einiger technischer Einrichtungen* (Vienna: Tendler). This work must have been published in a very small edition as no copies appear in the online databases of OCLC and RLIN. A search of the Austrian, German and Swiss libraries included in the Karlsruhe Virtueller Katalog shows only two listings: the Oesterreichische Landesbibliotheken and the Union Catalog of Northern Germany (GBV).

During the 1848 revolution in Vienna Möring wrote several pamphlets under the pseudonym "Cameo" and published his best-known work, the two-volume *Sybillinische Bücher aus Oesterreich* (1848), in which he attacked the Metternich government and called for the formation of a new Austria. He also served briefly as a delegate to the Frankfurt national assembly. After the collapse of the revolution and the restoration of

the monarchy, Möring continued to serve in the army engineering corps. In 1868, two years before his death, he was appointed a governor of Trieste.

The remarkable large colored paintings in Möring's manuscript each contain several detailed illustrations, most with captions, increasing the actual number of illustrations in this work to more than sixty. According to Möring's forward to his manuscript, most of the drawings were made on site. Five of the drawings depict innovations made by the American navy (Ericsson's steam engine and ship's propeller, W. W. Hunter's steam frigate "Union," etc.), and the remaining seven show technological improvements made by the American army. *Neue deutsche Biographie*. 39530

### *First Full Treatise on the Medical Plants of the New World*

**96. Monardes, Nicolás** (ca. 1493-1588). Dos libros, el uno que trata de todas las cosas que traen de nuestras de nuestras Indias occidentales, que sirven al uso de la medicina . . . 8vo. [140] f., plus "Tassa" leaf inserted between leaves A2



and A3. Woodcut portrait of Mondardes on title, woodcut head- and tailpieces and initials, printer's device. Seville: Hernando Diaz, 1569. 167 x 108 mm. Limp vellum c. 1569, title lettered in ink on spine, spine reinforced, a few small holes and chips. Title, "Tassa" leaf and lower corner of leaf L2 repaired, all with some loss, a few minor repaired tears in some other leaves. Very good copy apart from the repairs.

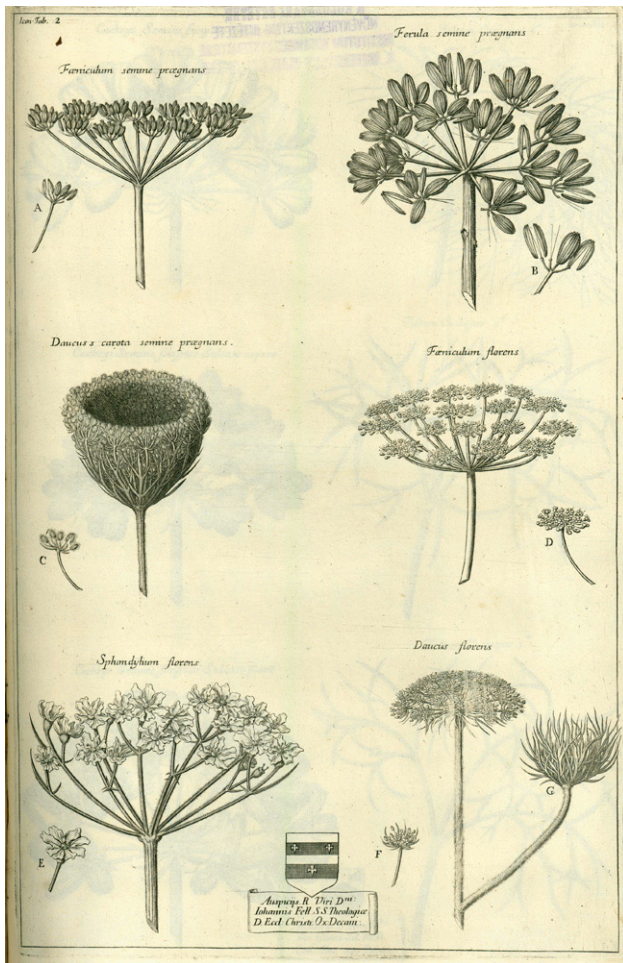
\$6000

Second edition of Monardes's treatise on the medical plants of the New World, first published in 1565. *Both editions are rare in commerce.* Monardes, a physician living in Seville, Spain, never traveled to America but was able to study a large number of New World plants due to Seville's control over the navigation and commerce operating between Spain and the Americas. He maintained a botanical garden in which he grew both native and exotic plants, and made scientific studies of the pharmacological properties of such New World species as tobacco, coca, sunflower, sarsaparilla, ipecacuanha, cinchona and saffras. Monardes's *Dos libros* was "the first full treatise on these drugs, and for many years the most important study of

the medicinal plants of Central America" (Mann, *Modern Drug Use*, p. 202). It was through Monardes's writings that the American materia medica began to be known, and his books were widely read and translated. The English version, translated by John Frampton, was published in 1569-71 under the title *Joyfull Newes out of the Newe Founde Worlde. Dictionary of Scientific Biography*. Morton, *History of Botanical Science*, p. 120. *Catalogue of Botanical Books in the Collection of Rachel McMasters Hunt*, I, 106. 40647

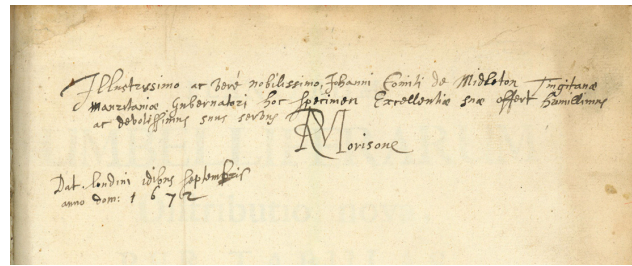
*First Monograph on a Natural Family of Plants—Signed Presentation Copy to Sir John Middleton*

**97. Morison, Robert** (1620-83). *Plantarum umbelliferarum distribution nova, per tabulas cognationis et affinitatis ex libro naturae observata & detecta.* Folio. [10], 91, [1]pp. 8 engraved tables with letterpress explanations on the versos of tables 1-7, 12 engraved plates with 5 unnumbered pages of explanatory text. Oxford: E Theatro Sheldoniano, 1672. 404 x



265 mm. Calf gilt ca. 1672, rebaked preserving original lettering piece, corners repaired, bookplate removed from inside front cover. *Signed Presentation Copy*, inscribed by Morison to Sir John Middleton (1618–74), Governor of Tangier, on the front free endpaper: “Illustrissimo ac vere nobilissimo, Johanni Comiti de Midleton Tingitanae Mauritaniae Gubernatori hoc specimen Excellentiae suae offert humillimus ac devotissimus suus servus Morison. Dat. londini idibus September anno dom: 1672” [To the most illustrious and truly most noble Sir John Middleton Governor of Tangier, this specimen is presented to his Excellency by his most humble and devoted servant Morison. Dated London, the ides of September, anno domini 1672]. Library stamps of the Botanical Institute of Cluj-Napoca, Romania on title and plates. \$7500

**First Edition** of “the first monograph on a natural family of plants” (Hunt Catalogue, I, p. xxix). Morison, a Scotsman, was Charles II’s royal physician and botanist,



and in 1669 became the first professor of botany at Oxford University, as well as Keeper of the university’s Physic Garden. Dissatisfied with current approaches to plant classification, Morison came up with his own plan, “stress[ing] the need for a single, key criterion for determining the *nota generica*, or natural relationships, of plants. He revived Cesalpino’s suggestion that classification should be based on fruit and seed characteristics. This principle was first applied in Morison’s monograph on umbelliferous plants (1672), which successfully isolated the Umbelliferae from other plants with similar inflorescence forms. The family was then subdivided into a series of genera that closely resembled later categories” (*Dictionary of Scientific Biography*). Morison later incorporated an extended version of *Plantarum umbelliferarum* into his *Plantarum historia pars tertia* (1699), part of an ambitious but never completed work applying Morison’s taxonomic scheme to the entire plant kingdom.

The Umbelliferae, also known as Apiaciae, is a family of hollow-stemmed plants including cumin, parsley, carrot, dill, fennel, celery, hemlock, Queen Anne’s lace and other relatives. The family includes about 300 genera and over 3000 species. The name “umbelliferae” derives from the form of the flowers, which are usually in the form of a compound “umbel” and bear some resemblance to umbrellas.

Morison presented this copy of *Plantarum umbelliferarum* to fellow Scotsman Sir John Middleton, army commander and governor of Tangier, a port city in Morocco controlled by the British from 1661 to early 1684. Middleton served two terms as governor of Tangier, from 1669 to 1670 and 1672 to 1674. Morison may have known Middleton in France, where both were part of Charles II’s entourage during the king’s exile prior to the Restoration (1660). Signed presentation copies of significant scientific works from the 17<sup>th</sup> century are **rare**. Henrey, *British Botanical and Horticultural Literature before 1800*, I, 262. *Catalogue of Botanical Books in the Collection of Rachel McMasters Hunt*, I, 323. Nissen, *Botanische Buchillustration*, 1411. *Dictionary of Scientific Biography*. *Dictionary of National Biography* for Middleton. 40646

**98. NEMA cipher machine. (I)** NEMA ciphering machine (operational model), serial no. T-D 491, enclosed in olive-green metal case

(slightly water-streaked, small area on left side where paint has flaked off, traces of removed paper label) measuring 365 x 326 x 140 mm. Printed label on case lid contains instructions in German, French and Italian about not using the machine except in wartime. 1947. (2) Bedienungs-Anleitung zur Chiffriermaschine "NEMA." Instruction de service de la machine à chiffrer "NEMA." 32pp. In German and French. Zurich: Aschmann & Scheller, [1947]. 211 x 148 mm. Original printed wrappers, sl. worn, stamped "Entklassifiziert datum 9. Juli 1992" on front cover. Both items in very good to fine condition.

\$4500

The NEMA (short for **N**eue **M**aschine) ciphering machine was designed between 1941 and 1943 by the Swiss Army's Cipher Bureau. The Swiss were driven to design their own ciphering machine by their lack of confidence in the 265 Enigma machines that had been supplied to them by Germany between 1938 and 1940. The Swiss used Enigma to encrypt diplomatic and military messages, and suspected that both the Germans and the Allied Forces might be able to read their Enigma-enciphered messages. The first functional NEMA model was completed in the spring of 1944, and by October 1945 the Swiss Army issued a production order for 640 machines, which were manufactured by Zellweger AG. This was the total number of NEMA machines produced. The machines were serially numbered starting with "100"; ours is numbered 491. Numbers 100-640 were used for training and observation, while numbers 641-740 were locked away to be used in case of war. The "T-D" in the serial number stands for "Tasten-Drucker"; another name for the NEMA as "Tasten-Drucker-Maschine" (Key-Stroke Machine). As is stamped on the cover of the instruction booklet, the NEMA machine remained classified until July 9, 1992.

The NEMA was designed on the same principle as the better-known Enigma, but includes features intended to overcome some of the Enigma's weaknesses. Sullivan and Weierud describe the different versions of the NEMA machine:

The NEMA machines appear to have been divided into four distinct user groups, with each group being issued with its own notch rings, although the contact wheels had the same wiring. The contact wheels and the notch rings are the secret parts of the machine. The wheels were wired by the Army and not by Zellweger AG. The notch rings are not mentioned in the list of spare parts which further indicates their secret nature.



A Training model was supplied with contact wheels A, B, C and D and with notch rings 16, 19, 20, 21 and 23/2 for the red drive wheel. An Operational model had the set of contact wheels A, B, C, D, E and F. The notch rings supplied being 12, 13, 14, 15, 17, 18 and 22/1 for the red drive wheel. The UKW wiring given in Figure 3 is common to both models.

The Swiss Foreign Office (FO) also adopted the NEMA and had on average 100 machines in service. No further details are known about the FO machines but it is suspected that they would have used completely different notch rings from those in use by the Army (Sullivan and Weierud, "The Swiss NEMA cipher machine," *Cryptologia* 23 (Oct. 1999): 310-28).

Our machine is an example of the Operational model, conforming to Sullivan and Weierud's description. The spare contact wheels are stored on threaded posts in the case lid. Our example is unusual in that it includes the printed manual, a small (and presumably easily lost) pamphlet. "The Swiss NEMA Cipher Machine." *Frode Weierud's CryptoCellar*. Crypto Simulation Group. Web. 19 Jan. 2011. 39494

## 99. Nightingale, Florence (1820-1910).

Florence Nightingale an angel of mercy. Scutari Hospital 1855. Mezzotint engraving by Charles Tomkins after F. Butterworth. London: Lloyd



Bros. & Co., June 30, 1855. On India paper, mounted. 391 x 345 mm. (image measures 333 x 300 mm.). Fine. \$1250

Excellent impression of what is most probably the first separately published image of Florence Nightingale as “The Lady of the Lamp.” The image shows Nightingale carrying a small lit oil lamp through a ward in the military hospital at Scutari (modern-day Üsküdar in Istanbul, Turkey), where she and 38 other women worked as volunteer nurses from 1854 to 1856 during the Crimean War. Beneath the image is the famous quotation from the *Times* of London (“Letter from Scutari,” February 1855) from which Nightingale’s “Lady of the Lamp” title was derived: “When all the medical officers have retired for the night, and silence and darkness have settled down upon those miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds.” 40979

### *The Earth’s Crust— Spectacular 9-Foot Scroll*

**100. Noeggerath, [Johann] Jakob** (1788–1877) and **Joseph Burkart**. *Der Bau der Erdrinde nach dem heutigen Standpunkte der Geognosie. La structure de l’écorce du globe géographiquement représentée selon l’état actuel*

de la géologie. The structure of the crust of the earth according to the present state of geology. Hand-colored lithograph scroll consisting of 5 imperial folio plates mounted on linen and wound around a wooden roller, with text in German, French and English. Bonn: Verlag des Lithographischen Instituts der Rheinischen Friedrich-Wilhelms-Universität und der Kaiserl. Leopoldinisch-Carolinischen Akademie der Naturforscher, von Henry & Cohen, 1838. 2 feet by approx. 9 feet. Outer edge of scroll a little soiled, and with a repair in the upper corner, ends of wooden roller a little wormed and chipped; interior portion of the scroll remarkably clean and fresh. \$9500

**First Edition** of this stunning large-scale visual representation in scroll format of the layers of the earth’s crust, prepared by mineralogist and geologist Jakob Noeggerath, director of the Museum of Natural History in Bonn and chief of the mining department at the city’s university. Noeggerath was the author of several important geological works, including *Über aufrecht im Gebirgsgestein eingeschlossene fossile Baumstämme und andere Vegetabilien* (1819–1821); *Das Gebirge in Rheinland-Westphalen, nach mineralogischem und chemischem Bezuge* (4 vol., 1822–1826); and *Die Entstehung der Erde* (1843).

The scroll, which can be unrolled for display, is made up of five imperial folio hand-colored plates, which were originally published as an atlas accompanied by a smaller-format text volume of 47 pages (not included here). Geological features are labeled in German, French and English. The scroll’s linen backing and wooden roller date from the mid-nineteenth century, and the whole work is in a remarkably good state of preservation (see accompanying images). We are unaware of any other copies of this work in scroll form—our version may be unique. It would make a spectacular exhibition piece for any library or museum.

There are several copies of *Der Bau der Erdrinde* in German and French libraries, but it is exceedingly rare in North America: when we checked, OCLC listed copies in only two U.S. institutions (Harvard University and University of Cincinnati). 40988

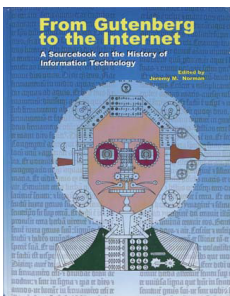
**101. Norman, Jeremy M.**, editor. Morton’s *Medical Bibliography* Fifth edition, revised and enlarged. 1243 pp. Aldershot: Scholar Press, 1991. Hardcover. ISBN 0-85967-897-0. \$245

Fifth and last edition, now out of print. The standard bibliographical reference, providing, in convenient form, an annotated chronological listing of the most important



contributions to the Western world literature on the health sciences from ancient times to circa 1980. Secondary sources are included up to roughly 1990. The annotations briefly explain the significance of individual contributions to the history and development of the bio-medical sciences. 40831

**102. Norman, Jeremy M.**, editor. From Gutenberg to the Internet: A sourcebook on the history of information technology. xvi, 899pp. Illustrated. Novato: Historyofscience.com, 2005. 8-1/2 x 11 inches. Pictorial boards, laminated. ISBN 978-0-930405-87-8.



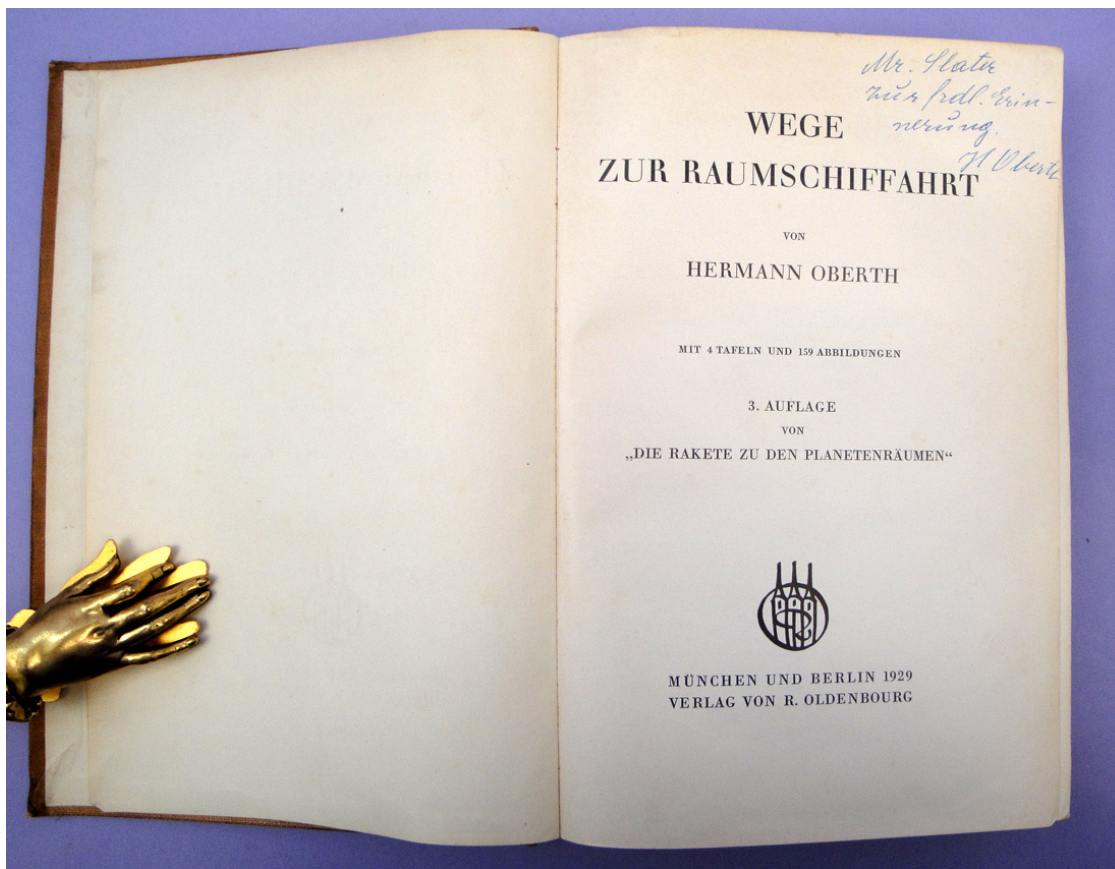
\$89.50

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

*Inscribed by Oberth*

**103. Oberth, Hermann** (1894-1989). *Wege zur Raumschiffahrt*. xi, 431pp. 4 plates. Munich & Berlin: R. Oldenbourg, 1929. 236 x 163 mm. Original cloth, minor soiling and edgewear. Very good copy, *inscribed in pen on the title page by Oberth for A. E. Slater*, secretary of the British Interplanetary Society (inscription dated 1951 in pencil, presumably by Slater). With Slater's pencil signature on the front pastedown "A. E. Slater/ Flugsport Office Frankfurt/ 29.5.36", and his pencil notes in the margins and on the rear free endpaper. \$2750

Third edition of Oberth's *Die Rakete zu den Planetenräumen* (1923), the first published under this title, and greatly expanded from the first edition, containing over 400 pages to the 1923 edition's 92. A comparison of the tables of contents of the first and third editions indicates how much information Oberth added to the work between 1923 and 1929: the first edition contains an introduction and three main sections ("Operation and performance"; "Description of Model B. Discussion of technical implementation"; "Purpose and prospects") and is divided into 17 chapters, while the third edition contains four sections ("Preliminary"; "Physical and technical questions"; "Construction questions"; "Uses") and is



divided into 22 chapters. It was through this third edition that Oberth's work in rocketry became widely known.

