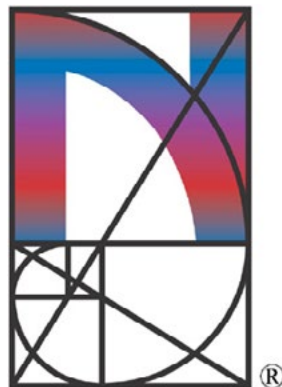


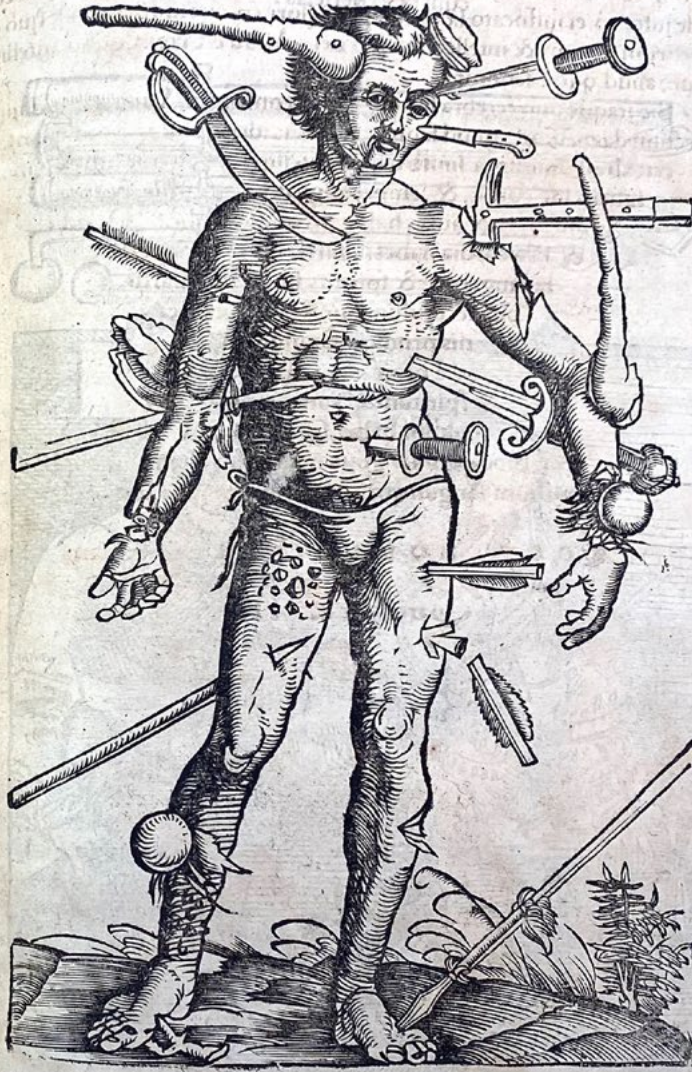
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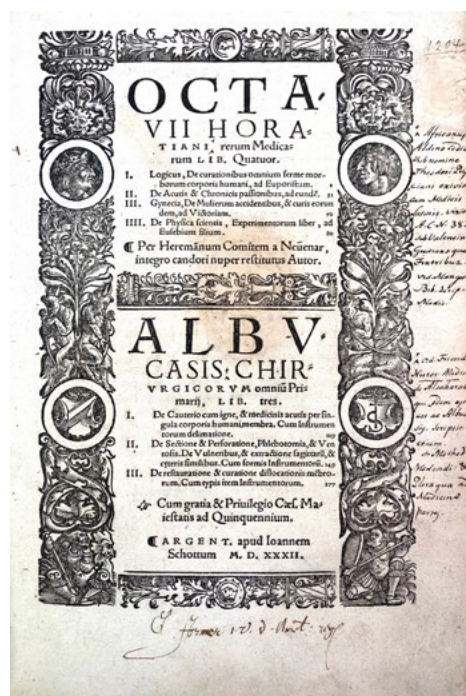
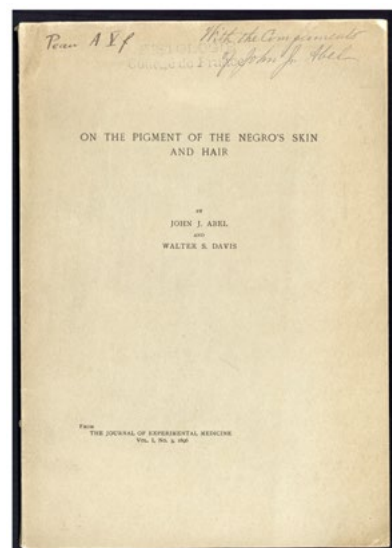


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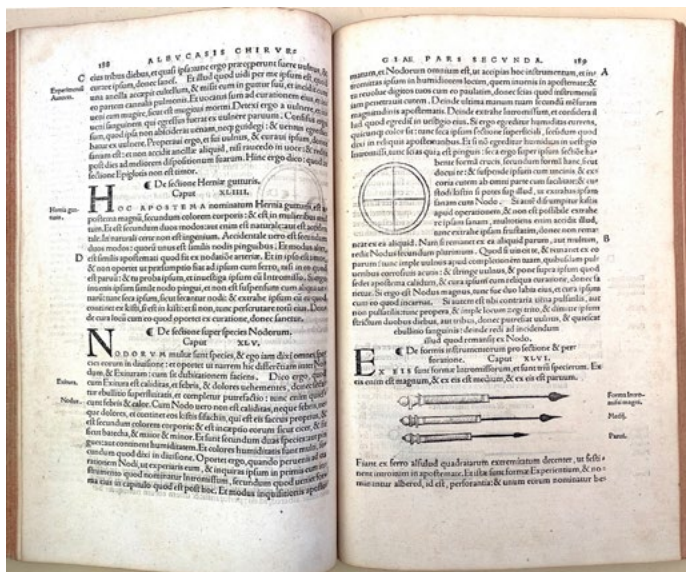
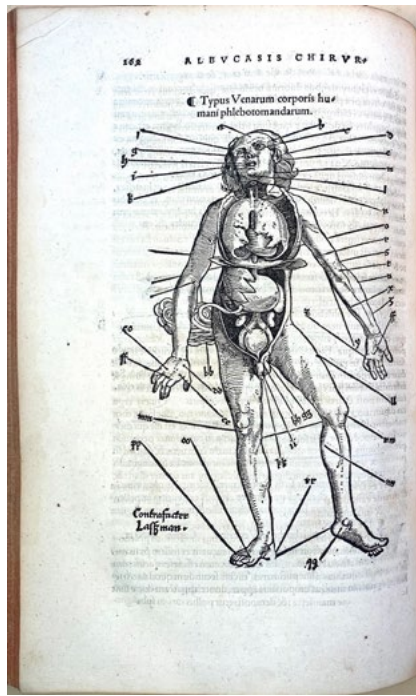
No. 2. Abulcasis

1. Abel, John J. (1857-1938) and **Walter S. Davis.** On the pigment of the negro's skin and hair. *Offprint from Journal of Experimental Medicine* 1 (1896). 40pp. Plate. 244 x 170 mm. Original printed wrappers, slightly chipped, small marginal tears in back wrapper mended with clear tape, unobtrusive French library stamp on front wrapper. Small dampstain in the lower corner of the last few leaves, but very good. *Presentation Copy*, inscribed on the front wrapper: "With the compliments of John J. Abel." \$450

First Edition, Offprint Issue. Abel and Davis conducted the first detailed analysis of the chemical composition of black skin pigment (melanin). They concluded that "In the present state of our knowledge we can only say that it seems highly probable that the pigment of the negro's hair is not different from the dark pigment found in the hair of the white races, and we may infer that the pigment of the black skin differs only in amount and not in kind from that deposited in the skin of the white man" (p. 40). Abel founded the department of pharmacology at Johns Hopkins and made a number of important discoveries during his long tenure there, including the isolation of epinephrin and the crystallization of insulin. Garrison-Morton.com 13027. 46094



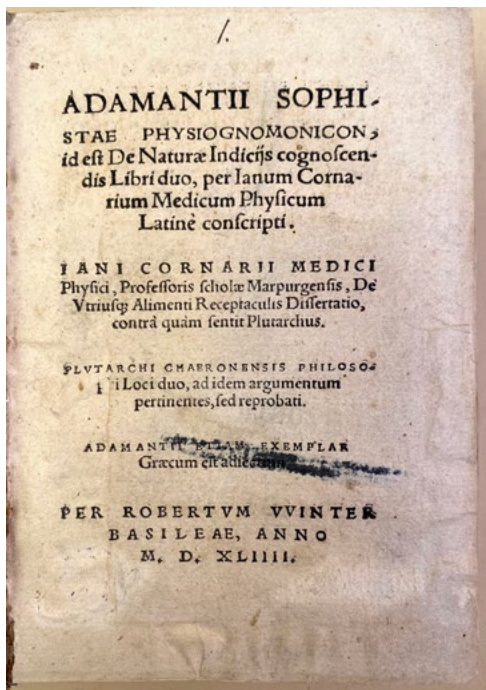
2. [Abulcasis (936-1015).] [Priscianus, Theodorus (fl. 4th cent.)] Horatianus, Octavius. *Rerum medicarum lib. quatuor . . . Albucasis [sic] chirurgicorum omniu[m] primarii, lib. tres . . . Folio. [8], 319pp.* 8 full-page woodcuts by Hans Wechtlin (ca. 1480 – post 1526). Argentoratum [Strasbourg]: apud Joannem Schottum, 1532. 307 x 202 mm. Old calf, rebaked, corners worn, covers a bit rubbed. Library stamp removed from title, occasional spotting, but very good. Early ownership signature at the foot of the title; manuscript notes in what appears to be another early hand in the title margins. \$27,500



Third Latin edition, first published in 1497, of three books of surgery from the *Kitab al-Tasrif* of Arabic physician Abu al-Qasim Khalaf ibn al-Abbas al-Zahrawi. Al-Zahrawi, whose first name was Latinized as Abulcasis or Albucasis, was the personal physician to Hakam II, Caliph of Córdoba in Muslim Spain; he ranks with Ibn Sina (Avicenna) among the most important Arabic medical writers of the medieval period. His encyclopedia in thirty volumes, *Kitab al-Tasrif* (The art of healing), which took over 50 years to complete, was issued around the year 1000. The work's last and most famous volume, on surgery, represents the first rational, complete and illustrated treatise on surgery and surgical instruments; it was translated into Latin by Gerard de Cremona in the 12th century and remained the leading European

textbook on surgery for the next three hundred years.

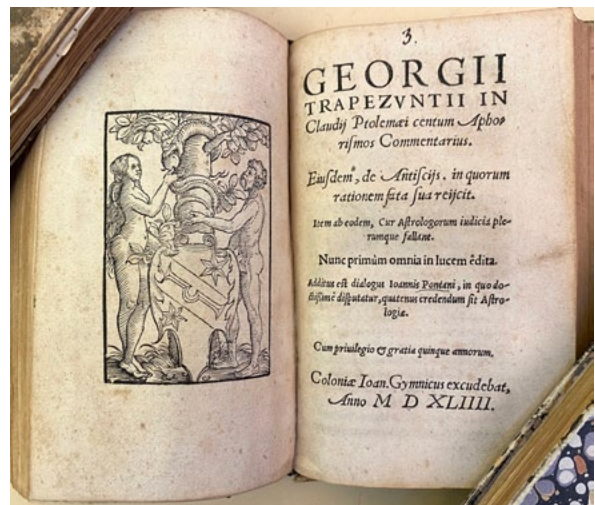
The present edition contains three books from the *Kitab al-Tasrif's* surgical volume, dealing with cauterization, incisions, bloodletting, wound treatment, fractures and dislocations. The book opens with a woodcut of the famous "Wound-Man" image illustrating roughly 30 different types of injury, together with the weapons and other instruments that cause them; other woodcuts depict surgical instruments. Preceding Abulcasis's surgical treatise in this edition is the first edition of the *Rerum medicarum* by Theodorus Priscianus, a fourth-century Greek physician who lived in Constantinople. The four books of Theodorus's treatise cover external and internal ailments, physiology and the diseases of women. Adams P-2119. Stillwell, *The Awakening Interest in Science During the First Century of Printing*, no. 532. 45940



16th-Century Pseudoscience—Works on Physiognomy, Chiromancy and Astrology

3. Adamantius (fl. 5th century CE). Physiognomicon, id est de naturae indiciis cognoscendis libri duo, per Ianum Cornarium medicum physicum latine constripti. 8vo. 203, [5]pp. Basel: Robert Winter, 1544. [With:] **Cocles, Bartolommeo della Rocca** (1467-1504). Physiognomiae et chiromantiae compendium. 8vo. [214]pp. Numerous text woodcuts of chiromancy. Strasbourg: Apud Ioannem Albertum, 1536. [With:] **George of Trebizond** (1396-1486). Georgii Trapezuntii in Claudius Ptolemaei centum aphorismos commentarius . . . item ab eodem, cur astrologorum iudicia plerumque fallant . . . Additus est dialogus Ioannis Pontani, in quo doctissime disputatur, quatenus credendum sit astrologiae. 8vo. [208]pp. Cologne: Ioan. Gymnicus, 1544. Together 3 books in 1 volume. 142 x 95 mm. Blindstamped pigskin, a few wormholes, lower portion of spine repaired, original leather ties lacking. Occasional spotting, light toning but very good. Library stamp removed from title verso. Very good to fine copies. Old woodcut bookplate; 20th-century owner's stamp on the front pastedown.

\$6000





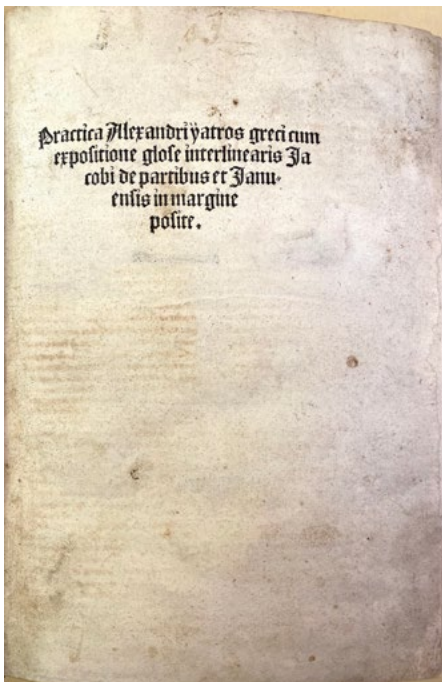
First Edition of Cornarius's Latin translation of Adamantius; later editions of Cocles's and George of Trebizond's treatises. Adamantius, a fifth-century Graeco-Jewish physician, was a native of Alexandria; he converted to Christianity after the patriarch of the city expelled the Jews in 415. His *Physiognomicon* is essentially an abridgement of Antonius Polemon's treatise on physiognomy from the second century CE, a work that survives today only in a 14th-century Arabic translation. This Latin translation by the German humanist Janus Cornarius (ca. 1500 – 1558) includes Adamantius's original Greek text as well as Cornarius's *De utriusque alimenti receptaculis dissertatio, contra quam sentit Plutarchus*.

Bartolommeo della Rocca, also known as Cocles, was a Bolognese scholar of chiromancy, physiognomy and astrology; he was assassinated in 1504 by Bolognese nobleman Ermete Bentivoglio for predicting that Ermete would die in battle. Cocles's treatise on physiognomy and chiromancy (palm-reading), his main work, was originally published in 1504 under the title *Chyromantiae ac physiognomiae anastasis*; the work first appeared under the present title in 1533. It consists of a preface by Cocles, an anonymous handbook of physiognomy and Andrea Corvo's

15th-century treatise on chiromancy, the latter two illustrated with numerous woodcuts.

The final work in this volume is a later edition of George of Trebizond's commentary on pseudo-Ptolemy's *Centiloquium*, a medieval collection of one hundred aphorisms about astrology and astrological rules. This edition includes a brief work on astrology by the Italian humanist Giovanni Pontano (1426-1503). 45943

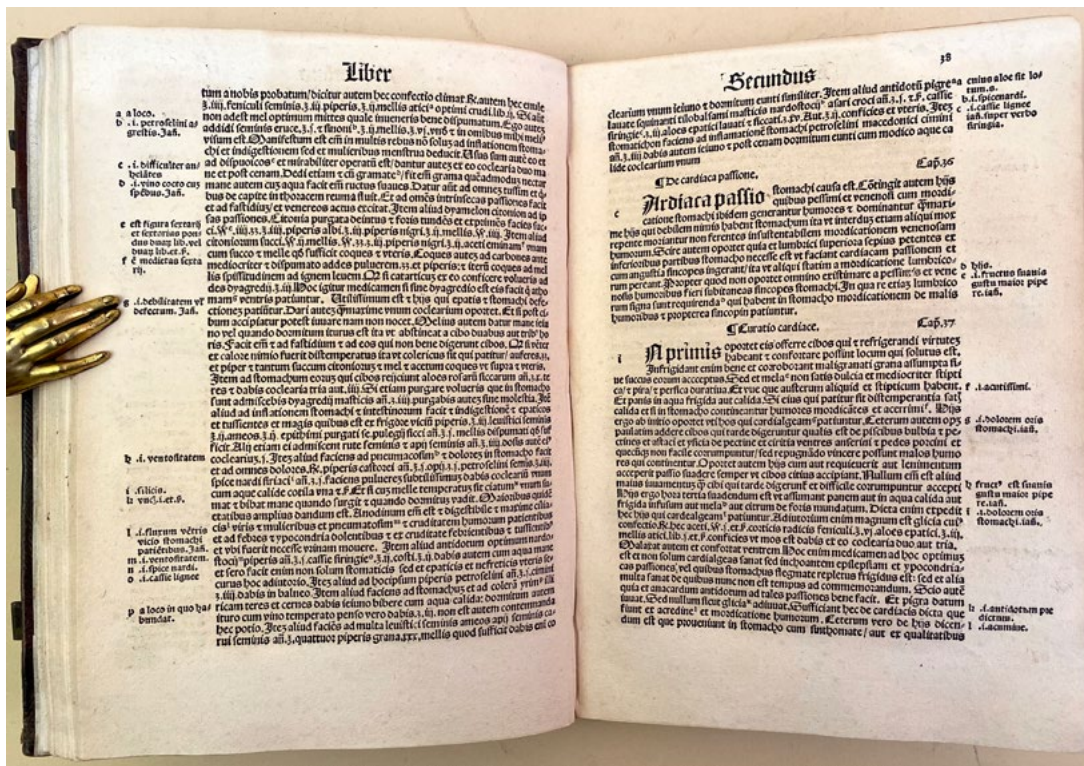
4. Alexander of Tralles (ca. 525 – ca. 605). *Practica Alexandri yatroz grecium expositione glose*



interlinearis Jacobi de partibus et Januensis in margine posita. 4to. [8], 93, [1]ff. Lyon: Franciscus Fradin, 1504. 241 x 162 mm. 18th- or 19th-century diced calf gilt, brass bosses and clasp fittings in imitation of a 16th-century binding, light rubbing and wear, remains of paper label on spine. Margin of first leaf repaired, stamp removed from second-to-last leaf, minor foxing and soiling, but very good. A few marginal annotations in an early hand (some cropped), verso of last blank with a 31-line inscription in what may be the same early hand. \$14,500

Editio princeps of Jacques Despars's Latin translation of the *Twelve Books on Medicine* by Alexander

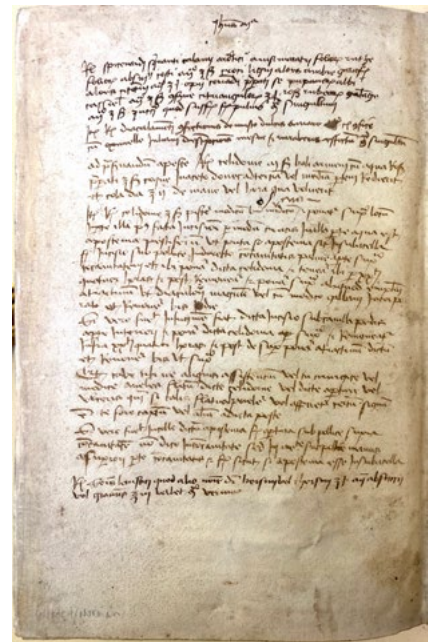
of Tralles, perhaps the most eminent physician from the early Byzantine era. **Rare**—there are no auction records for this title, and OCLC does not list any copies in North American libraries, citing only six actual

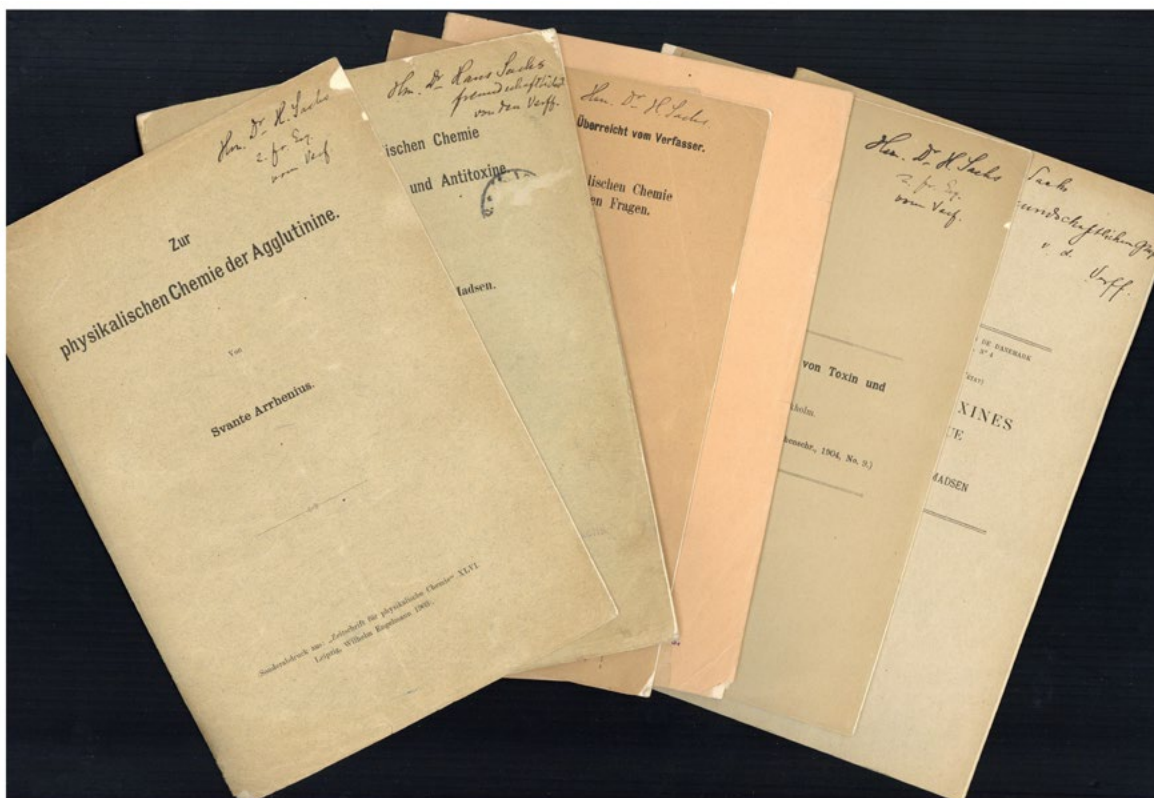


copies overall (Strasbourg, Bib. Ste.-Genevieve, Lyon, Danish Library, Bibliothèque Nationale, Univ. Aberdeen). This is the first copy of the 1504 *Practica* that have been handled in our over fifty years in the trade.

Alexander was one of several physicians in late antiquity who played a crucial role in “shaping a medical tradition and transfer of medical knowledge . . . In particular, Alexander of Tralles amalgamates his abilities as a compiler with his own extensive clinical experience, producing works which are marked by a strong authorial presence. Even though he was much influenced by the theories and practices of Galen and followed a Hippocratic understanding of humoral pathology and physiology, he kept on striving to find new ways of treating disease and researching the effectiveness of his therapies. He conscientiously cited earlier authorities and did not hesitate to disagree even with Galen when common sense demanded . . . Alexander’s main work, the *Therapeutics* [the present work], follows the well-established medical tradition of writing *a capite ad calcem* (from head to toe) and has details on diagnosis and treatment of diseases divided into twelve books” (Bouras-Vallianatos, pp. 338-339).