Oberth inscribed this copy of *Wege zur Raumschiffahrt* for A. E. Slater, secretary of the British Interplanetary Society and author of numerous papers on issues relating to space flight, including the often-cited "Biological problems of space flight" (*Journal of the British Interplanetary Society* 10 [1951]: 154-158). Slater's annotations on the rear endpaper include references to Oberth's discussions of this issue, and it is probable that the two men met in 1951.

Oberth's *Wege zur Raumschiffahrt* began as a doctoral thesis on the rocket in interplanetary space, which he submitted to the University of Heidelberg in 1922. In his thesis Oberth set out to prove four propositions: (1) that the technology of the time permitted the building of machines capable of rising above the earth's atmosphere; (2) that these machines could attain velocities sufficient to prevent their falling back to earth, or even to escape the earth's gravitational pull; (3) that such machines could be built to carry human beings; and (4) that under certain conditions, their manufacture might be profitable. Oberth demonstrated that a rocket can operate in a vacuum and that it can surpass the velocity of its own exhaust; he also pointed out the superiority of liquid fuels in producing maximum exhaust velocity.

Oberth's thesis was rejected by the University of Heidelberg, so he published it commercially in 1923 under the title *Die Rakete zu den Planetenräumen*; a second, slightly enlarged edition appeared in 1925. In the 1929 third edition, which is over four times larger than the first, Oberth "reported most of [his] theories on space travel . . . described manned space travel in detail, proposed the inclined trajectory towards the east for ascending space ships, investigated the relationships between consumption of propellant and gain of energy, commented on most of the errors in the literature of the day concerning rockets, and finally, described an electrostatic space ship" (Oberth, p 136).

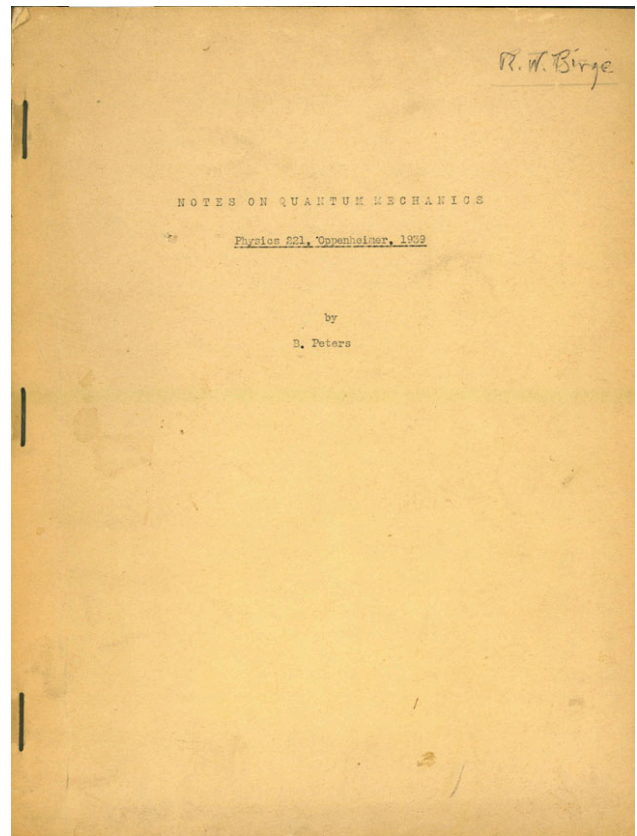
*Wege zur Raumschiffahrt* was the first work to receive the REP-Hirsch International Astronautics Prize, which had been established in 1928 by French rocketry pioneers Robert Esnault-Pelterie and André-Louis Hirsch; the prize was awarded annually between 1929 and 1939. The purpose of the prize was to recognize "the best original theoretical or experimental works capable of promoting progress in one of the areas permitting the realization of interstellar navigation or furthering knowledge in a field related to astronautics" (Blosset, p. 11). In the epilogue to his book, Oberth acknowledged its receipt of the REP-Hirsch Prize and expressed his surprise and gratitude that a French organization "would award such a prize to a German . . . It

is encouraging to see that science and education are able to bridge national differences” (p. [424]).

Some of Oberth’s findings were anticipated by those of Goddard and of Tsiolkovsky; however, their work went largely unheralded, while Oberth’s was greeted enthusiastically in Germany by a band of devotees that eventually became the *Verein für Raumschiffahrt* (Society for Space Travel). This in part explains why, when war came in 1939, Germany was able to quickly organize an efficient and competent rocketry research team capable of producing advanced weapons such as the V-2. After the war through Project Paperclip German rocket technology was transplanted into the United States’ rocketry and space programs, greatly enhancing their development. Blosset, “Robert Esnault-Pelterie: Space Pioneer,” in Durant & James, *First Steps toward Space* (1974), pp. 5-21. Oberth, “My Contributions to Astronautics,” in *ibid.*, pp. 129-140. Von Braun & Ordway, *History of Rocketry & Space Travel*, pp. 57-59. 40982

**104. [Oppenheimer, J. Robert (1904-67)]. (1) Peters, Bernard (b. 1910).** Notes on quantum mechanics. Physics 221, Oppenheimer, 1939. Mimeograph typescript. [4], 138ff., printed on rectos only. [Berkeley, 1939]. 277 x 215 mm. Original wire-stitched wrappers, title mimeographed on front wrapper, minor soiling and wear, a few tiny marginal tears. Very good copy. From the library of Raymond T. Birge (1887-1980), chairman of the physics department at the University of California, Berkeley from 1933-55, with his pencil signature on the front wrapper; signature overwritten with that of Birge’s son, Robert W. Birge, associate director of the Lawrence Berkeley National Laboratory from 1973-81. **(2) Pauli, Wolfgang (1900-1958).** The general principles of wave mechanics. Mimeograph typescript. 151ff., printed on rectos only. N.p., n.d. 281 x 220 mm. Unbound, pages punched with holes in the left margin and fastened with brads. Moderate soiling and fraying. \$2750

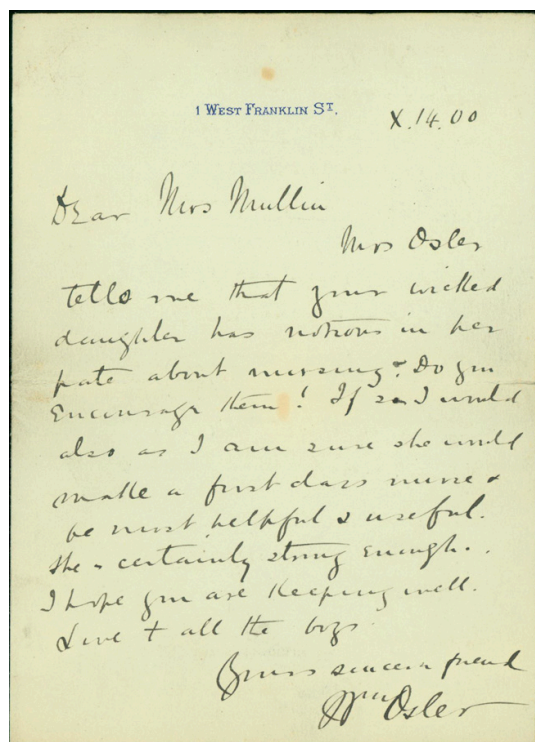
**First Edition** of the syllabus for Oppenheimer’s course given at the University of California, Berkeley in 1939 on quantum physics, the field in which he had distinguished himself brilliantly during the previous decade, particularly in the re-examination of atomic phenomena that followed after the introduction of the “new” quantum theory in 1925. “[Oppenheimer’s] course was an inspirational, as well as educational achievement.



He transmitted to his students a feeling of the beauty of the logical structure of physics and an excitement in the development of science. Almost everyone listened to the course more than once, and Oppie occasionally had difficulty in dissuading students from coming a third or fourth time. The basic logic of Oppenheimer’s course in quantum mechanics derived from Pauli’s article [“Die allgemeinen Prinzipien der Wellenmechanik”] in the *Handbuch der Physik* [vol. 24 (1933)]. Its graduates, Leonard Schiff in particular, carried it, each in his own version, to many campuses” (Rabi et al., *Oppenheimer*, p. 18).

The syllabus was prepared by Oppenheimer’s student Bernard Peters; it was reprinted in 1948 by the University of California Press. The mimeographed version is *scarce*, with OCLC recording only 5 North American libraries with copies (University of California, Cal Tech, Oklahoma University, Princeton & Martin Marietta [Oak Ridge, TN]). It is probably the rarest of Oppenheimer’s publications. We are offering it here with a mimeograph of an English translation of Pauli’s “Die allgemeinen Prinzipien der Wellenmechanik,” the article on which Oppenheimer based his course. This may have been the translation Oppenheimer gave to his students. *Dictionary of Scientific Biography*. 41104

**105. Osler, William (1849-1919).** Autograph letter signed to Mrs. [John A.] Mullin, with



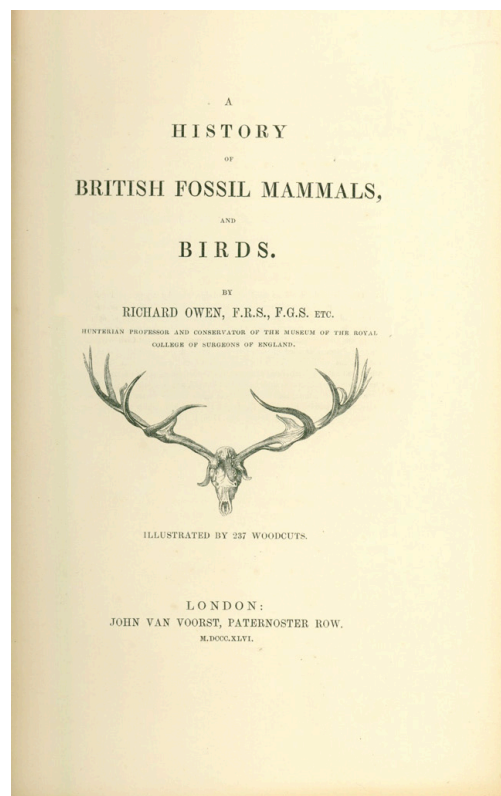
stamped cover. [Baltimore], October 14, 1900.  
 1 page, on Osler's 1 West Franklin St. stationery.  
 160 x 115 mm. Light soiling, a few spots on cover,  
 but very good. Docketed by recipient.

\$3750

A charming and humorous letter from Osler to the widow of his old friend Dr. John A. Mullin (1835-99) of Hamilton, Ontario. Osler had become acquainted with the Mullins in the 1870s, when he was a young professor at McGill University. Osler credited Dr. Mullin with being the first to observe "Osler's nodes," the cutaneous nodes in subacute bacterial endocarditis; Mullin had apparently demonstrated the nodes to Osler at the Hamilton City Hospital (Buchanan, pp. 163-64). Osler's affectionate relationship with Mrs. Mullin is apparent in the present letter:

Dear Mrs. Mullin, Mrs. Osler tells me that your wicked daughter has notions in her pate about nursing. Do you encourage them? If so I would also as I am sure she would make a first class nurse & be most helpful & useful. She is certainly strong enough. I hope you are keeping well. Love to all the boys. Your sincere friend, Wm. Osler.

Osler's letter is also of interest in that it demonstrates his approval of nursing as a career for women, an opinion that he expressed more fully in his *Medicine and Nursing* (1919). Buchanan, "Sir William Osler (1849-1919): The Early Years," *Proceedings of the Royal College of Physicians of Edinburgh* 31



(2001): 155-168. Cushing, *Life of Sir William Osler*, pp. 121, 487. 40797

**106. Owen, Richard** (1804-92). A history of British fossil mammals and birds. xlvii, 560, [2, errata]pp. Folding table. Text wood-engravings. London: John van Voorst, 1846. 256 x 165 mm. Original dark green cloth, gilt-lettered spine, minor wear. \$1500

**First Edition, Large Paper Copy.** Owen was conservator of the Museum of the Royal College of Surgeons from 1842-56, and superintendent of British Museum's Departments of Natural History from 1856 until his retirement in 1883. An anti-Darwinist, Owen developed his own theory of evolution as species development according to divinely implanted laws; however, by the time of Darwin's death in 1889 Owen had come to acknowledge the validity of Darwin's theory of evolution of natural selection.

Owen's interest in fossil mammals began in 1836 when he was asked to describe the fossil material brought back by Darwin from the *Beagle* voyage; his results were issued as Part I of the *Zoology of the Voyage of H. M. S. Beagle* (1840). Owen went on to publish several works on the subject, including the present one, which caused him to be compared favorably in the British press to Cuvier and von Humboldt. The production of a large paper version

in addition to the regular edition was highly unusual for a scientific work published during this period. DSB. Rupke, Owen, p. 351. 40030

*“I Hope to Hatch a Lovely Monster.”*

**107. Owen, Richard** (1804–92). Autograph letter signed to Joseph Pentland (1793–1873). [London,] College of Surgeons, Nov. 9, 1842. 3-1/2pp. 182 x 113 mm. Fine. \$2250

Owen’s letter discusses his award of a civil list pension of £200 per year from the British government, an event that marked “a major step up the social ladder for Owen” (Rupke, *Richard Owen*, p. 52). Owen received his first notification of the honor in a letter dated 1 November 1842 from British Prime Minister Robert Peel. He responded to Peel’s letter the same day, but was still waiting for official confirmation at the time he wrote the present letter to Pentland:

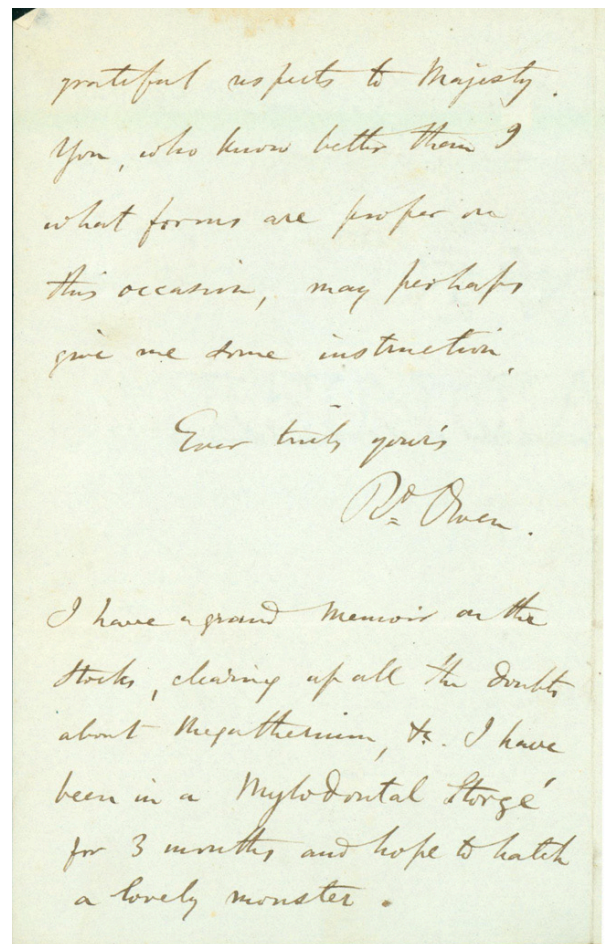
As I never see a newspaper your congratulations startled me: but both Mrs. Owen & myself esteem the kindness which prompted them. I have, it is true, been honor’d by a gracious letter of 3 pages & a half from the Premier, proposing with my consent to name me for the Civil List, &c., but beyond that nothing official has yet reached me: & I only trust, for the honor of physiology, that it is intended to give it the same reward as Chemistry has received in the person of Faraday & astronomy in that of Airy.

In the last phrase Owen was echoing his friend and fellow paleontologist William Buckland, who in January 1842 had sent a letter to Peel recommending Owen for a civil list pension and comparing his national reputation as a scientist to those of Michael Faraday, John Dalton and astronomer George Biddle Airy.

In a postscript Owen touched on his important researches on the giant extinct ground sloths of South America:

I have a grand memoir on the sloths, clearing up all the doubts about Megatherium, &c. I have been in a Mylodontal [...] for 3 months, and hope to hatch a lovely monster.

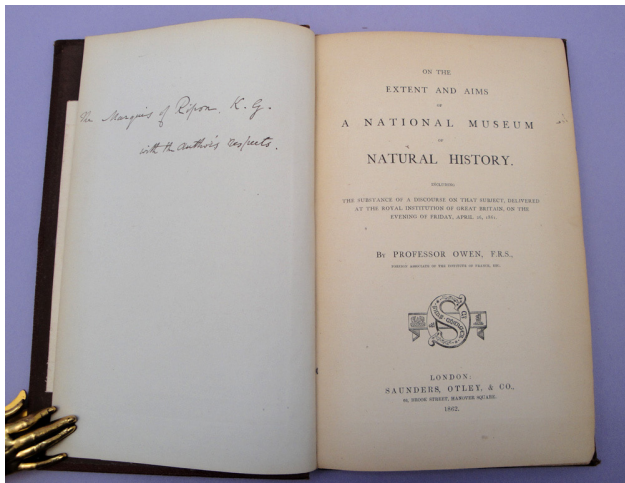
The “grand memoir” refers to Owen’s *Description of the Skeleton of an Extinct Giant Sloth* (1842), an anatomical study of the mylodon skeleton donated to the College of Surgeons in 1841 by Woodbine Parish, Britain’s *chargé d’affaires* at Buenos Aires. In his paper Owen used “a detailed description of form . . . to infer function, eating habits and habitat” (Rupke, p. 129), defending Cuvier’s and Buckland’s correct claim that the mylodon was indeed a herbivorous sloth and not an insect-eating armadillo-like creature, as some had argued.



Owen’s correspondent, Joseph Pentland, was a geographer and naturalist who had studied with Cuvier. Pentland helped to survey a large portion of the Bolivian Andes in 1826 and 1827, and served as British Consul-General in Bolivia from 1836–39. 40453

**108. Owen, Richard** (1804–92). On the extent and aims of a national museum of natural history. 8vo. [4], 126pp. 2 folding plates. London: Saunders, Otley & Co., 1862. 222 x 142 mm. Original plum cloth, a little worn, inner hinges cracking. Light toning, but very good. *Presentation copy*, inscribed by Owen on the verso of the front free endpaper: “The Marquis of Ripon, K.G. with the Author’s respects.” \$1500

**First Edition.** Owen was the prime mover behind the construction of the Natural History Museum, a project that occupied him for over two decades. After his appointment as superintendent of the Natural History department of the British Museum in 1856, dissatisfied with the cramped and disorganized confines of the existing British Museum (located in Bloomsbury), Owen began lobbying for a “separate but unified national museum



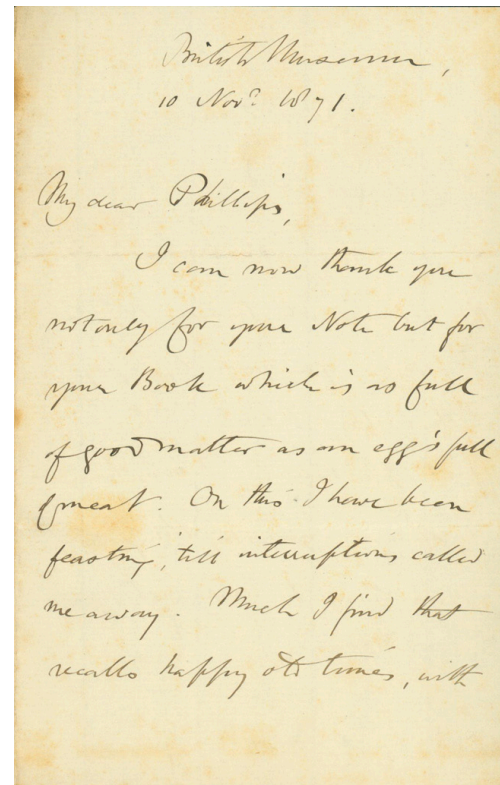
of natural history . . . to represent the three kingdoms of nature” (Rupke, p. 34), to be housed in a building spacious enough to display even the largest specimens of both living and fossil species. The project did not really get off the ground until October 1861, when Owen

manipulated future Prime Minister Gladstone into the opinion that the current exhibition facilities for the Natural History Department of the British Museum were inadequate for their task. Owen cultivated Gladstone’s support in order to bring the issue before Parliament once the Trustees of the British Museum fell into agreement with his extravagant plans for building not just more display space, but an entirely new building to house the natural history collection (Johnson-Roehr, “The Natural History Museum—London” [internet reference]).

After much heated debate, Owen’s plan was approved and the South Kensington museum, designed by Albert Waterhouse, began construction in 1873. The building was completed by late 1879, and the museum opened its doors to the public in 1881. The social and cultural impact of Owen’s Natural History Museum cannot be overestimated: Bill Bryson, in his *Short History of Nearly Everything* (2003), has stated that “by making the Natural History Museum an institution for everyone, Owen transformed our expectations of what museums are for” (p. 81).

Owen’s *On the Extent and Aims of a National Museum of Natural History*, containing the text of his lecture delivered before the Royal Institution in April 1861, was part of his long campaign to obtain political backing for the South Kensington Museum. Owen presented this copy of the work to the George Frederick Samuel Robinson, first Marquess of Ripon, a prominent Liberal politician who held several influential posts during Gladstone’s two terms as Prime Minister. The presentation was made in 1869 or afterwards, since Robinson was not made Knight of the Garter (K.G.) until that year. Wikipedia for Robinson.

40263



“Happy Old Times with Dear Old Buckland, When We Were Groping our Way.”

**109. Owen, Richard** (1804-92). Autograph letter signed to John Phillips (1800-1874). [London], British Museum, 10 Nov. 1871. 4pp. 180 x 113 mm. Light spotting, but very good.

\$1500

To Owen’s old friend John Phillips, reader in geology at Oxford University, who had sent Owen a copy of his *Geology of Oxford and the Valley of the Thames* (1871).

I can now thank you not only for your Note but for your Book which is so full of good matter as an egg’s full of meat. On this I have been feasting, till interruptions called me away. Much I find that recalls happy old times, with dear old Buckland, when we were groping our way. If I live to finish, & you to see, the Vol. on Australian fossils I promise you an early copy: I think it is likely to be the first opportunity I may have of returning you anything in kind . . .

Owen refers here to geologist and paleontologist William Buckland (1784-1856), author of *Reliquiae diluvianae* (1823) and of the first full account of a fossil dinosaur (1824). Buckland’s support had been crucial to the advancement of Owen’s career in the 1830s and 1840s. The “Vol. on Australian fossils” refers to Owen’s *Researches on the Fossil*

*Remains of the Extinct Mammals of Australia*, which he was then in the midst of writing; the work was published in 1877–78.

John Phillips, the recipient of this letter, was the nephew and pupil of geologist William Smith (1769–1839), whose “Delineation of the Strata of England and Wales with part of Scotland” (1815) was the first large-scale geological map of any country. 40454

or fossil with more than one  
pair of tusks: they descend from  
the fore part of the upper jaw.  
I am truly obliged to you for the  
continued kind interest you take  
in my life's pursuit.  
The palm-fossil is undoubtedly  
Palm.  
I am so full of interesting work that I  
cannot bring myself willingly to leave  
it. I shall only now to your fine  
written climate of forced. I shall bear  
your 'Sanitarium' in any good case  
worthy your care - Sincerely yours  
Richd. Owen.

**110. Owen, Richard** (1804–92). Autograph letter signed to Dr. [James Andrew Sandilands?] Grant (1840–96). N.p. [London], 27 Sept. 1875. 4pp., on stationery embossed with the seal of the British Museum. One or two faint spots, otherwise fine. \$1500

Letter with excellent scientific content from Richard Owen, the foremost British comparative anatomist and paleontologist of his era, and founder of London's Natural History Museum. Owen here advises his correspondent on the best method of excavating fossil remains:

I lose not a moment in acknowledging the receipt of your interesting letter of the 11<sup>th</sup> inst. with the sketches of the tusks (orig. size?) & vertebra of, most probably, a Sirenian [member of the manatee or dugong family]. In the case of such friable fossils when first explored in our home strata we find a bucket-ful of solution of glue, in hot water, the best application poured over the tusks or bones, in situ, before attempting the extraction. I think it likely that it would add also to the consistence of the limestone

matrix. Then we work out as much of the matrix as appears to be in contact with the fossil, again soak the mass in glue-solution, before beginning the work of extraction.

The next portion of the letter contains Owen's instructions to Grant for shipping the fossil remains to the British Museum and billing the Museum for his costs. Owen then returns to the subject of the fossil itself:

All of the shells associated with the tusks would help to determine the age of the matrix. I know of no Sirenian recent or fossil with more than one pair of teeth: they descend from the fore part of the upper jaw. I am truly obliged to you for the continued kind interest you take in my life's pursuit.

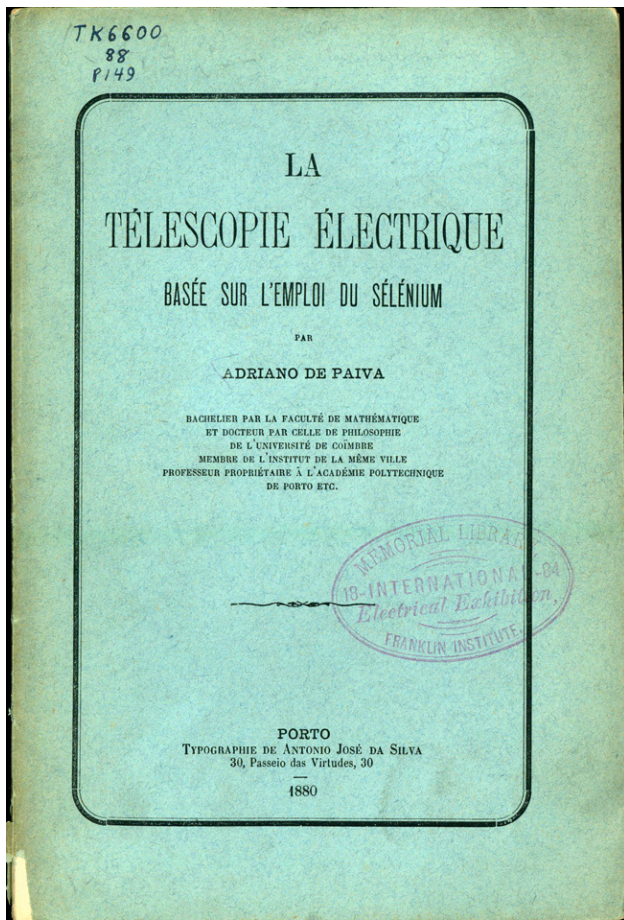
Owen's correspondent, identified in a later pencil note as being "of Egypt," was most likely Dr. James A. S. Grant, a Scottish physician who settled in Egypt in the 1860s. Grant assisted in the 1872 survey of the Great Pyramid, and took part in a number of archeological excavations. His large collection of Egyptian antiquities is now at the Marischal Museum at the University of Aberdeen. 40455

### *First Separate Publication on Television— Presentation Copy*

**111. Paiva, Adriano de** (1847–1907). *La t eloscopie  electrique bas ee sur l'emploi du s el enium*. 48pp. Porto: Antonio Jos e da Silva, 1880. 232 x 157 mm. Original printed wrappers, small chip at foot of spine; boxed. Very minor creasing, but fine otherwise. *Presentation copy*, inscribed "Hommage de l'auteur" on the half-title. Stamps of the Franklin Institute Memorial Library on the front wrapper, half-title and p. 19, commemorating the Institute's 1884 International Electrical Exhibition; F. I. Library reference stamp on the verso of the front wrapper. \$7500

**First Edition.** The first separate publication on television. *Rare*—OCLC and RLIN cite only three copies in the United States (Burndy Library, Lib. Congress, Cal. State Lib.), and the Karlsruhe database shows two copies in Portugal, one copy in Italy and one in France.

Paiva, a professor of chemistry and physics at the Polytechnic Academy at Porto (Portugal), became interested in the possibility of transmitting visual images by wire after the demonstration of Alexander Graham Bell's telephone in Lisbon in November 1877, and after reading L. Figuier's report, published in *L'Ann ee Scientifique et Industrielle* (June 1877, but read by Paiva after November 1877), of the "telectroscope," an instrument supposedly



invented by Bell for the purpose of visual transmission. In February 1878 Paiva submitted a paper on a proposed telectroscope to the Portuguese journal *O Instituto*; the paper appeared in the March issue. Paiva's paper described an apparatus similar to that reported by Figuiet, but was the first to suggest "televising" images by means of a selenium-covered plate, which would make use of selenium's peculiar electrical sensitivity to light (discovered in 1873 by Willoughby Smith) to convert light from images into electricity:

The experiments we intended to make, and which we shall still attempt to realize, consisted in the employment of selenium as the sensitive plate of the camera of the telectroscope. This body possesses the remarkable property, recently discovered, of,—when interposed in an electric circuit which passes through a galvanometer,—making the needle of the latter deviate sensibly whenever a luminous ray incidés on the selenium, and this deviation varies with the color of the light (p. 47).

According to Lange's *Histoire de la télévision*, Paiva's 1878 paper represents "la première formulation théorique de la possibilité d'utiliser le sélénium pour transmettre les images à distances" [the first theoretical formulation of the possibility of using selenium to transmit images at

a distance]. In October 1879 Paiva published a paper in *Commercio da Portuguez* in which he presented another plan for a telectroscope, in which a selenium plate would be scanned by a metal point. As far as is known, Paiva never attempted to test his ideas experimentally.

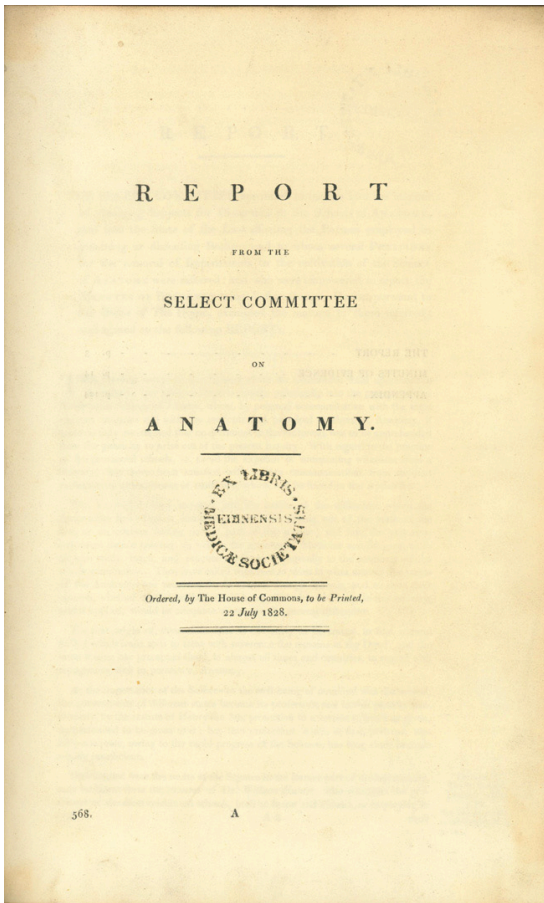
In 1880, in the interests of establishing priority, Paiva published *La téléscopie électrique*, which included reprints of his 1878 and 1879 papers (in both Portuguese and French), several articles on the telectroscope reprinted from scientific journals and newspapers, and an English translation of Paiva's 1878 paper made by his student William Macdonald Smith. This small pamphlet represents not only the first separate publication of Paiva's papers, but their first appearance in languages well known in the wider scientific community. This copy of *La téléscopie électrique* was presented by Paiva to the Franklin Institute in Philadelphia, which featured the work in its 1884 International Electrical Exhibition, the first exhibition on electricity held in the United States. Abramson, *History of Television*, pp. 8–9, 13. Shiers & Shiers, *Early Television: A Bibliographic Guide*, no. 142 ("the first publication of its kind on 'television'"). 40037

### "Body-Snatching" Report

**112. Parliament (Great Britain). House of Commons.** Report from the select committee on anatomy. Folio. 150pp. [London:] House of Commons, 22 July 1828. 331 x 212 mm. 19<sup>th</sup> century boards, rebaked and recorned in calf, light edgewear. Very good copy. Old medical library stamp on title and first page.

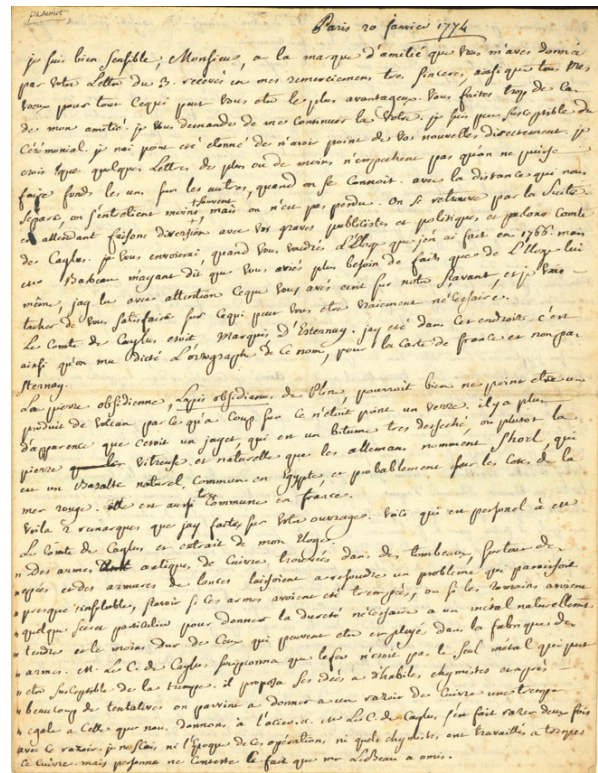
\$1000

**First Edition** of this highly interesting and entertaining report on the British body-snatching crisis. Since the mid-eighteenth century, obtaining cadavers for teaching purposes had been regulated in Britain by the Murder Act of 1752, which stipulated that only the corpses of executed criminals could be used for dissection. By the beginning of the nineteenth century, however, improvements in medical research coupled with a substantial drop in the number of executions caused the demand for cadavers to far outstrip the legal supply. This situation was ripe for exploitation by "resurrection men," criminals who robbed the graves of the newly deceased and sold their corpses to teachers of anatomy, who of necessity turned a blind eye to the illegality of these transactions. Some grave-robbers even resorted to murder, including the infamous William Burke, who in December 1828 was arrested in Edinburgh for the murders of over a dozen victims whose corpses he and his partner Hare sold



to Robert Knox, an anatomical demonstrator connected to Edinburgh University.

In the first half of 1828, in response to increasing calls for reform, the British Parliament appointed a committee to “enquire into the manner of obtaining subjects for dissection by schools of Anatomy and the State of law affecting persons employed in obtaining and dissecting bodies.” During the course of its investigation the committee heard testimony from a wide range of witnesses, from eminent medical men to procurers of bodies for medical schools (these last identified only by initials). The medical men included Sir Astley Cooper, Benjamin Collins Brodie, John Abernethy, William Lawrence, Herbert Mayo, Granville Sharp Pattison (who himself was indicted for body-snatching at the age of 23), Thomas Southwood Smith, Henry Halford, John Webster and Benjamin Harrison, the treasurer of Guy’s Hospital. The witness list can be found on page 13 of the committee’s report. The testimony of these men, reproduced in full in the report, is followed by several appendices, including tables of paupers’ deaths broken down by parish; the committee was proposing legislation that would allow the state to seize unclaimed corpses from workhouses and sell them to surgical schools. The committee’s efforts were successful: In 1832 Parliament passed the Anatomy Act, granting licenses to teachers of anatomy and giving physicians, surgeons



and medical students legal access to corpses unclaimed after death. Wise, *The Italian Boy: A Tale of Murder and Body Snatching in 1830s London* (2004). 40962

**113. Pasumot, François (1733–1804).**

Autograph letter signed, in French, to an unidentified correspondent. Paris, January 20, 1774. 4pp. 231 x 177 mm. Minor foxing, one or two tiny marginal tears, but fine otherwise.

\$950

A long and detailed letter from French cartographic engineer and antiquarian François Pasumot, best known today as the co-creator, with Nicolas Desmarest (1725–1815), of the landmark geological “Map of a part of Auvergne, representing the lava flows, where basalt is found in prismatic and round forms . . .” published as part of Desmarest’s *Mémoire sur l’origine et la nature du basalt en grandes colonnes polygones (Mémoires de l’Académie royale des sciences 1771 [1774]: 705–775)*. The Pasumot-Desmarest map “set a new standard for precise graphic representation of the positions of distinct kinds of rock, and played a role in emerging conceptions about geomorphological change and about the distribution of volcanic rocks” (Taylor, p. 129).

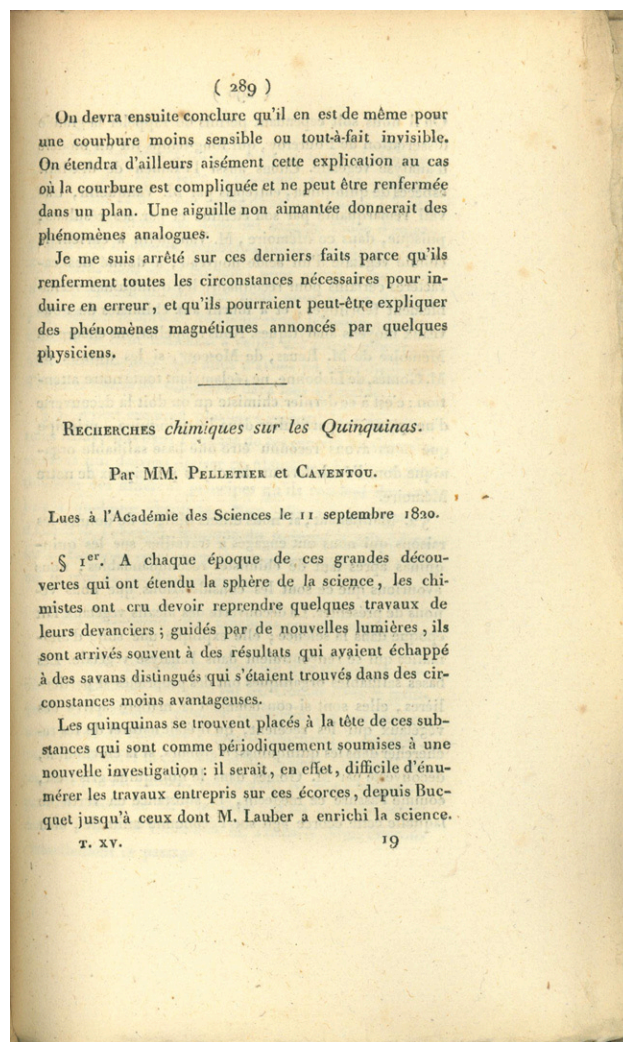
Pasumot devoted much of his time to the study of archeology and ancient geography, which he became interested in after the discovery of several ancient monuments in the Auxerre region of Burgundy, where he

was then teaching. He wrote several works on antiquarian subjects, the most important being *Recueil de mémoires géographiques sur quelques antiquités de la Gaule* (1765), in which he determined the topography of the ancient towns of Chora, Bandritum and Gergovia as well as the location of several sections of Roman road. The present letter is representative of Pasumot's activities in this area: In it, Pasumot obliges his correspondent with several long extracts, taking up nearly two pages of the letter, from his then-unpublished "Eloge" to fellow antiquarian the Comte de Caylus (1692-1765), whose seven-volume *Recueil d'antiquités égyptiennes, étrusques, grecques et romaines* (1752-55) helped lay the groundwork for the development of modern methods of archeology and art history. Pasumot's letter ends with an "Extrait du testament de feu M. le Comte de Caylus: à Paris, le 15 juillet 1765" (Extract from the will of the late M. le Comte de Caylus, Paris, July 15, 1765), and a transcript of the inscription on Caylus's tomb, taken from the July 1769 number of the *Journal des Savants*. Pasumot's "Eloge" to the Comte de Caylus, completed in 1766, remained in manuscript until after Pasumot's death, when it was included in the posthumous *Dissertations et mémoires sur différens sujets d'antiquité et d'histoire* (1810-13) edited by Grivaud de la Vincelle. Taylor, "New light on geological mapping in Auvergne during the eighteenth century: The Pasumot-Desmarest collaboration," *Revue d'histoire des sciences* 47 (1994): 129-136. *Nouvelle biographie générale*. 41003