Twelve Books is the largest surviving work by Alexander. Most of his other writings are lost, although they are known to have once been available in Greek, Latin, Hebrew and Arabic versions. Garrison-Morton.com 34. P. Bouras-Vallianatos, “Clinical experience in Late Antiquity: Alexander of Tralles and the therapy of epilepsy,” *Medical History* 58 (2014): 337-353. 46062





5. Arrhenius, Svante (1859-1927). Collection of 6 offprints on immunochemistry from the library of Hans Sachs (1877-1945) as listed below, five with presentation inscriptions to Sachs from Arrhenius. 1903-1904. Overall very good; see below for condition details. \$750

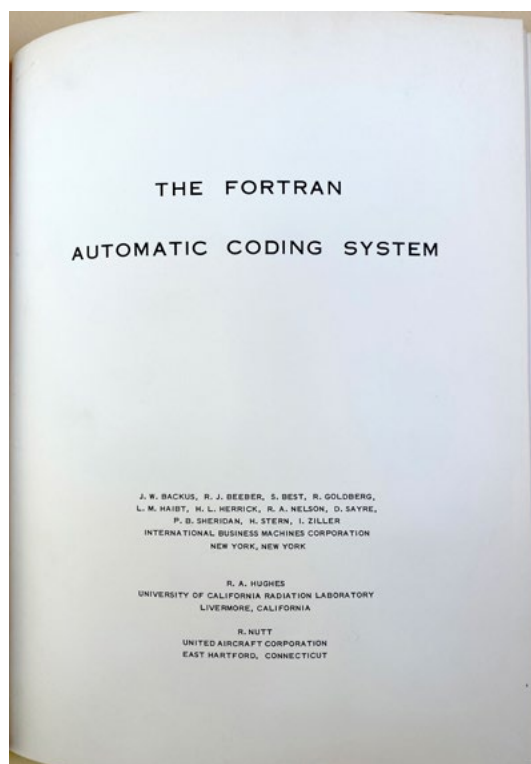
1. (with Thorvald Madsen [1870-1957].) Anwendung der physikalischen Chemie auf das Studium der Toxine und Antitoxine. Offprint from *Zeitschrift für physikalische Chemie* 44 (1903). 7-62pp. 229 x 156 mm. Original printed wrappers, a few chips and stains, spine worn. Front wrapper inscribed: "Hrn. Dr. Hans Sachs freundschaftlichet von den Verf." Sach's stamp on front wrapper.
2. Zur physikalischen Chemie der Agglutinine. Offprint from *Zeitschrift für physikalische Chemie* 46 (1903). 415-426pp. 230 x 157 mm. Original printed wrappers, a bit chipped and creased. Front wrapper inscribed: "Hrn. Dr. H. Sachs z. fr. Erg. vom Verf."
3. Die Anwendung der physikalischen Chemie auf die serumtherapeutischen Fragen. Offprint from *Festschrift Ludwig Boltzmann gewidmet zum sechzigsten Geburtstage 20 Februar 1904* (Leipzig: J. A. Barth, 1904). 860-865pp. 221 x 143 mm. Original printed wrappers, back wrapper detached, a few chips. Front wrapper inscribed: "Hrn. Dr. H. Sachs." Sachs's stamp on the front wrapper.
4. Die Anwendung der physikalischen Chemie auf die Serumtherapie. Berlin: Julius Springer, 1904. 16pp. 227 x 153 mm. Original printed wrappers, back wrapper lacking. Hans Sachs's stamp on the front wrapper.
5. Zur Theorie der Bindung von Toxin und Antitoxin. Offprint from *Berliner klinische Wochenschrift* (1904). 16pp. 223 x 142 mm. Original printed wrappers, a bit chipped. Front wrapper inscribed: "Hrn. Dr. H. Sachs z. fr. Erg. vom Verf."
6. (with Thorvald Madsen.) Toxines et antitoxins: Le poison diphthérique. Offprint from Académie Royale des Sciences et des Lettres de Danemark, *Bulletin de l'année 1904* (1904). 269-305pp. 234 x 148 mm. Original printed wrappers, a bit sunned. Front wrapper inscribed: "Herrn Dr. Hans Sachs mit freundschaftlichen Gruß v. d. Verff."

First Editions, Offprint Issues of nos. 1-3 and 5-6. Arrhenius, who received the Nobel Prize for chemistry in 1903 for his electrolytic theory of dissociation, spent the last part of his career the field of immunochemistry, a term he established via his book of that name published in 1907 (see Garrison-Morton.com 2564.1). “Arrhenius’s work in immunochemistry . . . was an attempt to study toxin-antitoxin reactions, principally diphtheria reactions, using the concepts and methods developed in physical chemistry. Together with Torvald Madsen, director of the State Serum Institute in Copenhagen, he carried out wide-ranging experimental studies of bacterial toxins as well as plant and animal poisons. The technical difficulties were too great, however, for Arrhenius to realize his aim of “making immunology an exact science” (“Svante Arrhenius,” *Encyclopaedia Britannica* [online]).

Arrhenius inscribed five of the six papers in this collection to German serologist Hans Sachs, best known for his work on improving the diagnosis of syphilis; see Garrison-Morton.com 2408. 46103

FORTRAN: The Earliest Published Documentation

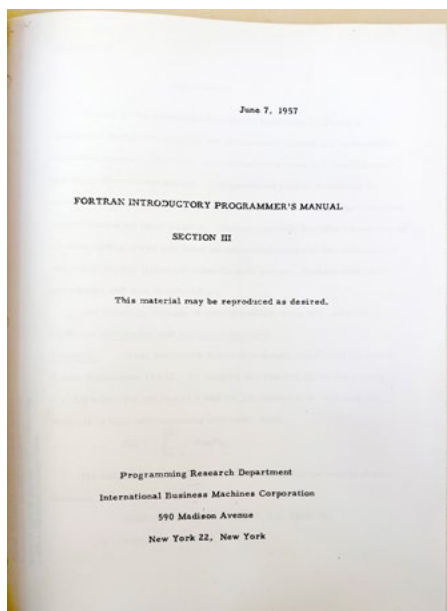
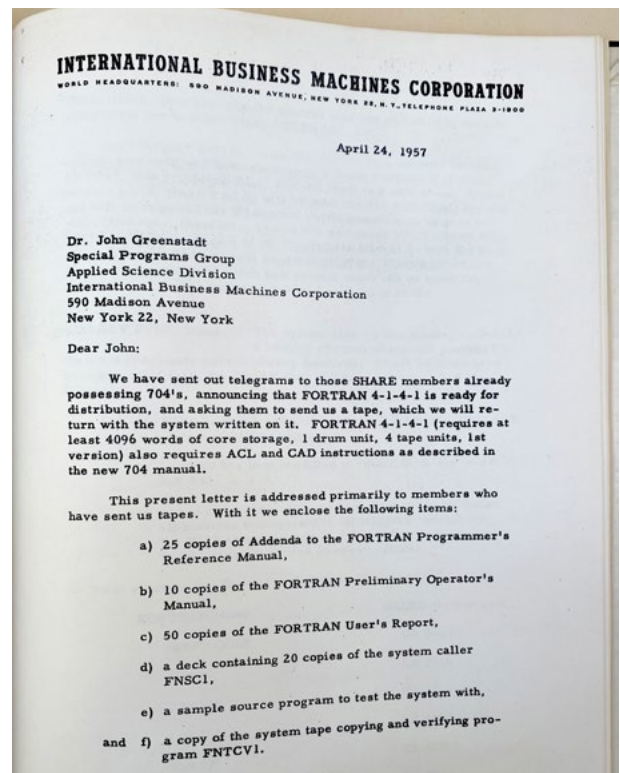
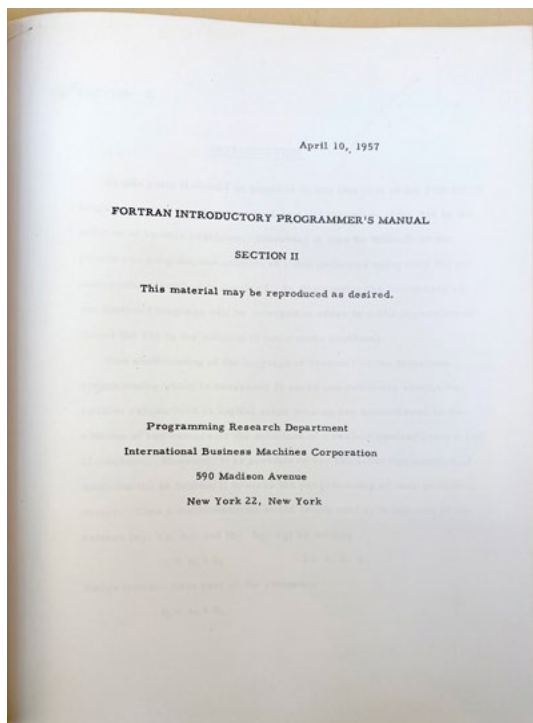
6. [Backus, John W. (1924-2007).] (1) FORTRAN introductory programmer’s manual. Section I. New York: Programming Research Department, IBM, March 20, 1957. Reproduced typescript. [2], 37 [1]pp. (2) FORTRAN introductory programmer’s manual. Section II. New York: Programming Research Department, IBM, April 10, 1957. Reproduced typescript. [2], 31 [1]pp. (3) FORTRAN introductory programmer’s manual. Section III. New York: Programming Research Department, IBM, June 7, 1957. Reproduced typescript. [2], 28pp., 6ff., plus errata leaf. (4) Preliminary operator’s manual [for] the FORTRAN automatic coding system for the IBM 704 EDPM. Photocopy of typescript. New York: Programming Research Department, IBM, April 8, 1957. [1], 37ff. (5) Backus et al. The FORTRAN automatic coding system. N.p., n.d. [1957]. Reproduced typescript. 49 [1]pp. (6) Backus. Typed letter signed (photocopy) to John Greenstadt. New York, April 24, 1957. 3ff. (7) Backus. Typed letter signed (photocopy) to Franz E. Ross. New York, May 7, 1957. 1 f. (8) FNEDT1. FORTRAN editing program. New York: Programming Research Department, IBM, May 8, 1957. Reproduced typescript. 3ff. Together 8 items in one volume. 274 x 211 mm. Cloth. Very good. Stamp and withdrawal markings of the Institut für Praktische Mathematik, Technische Hochschule, Darmstadt.



\$6000

First Editions of all but no. (5). *In our experience collecting and dealing in the history of computing literature for the past 30 years, this is the only copy of these founding publications on Fortran that has been available on the market.*

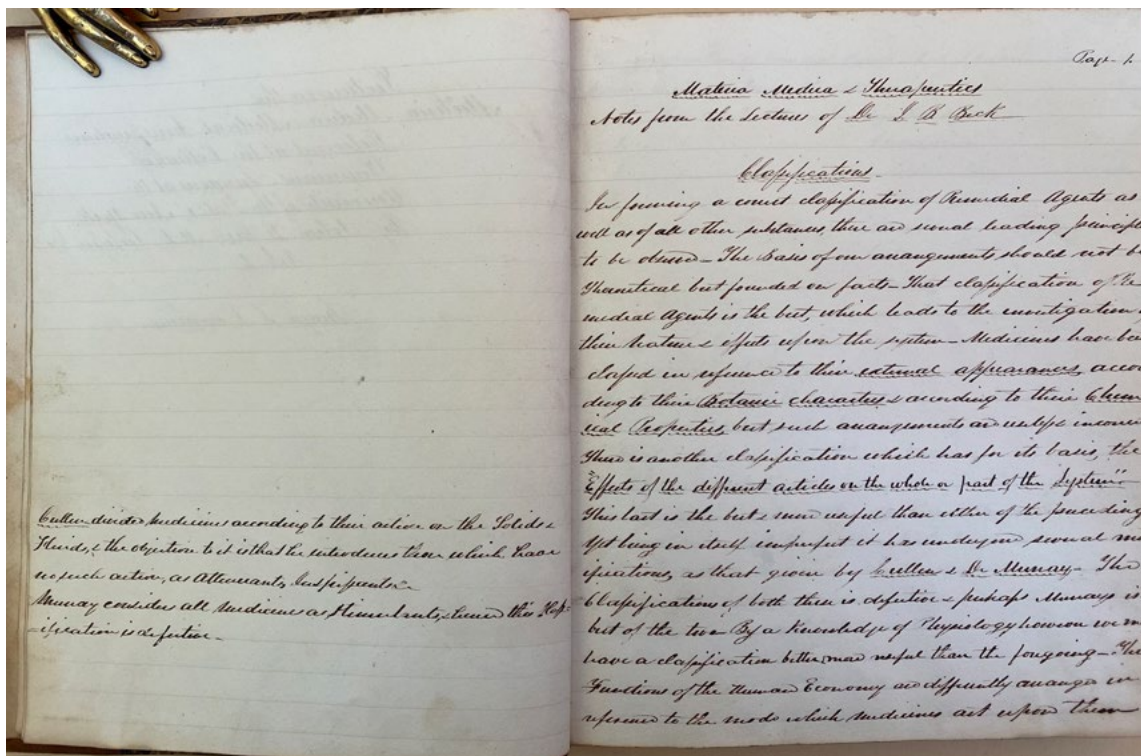
“Originally developed by IBM for scientific and engineering applications, FORTRAN came to subsequently dominate scientific computing. It has been in use for over six decades in computationally intensive areas such as numerical weather prediction, finite element analysis, computational fluid dynamics, geophysics, computa-



tional physics, crystallography and computational chemistry. It remains a popular language for high-performance computing, and is used for programs that benchmark and rank the world's fastest supercomputers" (Wikipedia).

Backus was the leader of the IBM team that created FORTRAN, the first high-level programming language. The FORTRAN language was completed in late 1954, and a FORTRAN compiler was programmed and tested in 1955–56. Shipment of the FORTRAN system began in April 1957 to IBM 704 users, most of whom gave it high marks. "A year later a SHARE survey of twenty-six 704 installations revealed that over half were using it for a majority of their problems . . . Productivity studies at the General Motors Research Laboratories installation showed that compared to assembly language FORTRAN reduced programming and coding effort by a factor of between five and ten" (Bashe *et al.*, *IBM's Early Computers*, p. 357). Although FORTRAN originated as an IBM product, within two decades it had become the property of the computer world at large.

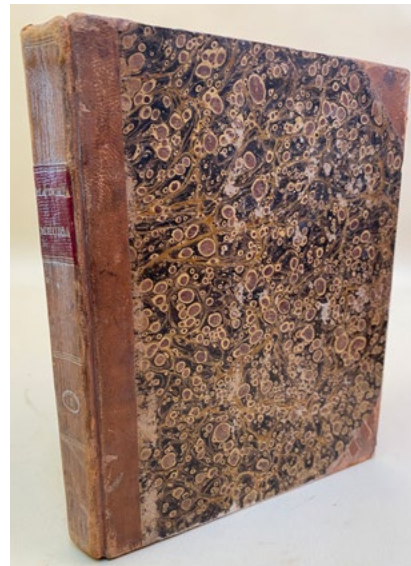
The three sections of the *FORTRAN Introductory Programmer's Manual* (nos. [1] – [3]) were distributed in advance of publication "to permit [their] easy use for teaching purposes." No. (4) was distributed with the first FORTRAN system tapes; "it describes how to use the tape editor and how to maintain the library of functions. Five pages of such general instructions are followed by thirty-two pages of error stops" (Backus, p. 40). No. (5) is a reprint of a paper published in the 1957 *Proceedings of the Western Joint Computer Conference*, nos. (6) – (7) are copies of letters Backus sent to members of IBM's SHARE program, and no. (8) is a program for producing "an up-to-date FORTRAN system tape from an original master tape and an up-to-date correction deck." Backus, "The history of FORTRAN I, II and III," in R. L. Wexelblat, ed. *History of Programming Languages*, pp. 25–45. *Origins of Cyberspace* 447 (this copy). 46117



7. [Beck, John B. (1794-1851).] Lectures on the materia medica and medical jurisprudence delivered at the College of Physicians & Surgeons at the University of the State of New York by John B. Beck. M.D. Professor &c. vol. I. Manuscript lecture notes written by Benjamin S. Downing (1810-34). [1], 127ff. [New York, ca. 1831.] 199 x 162 mm. Half sheep, marbled boards ca. 1831, light rubbing and wear. Very good. \$1250

Beck, an early American authority on forensic medicine, taught materia medica and medical jurisprudence at the New York College of Physicians and Surgeons; he also helped to found the *Medical and Physical Journal* and held several important positions in the state's various medical organizations throughout his career. He was the younger brother of Theodorick Romeyn Beck, whose *Elements of Medical Jurisprudence* (1823) was the first notable American textbook on forensic medicine; the work incorporates John Beck's 1817 medical thesis on infanticide, which became a standard treatise on the subject.

The present notebook, written in a neat and legible hand, contains notes of Beck's lectures on materia medica and forensic medicine taken by Benjamin S. Downing, who graduated from the College of Physicians and Surgeons in 1832. Notebooks like this provide a unique insight into how medicine was taught in the United States in the first half of the nineteenth century. Kelly and Burrage, *American Medical Biographies*. 45610

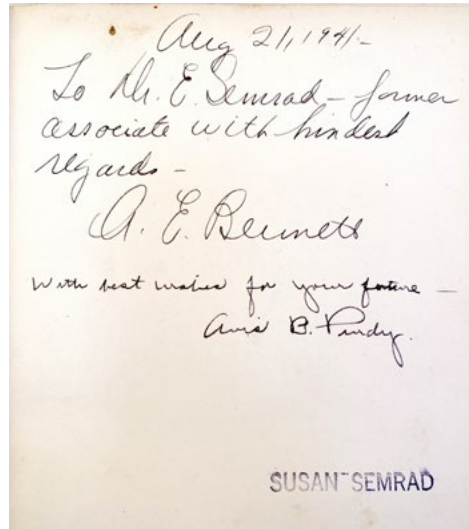
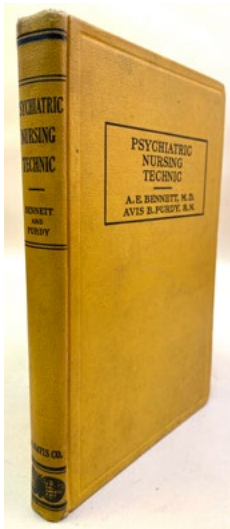




8. Bell, Thomas (1792-1880). Cabinet-size photographic portrait by Maull and Polyblank, mounted on heavy paper printed with gilt borders. [London, 1855.] 198 x 146 mm. (image); 303 x 253 mm. (mount). Traces of mounting on verso, but fine otherwise. \$950

Excellent portrait of British zoologist Thomas Bell, who described the reptile specimens brought back by Charles Darwin from the *Beagle* expedition and was the author of several illustrated books on natural history, including *A Monograph of the Testudinata* (1832-36) and *A History of the British Stalk-Eyed Crustacea* (1844-53). Bell played a significant role in the inception of Darwin's theory of evolution when he confirmed that the giant Galapagos tortoises were native to the islands rather than imported by buccaneers for food as Darwin had originally thought. He also chaired the momentous 1 July 1858 meeting of the Linnean Society at which Darwin and Wallace presented their joint paper on the theory of evolution by natural selection.

Victorian photographers Henry Maull (1829-1914) and George Polyblank set up their first studio in 1854, specializing in portraits of literary, artistic and scientific notables. The present portrait of Bell is from Maull & Polyblank's series *Literary and Scientific Men*, issued in 1855. 45679



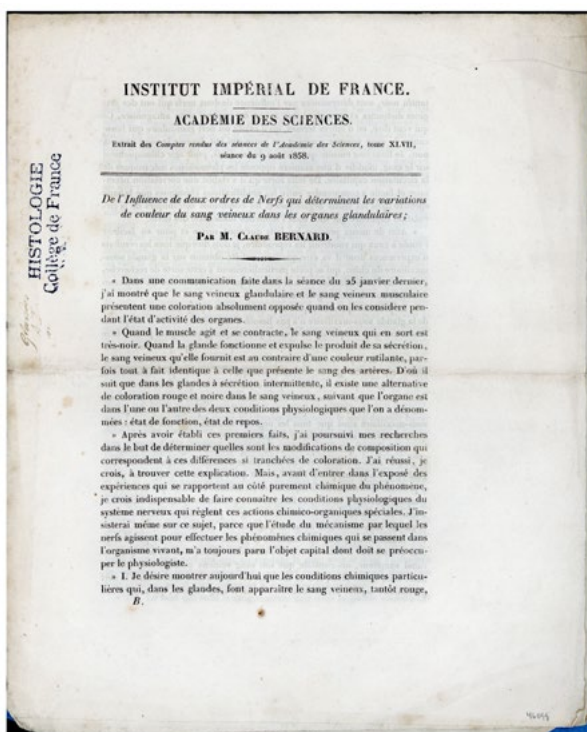
9. Bennett, Abram Elting (1898-1985); **Avis B. Purdy**. Psychiatric nursing technic. 172pp. Text illustrations. Philadelphia: F. A. Davis, 1940. 216 x 145 mm. Original cloth, a bit soiled, minor wear to extremities. Very good. *Presentation Copy*, inscribed by both authors to Dr. Elvin B. Semrad (1909-76) on the front free endpaper: "Aug. 21, 1941—To Dr. E. Semrad—former associate with kindest regards—A. E. Bennett. With best wishes for your future—Avis B. Purdy." Stamp of Susan Semrad on front free endpaper. \$275

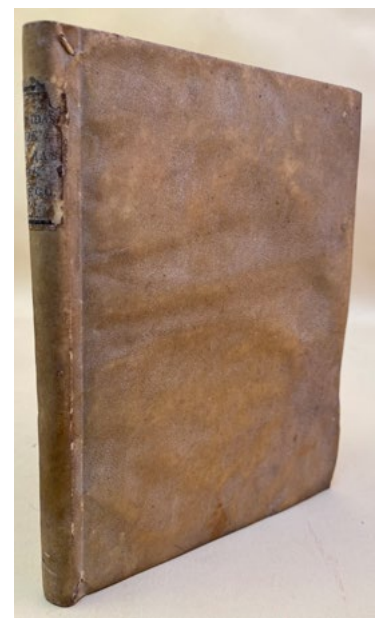
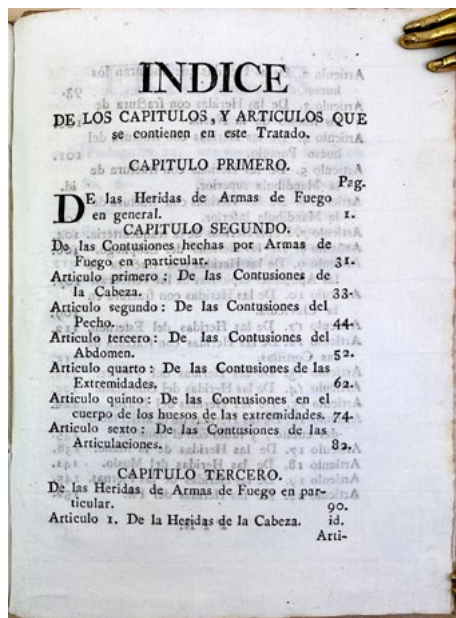
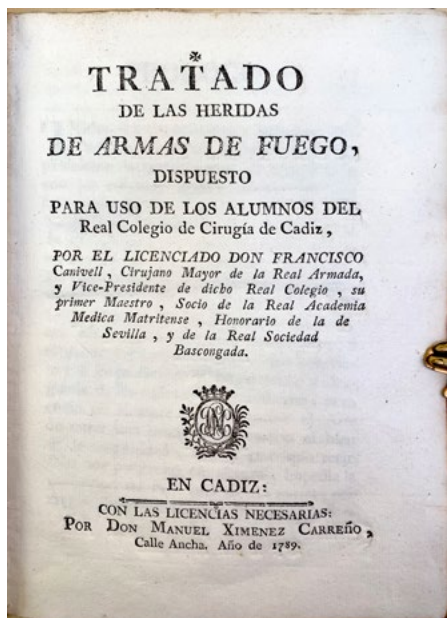
First Edition. "In the actual treatment of mental illness, the nurse and attendant often play a great part . . . With these thoughts in mind, we have formulated certain rules and described various ward procedures in common use in every modern psychiatric hospital in order to guide the newcomer in scientific psychiatric nursing" (p. 7). Bennett, an American psychiatrist, is best known for his work on electroconvulsive therapy; he introduced the use of curare to prevent fractures and other adverse effects caused by shock treatments. The recipient of this copy, Dr. Elvin Semrad, was an American psychoanalyst who rose to become the Harvard Professor of Psychiatry at the Massachusetts Mental Health Center; he was described by a former colleague as "among the most influential and beloved teachers of psychotherapy in his generation" (Good, p. 183). Garrison-Morton.com 13073. M. Good, "Elvin V. Semrad (1909-1976): Experiencing the heart and core of psychotherapy training," *American Journal of Psychotherapy* 63 (2009): 183-205. 46107

Discovery of the Vasomotor Nerves

10. Bernard, Claude (1813-78). De l'influence de deux ordres de nerfs qui déterminent les variations de couleur de sang veineux dans les organes glandulaires. Offprint from *Comptes rendus des séances de l'Académie des Sciences* 47 (1858). 8pp. 281 x 229 mm. (uncut). Original plain wrappers, creased horizontally, tiny chips in spine, 1 or 2 small stains. Light foxing but very good. Library stamp on first page. \$950

First Edition, Offprint Issue of Bernard's paper announcing his discovery of the vasomotor nerves. "The announcement of the completed discovery was made to the Academy of Sciences August 9, 1858. There were two new experiments. In the first, Bernard cut the vein of the submaxillary gland to estimate the rate of blood flow through it. He found that the drops escaped much faster during stimulation of the chorda tympani [a branch of the facial nerve] than when the gland was at rest; the blood was bright red and had a pulsatory movement. He now drew the conclusion that the dilation of the vein resulting from the stimulation of the chorda tympani permitted the blood to enter the vein so rapidly that the arterial pulsation was not lost (i.e., a venous pulse was produced). In the second experiment, he took advantage of the double nerve supply to the submaxillary gland, and by stimulating the sympathetic nerve caused the vessels to constrict, the blood flow to decrease almost to zero, and the blood itself to become dark. His result was now perfectly clear-cut. The sympathetic nerve acts to constrict the blood vessels of the submaxillary gland, the chorda tympani to dilate them, and these actions accompany the secretory function of the gland so as to furnish an abundant blood supply during actual secretion. The action of both vasomotor and vasoconstrictor nerves had been demonstrated in a flawless experiment" (Olmsted, *Claude Bernard and the Experimental Method in Medicine*, p. 105). Bernard has been called "the founder of the modern concept of vasomotricity" (Montastruc, Rascol and Senard, p. 183). Montastruc, Rascol and Senard, "The discovery of vasomotor nerves," *Clinical Autonomic Research* 6 (1996): 183-187. Garrison-Morton.com 774. 46099

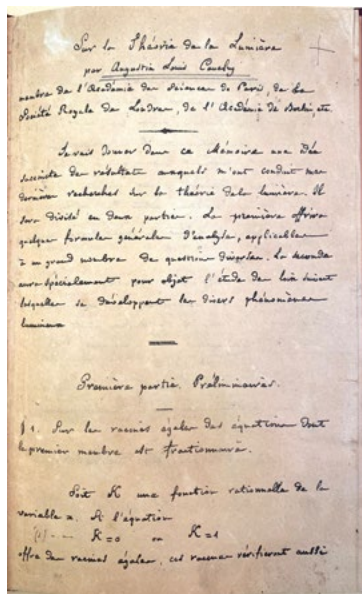




11. Canivell [y Vila], Francisco (1721-96). *Tratado de las heridas de armas de fuego, dispuesto para uso de los alumnos del Real Colegio de Cirugia de Cadiz*. 4to. [8], 156, [4]pp. Cadiz: Por Don Manuel Ximenez Carreño, 1789. 194 x 143 mm. Vellum ca. 1789, paper spine label (dulled and chipped), light wear and soiling. Very good, crisp copy. Small label with book number tipped to the inside front cover. \$750