## Discovery of Quinine

**114. Pelletier, Pierre Joseph** (1788-1842) & **Caventou, Joseph Bienaimé** (1795-1877). *Recherches chimiques sur les quinquinas*. In *Annales de chimie et de physique* 15 (Nov.-Dec. 1820): 289-318, 337-365. Together 2 whole numbers, 8vo. 225-335, 337-448pp. 3 plates. 220 x 144 mm. (uncut and partly unopened). Original printed wrappers, spines worn & partly defective. Minor dust-soiling and fraying, otherwise very good. \$2750

**First Edition.** Garrison-Morton 5233. The discovery and isolation of quinine. Between 1818 and 1821, the French chemists Pelletier and Caventou isolated a number of alkaloids from plants, including strychnine (1818), brucine and veratrine (1819), cinchonine and quinine (1820) and caffeine (1821). "The discovery of quinine was by far the most dramatic result of their collaboration, and soon there was worldwide demand for quinine as a therapeutic agent. In a letter written to the Academy of Sciences in 1827, Pelletier and Caventou pointed out that by 1826 a burgeoning French industry was annually producing approximately 90,000 ounces of quinine sulfate

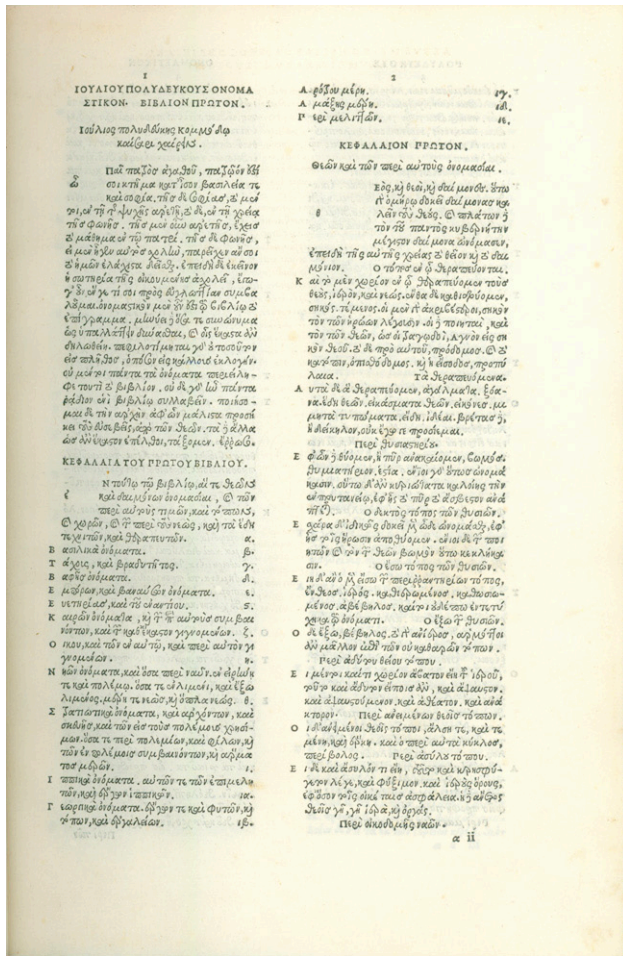


from cinchona bark, enough to treat more than a million individuals" (*Dictionary of Scientific Biography*). 40388

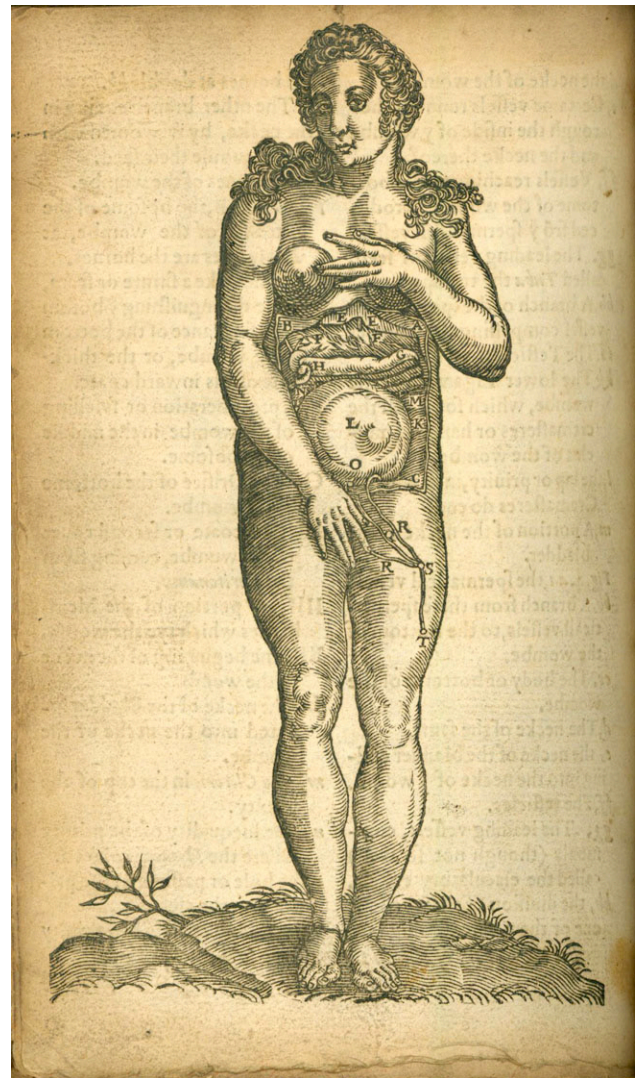
## "Objects in Daily Life, the Theater, Politics . . . and Numerous Fragments from Lost Works"

**115. Pollux, Julius [Poludeukes, Ioulios]** (fl. 2<sup>nd</sup> cent. A.D.). [Onomasticon] *Pollucis vocabularii index in latinum tralatus, ut vel graece nescientibus nota sint . . . Folio*. [104] ff. Venice: apud Aldum, April 1502. 296 x 201 mm. 18<sup>th</sup> or early 19<sup>th</sup> cent. gilt-ruled calf, a little rubbed, rebacked preserving original gilt spine. Fine copy. \$17,500

**Editio princeps.** Pollux, a Greek grammarian and sophist from Alexandria, was appointed professor of rhetoric at the Academy in Athens by the Roman Emperor Commodus (son of Marcus Aurelius). According to



Philostratus's *Lives of the Sophists*, Pollux was given this post on account of his melodious voice. Pollux was the author of numerous rhetorical works, of which only a few titles survive, and the *Onomasticon*, a thesaurus of Attic Greek synonyms and phrases arranged thematically in ten books. "It supplies in passing much rare and valuable information on many points of classical antiquity— objects in daily life, the theater, politics— and quotes numerous fragments of lost works. Pollux was probably the person satirized by Lucian as a worthless and ignorant person who gains a reputation as an orator by sheer effrontery, and pilloried in his *Lexiphanes*, a satire upon the affectation of obscure and obsolete words" (*Encyclopaedia Britannica* [1999]). The *editio princeps* of Pollux's *Onomasticon*, issued by Aldus Manutius in 1502, made the work widely available to Renaissance scholars and antiquaries, and anatomists of the period drew on the *Onomasticon* for obscure Greek words to describe parts of the body. The *Onomasticon* was a valuable source of information for several important nineteenth century works of classical scholarship, and has continued to attract the interest of researchers in a variety of fields—in 2004, John H. Dierkx published an article on "Dermatologic terms in the *Onomasticon* of Julius Pollux" in *The American Journal of Dermatopathology*. Adams P-1787. Ahmanson-Murphy 54. Renouard, pp. 32-33. 40354

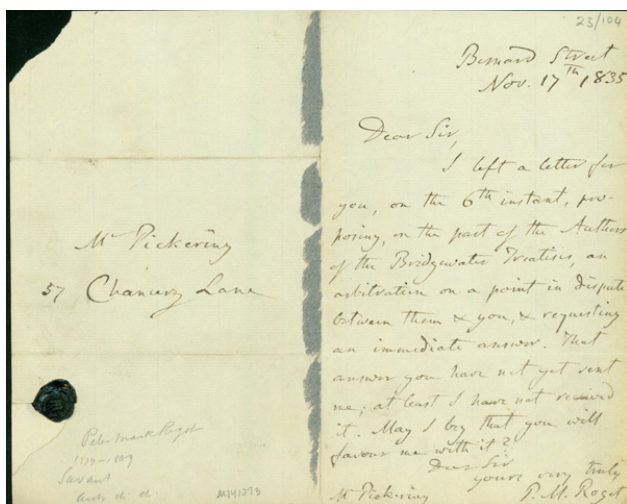


Rare Early Physician's Aid

**116. [Read (or Reid), Alexander** (1586?-1641).] *Somatographia Anthropine* [in Greek letters] or a description of the body of man. [Abridged from **Crooke, Helkiah** (1576-1635). *Mikrokosmographia*. A description of the body of man.] 8vo. [4], 153ff., final blank. *Lacks first blank and f. 154* (explanation of last illustration). Text on rectos, woodcuts on versos, some multi-figure. [London]: W. Iaggard [Jaggard], 1616. 180 x 115 mm. Title with margins renewed, affecting some letters including imprint date, RI with outer margin renewed, some edges frayed, light browning. Modern calf in antique style. Some early marginalia on first woodcut and last blank.

\$3750

**First Edition** of Read's abridgement of Helkiah Crooke's folio anatomy published in 1615. Crooke's work, based on Continental sources such as Bauhin and Laurent, was one of the earliest full-scale works of anatomy and physiology in English. The abridgement was commissioned by the publisher to provide a portable and affordable version, and as such, the *Somatographia Anthropine* is one of the earliest physician's aids in English. There is a woodcut illustration on the verso of every leaf with its explanation opposite on the recto. Read lectured at the Barber-Surgeon's Hall from 1632-34, and issued most of his writings in the 1630s. They were held in great repute and continued to be published for fifty years. At the time he worked anonymously for the publisher Jaggard he had probably just returned from studying surgery in France. *Very rare in any condition.* The Wellcome copy lacks the last two leaves, the NLM copy lacks the first preliminary leaf, and the Royal College of Surgeons copy cited as Russell 681 has two leaves in facsimile. NSTC 20782. DNB (article written by Sir D'Arcy Power in which he states that he had no evidence for the original 1616 edition aside from a single source [Wood]). 40086



**117. Roget, Peter Mark** (1779-1869). Autograph letter signed to [William] Pickering (1796-1854). [London] Bernard Street, Nov. 17, 1835. 1 page plus integral address leaf. 187 x 116 mm. Traces of former mounting, small tear in one corner where seal was broken (not affecting text), but very good. \$650

From the author of "Roget's Thesaurus" to British publisher William Pickering regarding the Bridgewater Treatises, a series of eight treatises on natural theology commissioned by the Earl of Bridgewater to explore "the Power, Wisdom, and Goodness of God, as manifested in the Creation." Roget was the author of the fifth Bridgewater

Treatise, a work titled *Animal and Vegetable Physiology Considered with Reference to Natural Theology* (1834); Pickering was the publisher of the series. The letter reads as follows:

Dear Sir, I left a letter for you, on the 6<sup>th</sup> instant, proposing, on the part of the Authors of the Bridgewater Treatises, an arbitration on a point in dispute between them & you, & requesting an immediate answer. That answer you have not yet sent me; at least I have not received it. May I beg that you will favour me with it? Dear Sir, Yours very truly, P. M. Roget.

41073



**118. Roget, Peter Mark** (1779-1869). Portrait photograph, from Maull and Polyblank's *Photographic Portraits of Living Celebrities* (1856-60). 305 x 253 mm. Small tear in one margin, slight soiling, but very good. \$1250

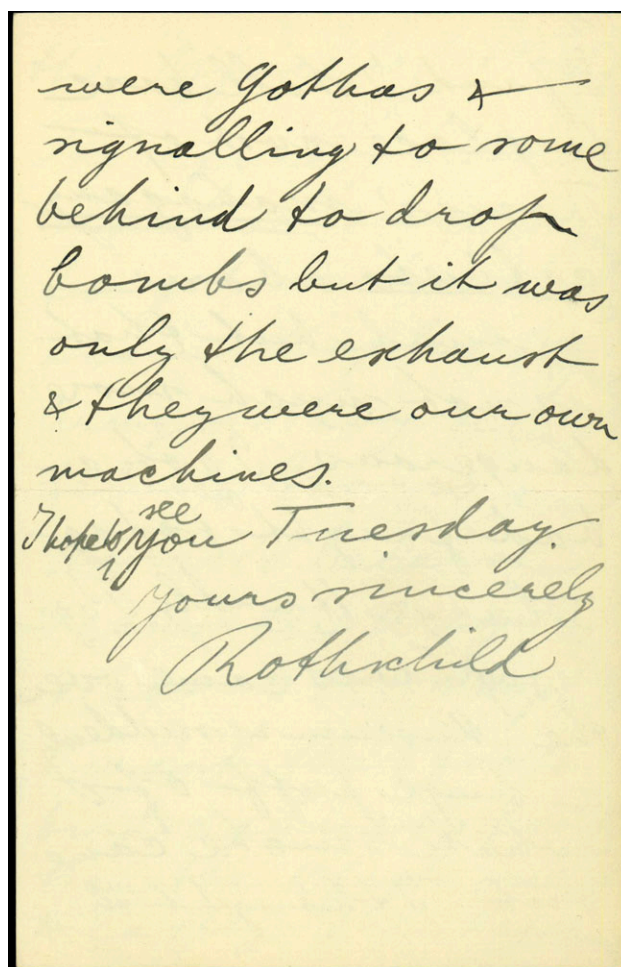
Photograph of Peter Mark Roget, best known as the compiler of *Roget's Thesaurus* (first ed. 1852), which has remained in print since its first publication. He is also known for having invented the log-log slide rule (1815), and for his 1824 paper entitled "Explanation of an optical deception in the appearance of the spokes of a wheel when seen through vertical apertures," which dealt with persistence of vision in regard to moving objects; this paper is one of the foundation works in the history of cinema. Roget trained as a physician, and helped to found both the School of Medicine at the University of Manchester, and the Medical and Chirurgical Society of London, which later became the Royal Society of Medicine. He

was the author of the fifth Bridgewater Treatise, *Animal and Vegetable Physiology Considered with Reference to Natural Theology* (1834). 40218

**119. Rothschild, Walter** (1868-1937). Six autograph letters signed to Charles E. Fagan, secretary of the Natural History Museum in London. V.p., November 26, 1912 – June 19, 1918. Approx. 18pp. total. 180 x 115 mm. [With:] **Rothschild, Nathaniel Charles** (1877-1923). Four autograph letters signed and one typed letter signed to Fagan. V.p., February 7, 1913 – May 21, 1915. Approx. 7pp. total. Various sizes. Together 11 items. Fine. \$1500

A remarkable collection of letters written by Walter Rothschild (2<sup>nd</sup> Baron Rothschild) and his younger brother, Nathaniel Charles, to the secretary of the Natural History Museum in London. Scions of the British branch of the immensely wealthy and influential House of Rothschild, both brothers departed from their family's traditional roles as bankers and financiers to make important contributions to zoological science. Walter specialized in the taxonomy of birds and butterflies and amassed an enormous collection of bird skins, bird's eggs, butterflies and beetles, which—together with his thousands of specimens of mammals, reptiles and fishes—represented the largest privately assembled zoological collection ever formed. He established his own museum of natural history at his estate in Tring, opening it to the public in 1892, and in 1899 he became a trustee of the Natural History Museum. Nathaniel Charles devoted himself to entomology, specializing in fleas; it was he who discovered and named the plague vector flea, *Xenopsylla cheopis* (Rothschild). He was also a pioneer of nature conservation in Britain, founding the Society for the Promotion of Nature Reserves (the forerunner of the Wildlife Trusts partnership) in 1912.

Most of the collection's letters from Walter Rothschild to Fagan were written in his role as trustee of the Natural History Museum, and have to do with the museum's operations. The fourth and fifth letters, both written in early 1918, refer to wartime dangers posed to the Museum's collections. Nathaniel Charles's letters are more varied—the first contains a probable reference to Society for the Promotion of Nature Reserves, while others refer to conference reports and charity work. Both brothers also wrote to Fagan to thank him for letters of condolence sent upon the death of their father, Baron Nathan Rothschild, in March 1915. 41082

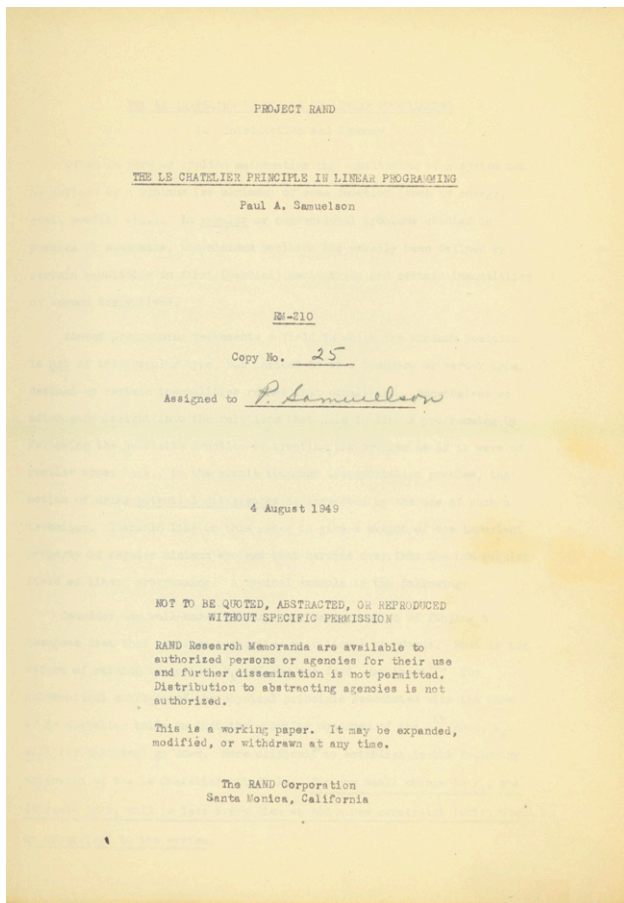


were Gothas & signalling to some behind to drop bombs but it was only the exhaust & they were our own machines. Hope you see Tuesday. yours sincerely Rothschild

#### Author's Copy

**120. Samuelson, Paul Anthony** (1915-2009). The Le Chatelier principle in linear programming. U.S. Air Force Project RAND report RM-210. Typescript duplicated by early chemical photocopy process. 18ff. Santa Monica, CA: The RAND Corporation, 4 August 1949. 280 x 217 mm. Original printed wrappers with author and title of paper supplied in original typescript, three or four small marginal tears, but fine otherwise. Samuelson's copy, no. 25 of most likely 50 copies or fewer, assigned to Samuelson on the title in a secretarial hand. \$4500

**First Edition, the Author's Own Copy**, of this rare and important research memorandum, in which Samuelson first applied the Le Chatelier principle of thermodynamics—which he had introduced into economics two years before—to the field of linear programming. **Extremely Rare**, with only one copy (Duke University) cited in OCLC. This working paper, prepared under the auspices of the RAND Corporation,



was most likely issued in an edition of 50 copies or fewer; a note on the title reads that “RAND Research Memoranda are available to authorized persons or agencies for their use and further dissemination is not permitted.”

Paul Anthony Samuelson, the first American to receive the Nobel Prize in Economics, was responsible, more than anyone else, for incorporating the use of mathematics and the principles of optimization that characterize the modern paradigm of economic analysis. In his magnum opus, *The Foundations of Economic Analysis* (1947), Samuelson established the method of “comparative statics” by adapting the Le Châtelier principle of thermodynamics, in order to solve the fundamental problem of explaining how the coordinates of an equilibrium point defined by a system of equations shift when one or more of the given determining parameters changes. Le Châtelier’s principle can loosely be formulated in the following way: “If the external conditions of a thermodynamic system are altered, the equilibrium of the system will tend to move in such a direction as to oppose the change in external conditions.” In the context of economics this principle yields itself as the property that if the quantity of one of the available resources changes, then its shadow price changes in the opposite direction, or in other words, the marginal value of a resource increases if its amount is reduced, and vice versa.