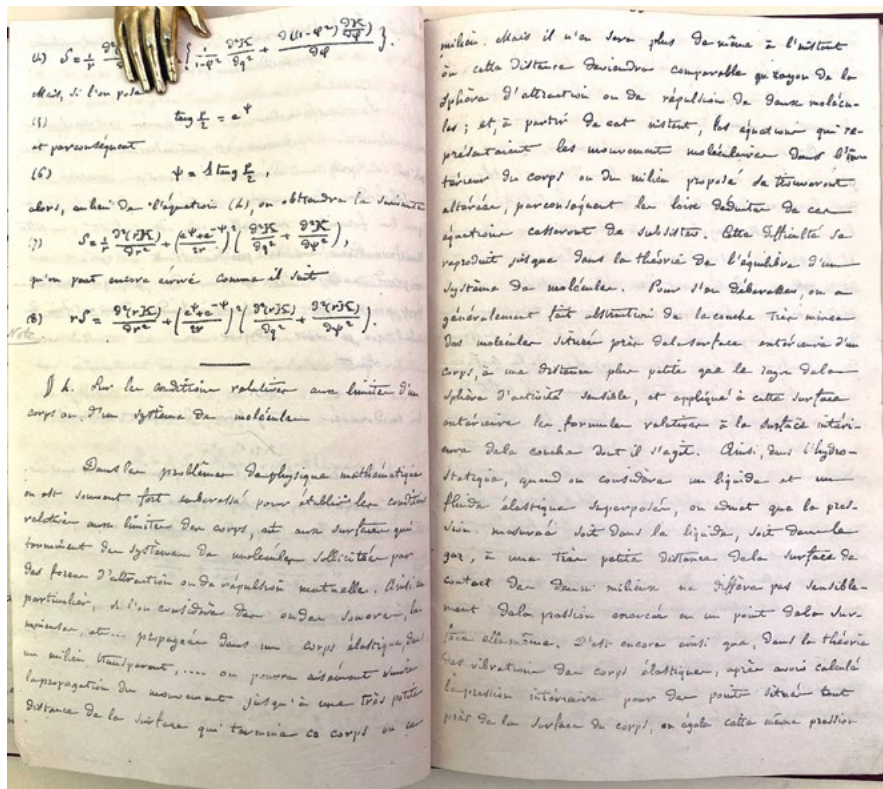
First Edition of this Spanish treatise on the treatment of gunshot wounds. Canivell’s work, prepared for the use of students at Cadiz’s Royal College of Surgery, deals with contusions, wounds and fractures caused by gunshots, starting with wounds to the head and progressing downward through the various parts of the body to the legs and feet. Canivell studied medicine in both Spain and France and served as a naval surgeon during various campaigns in Italy and North Africa; his writings “reflect a good knowledge of European surgical literature associated with rich personal experience” (TheBiography.us. “Biography of Francisco Canivell y Vila (1721-1796).” *TheBiography.us*, 2018). Garrison-Morton.com 13134. 46100

12. Cauchy, Augustin Louis (1798-1857). *Sur la théorie de la lumière*. Lithograph document reproduced from Cauchy’s autograph manuscript. 96pp. N.p. [Prague], August 1836. 213 x 133 mm. 19th-century cloth, slightly worn. Margins trimmed affecting some page numbers, a few small lacunae at gutter margin of first leaf (not affecting text), but very good. Some marginal pencil annotations; ownership stamp on front free endpaper. \$750



reproduced from Cauchy’s autograph manuscript. 96pp. N.p. [Prague], August 1836. 213 x 133 mm. 19th-century cloth, slightly worn. Margins trimmed affecting some page numbers, a few small lacunae at gutter margin of first leaf (not affecting text), but very good. Some marginal pencil annotations; ownership stamp on front free endpaper. \$750

First Edition of Cauchy’s 1836 *Traité de la lumière*, “a 96-page lithographed publication on light, dated August, which is **very rare** and not in his *Works*: a German translation/edition appeared in 1842. After stating various results in pure mathematics, including the expressibility of sums as integrals, [Cauchy] ran through equations and solutions for the propagation of light in various kinds of media. Among his notations, he used some exotic operator symbols to denote differentiation and related techniques” (Grattan-Guiness, *Convolution in French Mathematics 1800-1899*, 2, p. 1246; emphasis ours). OCLC notes only four copies in libraries—Staatsbibliothek zu Berlin, Huntington Library, Harvard and Oxford. *This lithographed edition resembles a manuscript and may be confused with one.*



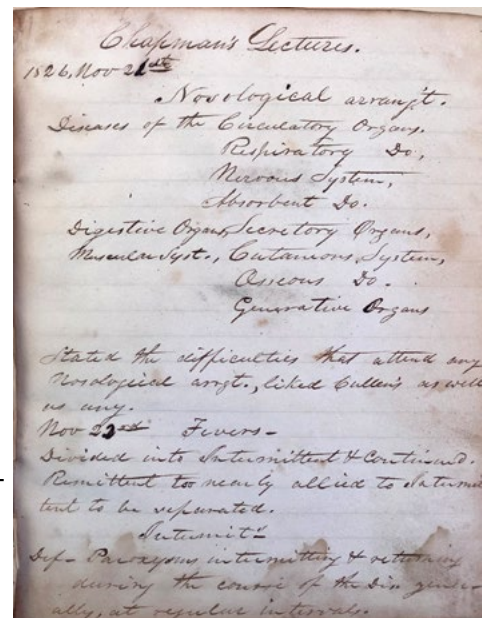
Cauchy's monograph appeared during his self-imposed eight-year exile from France following the July Revolution of 1830, which deposed the reigning Bourbon monarch, Charles X, and forced him to flee the country. For part of this time Cauchy served the exiled Bourbon court as science tutor to Charles X's grandson, and his court duties prevented him from publishing as frequently as he had prior to leaving France. On page 94 of his monograph, Cauchy reports that "circumstances independent of my will"—probably something to do with the court—"oblig[e] me to interrupt the execution of my project" (*ibid.*) 46112.

13. Chapman, Nathaniel (1780-1853); **John Redman Coxe** (1773-1864). Manuscript notebook containing notes on Chapman's and Coxe's medical lectures at the University of Pennsylvania and related material, written by Evert Denton (1789-1830). Approximately 88 leaves (including 3 blanks), unnumbered. Philadelphia and Chardon, Geauga County, Ohio, 21 November 1826 – 5 November 1829. 193 x 157 mm. Original calf-backed marbled boards, rubbed, front hinge starting. Some dampstaining, a few leaves loose, one leaf partly excised, but very good. Signed on the front pastedown by Denton and his son, Richard E. Denton.

\$1750

Excellent and legibly written contemporary record of early nineteenth-century medical lectures delivered at the University of Pennsylvania by two well-known early American physicians: Nathaniel Chapman, professor of the theory and practice of medicine, and John Redman Coxe, professor of materia medica and pharmacy.

Chapman, a pupil of Benjamin Rush, founded what is now the *American Journal of the Medical Sciences* in 1820, and in 1847 was the



Coxe's Lectures. Nov-26th 1826

Recommends to students to make their own Preparations & to get an intimate acquaintance with the articles of M[at]eria Med[ica].

The system rests on the Med. not the M.D. on the system. Hence the uncertainty of the practice. The head to science, a circle, begin where we will have something to settle before us. The uniform system of Education ought to be laid down by government.

Materia Med. divided into Reputable, Animal & Mineral Kingdoms. Alphabetical order, perhaps, for convenience may be as good as any. Not proper for a course of lectures.

The articles of Mat. Med. may be considered in a three-fold view, viz. Nat. History, Medicinal history & shall spend but little time on Nat. Hist. of Mat. Med. The only way we estimate the value of any article is by a comparison of its medicinal circumstances. Show wherein its uses consists.

To Dr Cooley. Oct 15th 1829.

Dear Sir,

An opportunity offering of forwarding a letter to within a short distance of you, by a private conveyance, I avail myself of it by addressing a few lines to you. For some time past I have been torturing my brain to conjecture the cause of your long silence. If it proceed not from one of two causes - some sad disaster having happened to you, or an absolute want of (your) friends help; I shall be easy to me immediately. Tell me how the world goes, what you are doing &c. &c. This vicinity has very healthy during the summer past & continues. Our village grows a little, by the addition of, one and then, a Mechanic, and occupies from the state of N. Y. a merchant. We have had the services of an Episcopal Clergyman 1/8 of the time, for some time past. I flatter our selves with the hope of some improvement in the state of Society. Our friend Mr Hunt is over another way to the country from North. While we be wait a little letter of Mr. Johnson

from Springfield (you probably recollect the former) was a student in the Theological Sem. in Andover, N. Y. I could not see the other day, but I was unfortunately from home. I did not have the pleasure of seeing him. I had formerly of Paddy Brook, who was in Alleghale Co. was at my house not long since. I have some thoughts of relinquishing Med. Study. What do you think of it? Don't laugh. As to the former, God be praised, we enjoy excellent health. We will start in a few days for Knoxville Co. in Knox Co. N. C. I will be glad to hear of you & enquire what has become of Dr. C. I have us with a visit next Spring. The distance (such is the facility of the Lake affords) is almost nothing. That God will bless you now & hereafter is the earnest prayer of your friend.

To Bishop Chase, Oct 26th 1829

Respectful and very dear Sir

By the way, the bearer here will hand you get the expense of his visit. He is in the common school, for one year. He



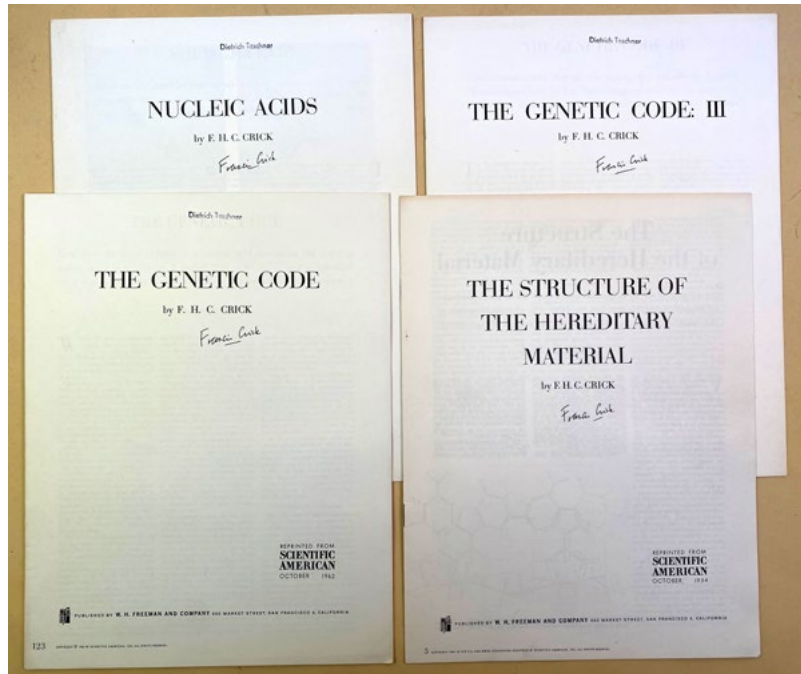
founding president of the American Medical Association. He was famous as both a lecturer and writer, his best-known work being *Therapeutics*, a textbook on pharmacology that went through seven editions. Coxe, another student of Rush, was an early advocate of vaccination and the first to practice it in Philadelphia (see Garrison-Morton.com 5425). He was the author of *The American Dispensary* (1806; Garrison-Morton.com 12134), the first attempt at standardization of drugs and their preparation in the United States, and *An Inquiry into the Claims of Doctor William Harvey to the Discovery of the Circulation of the Blood* (1834; Garrison-Morton.com 12935), possibly the first American monograph on the history of circulation.

Our notebook is unusual in that its creator is identified—often the writers of these early American medical notebooks are anonymous. The notes in our notebook were written by Dr. Evert Denton, a native of Connecticut who graduated from Columbia College circa 1810 and practiced medicine in both Connecticut and New York before moving to Geauga County in the Western Reserve (now Ohio) in 1820. He became “not only the leading physician of this section of the country, but one of its most prominent and influential citizens” (H. Upton, *History of the Western Reserve* [1910], p. 1512), before his early death at the age of 40 from injuries sustained after a fall from horseback. Our notebook indicates that Denton was living in Philadelphia in late 1826 and early 1827, most probably for the purpose of furthering his medical education.

The first 37 of the notebook’s leaves (approximately 72pp.) are devoted to Chapman’s lectures, with the first few lines reading: “Nosological arrang’t. Diseases of the Circulatory Organs, Respiratory Do. [i.e., ditto], Nervous System, Absorbent Do. Digestive Organs, Secretory Organs, Muscular Syst., Cutaneous System, Osseous Do. Generative Organs.” The Chapman notes are followed by two blanks, with the next 20 leaves (approximately 40pp.) containing Denton’s notes on Coxe’s lectures: “Recommends to students to make their own Preparations & to get an intimate acquaintance with the articles of M[at]eria Med[ica] . . .” The remaining 27 leaves contain some of Denton’s case records, transcripts of letters written in late 1829, and miscellaneous medical and pharmaceutical notes. 45756

The Central Dogma—Four Offprints, Each Signed by Crick

14. Crick, Francis H. C. (1916-2004). (1) Nucleic acids. Offprint from *Scientific American* (September 1957). 8, [4]pp. (2) The structure of the hereditary material. Offprint from *Scientific American* (October 1954). 7, [1]pp. (3) The genetic code. Offprint from *Scientific American* (October 1962). 9, [1]pp. (4) The genetic code: III. Offprint from *Scientific American* (October 1966). 9, [3]pp. Together 4 offprints. Text illustrations. 277 x 211 mm. Original printed self-wrappers. Some unobtrusive pencil notes in the first offprint, ownership stamp (Dietrich Teschner) on the front wrappers of the last three offprints. Signed by Crick on the front wrappers of each offprint. Fine. \$7500



First Editions, Offprint Issues of these four papers.

“Nucleic acids,”

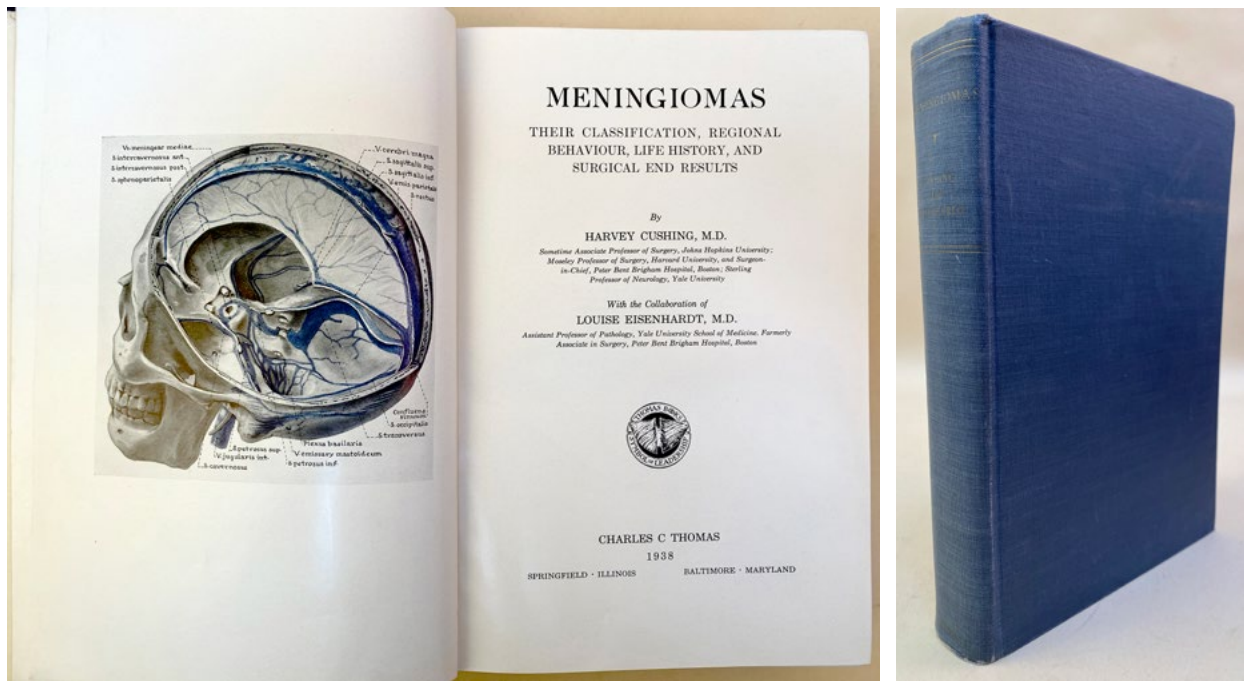
published in the *Scientific American* in

September 1957, is based on Crick’s famous “Central Dogma” lecture given in the same month. The *Scientific American* article, which appeared a year before his paper “On protein synthesis,” **contains the first published appearance of Crick’s famous term describing a fundamental property of genetics:**

This . . . illustrates very well what my colleagues and I call the Central Dogma: namely, that once information (meaning here the determination of a sequence of units) has been passed into a protein molecule it cannot get out again, either to form a copy of the molecule or to affect the blueprint of a nucleic acid (p. [9]).

“Crick’s talk is now often called the ‘central dogma’ lecture, for it was here that he first publicly presented this frequently misunderstood concept. While this was highly significant, the content of the lecture was even richer—it also saw Crick outline his view of the nature of life and of genetic information and the source of protein folding as well as making two bold and spectacularly accurate predictions: that there must exist a small ‘adaptor’ molecule (now known as tRNA) that could bring amino acids to the site of protein synthesis and that in the future, scientists would be able to explore rich evolutionary sources of information by comparing sequence data. In this one brief lecture, Crick profoundly influenced how we think. In *The Eighth Day of Creation*, journalist Horace Judson went so far as to claim that on that day 60 years ago, Crick ‘permanently altered the logic of biology’” (M. Cobb, “60 years ago Francis Crick changed the logic of biology,” *PLOS Biology* [2017] [10.1371/journal.pbio.2003243](https://doi.org/10.1371/journal.pbio.2003243)).

The third offprint in this group, “The genetic code,” presents in a somewhat more popular vein the researches described in Crick’s “General nature of the genetic code for proteins” (1961), co-written with L. M. Barnett, Sydney Brenner and R. J. Watts-Tobin; see Garrison-Morton.com 256.8. Garrison-Morton.com 13097. M. Cobb, *Life’s Greatest Secret: The Race to Crack the Genetic Code* (2015), ch. 8. 46093



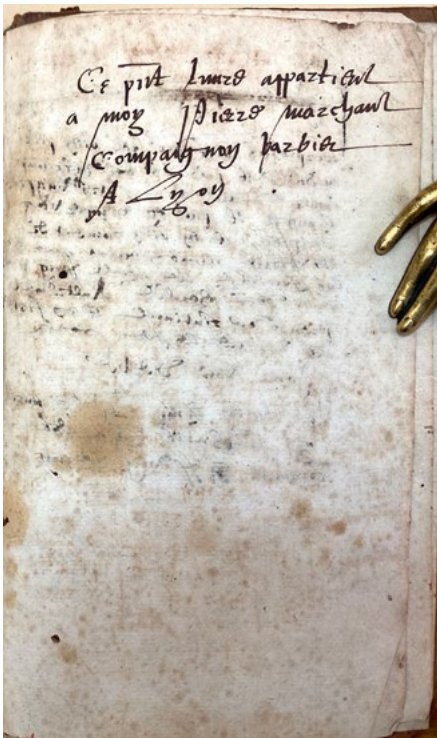
15. Cushing, Harvey (1879-1939); **Louise Eisenhardt** (1891-1967). *Meningiomas: Their classification, regional behavior, life history, and surgical end results.* xiv, 785, [3]pp. Text illustrations. Springfield, IL: Charles C Thomas, 1938. 256 x 171 mm. Original blue cloth, spine faded, light shelfwear. Very good. From the library of neurosurgeon Theodore C. Erickson (1906-86), with his stamp on the front free endpaper; “y from [flower image] Sept. 23, 1940” inscribed above the stamp in an unidentified hand. Erickson’s stamp also appears on the lower edge of the book block. \$1600

First Edition. Cushing’s last and greatest clinical monograph, the culmination of nearly twenty-five years of work on tumors of the brain. 1765 copies were printed. Louise Eisenhardt, Cushing’s protégée and longtime associate, was one of the world’s foremost neuropathologists.

This copy is from the library of neurosurgeon Theodore C. Erickson, co-author with Wilder Penfield of *Epilepsy and Cerebral Localization* (1941; Garrison-Morton 4910.1) and founder of the department of neurosurgery at Wisconsin General Hospital and the University of Wisconsin Medical School. *Bibliography of the Writings of Harvey Cushing* 24. Garrison-Morton.com 4612; 4909.01. 45622

Extensively Annotated by an Identified 16th-Century French Surgeon

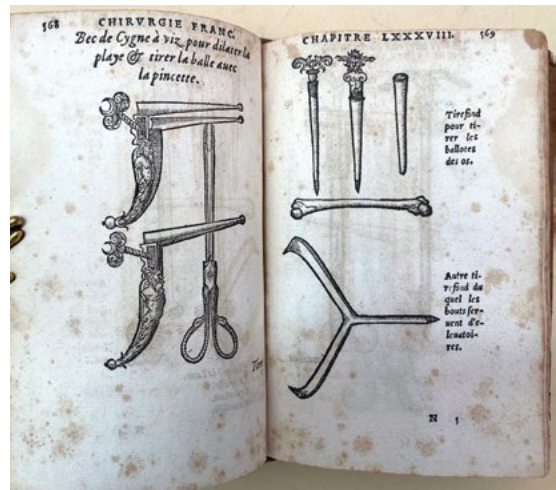
16. Daléchamps, Jacques (1513-88). *Chirurgie française . . . avec plusieurs figures des instrumens nécessaires pour l’opération manuelle . . .* 8vo. [52], 933, [5]pp. Lacking leaf y1 (pp. 337-338). Woodcut author’s portrait and over 300 woodcut text illustrations. Lyons: Guillaume Rouille, 1569. 160 x 103 mm. 17th-century sheep, gilt spine, some wear and rubbing. Minor worming in first few leaves, title a bit soiled, running heads on leaves N3-N4 trimmed. Very good. Extensively annotated by Lyonnais master surgeon Pierre Marchand (d. 1616), who signed his name on the last leaf. Old library stamp (Bibliothèque de Adn. de Gasparin) on title. \$13,500

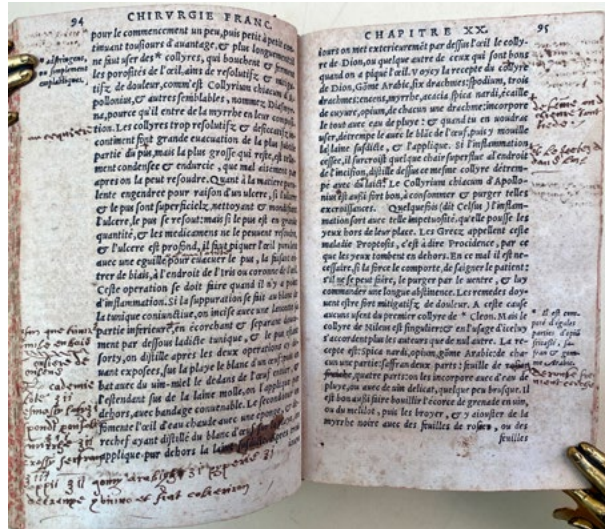
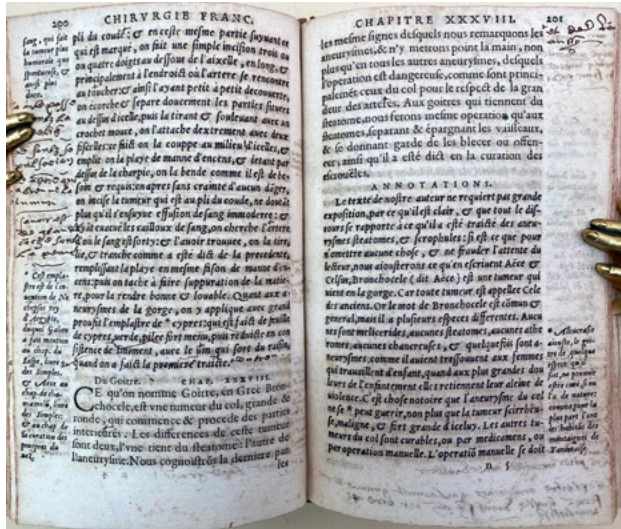


First Edition. A remarkable copy of Daléchamp’s important manual of Renaissance surgery, extensively annotated by one of Daléchamp’s contemporaries—Lyonnais master surgeon Pierre Marchand, who signed his name on the last leaf (“ce pr[esent] livre appartient a moy Pierre Marchand compaignon barbier a Lyon”). This is the first time we have handled a surgical work from this era annotated by an identified contemporary surgeon.

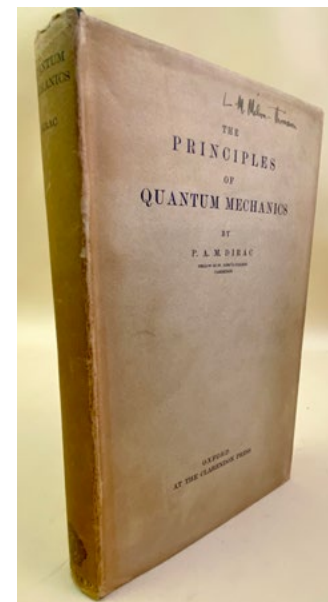
Daléchamp, a pupil of Guillaume Rondelet, received his doctorate in medicine from the University of Montpellier in 1547; he settled in Lyons in 1552, where he remained for the rest of his life. His *Chirurgie françoise*, which went through four editions between 1569 and 1610, is based on the sixth book of Paul of Aegina’s *De re medica*, which he translated into French and augmented with commentary by Aretaus, Celsus, Avicenna and Albucasis. He attempted to set the surgery of the ancient work in context, and compared the surgical knowledge of antiquity with that of his own day. Daléchamp’s treatise includes numerous illustrations of surgical instruments, some of which he credited to Ambroise Paré and to Jacques Roy; however, Daléchamps also introduced instruments of his own design, which Paré acknowledged in his own works.

The annotator of this copy, Pierre Marchand, was a master surgeon in Lyons in the last decades of the 16th century; see J.-B. Montfalcon, *Histoire de la ville de Lyon* (1851), p. 1392. Marchand acquired Daléchamp’s work when he was still a “compaignon barbier,” or member of the barbers’ guild. His annotations appear for the most part in the first 300 pages of





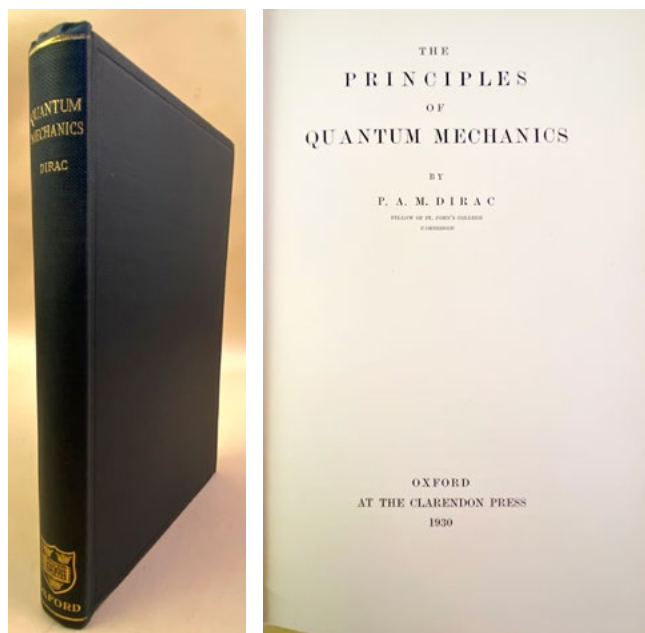
the book, devoted to wound treatment, trauma, abscess and surgery of the nose, ears, eyes and genitals—all of which fell within the purview of the Renaissance barber-surgeon’s practice. Marchand appears to have been particularly interested in ophthalmology, heavily annotating Daléchamp’s section on diseases of the eye (pp. 40-110): On p. 48 he points out the dangers of eyelid surgery; on p. 57 he improved the book’s illustration of ectropion by marking where to make the necessary incisions to repair it; on p. 66 he noted a method to limit “fluxion” and soothe pain when performing surgery of the eyelids; on p. 82 he wrote a recipe in Latin for “green or red” eyedrops to cure corneal abscess; on pp. 94-95 he provided a recipe for “Dion eye drops” and corrected the recipe for “eye drops of Nileus; on p. 100 he commented extensively on Daléchamp’s illustration of cataract needles; and on p. 106 he made similar comments on an illustration of an cautery used to treat lacrimal fistulas. Marchand also annotated some of Daléchamp’s descriptions of genital and ear surgery, and the last pages of the book contain Marchand’s notes on the use of suction cups, particularly in cases of snakebite. Bonnichon, Fontaine and Vons, “La Chirurgie française de Jacques Daléchamps, commentateur de Paul d’Égine,” *Histoire des sciences médicales* 52 (2018): 91-98. Garrison-Morton.com 13227. 46156



17. Dirac, Paul A. M. (1902-84). The principles of quantum mechanics. x, 257, [1]pp. Oxford: Clarendon Press, 1930. 237 x 156 mm. Original cloth, dust-jacket (minor wear and chipping). Very fine copy. From the library of British applied mathematician Louis Melville Milne-Thomson (1891-1974), with his signature on the dust-jacket and front free endpaper, and a very few annotations in the margins. \$7500

First Edition of Dirac’s classic treatise on quantum mechanics, containing “the first complete exposition of the general formalism of quantum mechanics, presented in a logically consistent and axiomatic fashion” (Jammer, *Conceptual Development of Quantum Mechanics*, p. 366). “Except for Darwin’s *Origin of Species*, no book since Newton’s *Principia* explained so much of so wide a realm of nature. It is difficult to think of another physics text that conveys more effectively the power of a simple, logical presentation. Probably no other book has ever given its readers a greater appreciation of the aesthetic dimension of theoretical physics” (Schweber, *QED and the Men who Made It*, p. 573). “Present expositions of quantum mechanics largely rely on [Dirac’s] masterpiece *The Principles of Quantum Mechanics*” (*Dictionary of Scientific Biography*).

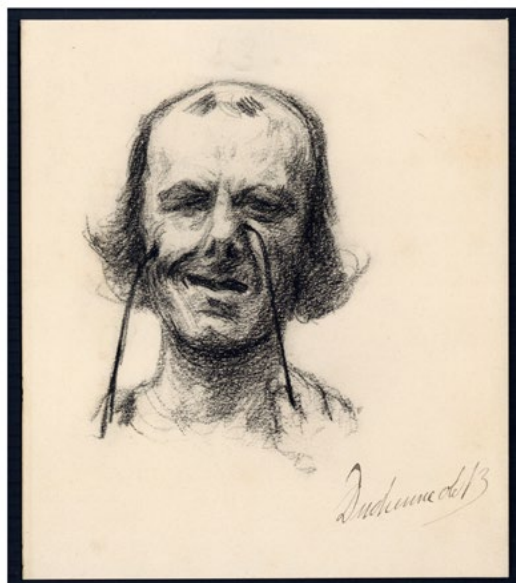
This very fine copy in dust-jacket is from the library of Louis Melville Milne-Thomson, author of several classic textbooks on applied mathematics such as *The Calculus of Finite Differences* (1933), and developer of the Milne-Thomson circle theorem and the Milne-Thomson method for finding a holomorphic function. The excellent condition of Milne-Thomson's copy of Dirac's *Principles of Quantum Mechanics, with the original cloth binding in mint condition*, suggests that he did not use it in his own work, despite the presence of a few marginal notes in what is presumably his hand. 45580



18. Duchenne de Boulogne, Guillaume B. A. (1806-75). Signed charcoal drawing of a faradized subject after Fig. 53 in Duchenne's *Mécanisme de la physionomie humaine* (1862). N.p., n.d. (between 1862 and 1875). 172 x 155 mm. Fine. \$5000

Extremely Rare Signed Original Drawing of the subject illustrated in Fig. 53 of Duchenne's *Mécanisme de la physionomie humaine* (Garrison-Morton.com 4973), his pioneering study of the physiological mechanisms governing human facial expression. To our knowledge, this is one of only four drawings by Duchenne to be discovered after his death.

Duchenne produced artificial expressions of emotion in his subjects by electrical stimulation of their facial muscles, recording the results in photographs that he took himself; his *Mécanisme de la physionomie humaine* was the first medical book to be illustrated with photographs of living subjects. However, "despite his fondness of photography, Duchenne was also a keen illustrator and used his fine drawing skills to portray his patients . . . After being one of the first to use photographs in a medical book, Duchenne might have preferred to use drawings instead of his photographs for his next books. Indeed, in the introduction to the album of photos added to the second edition of *De l'électrisation localisée* published in 1862, Duchenne indicated that he was not completely satisfied by photography . . . He later realized the advantages of drawing compared with photographs: it lets the drawer emphasize some essential lines of the fact to better make a point" (Drouin and Péréon, p. 331). It is possible that Duchenne made the present drawing to illustrate the second edition of the *Mécanisme*, which he was preparing in the early 1870s; however, he died in 1875, a year before the second edition appeared, and this plan was not realized. E. Drouin and Y. Péréon, "Unique drawings by Duchenne de Boulogne," *The Lancet: Neurology* 12 (2013): 330-331. 46162



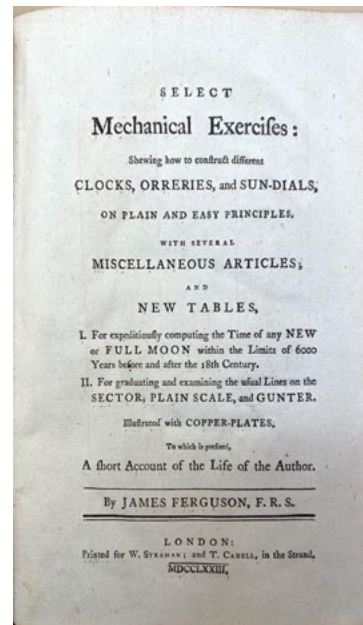
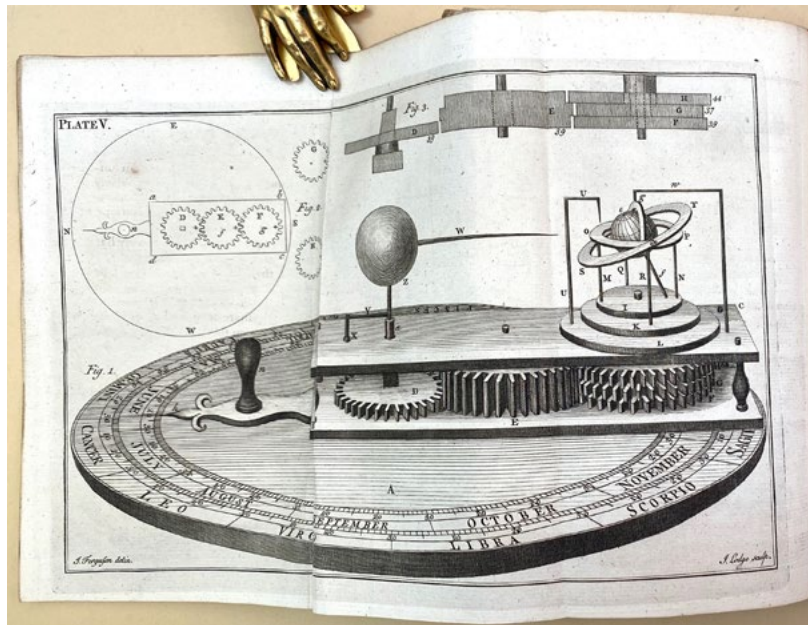


19. Duhring, Louis Adolphus (1845-1913). *Dermatitis herpetiformis*. Offprint from *Journal of the American Medical Association* 3 (1884). 16pp. 198 x 137 mm. Original printed wrappers, vertically creased, one corner a bit chipped, light dust-soiling. *Presentation Copy*, inscribed on the front wrapper: “Compliments of the Author.” [With:] Six other offprints on dermatitis herpetiformis as listed below, one with Duhring’s presentation inscription. V.p., 1884-85. Various sizes. In original printed wrappers or without wrappers as issued. Together 7 offprints. Some dust-soiling and creasing, but very good. \$1250

First Edition. “Duhring’s best work in dermatology. He brought together, under the name of ‘dermatitis herpetiformis’ (‘Duhring’s disease’) the group of eruptions which morphologically lay between urticaria and the toxic erythemas on the one hand and pemphigus on the other” (Garrison-Morton.com 4083). 45612

The remaining offprints in this group are:

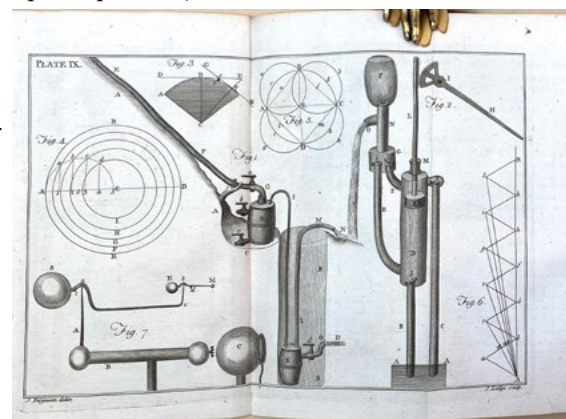
1. Case of dermatitis herpetiformis (multiformis), aggravated by pregnancy and irregular menstruation. Offprint from *The Medical News* (19 July 1884). 7pp. Without wrappers as issued. 2 gummed labels on first page.
2. Notes of a case of dermatitis herpetiformis during thirteen years. Offprint from *New York Medical Journal* (1884). 8pp. Original printed wrappers. Illegible German ownership signature. 2 gummed labels on front wrapper.
3. *Dermatitis herpetiformis: Its relation to so-called impetigo herpetiformis*. Offprint from *American Journal of the Medical Sciences* (1884). 11pp. Original printed wrappers. *Presentation Copy*, inscribed on the front wrapper: “Compliments of the Author.” Illegible German ownership signature. Gummed label on the front wrapper.
4. A case of dermatitis herpetiformis. Offprint from *New York Medical Journal* (1884). 6pp. Original printed wrappers. Illegible German ownership signature. 2 gummed labels on front wrapper.
5. Case of dermatitis herpetiformis caused by nervous shock. Offprint from *American Journal of the Medical Sciences* (1885). 4pp. Original printed wrappers. Illegible German ownership signature. 2 gummed labels on front wrapper.
6. Case of dermatitis herpetiformis, illustrating in particular the pustular variety (impetigo herpetiformis of Hebra). Offprint from *Journal of Cutaneous and Venereal Diseases* 2 (1884). 6pp. Without wrappers as issued, one corner chipped. Illegible German ownership signature. 2 gummed labels on front wrapper.

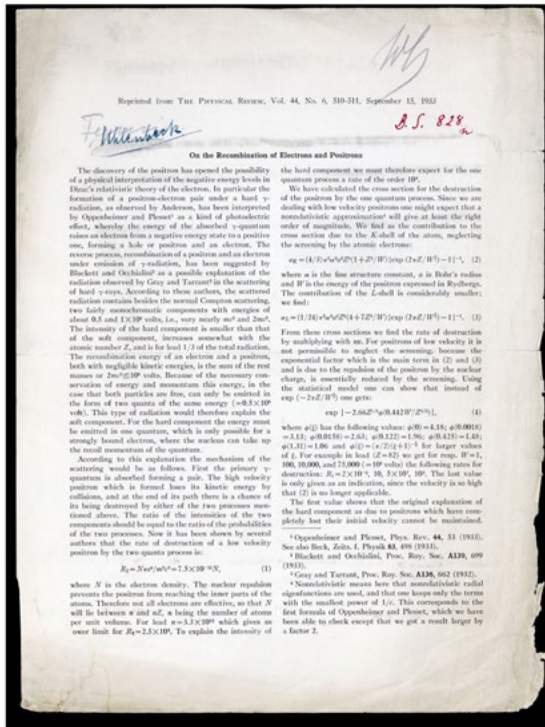


20. Ferguson, James (1710-76). *Select mechanical exercises: Shewing how to construct different clocks, orreries, and sun-dials, on plain and easy principles . . . To which is prefixed, a short account of the life of the author.* 8vo. [12], xlii, 272pp. 9 engraved folding plates. London: W. Strahan and T. Cadell, 1776. 202 x 130 mm. Sheep ca. 1776, gilt-ruled spine with handwritten paper label (worn), covers a bit worn and scuffed, upper spine chipped. Fore-edges of some plates a bit frayed, but very good. 19th-century library bookplate.

\$950

First Edition of Ferguson's last work. Ferguson, a Scottish astronomer and instrument maker, was famous as both an inventor and as a popularizer of science. The son of a tenant farmer, he was almost completely self-educated, mastering on his own the elements of surveying, horology and astronomy while working at a variety of menial jobs in his youth. "A skilled designer of clocks and planispheres (as well as a 'solar eclipsareon'), he became an accomplished public lecturer and expounder of Newtonian ideas . . . He lectured extensively in London and the provinces (including Bath, Bristol, Derby, Leeds, Liverpool and Newcastle) and was unofficial 'popularizer in residence' to the court of George III . . . His models of the planetary system were classics of engineering design whose accuracy far surpassed anything previously available" (*Dictionary of Scientific Biography*). Some of these models are illustrated in the present work, which also includes Ferguson's brief autobiography. 46119





21. Fermi, Enrico (1901-54); **George Uhlenbeck** (1900-1988). On the recombination of electrons and positrons. Offprint from *Physical Review* 44 (1933). 2pp. 268 x 201 mm. Single sheet, unbound. Some marginal fraying especially at right, some soiling, horizontal crease, a few small marginal tears. Good copy. From the library of physicist **Walther Gerlach** (1889-1979), with his initials in pencil on the first page, Fermi's and Uhlenbeck's names in Gerlach's hand on the first page. Docketed. \$3750

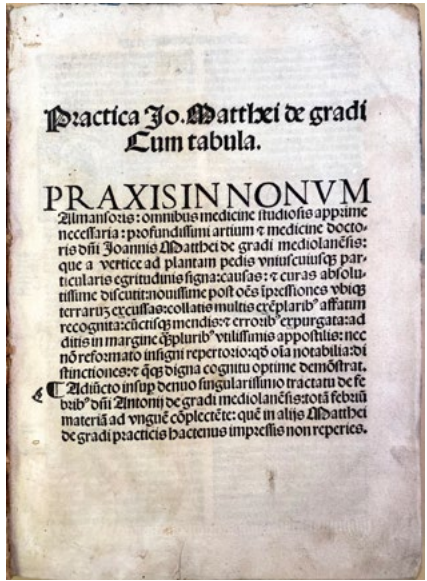
First Edition, Rare Offprint Issue. "The discovery of the positron [by Carl Anderson in 1932] and above all the processes of creating and destructing pairs of electrons and positrons, raised great interest around the world. Fermi too tackled the subject from the theoretical point of view. In a study with Uhlenbeck, carried out during his stay in August 1933 at the University of Michigan, he worked on the process of annihilation of an electron and a positron. In particular he tried to confirm whether a certain spectral line, identified by Louis H. Gray and Gerald T. P. Tarrant in the 'scattering of hard γ rays', could be attributed, as Blackett and Occhialini

had suggested, to an annihilation process but he found that, on the basis of Dirac's theory, it did not seem possible" (F. Guerra and N. Robotti, *The Lost Notebook of Enrico Fermi*, p. 75).

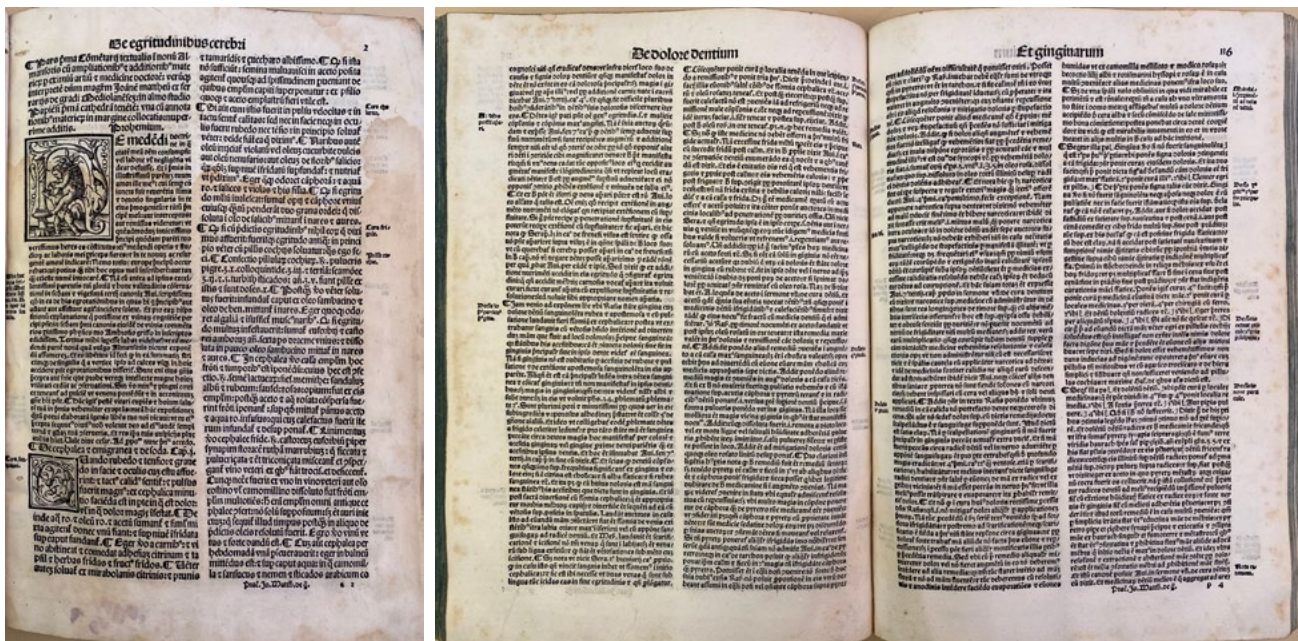
Fermi and Uhlenbeck's paper was published in both English and Italian; the English version is the one included in Fermi's *Collected Papers*. This copy is from the library of Walther Gerlach, co-discoverer of the Stern-Gerlach effect (spin quantization in a magnetic field). Fermi, *Collected Papers*, no. 77b. 46143

Commentary on Rhazes

22. Ferrari da Gradi, Gianmatteo (d. 1472). Praxis in nonum Almansoris: omnibus medicine studiosis apprimè necessaria . . . Folio. 373ff. Woodcut initials and printer's mark. Venice: Luccantonio de Giunta, 1521. 298 x 210 mm. Old quarter blindstamped pigskin, wormed, boards bound in an old vellum manuscript leaf, some soiling, light wear. Minor foxing and worming, some small dampstains, particularly in first few leaves, stamp erased from last leaf, but very good. 20th-century owner's stamp inside front cover. \$7500



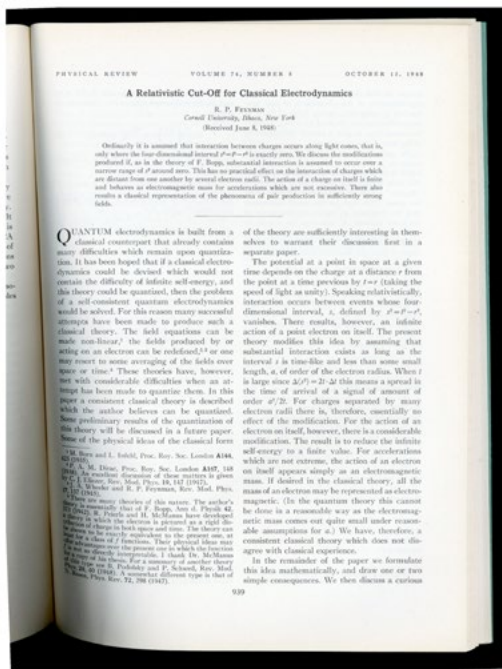
Later edition of Ferrari da Gradi's *Practica commentarium textuale in nonum Almansoris*, first published in 1472/73; the book went through at least nine editions in the 16th century, of which this appears to be the first 16th century edition. Garrison-Morton 2192 (for the first edition, which was the first large medical book to be printed, and is unobtainable on the market). There were 3 editions published in the 15th century. All editions of this work are rare; there are no auction records for any 15th or 16th edition of this title.



Ferrari da Gradi, one of the most famous physicians of his day, held the Chair of Medicine at the University of Pavia from 1452 until his death 20 years later. His reputation was such that he was chosen as personal physician by the dukes of Milan and consulted by the nobility of several European countries.

Ferrari's *Practica* is a commentary on the ninth book of Rhazes' *Almansor*, one of the most influential works of medieval Arabic medicine; the ninth book, which deals with the treatment of diseases "a capite usque pedes" (from head to toe), had become a standard textbook in the European medical curriculum by the fourteenth century. "The [*Practica*]'s discussion on various disorders is widely based on the anatomical description of organs involved and it is mainly in describing anatomy that Ferrari demonstrates his originality (he made anatomical dissections). Of special importance is the description of the 'matrice,' i.e. the female genital organs, in which for the first time Ferrari identifies the ovaries and gives them the name 'ova' (eggs in Latin)" (Dal Canton, Frosio-Roncalli and Dal Canton, p. 283). This edition of the *Practica*, issued by the famous Venetian publisher Lucantonio Giunti, includes the treatise on fevers by Antonio di Gradi (fl. 1468). Dal Canton, Frosio-Roncalli and Dal Canton, "The famous case of rheumatic hematuria described by Giammatteo Ferrari da Grado, professor at the University of Pavia (1432-1472)," *American Journal of Nephrology* 17 (1997): 282-285. 46047





23. Feynman, Richard (1918-88). A relativistic cut-off for classical electrodynamics. In *The Physical Review* 74 (1948): 939-94. Whole number. 851-990pp. 267 x 197 mm. Original printed wrappers. Fine. \$1500

First Edition, journal issue of Feynman's paper proposing a modification of classical electrodynamics to a form suitable for quantization. Feynman received the Nobel Prize for physics in 1965 (sharing it with Shinichiro Tomonaga and Julian Schwinger) for his fundamental work in quantum electrodynamics.

In the spring of 1948, prior to publishing any of his work on quantum electrodynamics, Feynman was invited to give a talk at the Pocono Conference on the problems of fundamental physics, which afforded him the first opportunity to present his ideas on QED to an audience of fellow physicists. By this time "Feynman had reworked almost all of quantum electrodynamics by his new technique of space-time diagrams. He had reached the most important part of his new results: namely, the relativistic formulation of quantum electrodynamics and, especially, perturbation theory, the relativistic cutoff and the renormalization of mass,

closed expressions for the transition of amplitude and causal propagators, a new operator calculus . . . However, before the Pocono Conference, Feynman had not published anything on quantum electrodynamics and he did not have the mathematical proofs of all his results" (Mehra & Rechenberg, 6, p. 1051).