Samuelson’s method of comparative statics lies at the core of modern economic analysis.

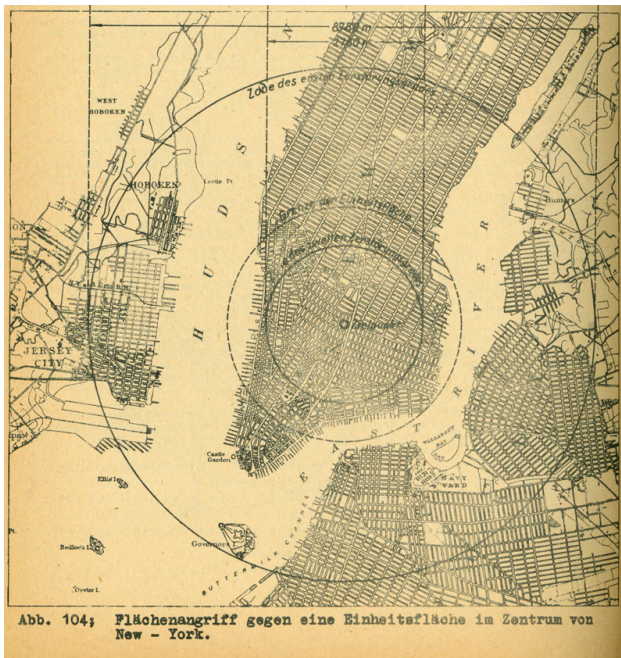
In this research paper Samuelson first introduced his principle, which later became known as the Samuelson-Le Châtelier (or correspondence) principle, into the newly born field of linear programming, which is a mathematical method for determining a way to achieve the best outcome in a given mathematical model. The method was first developed in 1939 by Russian mathematician Leonid Kantorovich, and further expanded in the following decade by George Dantzig, who published the simplex method in 1947, and John von Neumann, who developed the theory of the duality in the same year. Linear programming is used most often in business, economics and operations research. Samuelson published numerous works on linear programming, culminating with *Linear Programming and Economic Analysis* (1958), co-authored with Robert Dorfman and Robert Solow. 41018

### *Forerunner of the Space Shuttle*

**121. Sänger, Eugen** (1905–64) and **Irene Bredt**. A rocket drive for long range bombers. Translated by M. Hamermesh. Offset typescript. [2], 174pp., including folding plates (some color). Text illustrations and diagrams. N.p.: Technical Information Branch, BuAer, Navy Department, [1946]. 261 x 218 mm. Original printed wrappers, slightly worn and creased. Paper moderately browned, staples in the top margin of the front wrapper, but very good. Front wrapper stamped “Unclassified”; back wrapper date-stamped “Oct. 15 9 19 AM '46.” \$1500

**The Rare First English Translation** of Sänger and Bredt’s *Über einen Raketenantrieb für Fernbomber* (1944), a top secret report prepared for the German State Ministry for Aviation and issued in only 125 copies. The English translation, prepared by the Technical Information Branch of U.S. Navy’s Bureau of Aeronautics, was also limited to a small number of copies. A condensed version of the translation was published in 1952.

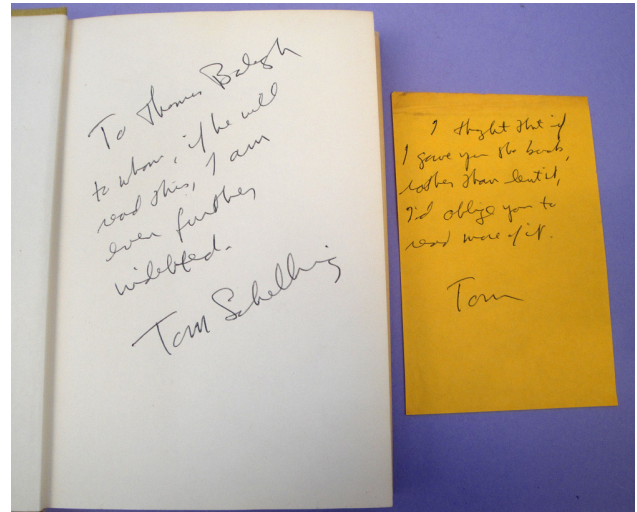
Sänger and Bredt’s report was originally intended to form part of the second volume of Sänger’s revolutionary *Raketenflugtechnik* (1933), the first study leading to the development of a reusable human-piloted rocket-powered space vehicle. Sänger’s “Silverbird” concept, which he and Bredt (who later became his wife) worked on during the 1930s, is a direct ancestor of the X-plane and the space shuttle; it was conceived of as “a winged vehicle propelled by a rocket engine burning liquid oxygen and kerosene, capable of reaching Mach 10.0 at altitudes in excess of



100 miles” (Jenkins, *Space Shuttle*, p. 1). In order to realize his concept of a reusable rocket engine, Sänger had to solve the major problem of how to cool the engine; this he accomplished by designing a “regeneratively cooled” engine cooled by its own fuel circulating around the combustion chamber. “Between 1932 and 1934, [Sänger] performed a series of pioneering experiments with reinforced cooled liquid rocket motors capable of burning mixtures of gas-oil and liquid oxygen (LOX), achieving thrust levels up to 30kp, pressures up to 50 bars, and exhaust velocities of about 3,000 m/s” (Sänger & Szames, “From the Silverbird to interstellar voyages,” p. 2).

With the advent of World War II, Sänger and Bredt’s space vehicle project had to be repurposed for military use if it was to survive. A preliminary report on space vehicles, prepared by the two in 1941, had been rejected by the German Research Institute for Aviation; Sänger and Bredt reworked this into a report on a rocket propulsion engine for long range bombers, issued as the GRIA’s “Secret Command Report” UM 3538. “Thus, Sänger’s former rocket-powered civilian space transport airplane project now evolved into an Earth-orbiting, single-stage, rocket-powered intercontinental bombing machine with a launch weight of 100 tons . . . It would be propelled by a rocket engine using highly efficient fuels with liquid oxygen used as an oxidizer in a combustion chamber at a pressure of 100 atmospheres and creating 100 tons of thrust” (Myrha, p. 78). This rocket-powered bomber was designed to attack strategic targets in the United States: New York City, Washington DC, Chicago and the steel-refining plants in Pittsburgh. Page 156 of Sänger and Bredt’s report shows a map of lower Manhattan superimposed with a bull’s-eye and containing calculations of the expected destruction

pattern. Sänger-Bredt, “The Silver Bird story: A memoir,” in Hall, ed., *Essays on the History of Rocketry and Astronautics*, vol. 1 (1977), pp. 195–228. Myrha, *Sänger: Germany’s Orbital Rocket Bomber in World War II* (2002), *passim*. 40949

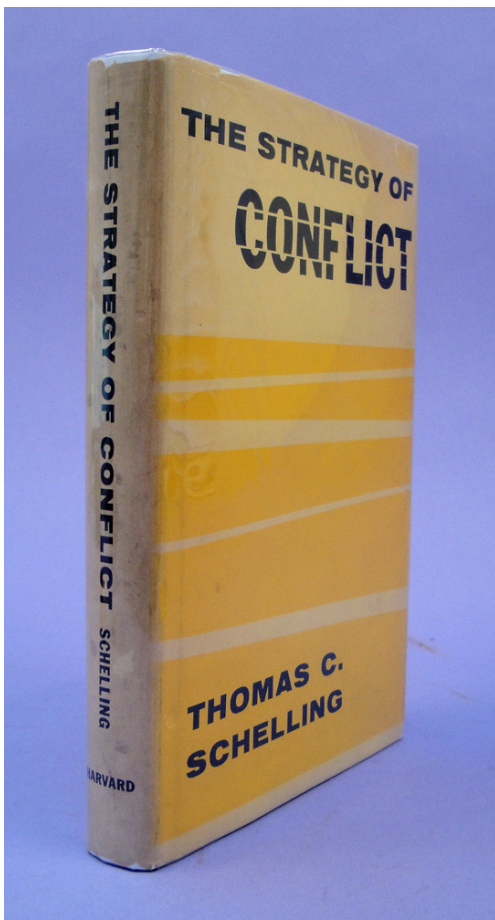


### “Game Theory as a Unifying Framework for the Social Sciences”—Presentation Copy of Schelling’s Nobel Prize-Winning Work

**122. Schelling, Thomas C.** (1921– ). The strategy of conflict. vii, [3], 309pp. Cambridge, MA: Harvard University Press, 1960. 210 x 137 mm. Original cloth, dust-jacket (slightly chipped at head and foot). Very good copy, *inscribed by Schelling to British economist Thomas Balogh* (1905–85) on the front endpaper: “To Thomas Balogh to whom, if he will read this, I am even further indebted. Tom Schelling.” Laid in is Schelling’s signed autograph note to Balogh: “I thought that if I gave you the book, rather than lent it, I’d oblige you to read more of it. Tom.”

\$6000

**First Edition** of Schelling’s most famous book, a study of bargaining and strategic behavior which pioneered the application of game theory to economics, business, warfare and other real-world situations. *The Strategy of Conflict* is considered one of the hundred books most influential in the West in the postwar era. The book introduced the concept of the “Schelling point” (also known as the focal point), defined as a point—physical or mental—that people will tend to converge on in the absence of communication, because it seems natural, special or relevant to them. In 2005 Schelling was awarded a share



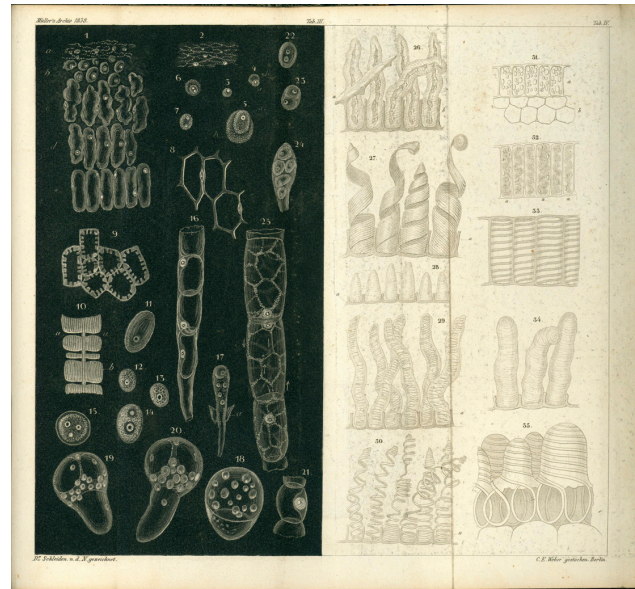
of the Nobel Prize in economics for his groundbreaking work in this field.

“Against the backdrop of the nuclear arms race in the late 1950s, Thomas Schelling’s book *The Strategy of Conflict* set forth his vision of game theory as a unifying framework for the social sciences. Schelling showed that a party can strengthen its position by overtly worsening its own options, that the capability to retaliate can be more useful than the ability to resist an attack, and that uncertain retaliation is more credible and more efficient than certain retaliation. These insights have proven to be of great relevance for conflict resolution and efforts to avoid war.

“Schelling’s work prompted new developments in game theory and accelerated its use and application throughout the social sciences. Notably, his analysis of strategic commitments has explained a wide range of phenomena, from the competitive strategies of firms to the delegation of political decision power” (Nobelprize.org).

Schelling presented this copy of his book to Thomas Balogh (Lord Balogh), a Hungarian-born economist who moved to England in the 1930s and taught for many years at Balliol College, Oxford and at the London School of Economics. In 1964 he was made Economic Advisor to the British Cabinet, and in 1968 he received a life peerage. He

served as Britain’s Minister of State for Energy from 1974 to 1977. “The Prize in Economics 2005 – Press Release”. Nobelprize.org. 7 Dec 2010. Weisman, “2 Game Theorists Share a Nobel – The Boston Globe.” Boston.com. 11 Oct. 2006. Web. 07 Dec. 2010. 41050

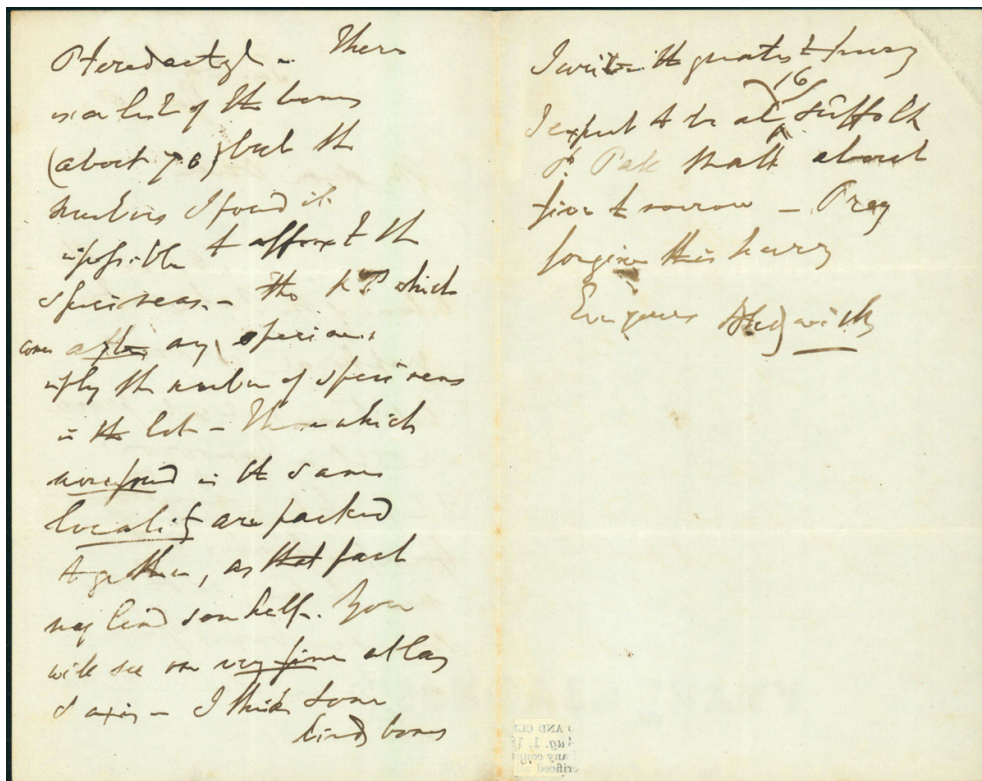


## Cell Theory

**123. Schleiden, Matthias Jakob** (1804–81). *Beiträge zur Phytogenesis*. In *Archiv für Anatomie, Physiologie und wissenschaftliche Medizin* (1838): 137–76. 2 plates (nos. III and IV) on one folding sheet. Whole volume, 8vo. [2], cxcviii, 608pp. 16 plates on 15 sheets. Pp. 605–8 bound before p. 1 in this copy. Berlin: Veit, 1838. Marbled boards c. 1838, rebacked and repaired. Light browning, occasional faint spotting, but very good. Stamps of the Muséum d’Histoire Naturelle on the title.

\$4500

**First Edition.** G-M 112. PMM 307a. Acting upon his belief that plants represented aggregates of individual cells, Schleiden published a study of the vegetable cell, beginning with the nucleus (discovered by Robert Brown in 1832), and proceeding to a discussion of its role in the formation of cells. Schleiden’s “watch-glass” theory of cell formation was wrong—he believed that they crystallized in a formative liquid containing sugar, gum and mucous—but it focused attention on the problem of cell reproduction and provided a testable hypothesis. More significant was Schleiden’s insistence that plants consisted entirely of cells and cell products. In 1839 Theodor Schwann published *Mikroskopische Untersuchungen*, in which he demonstrated that Schleiden’s conclusion also applies to animals, thus



establishing the cell as the elementary unit common to both plant and animal kingdoms.

Tradition has it that the cell-theory was conceived in a conversation between Schleiden and Schwann on phytogenesis. A few years after the appearance of the above paper, Schleiden published his *Grundzüge der wissenschaftlichen Botanik* (1842-43), which gave the best and most detailed statement on the cell as the basis of the vegetable world. DSB. Norman 1907 (offprint version). Hughes, *Hist. Cytology*, pp. 37ff. 38168

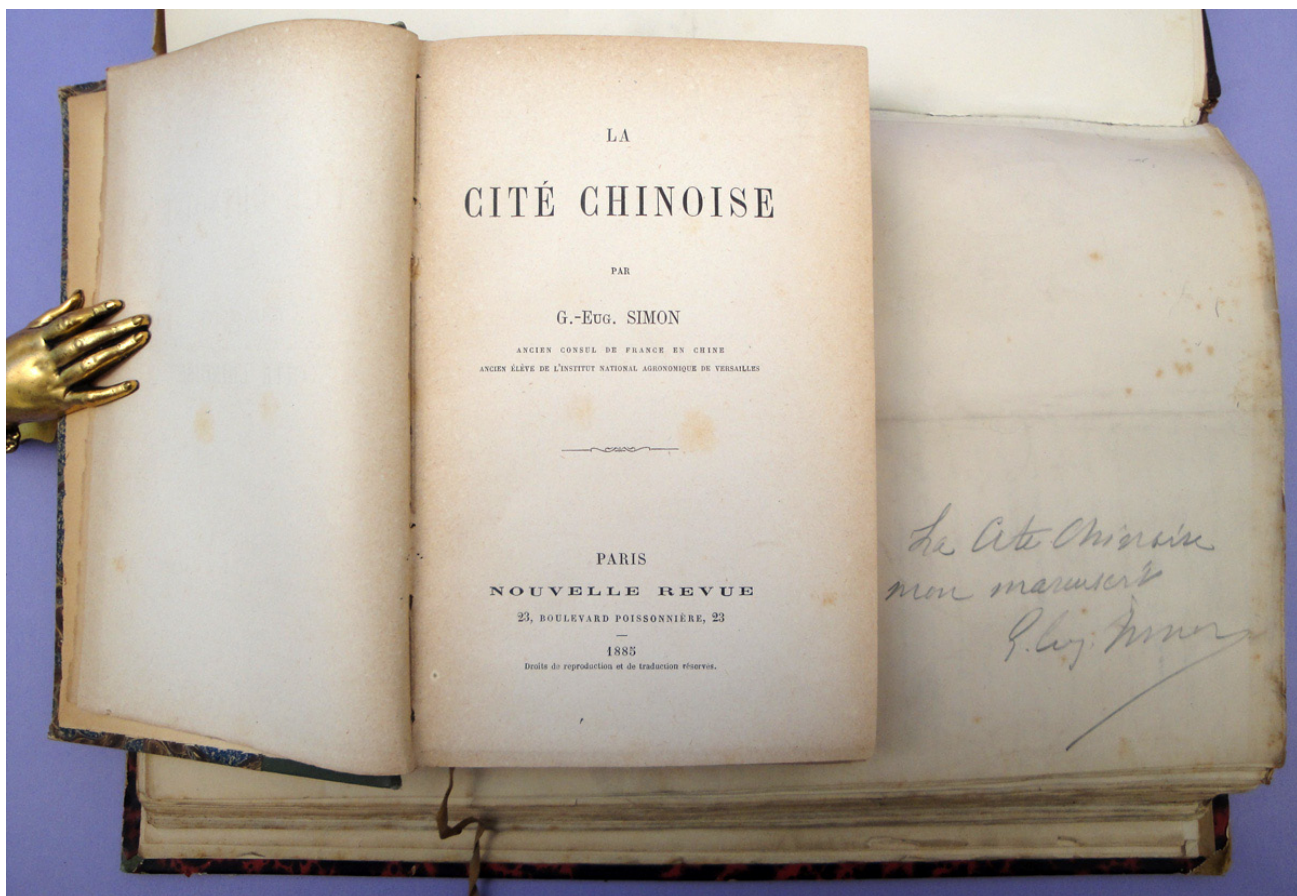
### “Certainly One New Species of Pterodactyl”

**124. Sedgwick, Adam** (1785-1873). (1) Autograph letter signed to Richard Owen (1804-92). N.p., “Jany. 8,” n.y. 2-1/2pp. 181 x 114 mm. Light soiling along folds, traces of former mounting, pencil notes in another hand on final blank page, but very good. (2) Lithograph portrait of Sedgwick at age 59 by J. H. Lynch after a drawing by S. Laurence, mounted. [1844.] 207 x 161 mm. (mount measures 238 x 163 mm.) **Signed by Sedgwick** in the lower margin of the mount. Small chip in lower right corner of mount, but very good. \$1250

(1) Letter with excellent paleontological content from eminent British geologist Adam Sedgwick, who defined the Devonian and Cambrian ages in the geological time scale, to Richard Owen, the foremost British comparative anatomist and paleontologist of his era and the prime mover behind the foundation of London’s Natural History Museum (est. 1881). The letter reads in part as follows:

My dear Owen, I hear the volume of the Palaeontographical is out but I have not yet procured it. Tomorrow I hope to be in London, only for a few hours as I am off to the North on Tuesday. I mean to bring with me some new bones from our “Green Sand”—certainly one new species of Pterodactyl. There is a list of the bones (about 70) but the numbers I found it impossible to affix to the specimens. The nos. which come after any specimen imply the number of specimens in the lot. Those which were found in the same locality are packed together, as that fact may lend some help. You will see one very fine atlas & axis—I think some bird bones. . . .