Unsurprisingly, Feynman's unorthodox approach to QED baffled the attendees of the Pocono Conference, which included such titans of quantum physics as Niels Bohr and Paul Dirac. Feynman had such difficulty explaining his ideas that, as he recalled later, "I said to myself, I'll just have to write it all down and publish it, so that they can read it and study it, because I know it's right!" (quoted in Mehra & Rechenberg, 6, p. 1057). In June 1948 Feynman published the present paper, which "dealt largely with the action-at-a-distance formulation he had worked on before getting involved with the war effort, but now with a density of field quanta playing the role of a regulator, so that the energy of a particle was made finite" (Mehra & Rechenberg, 6, p. 1092). Ezhela et al., *Particle Physics: One Hundred Years of Discoveries*, pp. 99-100. Mehra & Rechenberg, *Historical Development of Quantum Theory*, 6, pp. 1051-1093. 46173

Extremely Rare Offprint

24. Feynman, Richard (1918-88). Space-time approach to non-relativistic quantum mechanics. Offprint from *Reviews of Modern Physics* 20 (1948). 367-387pp. 266 x 199 mm. Without wrappers as issued. First and last leaves slightly soiled. Very good. Slip pasted to first leaf covering the ownership stamp of Austrian-American physicist Norman Rosenzweig (1925-76). \$9500

First Edition, Rare Offprint Issue of the first full discussion of Feynman's action-at-a-distance electrodynamics, in which he introduced his path integral formalism for quantum mechanics. Feynman received the Nobel Prize for physics in 1965 (sharing it with Shinichiro Tomonaga and Julian Schwinger) for his fundamental work in quantum electrodynamics.

Quantum electrodynamics in the 1940s had some clear mathematical flaws that gave rise to unacceptable infinities. In the early part of the decade, while working on his Ph.D. thesis at Princeton, Feynman tackled the problem of infinities in QED, exploring with his advisor John A. Wheeler "the possibility of formulating an action-at-a-distance electrodynamics in order to eliminate divergence problems, especially the self-energy of

charged particles and the zero-point energy of the electromagnetic field” (Mehra & Rechenberg, 6, p. 1025). Feynman’s innovative solution to this problem was inspired by Paul Dirac’s 1933 paper “The Lagrangian in quantum mechanics,” in which Dirac had advocated replacing the usual Hamiltonian formulation of quantum field theory by a Lagrangian one. Adopting Dirac’s suggestion, Feynman developed in his thesis a promising approach to the problem of quantizing a classical system without knowing its Hamiltonian—something Wheeler had tried and failed to do.

Shortly after receiving his Ph.D. in 1942 Feynman was recruited to work on the top-secret Manhattan Project at Los Alamos. He did not publish any papers on his QED research until 1948, beginning with the present paper dated April 1948 “present[ing] in detail his new approach to quantum mechanics” (Mehra & Rechenberg, 6, p. 1026).

This copy of Feynman’s paper was once owned by Austrian-American physicist Norbert Rosenzweig, who received his doctorate at Cornell University in 1951. Feynman taught at Cornell between 1945 and 1949, and it is very likely that Rosenzweig took some of his classes.

Ezhela et al., *Particle Physics: One Hundred Years of Discoveries*, p. 103. Mehra & Rechenberg, *Historical Development of Quantum Theory*, 6, pp. 1025-1029. 46129

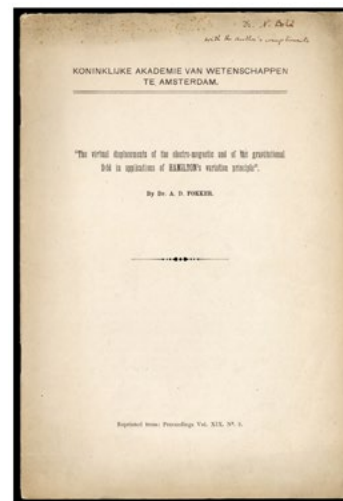


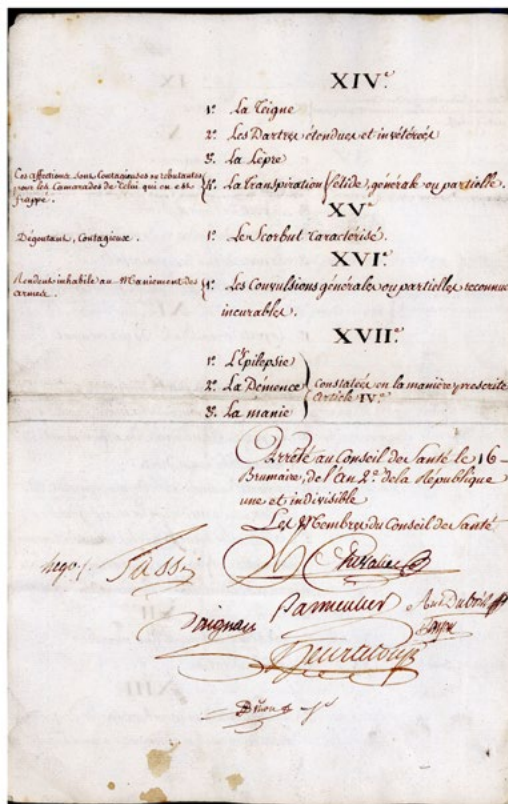
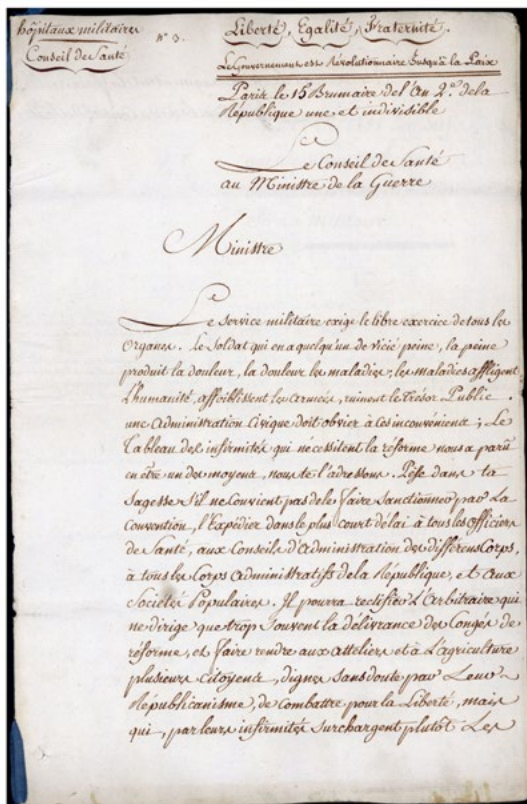
Inscribed to Niels Bohr

25. Fokker, Adriaan Daniel (1887-1972). The virtual displacement of the electro-magnetic and of the gravitational field in applications of Hamilton’s variation principle. Offprint from Koninklijke Akademie van Wetenschappen te Amsterdam, *Proceedings* 19 (1917). 17pp. 266 x 182 mm. Original printed wrappers, sunned, light spotting. Very good. *Presentation Copy*, inscribed to **Niels Bohr** (1885-1962) on the front wrapper: “Dr. N. Bohr with the author’s compliments.” \$2750

First Edition in English, Offprint Issue (a Dutch version appeared the same year). The Dutch physicist Adriaan Fokker, a student of Lorentz, made several contributions to both special and general relativity, collaborating with Einstein in 1914 on a paper on Nordström’s theory of gravitation and publishing a summary of the Einstein-Grossmann theory of gravitation the following year. The present paper, Fokker’s first on general relativity since the Einstein-Grossmann paper, “gave a reformulation and an extension of earlier work by Lorentz on the Hamiltonian formulation of general relativity. Notable in this paper was a derivation of the contracted Bianchi identities (as a consequence of the variational principle) and a discussion of its implications for the field equations” (Kox, p. 42).

Fokker presented this copy to Niels Bohr, winner of the Nobel Prize for physics in 1922 for his fundamental contributions to our understanding of atomic structure and quantum theory. A. Kox, “General relativity in the Netherlands,” J. Eisenstadt and A. J. Kox, eds., *Studies in the History of General Relativity*, pp. 39-56. 46115

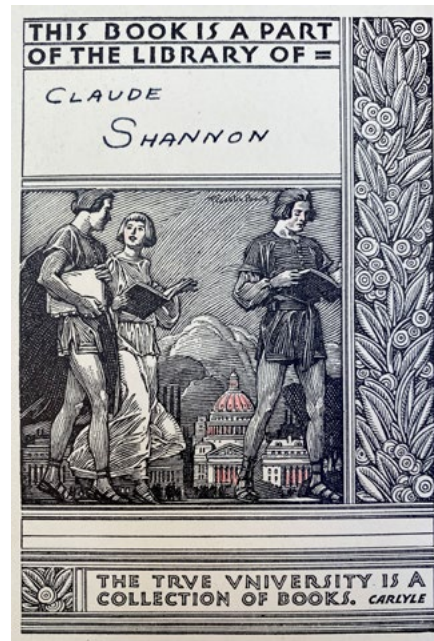
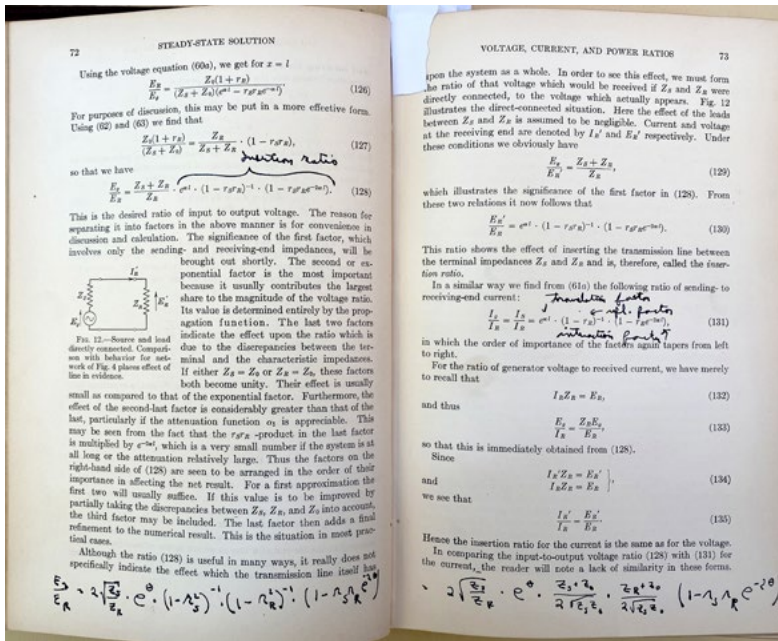




26. France. Conseil de Santé. Tableau des infirmités qui nécessitent la réforme, et doivent empêcher l'admission au service militaire [title on leaf 2]. Manuscript document addressed to the Minister of War, signed by nine members of the Conseil de Santé including **Antoine-Auguste Parmentier** (1737-1813), **Antoine Dubois** (1756-1837), **Guillaume Daignan** (1732-1812), **Nicolas Heurteloup** (1750-1812), **Pierre Bayen** (1725-98) and **Vincent Jean Paul Biron** (1758-1817). [4]ff. (2 bifolia), the last leaf blank, fastened along central fold with silk ties. Paris, 15 brumaire de l'an 2 de la République [5 November 1793]. 318 x 206 mm. Light soiling and spotting, first bifolium partially split along central fold, but very good. \$1500

Elegantly written official document from the French revolutionary government's Conseil de Santé to the Minister of War (Jean Baptiste Noël Bouchotte, 1754-1840), calling for the need to reform the French army's medical regulations and providing a tabulated list of infirmities disqualifying soldiers and prospective recruits from serving in the military. "[The list] will be able to rectify the arbitrariness that too often governs the issuance of sick leave, and will restore to workplaces and farms the many citizens who are no doubt worthy by virtue of their Republicanism to fight for liberty, but who, because of their infirmities, overload the armies rather than increase their strength" (f. 1; our translation). The "Tableau des infirmités" includes blindness in one or both eyes, deafness, goiter, pulmonary disease, hernia, hemorrhoids, sciatica, loss or paralysis of a limb, lameness, leprosy, scurvy, epilepsy and bad incisor or canine teeth—this last because soldiers used their front teeth to tear open gunpowder cartridges.

Among the signers of this document were Antoine-Auguste Parmentier, best known for promoting the potato as a food source in France; Nicolas Heurteloup, chief surgeon of the Grande Armée under Napoleon; Guillaume Daignan, author of one of the earliest studies of puberty among Europeans (see Garrison-Morton, com 7806); Antoine Dubois, head of maternity services to Napoleon and his wife Marie Louise; Pierre Bayen, chemist and member of the Académie des Sciences; and Vincent Jean Paul Biron, secretary of the Commission de Santé. 46096



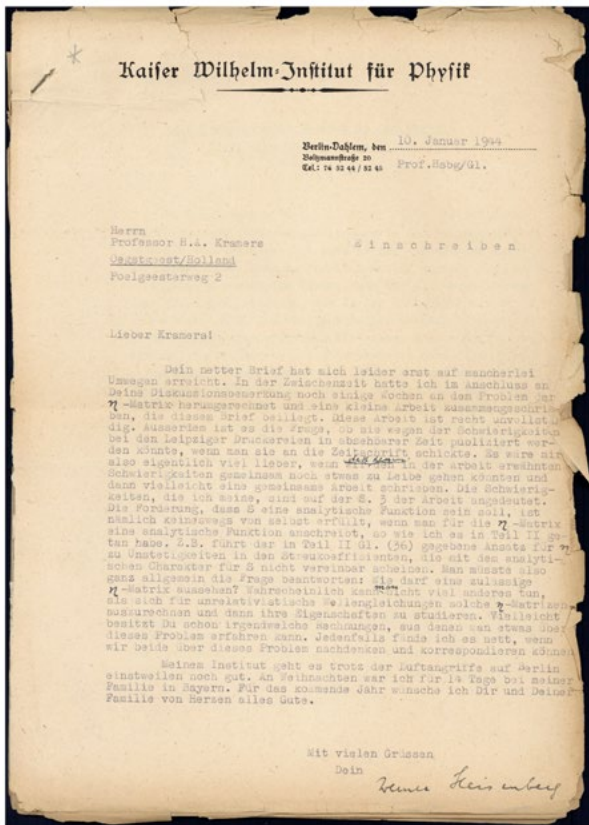
Claude Shannon's Annotated Copy

27. Guillemín, Ernst A. (1898-1970). *Communication networks*. Vol. I: The classical theory of lumped constant networks. Vol. II: The classical theory of long lines, filters and related networks. xii, 425; vii, 587pp. New York: John Wiley & Sons, 1931-1935. 222 x 146 mm. Original cloth, light wear, second volume a bit shaken. Very good. *From the library of Claude Shannon* (1916-2001), founder of information theory, with his signature in block letters in both volumes and numerous ink and pencil annotations **on 34 pages** in Vol. II. Sold

First Edition of Guillemín's classic textbook on communication networks, the copy **owned and used by Claude Shannon** while a graduate student at MIT. Shannon's MIT master's thesis, *A Symbolic Analysis of Relay and Switching Circuits* (1938), established the theory of digital circuit by demonstrating that electrical applications of Boolean algebra could be used to construct any logical relationship. His landmark paper "A mathematical theory of communication," published a decade later, founded the field of information theory. Guillemín, a professor of electrical engineering at MIT, "dedicated his entire career to developing and refining the art and science of linear network analysis and synthesis, thereby enriching the heritage of the electrical engineering profession . . . His two volumes on *Communication Networks*, published in 1931 and 1935, are considered classics . . . During his career, Professor Guillemín's genius influenced a host of undergraduate and graduate students, many of whom went on to be scholars in their own right and to play top leadership roles in industry and universities. He was deeply dedicated to his students, and they to him, so much so that they often referred to him as the 'father of linear network theory'" (Penfield). Shannon undoubtedly had Guillemín as a teacher during his time at MIT. His copy of the second volume of *Communication Networks* contains annotations by him in ink and pencil on 34 pages (pp. 72-73, 160, 164, 169, 176-77, 178-179, 180-181, 183, 185-186, 188-189, 191, 194, 196-197, 218-219, 220, 224-225, 226-227, 234-235, 250-251, 340, 417 and 458). Penfield, Paul, "Ernst Adolph Guillemín," *EECS Great Educators*, MIT Electrical Engineering and Computer Science, 15 June 1998 (web). Accessed 1/13/21. 46164

Typed Letter Signed, with a 23-Page Typescript

28. Heisenberg, Werner (1901-76). (1) Typed letter in German signed to H. A. Kramers (1894-1952). 1 page, on letterhead of the Kaiser Wilhelm-Institut für Physik. Berlin, 10 January 1944. 298 x 210 mm. Browned due to poor quality wartime paper, edges frayed, a few marginal tears. Stapled to (2) **Heisenberg**. Die beobachtbaren Größen in der Theorie der Elementarteilchen III. Typed manuscript with autograph additions and corrections. 23pp. Undated but ca. 1943-44. Browned due to poor quality wartime paper, a few edges a bit frayed. Together 2 items. Overall good. \$17,500



From Werner Heisenberg, one of the architects of quantum mechanics and author of the famous uncertainty principle, to his fellow physicist and sometime collaborator H. A. Kramers, discussing his S-matrix approach to elementary particle physics and urging Kramers to collaborate with him on a joint paper on the subject. Heisenberg's S-matrix theory, initially proposed as a replacement for quantum electrodynamics, became very influential in the 1960s when it led to the development of string theory, which remains the best-accepted approach to quantum gravity.

Heisenberg introduced his S-matrix approach in his paper "Die 'beobachtbaren Größen' in der Theorie der Elementarteilchen," the first two parts of which were

published in 1943. In 1944 Heisenberg was at work on the third part of this paper, and he attached a typescript draft of this as-yet unpublished part (no. [2]) to his letter in the hope that Kramers would be able to help him with some "difficulties." The letter is translated from the German as follows:

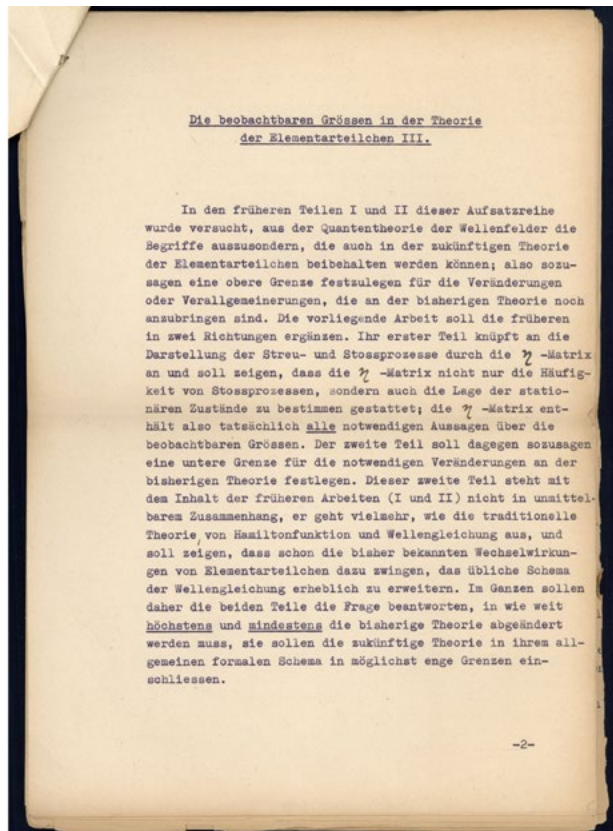
Dear Kramers,

Unfortunately, your nice letter only reached me in a number of detours. In the meantime, following your discussion, I had calculated the problem of the η -matrix for a few more weeks and wrote a little work that is enclosed with this letter. This work is quite incomplete. There is also the question of whether it could be published in the foreseeable future because of the difficulties at the Leipzig printing works if it was sent to the magazine. So I would actually much prefer it if we could tackle the difficulties mentioned in the paper together and then maybe write a joint paper. The difficulties I mean are indicated on page 3 of the paper. The requirement that S should be an analytic function is in no way fulfilled by itself if one writes an analytic function for the η -matrix, as I did in Part II. For example, in Part II Eq. (36) given approach for η to discontinuities in the scattering coefficients, which do not seem to be consistent with the analytical character for S. So one would have to answer the general question: What should a valid η -matrix look like? Probably not much else can be done than to work out such η -matrices for inrelativistic wave equations and then to study their properties. Perhaps you already have some kind of calculations from which you can learn about this problem. Anyway, I think it would be nice if we could both think about this problem and correspond.

Despite the air raids on Berlin, my institute is still doing well for the time being. At Christmas I was with my family in Bavaria for 14 days. I wish you and your family all the best for the coming year.

With warmest regards, your Werner Heisenberg

In the early 1940s, dissatisfied with the limitations of quantum electrodynamics, Heisenberg had proposed replacing QED with the S-matrix approach as the fundamental theory of elementary particles. As noted above, he introduced this proposal in “Die ‘beobachtbaren Grössen’ in der Theorie der Elementarteilchen,” the first two parts of which appeared in 1943; the third part was developed over the next year in collaboration with Kramers and other scientific colleagues. “One evening in October 1943 Heisenberg presented his new theory to an informal colloquium in the Kramers home near Leiden in the German-occupied Netherlands . . . During the discussion of Heisenberg’s talk, Kramers made the insightful remark that if the actual elements of the η -matrix could ever be determined without a complete theory, they would yield a so-called analytic function in the complex plane of k -variables . . . Back in Berlin, Heisenberg wrote immediately that he had grown ‘more and more enthusiastic’ about Kramers’s remark ‘because I believe that with it one can really arrive at a complete model of a theory of elementary particles’” (Cassidy, *Uncertainty*, pp. 478-479). Heisenberg pressed Kramers to work with him on a joint paper, repeating this request in the present letter and two others (see Cassidy, p. 632, note 21). Kramers ultimately declined Heisenberg’s request, but asked that his contributions be acknowledged in Part III of “Die ‘beobachtbaren Grössen’ in der Theorie der Elementarteilchen”—a request Heisenberg was happy to fulfill. 45906

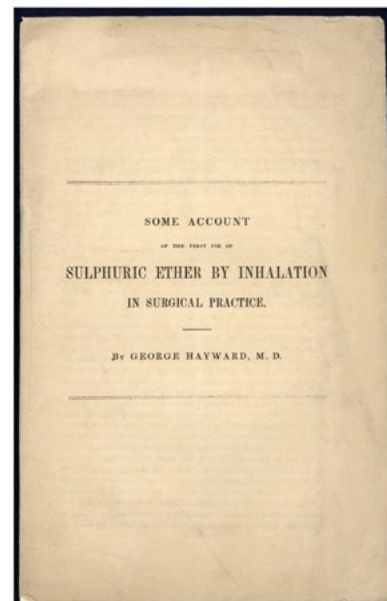


The First Major Operation Performed under Ether Anesthesia

29. Hayward, George (1791-1863). Some account of the first use of sulphuric ether by inhalation in surgical practice. [Read before the Boston Society for Medical Improvement, April 12, 1847.] 8pp. N.p., 1847. 237 x 148 mm. Original printed wrappers, vertically creased, a bit dust-soiled. Very good. \$1500

First Separate Edition, privately printed, of Hayward’s case report of the first major operation performed under ether anesthesia, which he performed at the Massachusetts General Hospital on November 7, 1846, three weeks after Warren’s first operation using ether on October 16, 1846. For the first experiment with ether as a surgical anesthetic Warren chose a minor operation-- the removal of a small vascular tumor. Hayward followed Warren’s initial experiment the following day with second minor operation using ether for removal of a small lipoma of the arm on October 17, 1846.

Though both operations were successful, Morton was initially unwilling to disclose the nature of his new anesthetic agent, as he wished to patent it, and no further public trials were permitted for a period of three weeks. In early November Henry Jacob Bigelow informed Morton that his initial demonstrations would be unconvincing to the surgical establishment unless

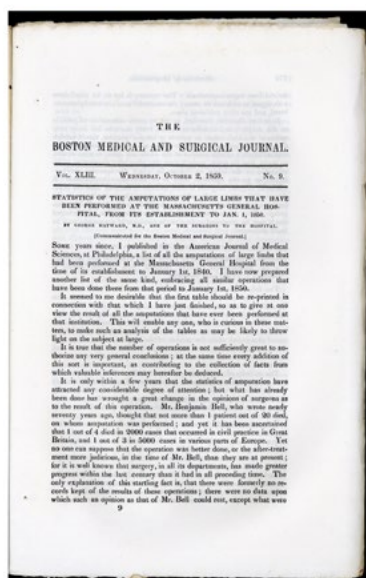


his anesthetic agent could be used successfully during the performance of a “capital” or major operation, after which Morton asked Hayward if he might use his anesthetic agent during an amputation of the thigh that Hayward was schedule to perform. Hayward wrote:

“The patient was a girl of 20 years of age, named Alice Mohan, who had suffered for two years from a disease of the knee, which terminated in suppuration of the joint and caries of the bones. For some months before the operation her constitutional symptoms had become threatening, and the removal of the limb seemed to be the only chance for her life. The ether was administered by Dr. Morton. In a little more than three minutes she was brought under the influence of it; the limb was removed and all the vessels were tied but the last, which was the sixth, before she gave any indication of consciousness or suffering. She then groaned and cried out faintly. She afterwards said that she was totally unconscious, and insensible up to that time, and she seemed to be much surprised when she was told that her limb was off. She recovered rapidly, suffering less than patients usually do after amputation of the thigh, regained her strength and flesh, and was discharged well on the 22nd of December.”

Hayward’s paper was published from a different setting of type in the *Boston Medical and Surgical Journal* on April 21, 1847. Garrison-Morton.com 11913. 45605

30. Hayward, George (1791-1863). Statistics of the amputations of large limbs that have been performed at the Massachusetts General Hospital, from its establishment to Jan. 1, 1850. In *Boston Medical and Surgical Journal* 43 (1850): 169-181. Whole number. [2], 169-188, [2]pp. 240 x 155 mm. Without wrappers. Margins a bit dust-soiled but very good. Signature of Rhode Island physician Dr. Joseph Mauran (1796-1873) on the first leaf.



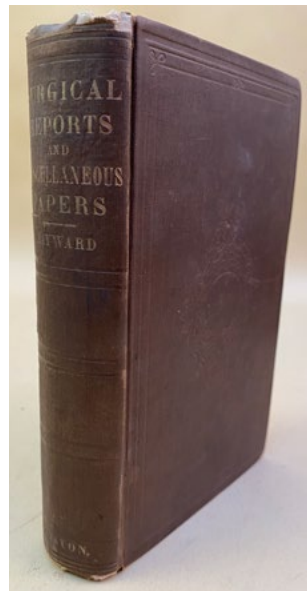
\$375

First Edition, journal issue. Hayward’s article includes two statistical tables, the first recording amputations at Massachusetts General from its founding in 1811 to 1 January 1840, and the second recording amputations from 1 January 1840 to 1 January 1850. Of the latter group, Hayward noted that “forty-eight of the patients inhaled some anaesthetic agent; 12 of this number died. It is well known, that it was in this hospital that these agents were first successfully employed in general operative surgery; and so entirely satisfactory have been the results, that no operation of any importance is performed there, without the patient being previously rendered insensible to suffering by these means.” Dr. Joseph Mauran, a former owner of this copy, helped to found the Rhode Island Hospital in Providence and held several

influential positions in that state’s medical establishment. 45606

31. Hayward, George (1791-1863). Surgical reports, and miscellaneous papers on medical subjects. 452pp. Boston: Phillips, Sampson & Co., 1855. 179 x 113 mm. Original cloth, light wear at head and foot of spine. One signature starting, but very good. *Presentation Copy*, inscribed on the front free endpaper: "Geo. A. Taylor Esqr. With the kind regards of his friend Geo. Hayward. July 2d 1857." Beneath Hayward's inscription are the ownership inscriptions of James P. A. Nolan, M.D. and James Nolan M.D. L.L.B. (the latter dated 15 August 1935); this latter signature also appears on p. 448. \$500

Geo. A. Taylor Esq.
 With the kind regards
 of his friend
 Geo. Hayward.
 July 2^d 1857.
 James P. A. Nolan M.D.
 Jamaica Plain
 Mass.
 FEB 19 1906
 James Nolan M.D. L.L.B.
 1265 Beacon St. Brookline
 213 Brighton Ave. Allston
 August 15/1935



First Collected Edition of 22 surgical papers by Hayward, including a reprint of Garrison-Morton.com 6030 and 11913. We have not been able to identify the recipient of this copy. Rutkow, *History of Surgery in the United States*, I, GS35. 45607

From Darwin's Mentor

32. Henslow, John Stevens (1796-1861). Autograph letter signed to James Yates (1789-1871). Bifolium. 3pp. plus address. Hitcham, Hadleigh, Suffolk [U.K.], 19 February 1848. 229 x 187 mm. Small lacuna in last leaf where seal was broken not affecting text, remains of mounting on last leaf, light soiling along creases but very good. \$1250

Good scientific letter from Darwin's mentor John Stevens Henslow, professor of botany at Cambridge, to naturalist and antiquary James Yates. It was Henslow who helped Charles Darwin obtain his post as naturalist on *HMS Beagle*, and who arranged for some of Darwin's letters to him to be printed privately while Darwin was on the *Beagle*; this pamphlet was Darwin's first publication.

Henslow founded Cambridge University's botanical museum in the 1820s but the institution remained chronically underfunded during his lifetime, as can be seen in the present letter regarding a possible purchase.

The funds at my disposal for purchasing objects for the Cambridge Bot. Mus. are so trifling that I am obliged to be very discreet. As I expect to be in town in about 3 weeks I will inspect the



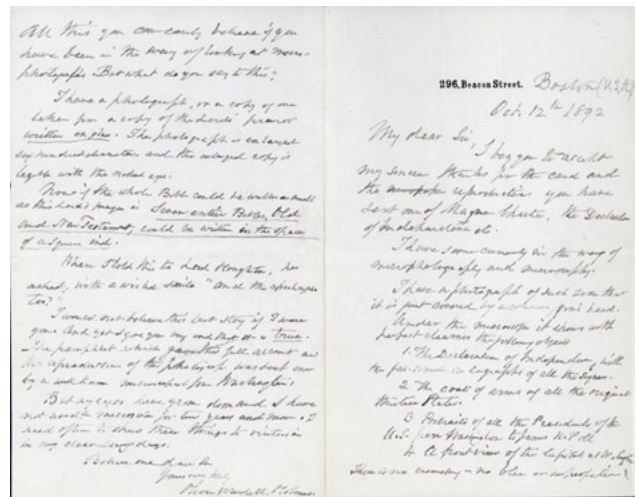
model, & see whether I find it sufficiently interesting to justify my appropriating a guinea to its purchase. As we have both male & female cones of this group of plants annually produced in our hothouse at Cambridge, the chief interest to be derived from a model would be lost to us. I do not exactly understand whether the model has been prepared by eye & hand, or the cast taken directly from the cone. The latter would be of most interest in a botanical point of view & an operation (I should think) very easily performed before the scales separated. I have often made casts in this way. I presume, however, from the price named, the model has been an elaborate work of art . . . I am very much obliged by your having sent me the prospectus & I have forwarded one to Sir W. Hooker. I think it very likely that he may wish for one for his Museum at Kew & he has ample resources for procuring every thing of the sort . . .

Sir William Hooker (1785-1865) served as director of the Royal Botanic Gardens at Kew from 1841 to 1865; his son Joseph Hooker married Henslow's daughter Frances.

It is likely that the model offered by Yates to Henslow was of a cone from *Encephalartos caffer*, the Eastern Cape dwarf cycad of South Africa, which produces both male and female cones made up of a series of spiraled scales. Henslow states in his letter that he had forwarded Yates's prospectus to Hooker, and in the 1 March 1856 issue of *Curtis's Botanical Magazine* Hooker refers to Yates's model of a female *E. Caffer* cone in the Kew collections. 45550

Concerning Microphotography

33. Holmes, Oliver Wendell (1809-94). Autograph letter signed to an unnamed correspondent. *Bifolium* (2pp.). Boston, 12 October 1892. 178 x 113 mm. Fine. Preserved in a cloth folding case.



\$750

Holmes, one of the foremost American writers, physicians and medical reformers of the 19th century, here discusses his enthusiasm for microphotography and micro-reproduction of texts:

. . . I have some curiosity in the way of microphotography and microscopy. I have a photograph of such size that it is just covered by a common pin's head. Under the microscope it shows with perfect clearness the following objects.

1. The Declaration of Independence, with the facsimile autographs of all the signers.
2. The coat of arms of all the original thirteen states.
3. Portraits of all the Presidents of the U.S. from Washington to James K. Polk.
4. A front view of the Capitol at Washington . . .

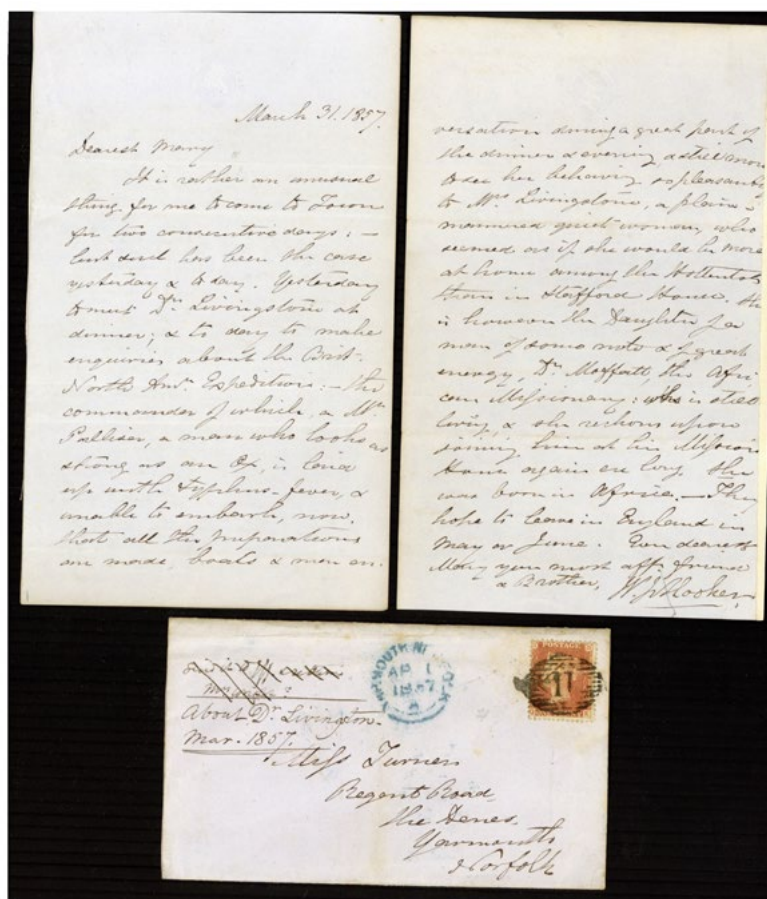
All this you can easily believe if you have been in the way of looking at microphotographs. But what do you say to this?

I have a photograph, or a copy of one taken from a copy of the Lord's Prayer written on glass. The photograph is enlarged six hundred diameters, and the enlarged copy is legible with the naked eye. Now if the whole Bible could be written as small as this Lord's Prayer is seven entire Bibles, Old and New Testament, could be written in the space of a square inch.

When I told this to Lord Houghton, he asked, with a wicked smile, "And the Apocrypha too?" . . .

But my eyes have grown dim and I have not used a microscope for ten years and more. I used often to show these things to visitors in my clear-seeing days . . .

Microphotography was invented in the late 1830s and refined over the next decades to the point where microfilm was used in the 1870s during the Franco-Prussian War to send communications by carrier pigeon. 45670



"I Wish You Could Have Seen Livingstone . . ."

34. Hooker, William Jackson (1785-1865). Autograph letter signed to Mary Anne Turner (1803-74). 6pp. on Athenaeum Club stationery (bifolium plus half-sheet), plus postmarked cover. [London,] 31 March 1857. 180 x 110 mm. Slight creasing, traces of former mounting, but very good to fine. \$2250

From botanist William J. Hooker, the first full-time director of the Royal Botanic Gardens at Kew and author of over two dozen works on botany, to his sister-in-law Mary Anne Turner, daughter of botanist and antiquarian Dawson Turner (1775-1858). In the letter Hooker gives a detailed account of his encounter with David Livingstone (1813-73), the renowned explorer of Africa, at a dinner given by the Duke and Duchess of Sutherland.

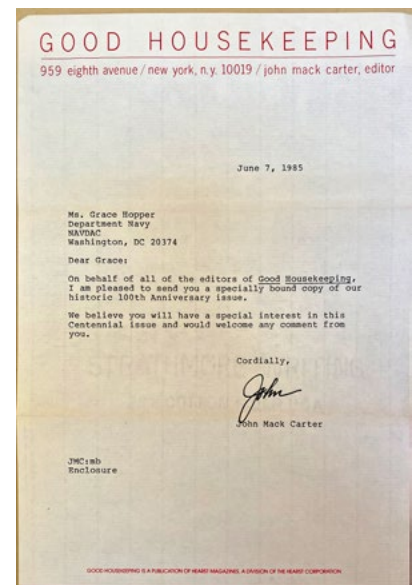
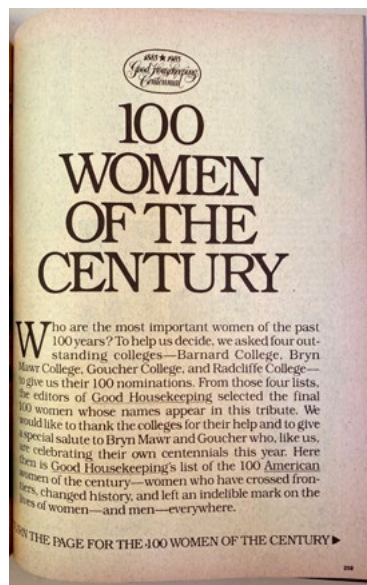
I wish you could have seen Livingstone, he is a most interesting man:— as modest & humble as he is clever & enterprising. I only wish he would keep off the subject of Botany, for he calls every thing of that kind by the wrong name. We had, (at Stafford House), really quite an exhibition of drawings of African Plants, Birds, Beasts, Scenery & Maps upon a most extensive scale, prepared in Africa by Col. Gordon. The great superb Hall was entirely occupied by them . . . Livingstone explained many of the objects & described a great deal of the country here represented:— & he certainly is more at home among the Birds & Beasts than he is among the Plants. Some of his anecdotes & adventures were very amusing:— the being lifted up in a canoe, for example, in a river, by a Hippopotamus getting under the Canoe & rising to the surface with it on his back— upsetting it & dousing the whole party into the water. This & much more will I doubt not be related in the narrative he is now preparing & which is happily in a very forward state. He works all day long at it, & only allows himself relaxation of an afternoon or evening when he is sure to be invited & I hope to have him & his wife to dinner on Saturday . . . It was delightful to see how well the Duchess of Sutherland drew him out, keeping

him in conversation during a great part of the dinner & evening & still more to see her behaving as pleasantly to Mrs. Livingstone, a plain-mannered quiet woman, who seemed as if she would be more at home among the Hottentots than in Stafford House . . .

Livingstone's "narrative" was, of course, his *Missionary Travels and Researches in South Africa*, published by John Murray in 1857; the hippopotamus incident appears in Chapter XXV.

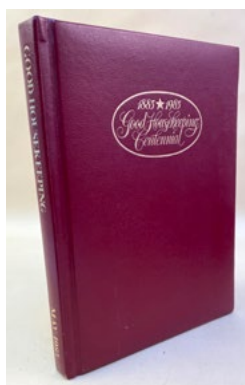
Stafford House (now Lancaster House) was at the time the London residence of the second Duke of Sutherland, George Granville Sutherland-Leveson-Gower (1786-1861) and his wife, Harriet Elizabeth Georgiana (1806-68). Like Livingstone, the Sutherlands were staunch opponents of the slave trade; their liberal politics and love of the arts attracted such distinguished visitors as Harriet Beecher Stowe, Giuseppe Garibaldi and Frederic Chopin.

Hooker's letter also refers to the British North American Exploring Expedition, led by John Palliser (1817-87), which explored and surveyed western Canada between 1857 and 1860. The expedition had been due to begin that month, but "Mr. Palliser, a man who looks as strong as an ox, is laid up with typhus-fever, & unable to embark, now, that all the preparations are made, boats & men engaged . . ." 45982



"100 Women of the Century" Presented to Grace Hopper

35. [Hopper, Grace Murray (1906-92).] Hopper's specially bound copy of *Good Housekeeping's* centennial issue (May 1985), containing a brief profile of Hopper on p. 265, together with a typed letter signed to Hopper dated 7 June 1982 from John Mack Carter (1928-2014), editor of *Good Housekeeping*, presenting this copy to Hopper. 454pp. 276 x 204 mm.; letter measures 267 x 185 mm. Original leatherette, slight edgewear. Very good to fine. \$275



First Edition. Hopper, one of the most famous of the postwar computer pioneers, was one of "100 Women of the Century" profiled on pages 259 – 271 of *Good Housekeeping's* special centennial issue. The profile notes that Hopper was "in the forefront of the computer revolution" and that "the grand old lady of software' has worked on computers and computer languages since 1944." Mack's letter to Hopper reads: "Dear Grace: On behalf of all the editors of *Good Housekeeping*, I am pleased to send you a specially

bound copy of our historic 100th anniversary issue. We believe you will have a special interest in this Centennial issue and would welcome any comment from you." 45669

36. Hornaday, William Temple (1854-1937).

Autograph draft in ink and pencil, unsigned, with numerous emendations, to **Alexander Graham Bell** (1847-1922). 4 pp. on 3 sheets, on letterhead of the New Willard Hotel in Washington DC. Washington DC, 3 December 1906. 265 x 202 mm. 2 small marginal tears, small rust-stains from paper clips on first leaf, but very good. \$300

From William Temple Hornaday, zoologist, conservationist and the first director of the New York Zoological Park (now known as the Bronx Zoo), to inventor Alexander Graham Bell in Bell's capacity as a trustee of the Smithsonian Institution's Board of Regents, nominating zoologist William Jacob Holland (1848-1932) to fill the post of Secretary left vacant on the retirement of Samuel Pierpoint Langley. In choosing Langley's successor, Hornaday urged the Smithsonian to follow the example of America's industrial magnates:

The American nation is now preeminent in international politics and policies, in mechanical industries, and in agriculture. There are many reasons why our national scientific institutions should be equally preeminent . . . Today the Board of Regents is seeking a scientific captain of industry who will be competent to plan a new future, and carry those plans into effect . . . On selecting great captains of industry, it is the way of the business world to look first of all for experience, and the expert knowledge which long experience alone can give . . . Inasmuch as the American people expect that the National Museum shall be preeminent in zoology, the logic of the situation seems to call for the selection of a zoologist. Amongst our scientific men who may justly be regarded as available for the vacant secretaryship, I know of one only who is a general zoologist, thoroughly experienced in museum-building, and also is of sufficient scientific and literary stature to meet the requirements of the situation. That man is William J. Holland, Ph.D. and LL.D. now director of the Carnegie Museum, of Pittsburgh . . .

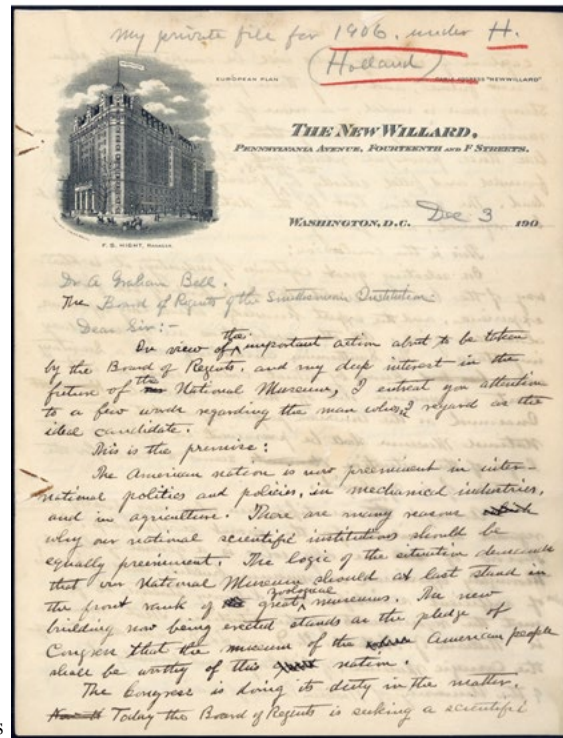
The Smithsonian's board ended up choosing geologist Charles Doolittle Walcott to fill the post. Holland remained director of the Carnegie Museum until his retirement in 1922. 46172

“Mr. Kuser was Unable to Purchase Mr. Beebe with Plain Money . . .”

37. Hornaday, William Temple (1854-1937). Autograph draft in pencil, unsigned, with numerous emendations, of a letter to **Madison Grant** (1865-1937). 4pp. on 4 sheets. N.p., 19 August 1909. 280 x 217 mm. Small dampstains in upper corners of first and last leaves, rust-marks from paper clip, but very good. \$750

From Hornaday to Madison Grant, chairman of the New York Zoological Society, vehemently denouncing what he regarded as an attempt to “steal” the Zoo's curator of birds, the eminent ornithologist and explorer **C. William Beebe** (1877-1962).

In 1909 a wealthy American businessman, Anthony R. Kuser (1862-1929), proposed to the Zoo that Beebe head an expedition around the world, which Kuser would finance, to document the world's pheasants. Hornaday strongly objected to Kuser's proposal, seeing Kuser as a publicity-hungry dilettante trying to lure Beebe from what Hornaday regarded as Beebe's duty to the Zoo:



31
 Madison Grant, Esq.
 Chairman Executive Committee,
 N.Y. Zoological Society
 Aug 19, 1909.

Dear Mr Grant:

This morning the Kuser-Beebe situation is clearer to me than it was yesterday, and I wish to lay before you a correct relief map of it. Please note carefully all these points:

Mr Kuser is a very wealthy man, amusing himself just now with birds and aviaries. His aviaries and birds are remote from the haunts of men, and he naturally wishes to attract attention to them. Finding in Mr Beebe a congenial and admiring spirit, he decides to annex Mr Beebe; for it is the way of some wealthy men to reach out and take whatever they specially desire.

Mr Kuser was unable to purchase Mr Beebe with plain money; for Mr Beebe is a perfectly sincere enthusiast, and values his scientific work above ordinary money.

Mr Kuser then proceeded to skilfully set a trap for Mr Beebe; and he baited it with (1) Mr Kuser's lavish promises of help with the Zoological Park Collections, (2) a finely-illustrated pheasant book, and (3) a trip to the orient.

Mr Beebe has been so firmly caught that he is today ready to fling away a great career as an ornithologist, - if he is denied what he now asks, - and all for the privilege of becoming, for a brief plaything, and making a picture book that he never would have dreamed of making.

This morning the Kuser-Beebe situation is clearer to me than it was yesterday, and I wish to lay before you a correct relief map of it. Please note carefully all these high points:

Mr. Kuser is a very wealthy man, amusing himself just now with birds and aviaries.

His aviaries and birds are remote from the haunts of men, and he naturally wishes to attract attention to them.

Finding in Mr. Beebe a congenial and admiring spirit, he decides to annex Mr. Beebe; for it is the way of some wealthy men to reach out and take whatever they specially desire.

Mr. Kuser was unable to purchase Mr. Beebe with plain money: for Mr. Beebe is a perfectly sincere enthusiast, and values his scientific work above ordinary money.

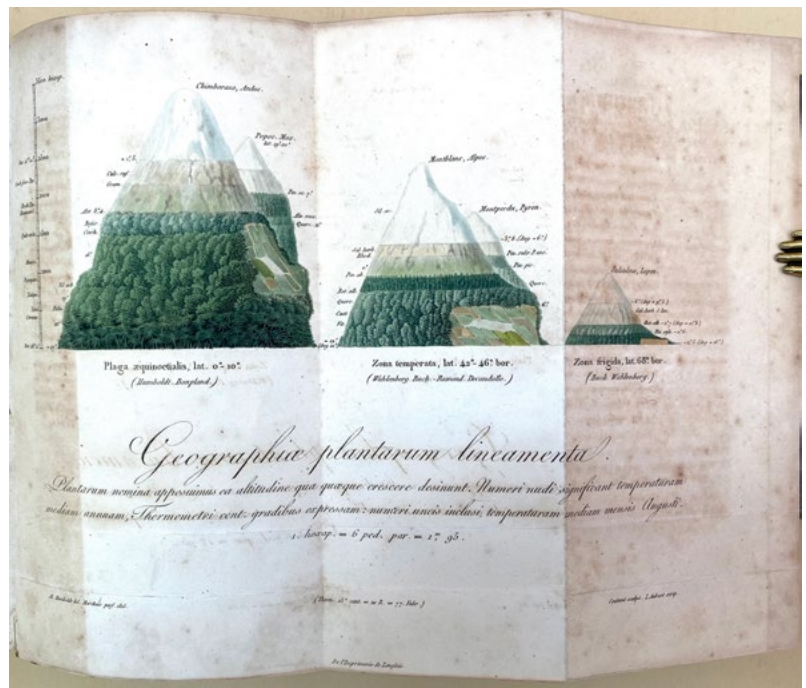
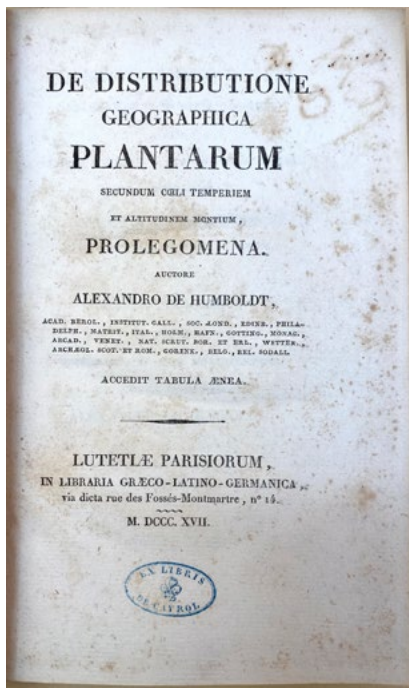
Mr. Kuser then proceeded to skilfully set a trap for Mr. Beebe; and he baited it with (1) Mr. Kuser's lavish promises of help with the Zoological Park Collections, (2) a finely-illustrated pheasant book, and (3) a trip to the orient.

Mr. Beebe has been so firmly caught that I think he is today ready to fling away a great career as an ornithologist, if he is denied what he now asks, and all for the privilege of becoming, for a brief

season only, a rich man's plaything, and making a picture book that he never of his own initiative would have dreamed of making . . .

Despite Hornaday's opposition, the Zoo agreed to Kuser's plan and Beebe embarked on what would be a 17-month expedition, focusing primarily on the pheasant species of Asia. He was able to obtain live or stuffed specimens of nearly all the pheasants he sought, some of which—such as the Himalayan monal—had never before been seen in the wild by American or European explorers. Based on observations made during the expedition, Beebe became the first biologist to correctly understand the operations of sexual dimorphism in pheasants, and he proposed a new model of pheasant evolution that is now universally accepted.