As Woodwardian Professor of Geology at Cambridge, Sedgwick worked actively to enrich the fossil collections of the university’s Woodwardian Museum, particularly with the remains of pterosaurs (pterodactyls) found in the Cambridge “Upper Greensand” stratum. His paleontological activities would have been of great interest to Owen, who coined the term “dinosaur” and earned



the nickname of “the British Cuvier” with his celebrated reports on the extinct South American Megatherium. It is likely that Sedgwick was giving the “new bones” referred to in his letter to the British Museum’s Natural History Departments, which Owen had headed since 1856.

(2) A portrait (head only) of Sedgwick in late middle age, showing him in profile. See Clark and Hughes, *Life and Letters of the Reverend Adam Sedgwick* (1890), Vol. 2, p. 70. 41100

*Manuscript of a Pioneering Sociological Treatise on China, Together with a Presentation Copy of the Published Work*

**125. Simon, G. Eugène** (1829–96). (1) Manuscripts. [On following leaf:] *La cité chinoise* . . . *Le village abandonné*. Pages détachées. Autograph manuscript. 253ff., variously numbered, plus unnumbered cover sheets. 317 x 202 mm. Bound in quarter morocco, mottled boards, gilt-lettered spine, light rubbing. Some edges frayed, minor soiling. Inscribed by Simon

on the first leaf: “A ma bien aimée soeur Adeline G. Eug. Simon” and signed by him in a few other places in the manuscript. Printer’s marks and annotations. (2) *La cité chinoise*. 12mo. [8], 389, [3]pp. Paris: Nouvelle Revue, 1885. 183 x 116 mm. Marbled boards, cloth spine c. 1885, light rubbing. Light browning and foxing. Sheet bound in front with Simon’s autograph presentation inscription: “Monsieur Maret hommage de l’auteur G. Eug. Simon.” Pencil notes of former owner on this sheet and several leaves of text. \$15,000

(1) The manuscript of Eugène Simon’s *La cité chinoise* (1885), a pioneering sociological analysis of Chinese culture and traditions that was later praised by one Chinese scholar as “the best book written in any European language on the spirit of the Chinese civilization” (Gu Hongming, *Spirit of the Chinese People* [1915]; quoted by David Gosset). Simon, an agricultural engineer, traveled to China in the early 1860s and spent four years touring the country and studying its inhabitants and customs. During the latter part of the 1860s he served as France’s consul in China. After his return to France, Simon published *La cité chinoise*, a work that helped to counter the prevailing mid-nineteenth

century European view of China as a stagnant, despotic and morally inferior society. Simon's book

idealizes China as a peasant society where liberty in all its forms—political, economic, religious, and intellectual—is realized. Simon's book, which was very popular, prophesied that all European attempts to subject China to industrialization, colonization, or modernization would fail because of the astounding vitality of the rural nation and its naturalistic civilization. On contemporaries, Simon's book . . . had an impact out of all proportion to its intrinsic importance. Paul Ernst, the German poet, was inspired by Simon to adulate the collectivist peasant culture of China for giving a higher place to spiritual than to material values ("China in Western Thought and Culture," *Dictionary of the History of Ideas*, I, p. 371).

The manuscript volume we are offering contains not only the manuscript of *La cité chinoise* that Simon sent to the printer, but also an additional, apparently unpublished shorter work entitled "Le village abandonnée," as well as a section titled "Pages détachées," which appears to contain drafts, revisions or deleted pages from *La cité chinoise*. Some of these pages have portions cut from them; these probably correspond to some of the pasted-in corrections in Simon's manuscript. Simon presented this manuscript book to his sister, as indicated in his presentation inscription on the first leaf.

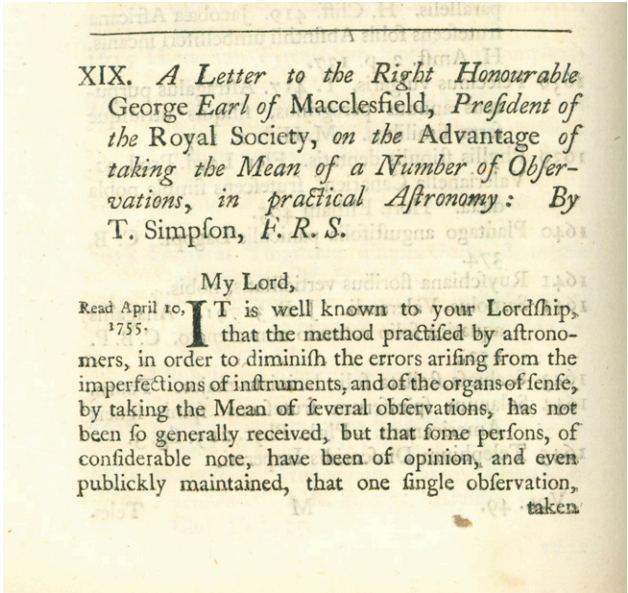
**(2) First Edition.** Simon's book went through seven editions between 1885 and 1891. This copy of the first edition bears Simon's presentation inscription to a M. Maret. Gosset, "The Dragon's Metamorphosis," *Asia Times*, Dec 9, 2006. 34390

### *Classic of Statistics and Data Processing*

**126. Simpson, Thomas** (1710–61). On the advantage of taking the mean of a number of observations, in practical astronomy. In: *Phil. Trans.* 49 (1755), pp. 82–93. Whole number, 4to. [I6], 444pp. Fold. plates, text illustrations. London: L. Davis & C. Reymers, 1756. 255 x 195 mm. (uncut & unopened). Quarter morocco, marbled boards in period style. Some dust-soiling and fraying to edges, but very good.

\$1500

**First Edition.** Simpson's paper is considered a milestone in statistical inference, as well as the earliest formal treatment of any data-processing practice. Simpson was the first to attempt to prove mathematically that the mean result of several observations is nearer to the truth



XIX. A Letter to the Right Honourable George Earl of Macclesfield, President of the Royal Society, on the Advantage of taking the Mean of a Number of Observations, in practical Astronomy: By T. Simpson, F. R. S.

My Lord,  
Read April 10, 1755. **I**T is well known to your Lordship, that the method practised by astronomers, in order to diminish the errors arising from the imperfections of instruments, and of the organs of sense, by taking the Mean of several observations, has not been so generally received, but that some persons, of considerable note, have been of opinion, and even publicly maintained, that one single observation, taken

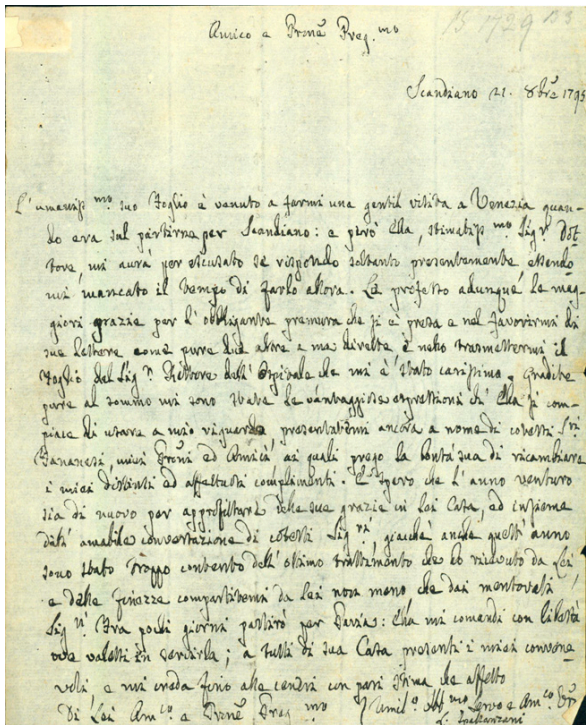
than any single observation (the law of large numbers). A key feature of his paper was that Simpson chose to focus "not on the observations themselves . . . but on the errors made in the observations, on the differences between the recorded observations and the actual position of the body being observed. . . . [This] was the critical step that was to open the door to an applicable quantification of uncertainty" (Stigler, *Hist. Statistics*, pp. 90–91; see also pp. 88–94). "Simpson was the first to characterize the errors in observations as independent events, taking positive and negative values with equal probabilities, and the first to provide a mathematical expression for the probability that the error in the mean result will lie between assigned limits" (Todhunter, *Hist. Probability*, p. 309).

Also present in this volume are two important medical papers: Jonathan Wathen's "A method proposed to restore the hearing, when injured from an obstruction of the tuba Eustachiana" (G-M 3356), describing his method of relieving catarrhal deafness by injections into the Eustachian tube through a catheter passed into the nose; and John Machin's "An uncommon case of a distempered skin" (G-M 4013), containing the first known description of ichthyosis hystrix. DSB. 35289

**127. Spallanzani, Lazzaro** (1729–99).

Autograph letter signed, in Italian, to an unnamed correspondent. Scandiano, October 21, 1795. 1 page. 211 x 168 mm. Right margin slightly frayed, traces of former mounting. Transcription provided. \$1250

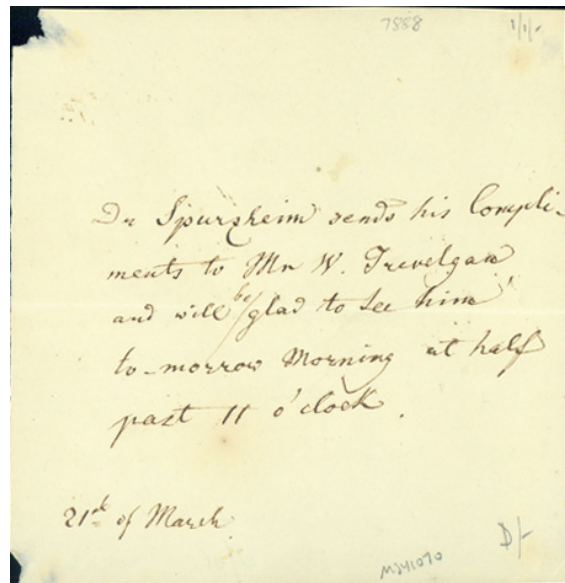
"Among the many dedicated natural philosophers of the eighteenth century, Spallanzani stands preeminent for applying bold and imaginative experimental methods to an extraordinary range of hypotheses and phenomena. His



main scientific interests were biological and he acquired a mastery of microscopy; but he probed also into problems of physics, chemistry, geology, and meteorology, and pioneered in vulcanology. Acute powers of observation and a broadly trained and logical mind helped him to clarify mysteries as diverse as stones skipping on water; the resuscitation of Rotifera and the regeneration of decapitated snail heads; the migrations of swallows and eels and the flight of bats; the electric discharge of the torpedo fish; and the genesis of thunderclouds or a waterspout. His ingenious and painstaking researches illuminated the physiology of blood circulation and of digestion in man and animals, and also of reproduction and respiration in animals and plants. The relentless thoroughness of his work on the animalcules of infusions discredited the doctrine of spontaneous generation and pointed the way to preservation of foodstuffs by heat” (*Dictionary of Scientific Biography* 12, p. 553). Spallanzani’s scientific activities concluded only with his death: his investigations into bat flight, eel reproduction and animal and plant respiration were done in the final decade of his life, and his last scientific publication (1798) contains his discovery that plants respire oxygen and give off carbon dioxide (the reversal of the photosynthesis process) when kept in deep shade.

In the present letter, written to a doctor, Spallanzani alludes to medical treatments he had been receiving, most likely for the prostate and bladder problems that eventually caused his death. 40140

**128. Spurzheim, Johann Gaspar** (1776–1832). Autograph note to Mr. W. Trevelyan (most likely



Walter Calverley Trevelyan [1797–1879]). 21 March [n.y.]. 1 page. 121 x 116 mm. Traces of former mounting on verso, tiny lacunae in upper and lower left corners (not affecting text) but very good. \$450

From J. G. Spurzheim, co-developer with Gall of the pseudoscience of phrenology, which holds that a person’s character and personality traits can be determined by reading the bumps and fissures of the skull. Phrenology was very popular in the nineteenth century, and is credited with furthering the development of neuroscience by promoting the concept of localization of function in the brain. Spurzheim collaborated with Gall on several phrenological works and later set up on his own as a lecturer and writer on phrenology, traveling extensively throughout Britain and Europe.

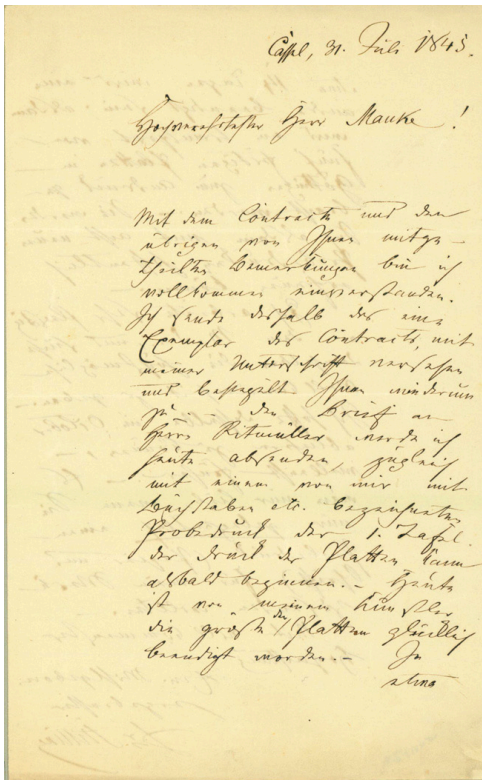
Spurzheim’s note was almost certainly written to Walter Calverley Trevelyan (later Sir Walter Calverley Trevelyan, Bart.), a member of a prominent aristocratic family and one of Britain’s most eminent supporters of phrenology. The note reads as follows:

Dr. Spurzheim sends his compliments to Mr. W. Trevelyan and will be glad to see him to-morrow morning at half past 11 o’clock.

41070

**129. Stilling, Benedikt** (1810–79). Autograph letter signed, in German, to Herr Enke(?). Cassel, July 31, 1843. 2pp. plus integral blank. 214 x 133 mm. Mounted. Fine. \$950

From German neurologist Benedikt Stilling, who named the vasomotor nerves in his *Physiologisch-*



*pathologische und medicinisch-praktische Untersuchungen über die Spinal-Irritation* (1840). He is also remembered for introducing a procedure of serial-section portrayal (thin slicing) of spinal cord specimens for histological study, and for having performed the first ovariectomy in Germany. His name is associated with “Stilling’s canal” (a small channel running through the vitreous humor between the optic disk nerve and the lens) and the “Fleece of Stilling” (a mesh of myelinated fibers surrounding the dentate nucleus of the cerebellum).

Stilling’s letter can be translated as follows:

Dear Mr. Enke, I fully agree with the contract and other information you sent. I will therefore send you the contract with my signature and also will have it notarized. I will send the letter today to Mr. Ritmüller . . . Then the printing of the plates can begin. Today the largest of my plates was successfully finished by [. . .]. In a fortnight another one will be ready. Then five completed plates will be printed in Göttingen. You will have then eight new trial printings to enjoy—I hope. I am busy working on the MS and am trying to perfect it as much as possible . . .

Stilling’s letter most likely refers to the publication of his *Ueber die Medulla Oblongata*, published in 1843 by F. Enke. 41002

## Relationship of Information to the Physical World

**130. Szilard, Leo** (1898–1964). Über die Entropieverminderung in einem thermodynamischen System bei Eingriffen intelligenter Wesen. In *Zeitschrift für Physik* 53 (1929): 840–856. Whole volume. vii, 889pp. Text illustrations. 223 x 152 mm. Library buckram. Fine. Embossed library stamp of the Carnegie Institution of Washington, Mount Wilson Laboratory on the front free endpaper, library call number on spine. Boxed. \$3750

**First Edition** of the founding document of information theory. In “Über die Entropieverminderung in einem thermodynamischen System bei Eingriffen intelligenter Wesen” [On the reduction of entropy in a thermodynamic system by the intervention of intelligent beings], Szilard described a theoretical model that served both as a heat engine and an information engine, establishing the relationship between information (manipulation and transmission of bits) and thermodynamics (manipulation and transfer of energy and entropy). He was one of the first to show that “Nature seems to talk in terms of information” (Seife, *Decoding the Universe*, p. 77).

In his paper Szilard addressed the problem of “Maxwell’s demon,” a thought experiment posed by James Clerk Maxwell in his *Theory of Heat* (1871) as a challenge to the second Law of Thermodynamics. This law states that the entropy of an isolated system not in equilibrium will tend to increase over time, reaching its maximum level at equilibrium. Maxwell’s demon exploits the random, statistical nature of matter in order to decrease entropy in a closed system without any expenditure of energy—a state of affairs that is physically impossible. Recognizing the flaw in Maxwell’s concept, Szilard countered the earlier physicist’s challenge as follows:

Szilard realized that the act of measuring the position of the atom (or in the Maxwell case, the speed of an incoming atom) must, in some way, increase the entropy of the universe, counteracting the demon’s reduction of the universe’s entropy. When a demon performs a measurement, he is getting an answer to a question: Is the atom on the right side of the box or the left side of the box? Is the atom hot or cold? Should I open a shutter or not? So a measurement is an extraction of information from the particle. That information does not come for free. Something about that information—either extracting it or processing it—would increase the entropy of the universe. In fact, Szilard calculated that the “cost”

Über die Entropieverminderung in einem thermodynamischen System bei Eingriffen intelligenter Wesen.

Von L. Szilard in Berlin.

Mit 1 Abbildung. (Eingegangen am 18. Januar 1928.)

Es wird untersucht, durch welche Umstände es bedingt ist, daß man scheinbar ein Perpetuum mobile zweiter Art konstruieren kann, wenn man ein Intellekt besitzendes Wesen Eingriffe an einem thermodynamischen System vornehmen läßt. Indem solche Wesen Messungen vornehmen, erzeugen sie ein Verhalten des Systems, welches es deutlich von einem sich selbst überlassenen mechanischen System unterscheidet. Wir zeigen, daß bereits eine Art Erinnerungsvermögen, welches ein System, in dem sich Messungen ereignen, auszeichnet, Anlaß zu einer dauernden Entropieverminderung bieten kann und so zu einem Verstoß gegen den zweiten Hauptsatz führen würde, wenn nicht die Messungen selbst ihrerseits notwendig unter Entropieerzeugung vor sich gehen würden. Zunächst wird ganz universell diese Entropieerzeugung aus der Forderung errechnet, daß sie im Sinne des zweiten Hauptsatzes eine volle Kompensation darstellt (Gleichung (1)). Es wird dann auch an Hand einer unbelebten Vorrichtung, die aber (unter dauernder Entropieerzeugung) in der Lage ist, Messungen vorzunehmen, die entstehende Entropiemenge berechnet und gefunden, daß sie gerade so groß ist, wie es für die volle Kompensation notwendig ist: die wirkliche Entropieerzeugung bei der Messung braucht also nicht größer zu sein, als es Gleichung (1) verlangt.

Es gibt einen schon historisch gewordenen Einwand gegen die allgemeine Gültigkeit des zweiten Hauptsatzes der Thermodynamik, welcher in der Tat einen recht bedrohlichen Eindruck macht. Es ist dies der Einwand des Maxwellschen Dämons, der in verschiedener Umkleidung auch heute noch immer wieder auftaucht, und vielleicht nicht ganz mit Unrecht insofern, als hinter der präzise gestellten Frage sich quantitative Zusammenhänge zu verbergen scheinen, die bisher nicht aufgeklärt worden sind. Den Einwand in seiner ursprünglichen Formulierung, die mit einem Dämon operiert, welcher die raschen Moleküle abfängt und die langsamen passieren läßt, kann man allerdings mit der Entgegnung abtun, daß wir Menschen den Wert der thermisch schwankenden Parameter ja prinzipiell nicht jeweils erraten können; aber es läßt sich nicht leugnen, daß wir den Wert eines solchen schwankenden Parameters sehr wohl messen könnten und dann sicherlich Arbeit auf Kosten der Wärme gewinnen könnten, indem wir unsere Eingriffe dann je nach dem Resultat der Messung passend einrichten. Freilich bleibt es zunächst dahingestellt, ob wir nicht einen Fehler begehen, wenn wir den eingreifenden Menschen selbst nicht mit zum System rechnen und seine Lebensvorgänge nicht mitberücksichtigen.

of that information was a certain amount of useful energy—more precisely,  $kT \log 2$  joules for every bit of information, where  $T$  is the temperature of the room that the demon is in and  $k$  is the same constant that Boltzmann used in his entropy equation (Seife, *Decoding the Universe* [2007], pp. 78–79).

One of the most brilliant thinkers of the twentieth century, Szilard is best known for his work in nuclear physics: he conceived the idea of a nuclear chain reaction in 1933, filed a patent for a simple nuclear reactor in 1934, and collaborated with Fermi in the first demonstration of a chain reaction in 1942. In 1939 Szilard wrote a confidential letter to President Roosevelt outlining the possibility of nuclear weapons; this letter, co-signed by Einstein, led directly to the foundation of the Manhattan Project. Szilard worked on the Manhattan Project during the Second World War but opposed the use of the atomic bomb as a weapon of destruction, instead advocating for a demonstration of the bomb's power in the hope that the mere threat of such a weapon would force Germany and Japan to surrender. Horrified by the devastation of Hiroshima and Nagasaki, Szilard turned from nuclear

physics to biology after the war, and became an outspoken opponent of nuclear proliferation. 40220

*Genesis of the “Three-Age” System in Prehistory*

**131. [Thomsen, Christian Jurgensen** (1788–1865), ed.]. *Ledetraad til Nordisk Oldkyndighed*. [4], 100pp. Text illustrations. 201 x 127 mm. Copenhagen: S. L. Møller, 1836. 19<sup>th</sup> century boards, rebaked, endpapers renewed, edges a bit worn. Minor foxing but very good. 19<sup>th</sup> century armorial bookplate; 20<sup>th</sup> century bookplate of Laege Georg Moltved. \$1500

**First Edition.** The first curator of the National Museum in Copenhagen, Thomsen formulated a method of classifying the museum's archeological collections according to whether the artifacts were made of stone, bronze or iron. He claimed that these three groupings represented three chronologically successive archeological ages; this was the genesis of the Three-Age system, “the basic chronology that now underpins the archaeology of most of the Old World” (Rowley-Conwy, *From Genesis to Prehistory* [2007], p. 1).

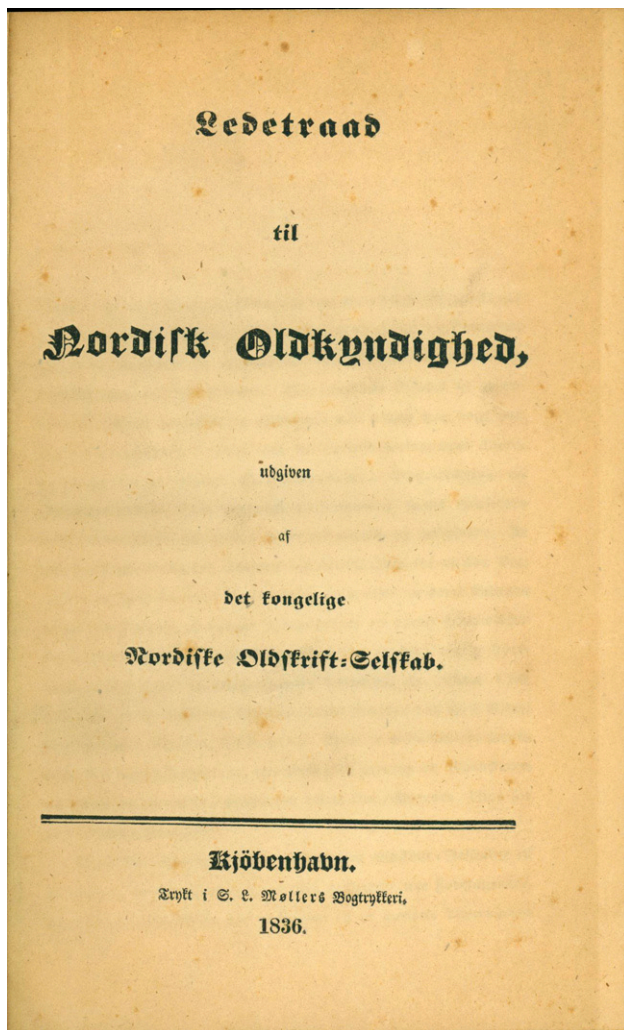
The principal publication of Thomsen's three-age concept appeared in *Ledetraad til Nordisk Oldkyndighed* (1836) a guidebook to the National Museum edited by Thomsen. The second chapter of this work, contributed by Thomsen, described his dating scheme and applied it to the monuments and antiquities of the North. Thomsen defined the three ages as follows:

The Age of Stone, or that period when weapons and implements were made of stone, wood, bone, or some such material, and during which very little or nothing at all was known of metals. . . .

The Age of Bronze, in which weapons and cutting implements were made of copper or bronze, and nothing at all, or but very little was known of iron or silver. . . .

The Age of Iron is the third and last period of the heathen times, in which iron was used for those articles to which that metal is eminently suited, and in the fabrication of which it came to be employed as a substitute for bronze (Thomsen, *Guide to Northern Archaeology* [1848], pp. 64–68).

Thomsen was a scholar with a background in the history of numismatics, rather than a field archaeologist. He based his study of artifacts on the associations between stylistic change, decoration and context—topics which may have interested him initially through his numismatic researches. Thomsen recognized the importance of examining objects



from “closed finds,” which allowed him to determine the common associations of artifacts for various periods. Thomsen’s assistant, archaeologist Jens J. A. Worsaae, later demonstrated through archeological fieldwork the stratigraphic succession of the stone, bronze and iron ages in Denmark. An English translation of *Ledetraad til Nordisk Oldkyndighed*, by the Earl of Ellesmere, was published in 1848. Spencer, *Ecce homo* (1986) no. 3.488. 41015

### *Aerial Photography*

**132. Tissandier, Gaston** (1843–99). *La photographie en ballon*. Paris: Gauthier-Villars, 1886. Sm. 4to. vii, 45, [3]pp. Frontispiece consisting of original photographic print mounted on stiff card with tissue overlay key; text illustrations. 209 x 148 mm. Modern buckram, original printed wrappers bound in. Front wrapper mounted, corner of frontispiece



repaired (not affecting photograph), gutter margin of tissue overlay repaired, light soiling and foxing. \$2000

**First Edition.** The history of aerial photography begins in 1858, when the photographer Nadar took the first photographs from a balloon. His results were only partially successful, as were those of other experimenters who followed him, and it was not until 1878, when factory-made gelatin dry plates were introduced, that aerial photography came into its own. Using gelatin plates, which were twenty times faster than the old wet-collodion plates, the photographer Paul Desmarest obtained two birds-eye views of Rouen in 1880 from a balloon at 4,200 feet. However, Desmarest’s results were surpassed five years later by Jacques Ducom, who, in a balloon navigated by Gaston Tissandier, was able to take superb aerial photographs of Paris from a height of 1,800 feet. “Ducom’s view of the Île Saint-Louis, Paris [the frontispiece to the present work] from 1,800 ft leaves absolutely nothing to be desired. Through a magnifying glass people can be counted on the bridge. The exposure of this and the other photographs taken on this flight was 1/50 second, using a specially constructed guillotine shutter which was opened

pneumatically and closed automatically with a rubber spring” (Gernsheim & Gernsheim, p. 508).

Tissandier’s *La photographie en ballon* records his and Ducom’s achievements in aerial photography, and also surveys the work of Nadar, Desmarests, Shadbolt, Triboulet, Pinard, Weddel and other aerial photographers. The preface mentions the pioneering aerial photograph of Boston taken in 1860 by J. W. Black from a tethered balloon at 1,200 feet—Tissandier, who saw a print of Black’s photograph, described it as “assurément fort curieuse, mais comme les précédentes elle manque de netteté et semble en outre avoir été prise à très faible hauteur” (p. vi). Gernsheim & Gernsheim, *The History of Photography 1685-1914*, pp. 507-8. Frizot, *A New History of Photography*, p. 391. 39486

### *On the Fabric of the Human Body— Complete Translation in English*

**133. Vesalius, Andreas** (1514-64). On the fabric of the human body. A translation of *De humani corporis fabrica libri septem*. Translated by William Frank Richardson and John Burd Carman. 5 volumes. San Francisco and Novato: Norman Publishing, 1998-2009. Cloth, pictorial dust-jackets. All volumes printed on 80-pound Mohawk Superfine acid-free paper.

\$275 per volume

Vesalius’s *De humani corporis fabrica* (1543) is one of the world’s most famous books, and probably the greatest book in the history of anatomy. This award-winning translation by Richardson and Carman is now complete, and available in five volumes:

Vol. I: *Book I, The Bones and Cartilages*

Vol. II: *Book II, The Ligaments and Muscles*

Vol. III: *Book III, The Veins and Arteries; Book IV, The Nerves*

Vol. IV: *Book V, The Organs of Nutrition and Generation*

Vol. V: *Book VI, The Heart and Associated Organs; Book VII, The Brain*

All of Vesalius’s famous woodcut anatomical illustrations are reproduced, and each volume contains historical introductions and extensive notes. The last volume concludes with a series of indexes to the fifth volume and the complete set, which greatly adds to the usefulness of the translation. These include Dr. Richardson’s translation of Vesalius’s original index to the *Fabrica*, which represents Vesalius’s outline of key discoveries and ideas in the *Fabrica*, and a set of cumulative indexes to all five volumes of *On the Fabric of the Human Body*.

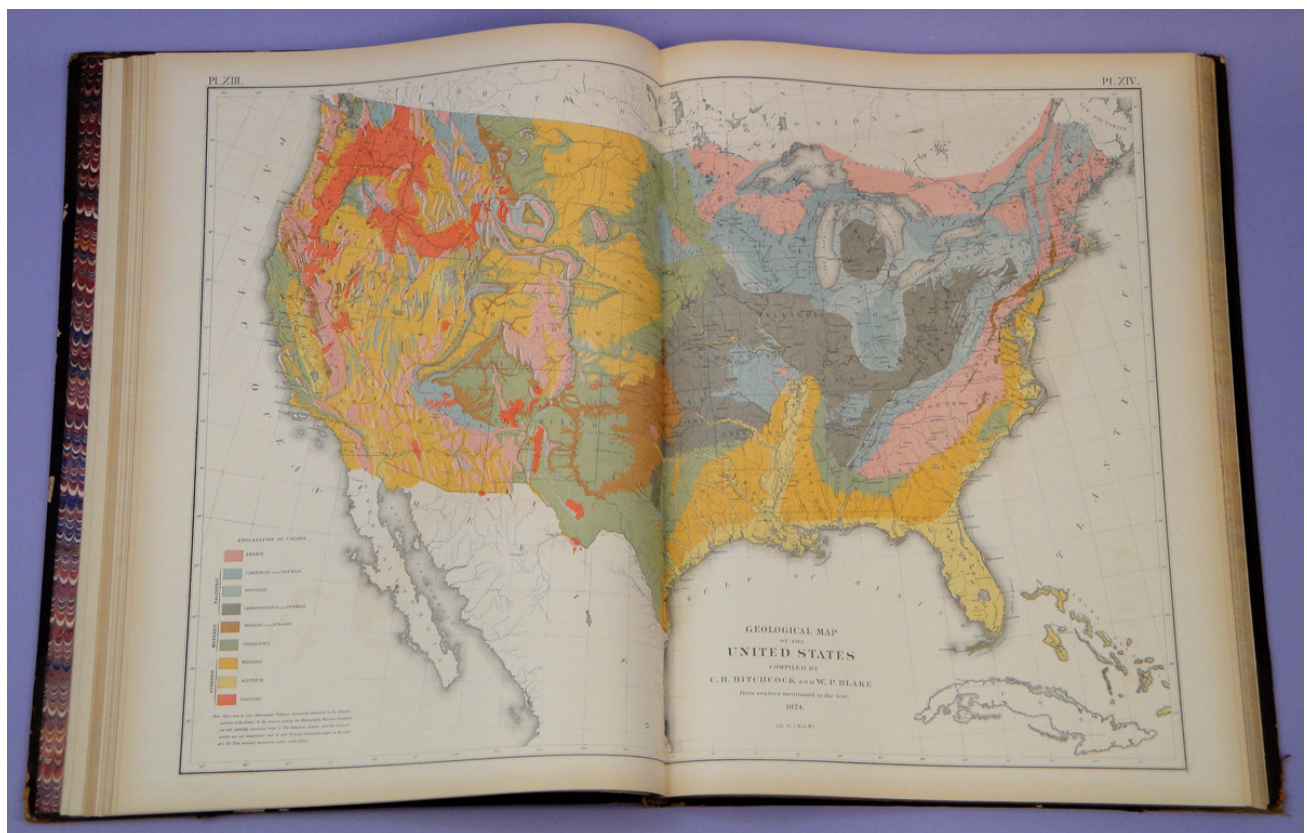


### *First Comprehensive Thematic Atlas*

**134. Walker, Francis Amasa** (1840-97). Statistical atlas of the United States based on the results of the ninth census 1870 with contributions from many eminent men of science and several departments of the government. Double folio. N.p.: Julius Bien, 1874. Various paginated. 60 chromolithographed plates, numbered I-X, Xa, XI-XVI, XVIa, XVII, XVIIa, XVIII-XXXV, XXXVa, XXXVI, XXXVIa, XXXVIb, XXXVII-LIV. 555 x 416 mm. Original half sheep gilt, rubbed, gilt-lettered leather label on front cover. One or two marginal tears due to acidic paper, but very good.

\$2750

**First Edition.** A landmark in the visual display of information. “Published in 1874, this oversized compendium of maps, graphs, statistical tables, and essays by scientists, economists, and federal officials was the first comprehensive thematic atlas produced by any nation, and it was hailed both at home and abroad for its innovative use of graphic elements to distill and display complex data” (Kinnahan, p. 399). Based on data from the 1870 census, the *Statistical Atlas of the United States* was one of the earliest



national atlases published. The work was conceived and supervised by Francis Amasa Walker, Chief of the U. S. Bureau of Statistics and superintendent of the 1870 census. The large plates, most of them in color, were lithographed by Julius Bien, who produced the plates for the first American full-size reissue of Audubon's *Birds of America* (1858-60). Kinnahan, "Charting Progress: Francis Amasa Walker's *Statistical Atlas of the United States* and narratives of Western expansion", *American Quarterly* 60, (2008): 399-423. 41106

**135. Wallace, Alfred Russel** (1823-1913). Autograph letter signed to Dr. [Maxwell Tylden] Masters (1833-1907). Waldrow Edge, Duppas Hill, Croydon, January 17, 1879. 2pp. 178 x 114 mm. Tiny rust-stain on verso of second leaf.

\$1250

To the British botanist M. T. Masters, longtime editor of the *Gardener's Chronicle* and author of *Vegetable Teratology* (1869). In the letter Wallace refers to his article "Epping Forest," published in the November 1, 1878 number of the *Fortnightly Review*. Epping Forest, one of the surviving remnants of England's ancient Forest of Essex, had been declared a protected natural preserve in 1874, much to the delight of Wallace, who approved the move both as a conservationist and as an opponent of land enclosure. In 1878 the Epping Forest Committee was seeking to appoint

100

a Superintendent of the forest, a post for which Wallace actively campaigned; his "Epping Forest" article was written in part to impress the committee with his scientific credentials and *bona fides*. Wallace made the committee's short list, but failed to get the Superintendent's position, which was given to Alexander McKenzie. Raby, *Alfred Russel Wallace*, pp. 218-20. 40192

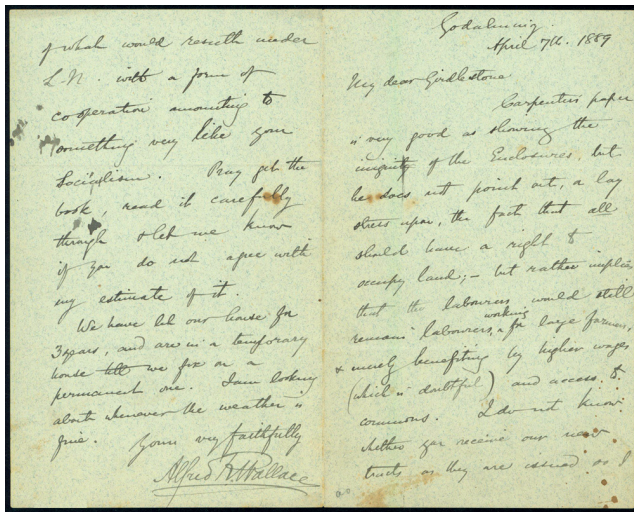
**136. Wallace, Alfred Russel** (1823-1913). Autograph letter signed to [Edward Deacon] Girdlestone (1829-92). Godalming, April 7, 1889. 4pp. 179 x 112 mm. A few minor spots.

\$1750

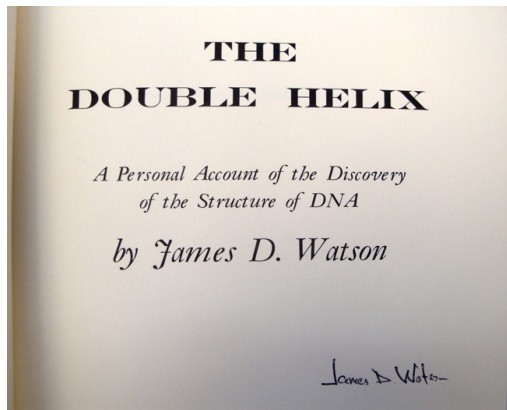
Excellent letter to socialist author Edward Deacon Girdlestone, discussing Wallace's progressive views on land reform, a cause that had taken up most of his energies over the preceding decade:

Carpenter's paper is very good at showing the iniquity of the Enclosures, but he does not point out, or lay stress upon, the fact that all should have a right to occupy land;--but rather implies that the labourers would still remain labourers, working for large farmers, & merely benefiting by higher wages (which is doubtful) and access to commons. . . .