With costs underwritten by Kuser, Beebe's famous four-volume folio monograph documenting the expedition, *A Monograph of the Pheasants*, was published between 1918 and 1922. With 90 colored plates of birds and 88 photogravure plates of habitats and scenery, it has been called "the greatest ornithological treatise of the 20th century." Illustrators included Henrik Grönvold, Charles Robert Knight, George Edward Lodge, and Archibald Thorburn. 46171



38. Humboldt, Alexander von (1769-1859). *De distributione geographica plantarum secundum coeli temperiem et altitudinem montium, prolegomena*. 8vo. [6], 249, [5] pp. Hand-colored folding engraved plate. Paris: In Libraria Graeco-Latino-Germanica, 1817. 198 x 119 mm. Sheep, gilt spine ca. 1817, some rubbing, upper spine chipped, hinges cracked but holding. Minor foxing but very good. Signature and stamps of Louis N. J. J. de Cayrol (1775-1859) on the half-title and title; later stamp of George R. Brush. \$950

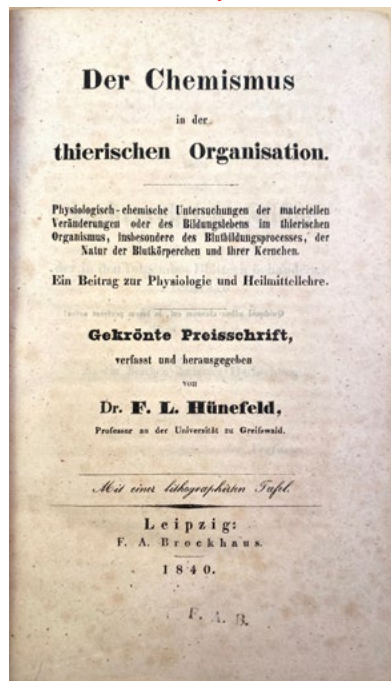
First Separate Edition. Humboldt's *De distributione geographica plantarum* was originally published as the prolegomenon (introductory essay) to his *Nova genera et species plantarum* (1815); it was issued as a separate publication in 1817. In it, Humboldt elaborated and extended the researches on the geographical distribution of plants that he had first presented in the *Essai sur la géographie des plantes* (1805), the work that founded this branch of ecology. In the 1817 work Humboldt made more explicit the parallels between changes in elevation from lower to higher and changes in location from tropical to arctic, illustrating these with a plate giving "a pictorial representation of three vegetational profiles: equatorial Chimborazo, mid-latitude Mont Blanc, and Sulitelma in arctic Lapland. It was this graphic that finally connected the dots between altitude and latitude" (Jackson, p. 32).

This copy is from the library of French political and military figure Louis de Cayrol, and was later owned by U.S. naval surgeon George Brush. S. Jackson, "Introduction: Humboldt, ecology and the cosmos," in Humboldt and Bonpland, *Essay on the Geography of Plants* (2008), pp. 1-46. 45874



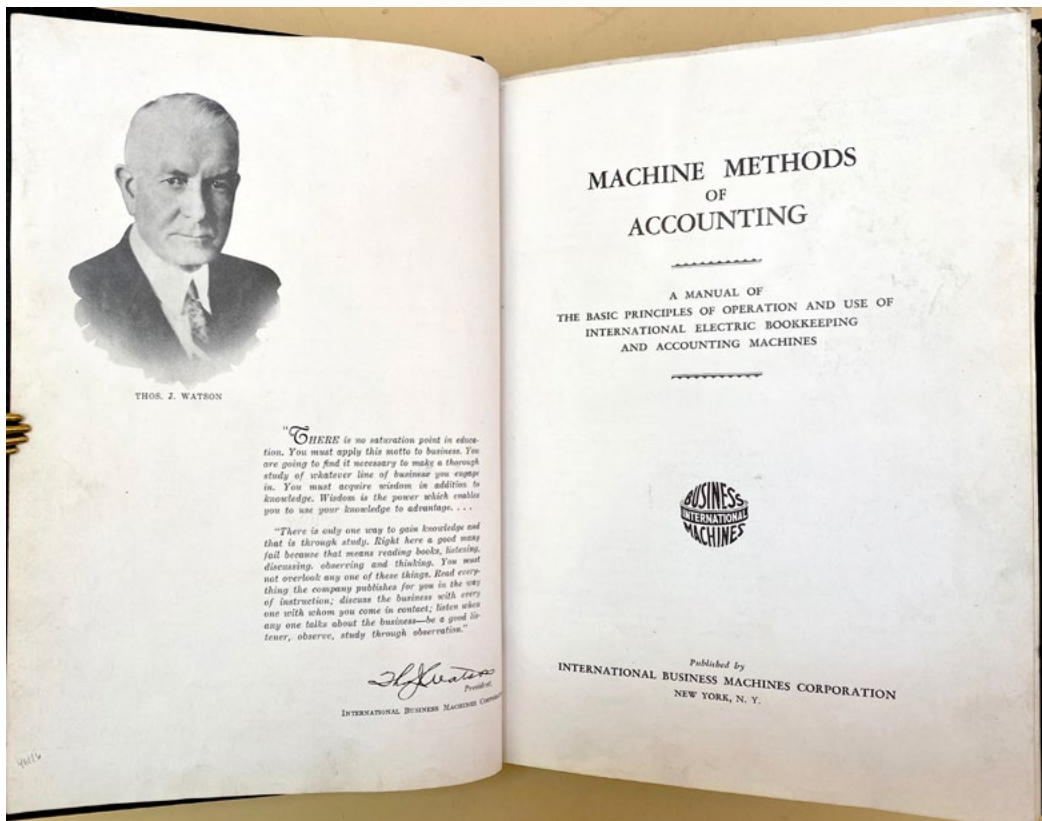
Discovery of Hemoglobin

39. Hünefeld, Friedrich Ludwig (1799-1882). *Der Chemismus in der thierischen Organisation*. xvi, 269, [3]pp. Plate. Leipzig: F. A. Brockhaus, 1840. 216 x 128 mm. 19th-century quarter cloth, marbled boards, light rubbing and edgewear. Minor foxing and toning, but very good. Small ownership stamp on title. \$1750



First Edition. Hünefeld, professor of chemistry and mineralogy at the University of Greifswald, accidentally discovered crystalline hemoglobin in partially dried samples of mammalian blood held between two glass slides. On page 160 of the present work, Hünefeld noted that he had seen, in some samples, “tabular, crystalline precipitations, which under the microscope appeared sharply defined and colored bright red.” Figures 7 and 8 in the plate illustrating Hünefeld’s work show the crystals he observed in pig’s blood and human

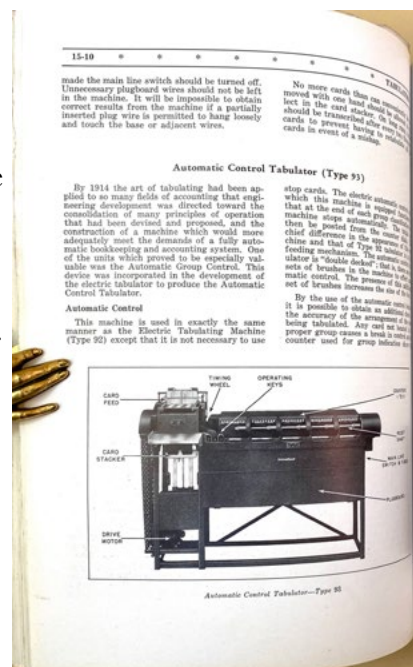
blood respectively; these represent the first published illustrations of hemoglobin crystals. The substance Hünefeld discovered was given the name “hemoglobin” by Hoppe-Seyler in 1864; in 1870 Claude Bernard discovered hemoglobin’s role as an oxygen carrier. Garrison-Morton.com 6921. Judson, *Eighth Day of Creation*, p. 489. Lesk, *Protein Structure*, p. 36. 46065

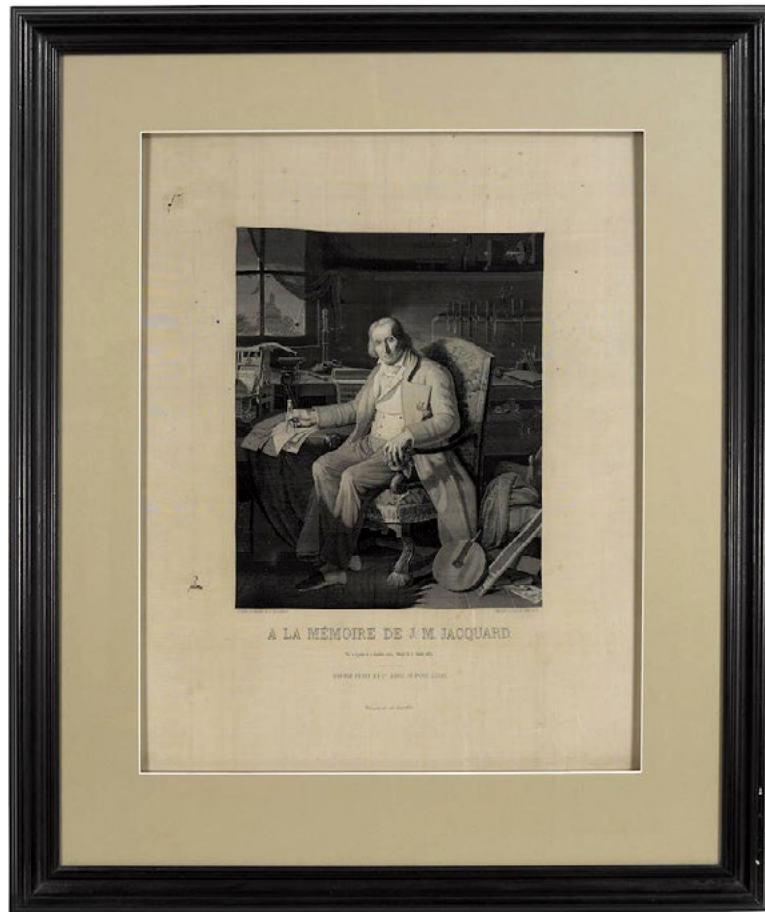


The Apogee of 1930s Information Processing

40. IBM. Machine methods of accounting: A manual of the basic principles of operation and use of international electric bookkeeping and accounting machines. 23 separately paginated parts plus [8] pp. preliminaries. Text illustrations. New York: International Business Machines Inc., [1936]. 282 x 217 mm. In original cloth pressure binder, “Machine Methods of Accounting” stamped on the front cover over the IBM logo, “The Chase National Bank of the City of New York / Foreign Exchange Department” very faintly stamped at the foot of the front cover. Light wear, a few edges frayed. Very good. \$2500

First Edition of this manual issued in 23 separate parts by IBM during the period just before the invention of the electronic computer, when the company dominated the market for punch-card tabulators and other calculating and data-processing machines. The most sophisticated of IBM’s electric punched card tabulators could be programmed by plug boards, and represented an intermediate step between traditional tabulating machines and the programmable computers that were developed during World War II. “Primarily, this book was written to provide a single volume from which employees of International Business Machines Corporation may thoroughly familiarize themselves with the complete list of bookkeeping and accounting machines manufactured by their Company, and with the operation of such machines of furnishing figure-facts automatically” (p. [6]). The manual is copiously illustrated with photographs and drawings of IBM’s accounting machines, punch cards and related equipment, together with images of the company’s corporate headquarters and its president, Thomas J. Watson. 46116





The Most Famous Image in the Early History of Computing

41. Jacquard, Joseph Marie (1752-1834). Portrait in silk of Joseph-Marie Jacquard after an original oil portrait by Claude Bonnefond, manufactured by Didier, Petit et Cie; woven by Michel-Marie Carquillat (1803–1884) in Lyon, France, 1839. The image, including caption and Carquillat’s name, taking credit for the weaving, is 55 x 34 cm.; the full piece of silk including blank margins is 85 x 66 cm. The visible portion of the image in the frame is 72 x 54.5 cm., and the frame measures 104 x 84 cm. Minor wear from folding barely visible in the image, but with the image in clear, unfaded and fresh condition. The weaving was professionally treated by a textile conservator, whose conservator’s report and images of before and after are available. Minor flaws visible in the large outer margins of the silk, not affecting the image. In a large and attractive archival frame. \$20,000

This famous image, of which only a very few examples are known, was woven by machine using 24,000 Jacquard cards, each of which had over 1000 hole positions. The process of *mis en carte*, or converting the image details to punched cards for the Jacquard mechanism, for this exceptionally large and detailed image, would have taken several workers many months, as the woven image convincingly portrays superfine elements such as a translucent curtain over glass window panes. Once all the “programming” was completed, the process of weaving the image with its 24,000 punched cards would have taken more than eight hours, assuming that the weaver was working at the usual Jacquard loom speed of about forty-eight picks per minute, or about 2800 per hour. More than once this woven image was mistaken for an engraved image. The image was

produced only to order, most likely in a small number of examples. Recorded examples are those at the Metropolitan Museum of Art, the Science Museum, London, The Art Institute of Chicago, and the Computer History Museum, Mountain View, California, Musée de Tissus, Lyons.

The image is the subject of the book by James Essinger entitled *Jacquard's Web: How a Hand Loom Led to the Birth of the Information Age* (2004). To Charles Babbage the incredible sophistication of the information processing involved in the *mis en carte*—what we call programming—of this exceptionally elaborate and beautiful image confirmed the potential of using punched cards for the inputting, programming, and outputting and storage of information in his design and conception of the first general-purpose programmable computer—the Analytical Engine. The highly aesthetic result also confirmed to Babbage that machines were capable of amazingly complex and subtle processes—processes which might eventually emulate the subtlety of the human mind.

In June 1836 Babbage opted for punched cards to control the machine [the Analytical Engine]. The principle was openly borrowed from the Jacquard loom, which used a string of punched cards to automatically control the pattern of a weave. In the loom, rods were linked to wire hooks, each of which could lift one of the longitudinal threads strung between the frame. The rods were gathered in a rectangular bundle, and the cards were pressed one at a time against the rod ends. If a hole coincided with a rod, the rod passed through the card and no action was taken. If no hole was present then the card pressed back the rod to activate a hook which lifted the associated thread, allowing the shuttle which carried the cross-thread to pass underneath. The cards were strung together with wire, ribbon or tape hinges, and fan-folded into large stacks to form long sequences. The looms were often massive and the loom operator sat inside the frame, sequencing through the cards one at a time by means of a foot pedal or hand lever. The arrangement of holes on the cards determined the pattern of the weave.

As well as patterned textiles for ordinary use, the technique was used to produce elaborate and complex images as exhibition pieces. One well-known piece was a shaded portrait of Jacquard seated at table with a small model of his loom. The portrait was woven in fine silk by a firm in Lyon using a Jacquard punched-card loom. The image took 24,000 cards to produce, and each card had over 1,000 hole positions. Babbage was much taken with the portrait, which is so fine that it is difficult to tell with the naked eye that it is woven rather than engraved. He hung his own copy of the prized portrait in his drawing room and used it to explain his use of the punched cards in his Engine.

The delicate shading, crafted shadows and fine resolution of the Jacquard portrait challenged existing notions that machines were incapable of subtlety. Gradations of shading were surely a matter of artistic taste rather than the province of machinery, and the portrait blurred the clear lines between industrial production and the arts. Just as the completed section of the Difference Engine played its role in reconciling science and religion through Babbage's theory of miracles, the portrait played its part in inviting acceptance for the products of industry in a culture in which aesthetics was regarded as the rightful domain of manual craft and art (Swade, *The Cogwheel Brain. Charles Babbage and the Quest to Build the First Computer* [2000] 107-8).

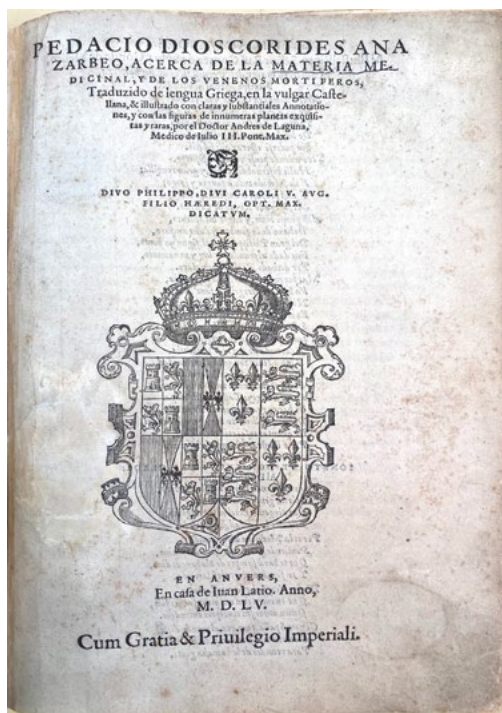


One of the Rarest Herbals of the 16th Century

42. [Laguna de Segovia, Andrés (1499-1559).] Dioscorides Pedanius (ca. 40-90 CE). Acerca

de la materia medicinal, y de los venenos mortiferos, traducido de lengua griega, en la vulgar castellana, & ilustrado con claras y substantiales annotations, y con las figuras de innumerables plantas exquisitas y raras, por el Doctor Andres de Laguna . . . Folio. [8], 616, [24]pp. Numerous woodcut text illustrations. Antwerp: En casa de Juan Latio, 1555. 287 x 195 mm. 18th century mottled calf, rebaked preserving original gilt spine, corners a bit worn. Library stamps skillfully removed from title. Title leaf and leaf Bbb1 skillfully repaired, minor toning and foxing but very good.

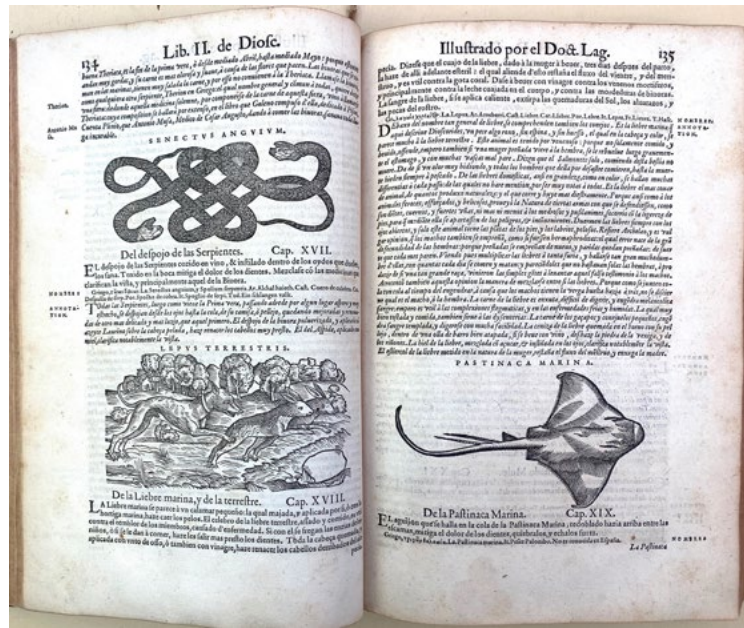
\$30,000



First Edition in Spanish of Andrés Laguna de Segovia's edition of Dioscorides's *De materia medica*, (first published in Latin in 1554), with commentaries and additions that double the original text, and illustrated with hundreds of beautiful woodcut illustrations of plants and animals. This is one of the rarest botanical works of the 16th century. There are no auction records for this edition, and OCLC cites only seven copies worldwide: Chicago Public Library, National Library of Scotland, University of Oxford, Bayerische Staatsbibliothek, Biblioteca Nacional de España, University of Michigan, State Library of New South Wales.

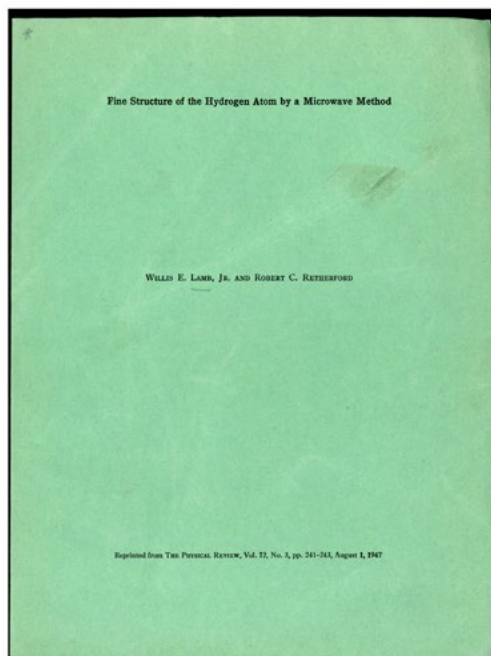
Dioscorides' encyclopedic treatise on medical botany, written in Greek around the first century CE, is one of the founding works of pharmacology; it maintained its authority, though various translations and commentaries, for over 1500 years. Laguna's extensively annotated translation into Castilian Spanish is considered one of the best and most faithful renditions of Dioscorides' work into a modern language; it continued to be published, in various editions, until the end of the eighteenth century.

Laguna, a Spanish physician, botanist and humanist, studied medicine in Paris in the 1530s and spent several years in the Netherlands, France, England and Italy before returning to Spain in 1557. He enjoyed an international reputation as a learned and skilled physician, and his services were sought after by some of Europe's most powerful men, including Pope Julius III and Holy Roman Emperors Charles V and Philip II. While a medical student in Paris, Laguna began copying and collecting manuscripts for his commentary on Dioscorides, and on his frequent trips to Rome he was able to consult a number of codices of *De materia medica* as well as Pietro Andrea Mattioli's 1544 Italian translation. During his European travels he also collected herbal remedies from every place he stayed so that he could personally verify Dioscorides' prescriptions. Laguna based his edition of Dioscorides largely on the 1518 Latin translation of Jean Ruel, who had been one of his teachers in Paris; his commentaries on the text, incorporating his own observations, opinions and experiences, are an important primary source of information on the botanical and other scientific activities of his time. Garrison-Morton, com 13125. E. Andretta, "The medical cultures of 'the Spaniards of Italy': Scientific communication, learned practices and medicine in the correspondence of Juan Páez de Castro," in J. Slater, M. López-Terrada and J. Pardo-Tomás, eds., *Medical Cultures of the Early Modern Spanish Empire* (2016). Hunt *Botanical Catalogue*, I, no. 95. Nissen, *Botanische Buchillustration*, no. 500. 45941



The Lamb Shift

- 43. Lamb, Willis** (1913-2008); **Robert C. Retherford** (1912-81). Fine structure of the hydrogen atom by a microwave method. Offprint from *Physical Review* 72 (1947). 241-243pp. 266 x 198 mm. Original printed wrappers, somewhat creased., small scuff on front wrapper. Light toning but very good. \$5000

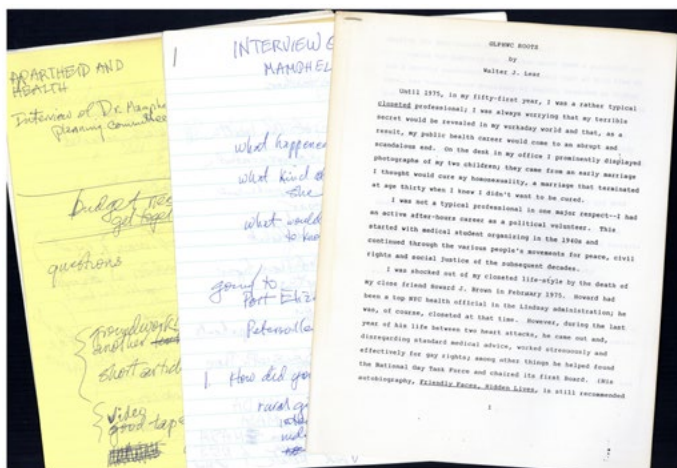


First Edition, Offprint Issue. The Lamb-Retherford experiment of 1947 was the first to measure what is now known as the Lamb shift—the difference in energy between two energy levels $2S_{1/2}$ and $2P_{1/2}$ of the hydrogen atom—which had not been predicted by the Dirac relativistic wave equation. Discovery of the Lamb shift helped to stimulate the development of modern quantum electrodynamics by Schwinger, Feynman, Tomonaga *et al.* Lamb received a share of the 1955 Nobel Prize for physics for this achievement.

When Swedish physicist Ivar Waller presented Lamb with the Nobel, he remarked that “it does not often happen that experimental discoveries exert an influence on physics as strong and invigorating as did your work. Your work led to the reevaluation and a reshaping of the theory of the interaction of electrons and electromagnetic radiation, thus initiating a development of utmost

importance to many of the basic concepts of physics” (quoted in Mehra & Rechenberg, *Historical Development of Quantum Theory*, 6, p. 1037). Ezhela *et al.*, *Particle Physics: One Hundred Years of Discoveries*, p. 94. Wikipedia Timeline of Quantum Mechanics. 46004

- 44. Lear, Walter J.** (1923-2010). Archive of manuscript, typescript, reproduced and printed materials dealing with his health activism and researches on the U.S. health left. Circa 300 pages. 1980s-1990s. Very good. \$750



Archive of materials created by Walter J. Lear, pioneering LGBT physician and activist for health care reform and LGBT rights. “Walter J. Lear earned a medical degree from Long Island College of Medicine and a master’s in hospital administration from Columbia University in 1948. After several years at the U.S. Public Health Service, Lear became Philadelphia’s deputy city health commissioner in 1964. In 1971, he was appointed state regional health commissioner, and he later served as executive director of Philadelphia General Hos-

pital. Lear came out as gay in 1975 and may have been the first openly gay public officer in Philadelphia . . . “Lear helped found and lead many groups, including: the Medical Committee for Human Rights; the Caucus of Gay and Lesbian Public Health Workers of the American Public Health Association (APHA); the Mater-

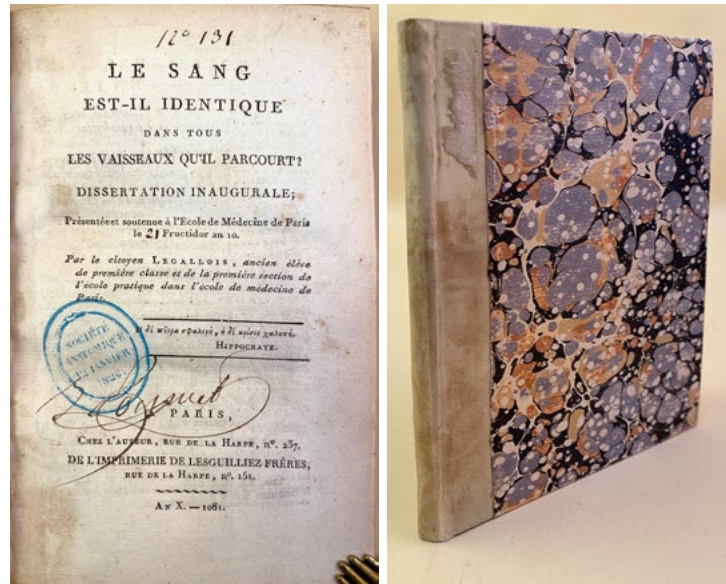
nity Care Coalition of Greater Philadelphia; the Gay and Lesbian Community Center of Philadelphia (now the William Way Center); the Siegrist Circle (progressive medical historians); the National Gay Health Coalition; the Maternity Care Coalition of Greater Philadelphia; and the Philadelphia AIDS Task Force” (“U. S. Health Activism History Collection [Walter J. Lear U.S. Health Activism History Collection],” *Penn Libraries*, University of Pennsylvania [web]).