Wallace had long been a critic of England's system of land ownership, and in 1879 he began to devote himself in

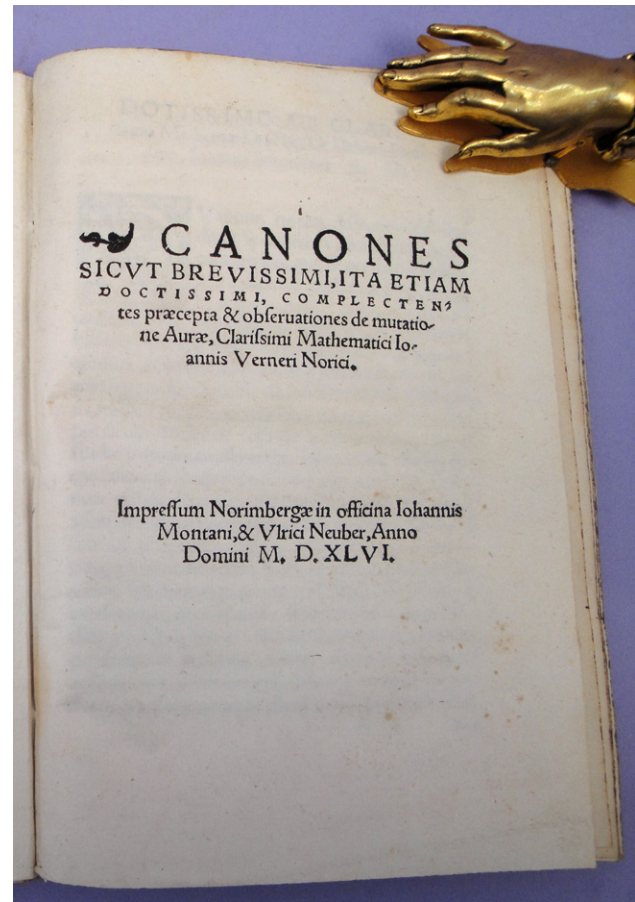


earnest to the cause of land reform. "He believed that rural land should be owned by the state and leased to people who would make whatever use of it that would benefit the largest number of people, thus breaking the often-abused power of wealthy landowners in English society. In 1881 Wallace was elected as the first president of the newly formed Land Nationalisation Society. The next year he published a book, *Land Nationalisation; Its Necessity and Its Aims*, on the subject. He criticized England's free trade policies for the negative impact they had on working class people" (Wikipedia, "Alfred Russel Wallace"). Raby, *Alfred Russel Wallace: A Life*. 40193



**137. Watson, James D.** (1928- ). The double helix. Being a personal account of the discovery of the structure of DNA, a major scientific advance which led to the award of a Nobel Prize. xvi, 226, [12]pp. Numerous illustrations. New York: Athenaeum, 1968. 213 x 137 mm. Original cloth, dust-jacket. Signed by the author on the title. Former owner's bookplate on inside front cover. Fine. \$3750

**First Edition.** Watson's famous and controversial best-selling account of the events surrounding the discovery in 1953 of the structure of DNA. Watson is not usually cooperative about signing his books, so books with his signature are uncommon. 39535



### Pioneering Work on Environmental Science and Meteorology

**138. Werner, Johann** (1468-1522). *Canones sicut brevissimi, ita etiam doctissimi, complectentes praecepta & observationes de mutatione aurae . . .* 4to. [20]ff., last leaf blank. 2 woodcut initials. Nuremberg: J. Montanus & U. Neuber, 1546. 202 x 142 mm. Modern vellum. Minor soiling on verso of last leaf, otherwise fine. Manuscript annotations in an early hand, titled "Aphorismi Astrologiae," on recto of last leaf.

\$10,000

**First Edition of** one of the rarest works by the mathematician and astronomer Johann Werner, and a pioneering contribution to environmental science at the height of the scientific revolution. Werner, a priest in Nuremberg, made notable contributions to astronomy,

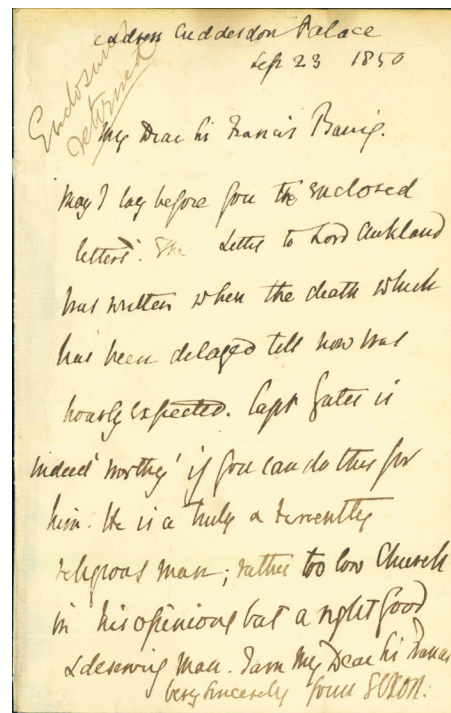
mathematics and geography. He invented instruments for solving problems in spherical astronomy and for determining the latitudes of planets, and his work on spherical triangles (not published until 1907) was superior to that of Regiomontanus in its presentation and practical applicability. He also developed the first method for determining latitude and longitude simultaneously.

Werner was the first to make regular observations of weather conditions in Germany; together with Tycho Brahe, he pioneered the practice of collecting meteorological data for scientific purposes. "In meteorology Werner paved the way for a scientific interpretation. Meteorology and astrology were connected, but he nevertheless attempted to explain this science rationally. . . . The 'guidelines that explain the principles and observations of the changes in the atmosphere,' published [posthumously] in 1546 by Johann Schöner, contain meteorological notes for 1513-1520. The weather observations are based mainly on stellar constellations, and hence the course of the moon is of less importance. Although Werner did not collect the data systematically, as Tycho Brahe did, he attempted to incorporate meteorology into physics and to take into consideration the geographical situation of the observational site. Thus he can be regarded as a pioneer of modern meteorology and weather forecasting" (*Dictionary of Scientific Biography*).

This pamphlet by Werner is very rare, with only three copies in the United States cited in OCLC (UC San Diego, Yale, U. Michigan). Our copy appears to be the first on the market since the Honeyman copy sold in 1981. 40981

**139. Wilberforce, Samuel** (1805-73). (1) Autograph letter signed to Sir Francis Baring (1796-1866). Cuddesdon Palace [Oxfordshire], Sept. 23, 1850. 1 page plus integral blank (docketed on verso by recipient). 182 x 115 mm. Some damage to blank along central fold due to removal from mounting (not affecting text), but very good. (2) Autograph letter signed to Charles Baring Wall (1795-1853). 61 Eaton Place [London], Nov. 20, 1852. 1 page, on Athaneum stationery. 182 x 115 mm. Fine. \$500

From Samuel ("Soapy Sam") Wilberforce, Bishop of Oxford, best known today for his participation in the famous 1860 Oxford debate on Darwin's theory of evolution, in which Wilberforce, an opponent of evolution, supposedly asked Thomas Henry Huxley whether it was through his grandfather or grandmother that he claimed descent from a monkey. Huxley is reported to have answered that he would not be ashamed to have a monkey for his ancestor, but he would be ashamed to be connected



with a man who used his great gifts to obscure the truth (no verbatim transcript of the debate exists, and accounts of what was actually said vary). Wilberforce, a son of the famous British abolitionist William Wilberforce, was one of the most influential British churchmen of the 19<sup>th</sup> century, noted for "his unflinching tact and wide sympathies, his marvellous energy in church organization, the magnetism of his personality, and his eloquence both on the platform and in the pulpit" (*Encyclopedia Britannica* [11<sup>th</sup> ed.]). His unflattering nickname originated with a comment made by Benjamin Disraeli that Wilberforce's manner was "unctuous, oleaginous, saponaceous" (oily, greasy, soapy). Wilberforce's two correspondents were members of the wealthy and powerful Baring family, founders of Baring's Bank (est. 1762), which until its collapse in 1995 was the oldest merchant bank in Britain. Sir Francis Baring (later Baron Northbrook) was a Whig politician and longtime member of the House of Commons, who served as First Lord of the Admiralty from 1849 to 1852. Wilberforce's 1850 letter to Sir Francis addresses him in that capacity:

My dear Sir Francis Baring, May I lay before you the enclosed letter? The letter to Lord Auckland [sic] was written when the death which has been delayed till now was hourly expected. Capt. Gates is indeed "worthy" if you can do this for him. He is a truly & fervently religious man; rather too low church in his opinions but a right good & deserving man. I am my dear Sir Francis, very sincerely yours S Oxon.

"Lord Auckland" refers to George Eden, first Lord Auckland (1784-1849), who had preceded Baring as First Lord of the Admiralty. Regarding the peculiar signature, it is customary

for Anglican bishops to sign letters with their first name (or parts thereof) and the Latin version of the name of their diocese—hence “S” for Samuel and “Oxon” for Oxford.

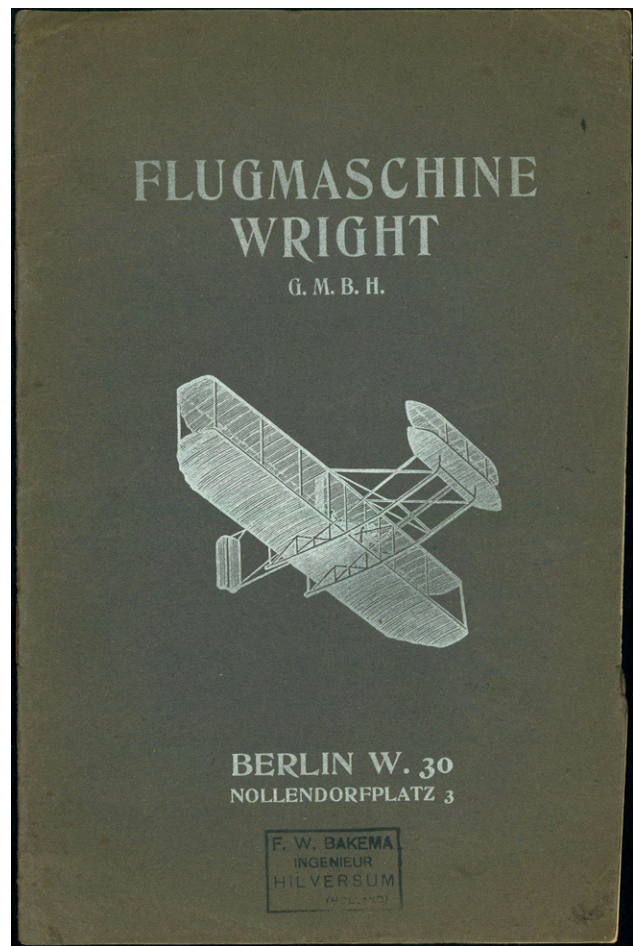
Charles Baring Wall, the recipient of Wilberforce’s 1852 letter, was Sir Francis Baring’s cousin; he too was politically active, serving as M.P. from Salisbury until his death at the age of 58. In his letter Wilberforce accepts Baring Wall’s invitation to “dinner on Wednesday next at ¼ to 8.” 41083

### *First Sales Brochure for a Wright Brothers Airplane*

**140. [Wright Brothers.] Flugmaschine Wright G.m.b.H.** Flugmaschine Wright G.m.b.H. 12pp. Text illustrations. Berlin: Vereinigte Verlagsanstalten G. Braunbeck & Gutenberg-Druckerei Aktiengesellschaft, 1909. 256 x 168 mm. Original wrappers printed in silver, light wear, fore-edge irregularly trimmed. Very good copy. Ownership stamp of Dutch chemical engineer and inventor F.W. Bakema on front wrapper and title. \$5500

**First Edition** of the first sales brochure advertising a plane designed by the Wright Brothers. The Wrights chose to demonstrate their flyer for the first time in France from August to December 1908, and these demonstrations had dramatic impact on the European aviation industry. Flugmaschine Wright G.M.b.H., established in June 1909, acquired the Wright German patents and the exclusive right to manufacture Wright airplanes in Germany, as well as sales rights for Sweden, Norway, Denmark, Luxemburg and Turkey (see Renstrom, p. 97). Flugmaschine Wright was the second Wright aircraft company established in Europe, following the Compagnie Générale de Navigation Aérienne, which had purchased the French rights to manufacture and sell Wright aircraft in March 1908, subject to satisfactory demonstrations of the plane. Though Gibbs-Smith 2002 states that the first French-built Wright Model A was delivered from the French factory in August 1909, we have found no record in OCLC or any bibliography of any sales or promotional publications issued by the French company. Both the French and German Wright aircraft companies preceded the American Wright company, which was not incorporated until November 1909.

The present brochure contains an extensive description of the Wright airplane and its performance, as well as an account of the formation of the Flugmaschine Wright company. The company manufactured between twenty and sixty examples of the Wright Model A, which was the first Wright aircraft to be produced commercially. **Rare**, with only four copies cited in OCLC (US Air Force Academy,



Library of Congress, Waseda University [Japan] and the ETH-Bibliothek [Switzerland]). This copy was originally owned by F.W. Bakema, a Dutch chemical engineer and inventor who built several superphosphate fertilizer factories in the Netherlands and Norway, and established the first Dutch chemical industry advisory agency (1909). Gibbs-Smith, *The Wright Brothers: Aviation Pioneers and their Work* (2002), p. 44. Gibbs-Smith, *The Rebirth of European Aviation 1902-1908. A Study of the Wright Brothers' Influence* (1974). Renstrom, *Wilbur and Orville Wright: A Bibliography Commemorating the One-Hundredth Anniversary of the First Powered Flight* (2002), p. 98. Kingma, Jur. “Building the Plant | Recensiebank Historisch Huis.” Building the Plant: A History of Engineering Contracting in the Netherlands (review). Historisch Platform. Web. 28 July 2010. 41008

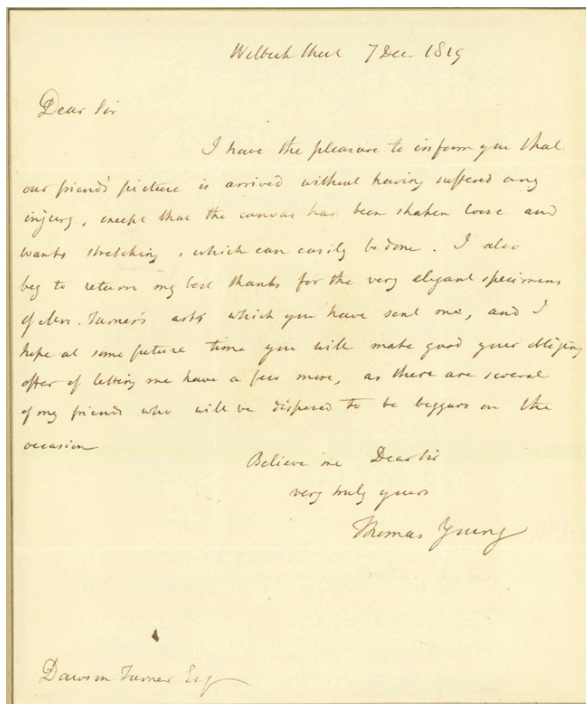
**141. Wundt, Wilhelm** (1832-1920). Autograph letter signed, in German, to Alfred R. v. Dutezinski (identified in a different hand on the verso of the second leaf). Leipzig, March 25, 1894. 1 page plus blank leaf. 196 x 125 mm. Fine.

\$750

From Wilhelm Wundt, known as the “father of experimental psychology,” who established psychology as a separate science and founded one of the first formal laboratories for psychological research (at the University of Leipzig). He is one of the founding figures of modern psychology. His letter may be translated as follows:

Dear Sir, My best thanks for sending your work to me. It deals with a subject in which I am very interested and I certainly will give my whole attention to your [thesis?] as soon as my own work leads to this subject. Yours very truly, W. Wundt.

40998



**142. Young, Thomas** (1773–1829). Autograph letter signed to Dawson Turner (1775–1858). [London] Welbeck Street, 7 December 1819. 1 page. 215 x 180 mm. Mounted. Fine.

\$1500

From British scientist Thomas Young, the founder of physiological optics and author of the wave theory of lights (see Garrison–Morton 1486–88, *Printing and the Mind of Man* 259, Dibner 152), to botanist and antiquary Dawson Turner, author of *The Botanist’s Guide through England and Wales* (1805), the four-volume illustrated *Fuci, sive, Plantarum fucorum generi a botanicis ascriptarum icones descriptiones et historia* (1808–19), *Account of a Tour in Normandy* (1820), *Guide . . . towards the Verification of Manuscripts by Reference to Engraved Facsimiles* (1848) and several other works. Young’s letter reads as follows:

Dear Sir, I have the pleasure to inform you that our friend’s picture is arrived without having suffered any injury, except that the canvas has been shaken loose and wants stretching, which can easily be done. I also beg to return my best thanks for the very elegant specimens of Mrs. Turner’s arts which you have sent me, and I hope at some future time you will make good your obliging offer of letting me have a few more, as there are several of my friends who will be disposed to be beggars on the occasion. Believe me Dear Sir very truly yours Thomas Young.

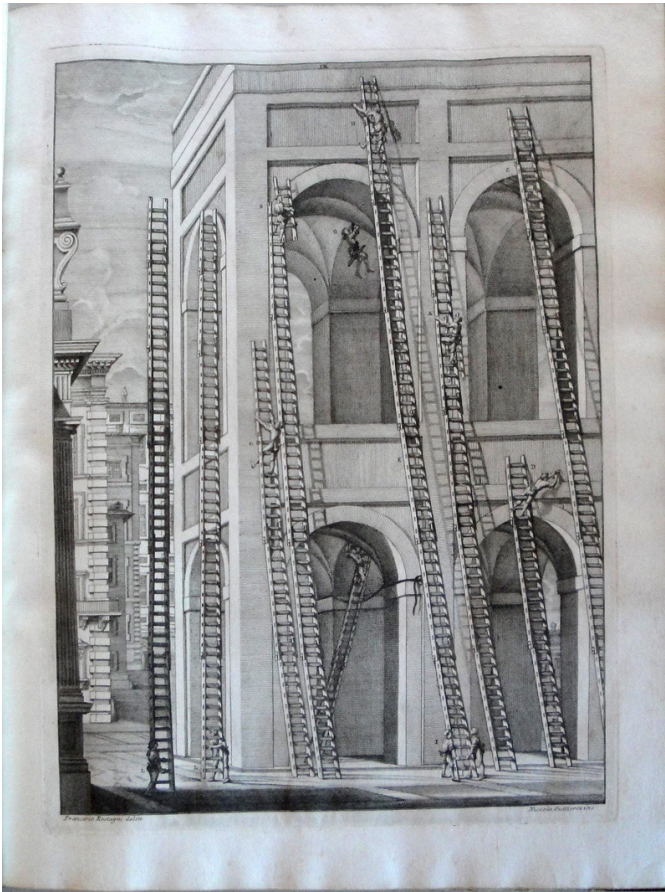
“The very elegant specimens of Mrs. Turner’s arts” that Young had received were most likely drawings or prints. Mary Turner was a skilled artist who had studied under both John Crome and John Sell Cotman; together with her equally talented daughters, she produced an enormous number of drawings, paintings, etchings and lithographs, which Turner used both in his own publications and as additional illustrations for the 8000 volumes in his library.

Young wrote this letter from his Welbeck Street address in London, where he had lived and practiced medicine since 1799. Autograph letters from Thomas Young are rare—this is the first we have handled in our nearly forty years in business. 40834

**143. Zabaglia, Niccola** (1674–1750).

*Contignationes, ac pontes . . . Ac descriptione translationis obelisci vaticani, aliorumque per equitem Dominicum Fontana susceptae*. Large folio. [46]ff. Engraved frontispiece portrait of the author by Rossi after Pietro Leone Ghezzi; 54 numbered engraved plates, 50 full-page and 4 double-page, by various engravers after Francesco Rostagni and Carlo Fontana. Rome: ex typographia Palladis, excudebant Nicolaus et Marcus Plearini, 1743. 475 x 370 mm. Elaborately gilt diced Russia spine, and corners, marbled boards ca. 1743. Rubbed, light wear at edges. Small portions, circa 2cm in diameter, of plates 35 & 36 skillfully repaired, very slightly affecting images, occasional minor dampstaining and spotting, but otherwise a fine, large copy on heavy paper in an attractive binding from the time of publication. Bookplate of Verne Roberts’s *Bibliotheca Mechanica*. \$22,500

**First Edition** of this spectacular and fundamental work for the history of engineering and the construction during the 18th century. It is also important for the building history of St. Peter’s and other great buildings in Rome. Niccola Zabaglia was one of the foremost practical



mechanics of his time. Engineer for the construction of St. Peter's, he was involved in strengthening the dome after the earthquakes of 1703 and 1730, inventing the machines and training the maintenance crew. The splendid large engravings in his book illustrate the machinery and instruments used for the restoration of the dome — elaborate hoisting devices, construction tools, pulleys, scaffolding, ornamental tiles, etc. — as well as the craftsmen at work. The plates, together with the 21 explanatory tables in Latin and Italian, provide a clear understanding of early building techniques. The transportation of the Vatican obelisk by Domenico Fontana in 1590 is represented by a choice selection of 13 plates from Carlo Fontana's work on St. Peter's, published in 1694, and other plates original to Zabaglia's work. Apparently Zabaglia's book was meant to be issued with either a Latin or an Italian title-page and preface; however, in this copy both the Latin and Italian versions of these pages are present. The explanatory text is in both languages, with the Latin text at the left, and the Italian text at the right. In this copy, the text leaves have been bound after the plates. *Berlin Kat.* 2755. Riccardi I, 642. Brunet V, col. 1515 ("fort recherché"). Graesse VII, p. 501. Not in Fowler. 38665

Check out Jeremy's new history of information and media site:

[Historyofinformation.com](http://Historyofinformation.com) and  
[From Cave Paintings to the Internet](#)