The archive contains materials mostly from the 1980s and 1990s, and includes material on AIDs, drafts of articles on progressive medical activism, records of interviews, etc. 46155

45. Legallois, César Julien Jean (1770-1814). *Le sang est-il identique dans tous les vaisseaux qu'il parcourt?* [2], 5-149, [1]pp. Paris: Chez l'auteur; de l'Imprimerie de Lesguiliez Frères, An X—1801. 193 x 126 mm. 20th-century quarter vellum, marbled boards, lightly rubbed, remains of paper label on spine. Minor foxing and toning, library stamp dated 1826 on title. 19th-century ownership inscription (illegible) on title.

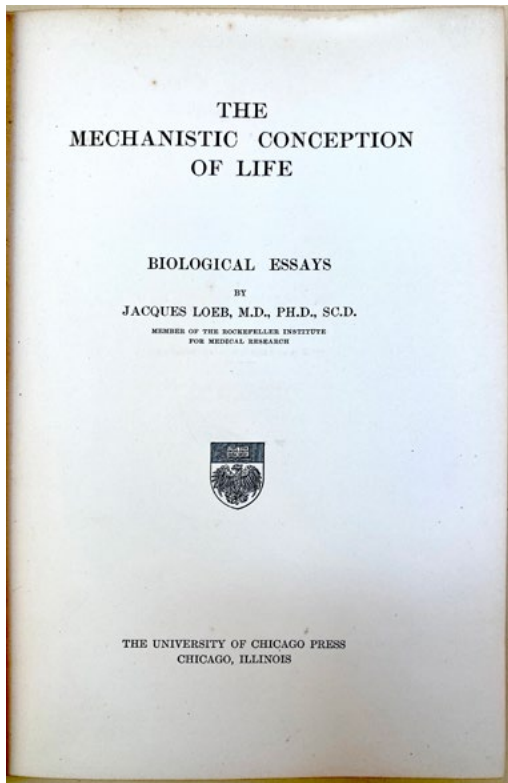
\$1250

First Edition. Legallois's medical thesis, on whether blood is identical in all vessels through which it flows, anticipated the concept of internal secretion. “Legallois pointed out that although blood is identical in all the arteries, it changes as it passes through the various organs and thus one organ may by its products influence all the others. This dissertation revealed Legallois's interest in experimental physiology and was widely appreciated as a model of physiological discussion” (*Dictionary of Scientific Biography*). Garrison-Morton.com 1118. 46061



Inscribed to the Journalist who Promoted his Work; from the Library of Herbert M. Evans

46. Loeb, Jacques (1859-1924). (1) The mechanistic conception of life. Offprint from *Popular Science Monthly* 80 (1912). 5-21pp. 247 x 166 mm. Original printed wrappers, detached, fore-edges a bit frayed. Some browning due to acidic paper. Very good. From the library of Herbert M. Evans (1882-1971), with his stamps on the front wrapper. (2) The mechanistic conception of life: Biological essays. [10], 232pp. Text illustrations. Chicago: University of Chicago Press, 1912. 219 x 140 mm. Original cloth, light edgewear, small spot on front cover. Very good. *Presentation Copy*, inscribed on the front free endpaper: "To Mr. Carl Snyder with the author's sincere regards." Dated Woods Hole, Aug. 25, 1912 in another hand. \$950

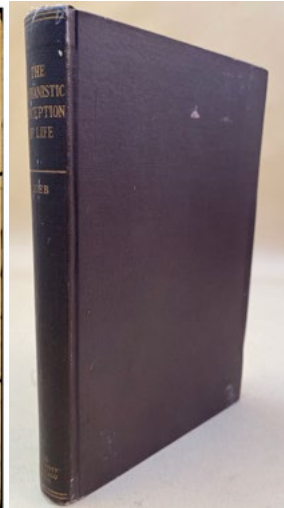
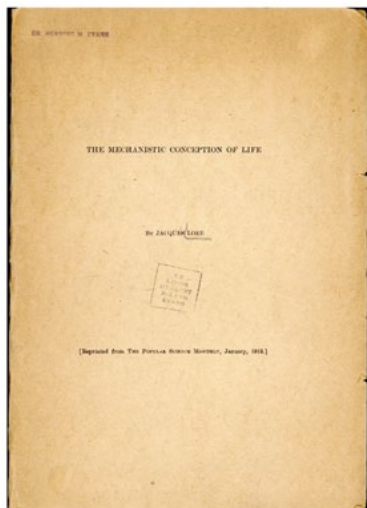


First Editions of two of Loeb's most famous and widely read works. The offprint (no. 1) is from the library of Herbert M. Evans, the co-discoverer of vitamin E and human growth hormone; see Garrison-Morton.com 1055. Loeb presented this copy of his book (no. 2) to journalist Carl Snyder, who was largely responsible for introducing Loeb and his researches to the American public. "The person who crystallized an image of Loeb, his work and his aims, and presented it to a wide public was Carl Snyder. This young journalist . . . interviewed Loeb for *McClure's Magazine*, the popular progressive monthly edited by Lincoln Steffens" (Pauly, *Controlling Life*, p. 102).

*To Mr. Carl Snyder
with the author's sincere
regards.*

Woods Hole -
Aug. 25, 1912.

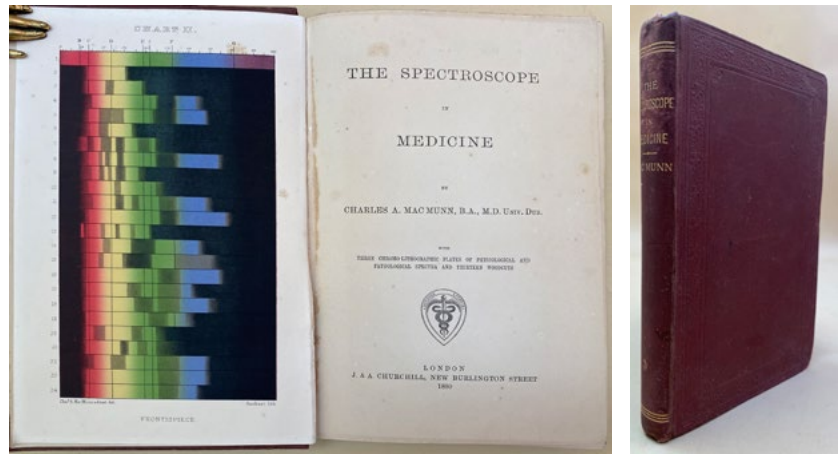
Jacques Loeb, one of the most famous scientists in early 20th-century America, promoted a purely mechanical conception of biology, stating that "life, i.e., the sum of all life phenomena, can be unequivocally explained in physico-chemical terms" (*Mechanistic Concept of Life*, p. 3). He "was the apostle of mechanistic conceptions in biology . . . Few scientists of Loeb's generation were as well known to the American public. As a materialist in philosophy, a mechanist in science, and a socialist in politics, he offended against the prevalent American orthodoxies . . . Loeb's principal statement of his basic philosophy for a lay audience was his famous address 'The mechanistic conception of life,' delivered before the First International Congress of Monists in Hamburg in September 1911 and published as the title piece of his most widely read book (1912). In this work Loeb argued that the mechanistic conception had made colossal strides in the first decade of the twentieth century, largely through his own researches" (*Dictionary of Scientific Biography*). Garrison-Morton.com 135. 46160



47. MacMunn, Charles A.

(1852-1911). The spectroscope in medicine. xiii, 198pp. plus 24-page publisher's catalogue. 3 chromolithographed plates, text illustrations. London: J. & A. Churchill, 1880. 223 x 144 mm. Original cloth, light wear. Minor foxing and toning but very good. Spanish bookseller's label on the verso of the front free endpaper.

\$375



First Edition. MacMunn pioneered the use of spectroscopy in medicine, devoting the present work—his first book—to a discussion of the spectroscope and its use in medical analysis. MacMunn would go on to investigate the spectra of heme proteins in different states of oxygenation, discovering the pigments now known as cytochromes (see Garrison-Morton.com 13108); unfortunately, MacMunn's findings were discredited by the eminent German physiologist Hoppe-Seyler, and MacMunn's contributions to hematology remained unrecognized until Keilin's rediscovery of cytochromes in 1925. Garrison-Morton.com 13109. 46146

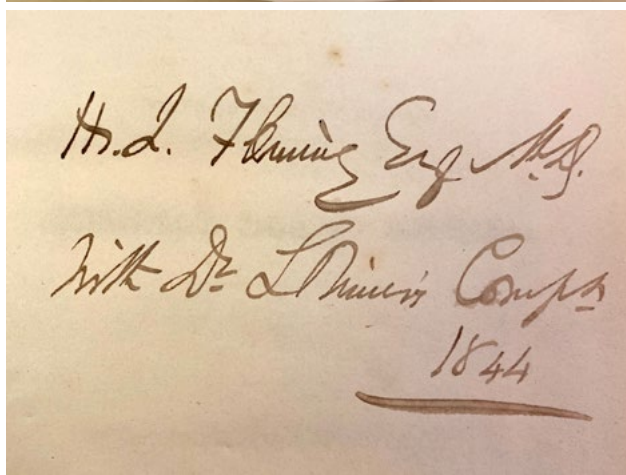
Six Works Printed & Bound at the Vepery Mission Press, Madras; Presentation Copy

48. [Madras Presidency.] Lorimer, Alexander. (1) Report on the medical topography and

statistics of the Presidency Division of the Madras Army, including Fort St. George, and its dependencies . . . compiled from the records of the Medical Board Office. vi, 110, [2], xxiv pp. 3 folding plates, 7 folding tables. (2) Report on the medical topography and statistics of the Centre Division of the Madras Army . . . [4], 112-247, [2], xxv – xxx pp. 4 folding plates, 6 folding



tables. (3) Report on the medical topography and statistics of the Southern Division of the Madras Army . . . [4], 248-466, [2], xxxi – xliii pp. 5 folding plates, 5 folding tables. (4) Medical topography and statistics of the Presidency of Madras . . . Vol. I. [2], 3, 467-529, [3], xlv – xlvi pp. 2 folding plates, 5 folding tables. (5) Report, on the medical topography and statistics of the Mysore Division of the Madras Army . . . [4], 126, [3], iv pp. 4 folding plates, 4 folding tables. (6) Report on the medi-



cal topography and statistics of the ceded districts, Coorg, and the Neilgherry hills . . . [4], 127-212, [2], v – x, [2], 213-307pp. 6 folding plates, 4 folding tables. (7) Medical topography and statistics of the Presidency of Madras . . . Vol. II. [8], 308-409, [2], xi – xxiv, 410-553pp. 10 folding plates, 2 folding tables. Together 7 works in 6 volumes. Madras: R. W. Thorpe at the Vepery Mission Press, 1842-44. 211 x 143 mm. Uniformly bound in half morocco, boards, gilt-lettered spines ca. 1844, light rubbing and spotting, binder's label of the Vepery Mission Press in the first 3 volumes. Minor tears in a few plates, light toning, but very good. *Presentation Copies*, with each volume inscribed on the front flyleaf from Dr. Lorimer to H. S. Fleming, M.D., the first volume in a secretarial hand and the remaining volumes in what is presumably Lorimer's hand.

\$1500

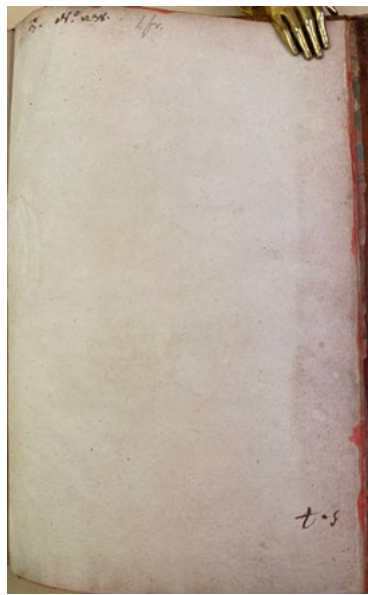
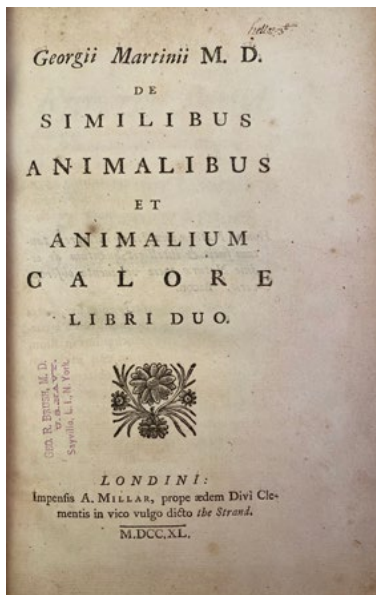
First Editions of these official government reports on the medical topography of the Madras Presidency, an administrative subdivision of British India which at the time covered most of southern India. The reports were compiled from the records of the Medical Board Office by Alexander Lorimer, assistant garrison surgeon at the East India Company's Fort St. George.

Issued between 1842 and 1844, the reports are illus-

trated with numerous hand-colored maps and plates lithographed and hand-colored in Madras, and contain a wealth of statistical data from the Presidency's hospitals, infirmaries, asylums, prisons and garrisons.

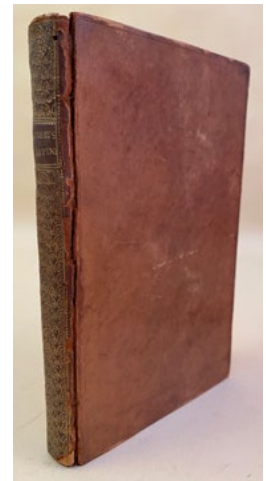
The records of the Medical Board Office were known to contain a large and valuable collection of topographical and statistical information, but the various documents were so incomplete as to render it necessary to make a further reference to the Medical Officers of the Establishment . . . The Medical Board, therefore, with a view to fulfil the wishes of Government, propose to compile from the whole of the records at their disposal, a general Topographical and Statistical account of each of the Military Divisions of this Presidency . . . Tables of Disease and Mortality, both of the Civil and Military departments, for Europeans and Natives, will be annexed to the reports. This part of the work, drawn up from returns in the Medical Board Office, will be found to contain much valuable information (Vol. 1, p. ii).

Dr. Lorimer, the compiler of these reports, presented this set to Dr. H. S. Fleming, a member of the Madras Presidency's Medical Board. 45619



Lavoisier's Copy

49. Martine, George (1700-1741). *De similibus animalibus et animalium calore libri duo*. vi, [2], 275, [1]pp. Text illustrations. London: A. Millar, 1740. 204 x 130 mm. 18th-century calf, gilt spine, hinges split, head and foot of spine chipped, light wear. Very good. From the library of **Antoine Lavoisier** (1743-94), with his bookplate (one edge chipped) inside the front cover and shelf-marks possibly his on the title and back flyleaf. Later stamp of U.S. Navy surgeon George R. Brush (d. 1894) on the title. \$1250



First Edition of this work on comparative physiology by Scottish physician George Martine. This copy is from the library of French scientist Antoine Lavoisier, whose *Traité élémentaire de chimie* (1789) marks the foundation of modern chemistry. Animal heat, or metabolism, was a topic of great interest to Lavoisier, as it was central to his researches on combustion and respiration; Duveen and Klickstein's *Bibliography of the Works of Antoine Laurent Lavoisier* cites no fewer than 16 works on the subject of animal heat. Lavoisier's copy of Martine's treatise is cited on p. 323 of Marco Beretta's *Bibliotheca Lavoisierana: The Catalogue of the Library of Antoine Lavoisier* (1995).

“In his early years Martine had published several articles, in the form of letters or essays, dealing with the blood and organs of the human body, and by this time had developed an interest in the temperature of the circulating blood and animal heat generally. The difficulties of measuring temperature led him to investigate the unsatisfactory business of thermometer manufacture and the impossibility of comparing observations that had been made with a variety of instruments graduated to individual scales” (*Oxford Dictionary of National Biography*). 45755

Transuranic Researches; Rare Offprints

50. Meitner, Lise (1878-1968). (1) Über die β - und γ -Strahlen der Transurane. Offprint from *Annalen der Physik*, 5th series, 29 (1937). 246-250pp. Text illustrations. 231 x 152 mm. Original printed self-wrappers, tiny rust-marks on front wrapper. (2) (with **Otto Hahn** [1879-1968] and **Fritz Strassmann** [1902-80].) Über die Umwandlungsreihen des Urans, die durch Neutronenbestrahlung erzeugt werden. Offprint from *Zeitschrift für Physik* 106 (1937). 249-270pp. 229 x 156 mm. Original printed wrappers. Together 2 offprints. Very good to fine. “Kern” (German for “nucleus”) written in pencil on the front wrappers of both offprints. \$3750

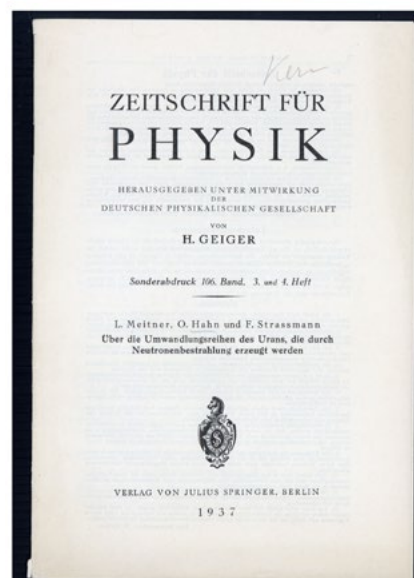
First Editions, Offprint Issues of two papers on Lise Meitner’s “transuranic” researches, which ultimately led to her discovery (with Otto Frisch) of nuclear fission.

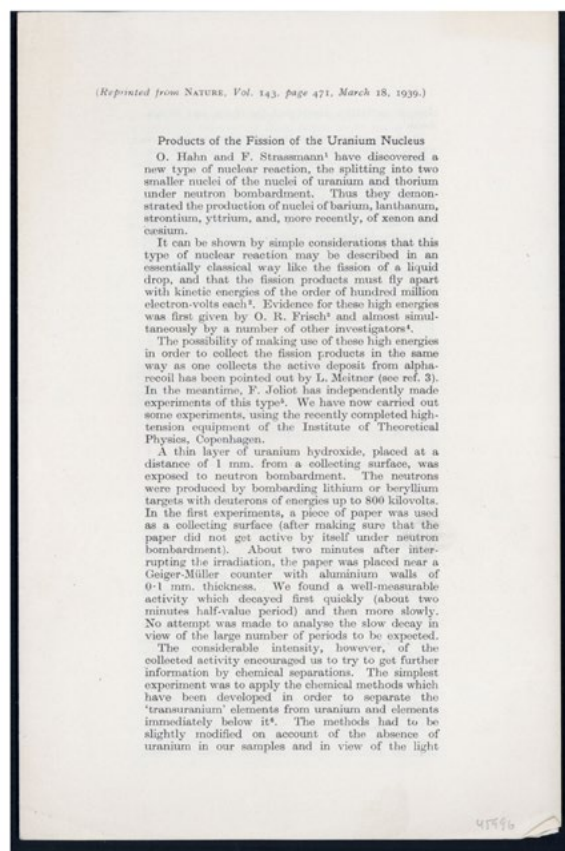
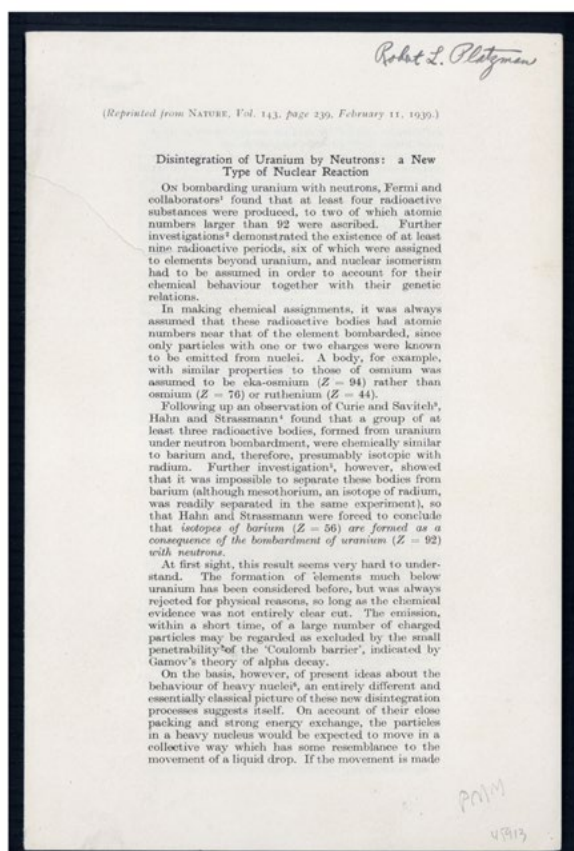
In March 1934, Enrico Fermi and his research team had begun a series of experiments in which they irradiated all the elements in the periodic table with neutrons, beginning with hydrogen and working their way up to uranium. Meitner, professor of physics at the Kaiser Wilhelm Institut in Berlin, was particularly interested in the results he had obtained with uranium (atomic no. 92), then the heaviest known element, which when bombarded exhibited at least four new beta activities whose chemistry appeared different from uranium. Fermi had speculated that these new activities represented transuranium elements of atomic number 93 or higher, a hypothesis adopted by Meitner and most other nuclear physicists at the time.

During the next four years (1934-38) Meitner undertook a thorough investigation of these “transuranic” phenomena, joined by physical chemists Otto Hahn and Fritz Strassmann. The team identified numerous radioactive “transuranes” resulting from neutron bombardment of uranium; although the chemical evidence for these elements appeared strong, the physics of their creation—which conformed to no known pattern—perplexed Meitner deeply. From cloud chamber photographs, Meitner determined that transuranes emitted only beta particles; she reported this finding in the first paper listed above, which includes illustrations of the cloud chamber results for “eka-rhenium” and “eka-osmium.” The team kept discovering what appeared to be new transuranes, and in May 1937 they issued a jointly authored report on their researches, “Über die Umwandlungsreihen des Urans, die durch Neutronenbestrahlung erzeugt werden.” In this paper

Hahn presented what appeared to be ironclad chemical evidence for the existence of transuranes. In contrast, Meitner’s work demonstrated that the uranium problem had become much larger, more difficult, and more significant than the discovery of new elements alone . . . As the physicist on the Berlin team, Meitner’s task was to incorporate the data from chemistry, radioactivity, and her own physical experiments into a coherent explanation of the nuclear processes. Her report in *Zeitschrift für Physik* clearly shows how difficult that was (Sime, pp. 173-174).

R. L. Sime, *Lise Meitner: A Life in Physics* (1996). 46113





First Announcement of Nuclear Fission; Very Rare Offprint

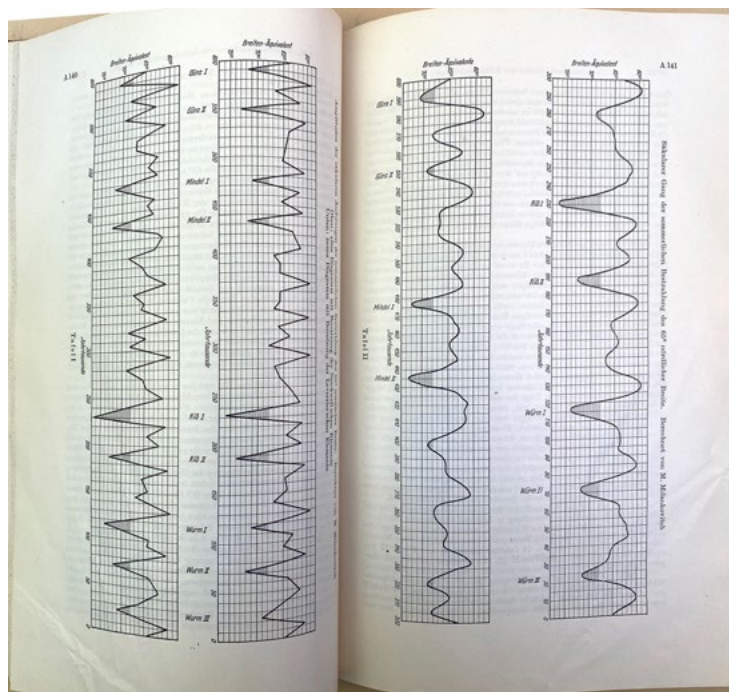
51. Meitner, Lise (1878-1968); **Otto Frisch** (1904-79). (1) Disintegration of uranium by neutrons: A new type of nuclear reaction. Offprint from *Nature* 143, no. 3615 (11 Feb. 1939). [3]pp. 213 x 141 mm. Without wrappers as issued. Tear in left margin extending into the text. From the library of American chemist Robert L. Platzman (1918-73), with his signature on the first page. (2) Products of the fission of the uranium nucleus. Offprint from *Nature* 143 (18 March 1939). [3]pp. 215 x 141 mm. Without wrappers as issued. Together 2 offprints. Very good. \$9500

First Editions, Rare Offprint Issues. In 1938 Otto Hahn and Fritz Strassmann, while bombarding uranium with neutrons in the expectation of producing “transuranium” elements, discovered barium isotopes among the decay products produced by the bombarded nuclei. At a loss to interpret this, the two men communicated their result by letter to Hahn’s former co-worker Lise Meitner, who had earlier fled to Stockholm to escape Nazi persecution. Meitner, at the suggestion of her nephew Otto Frisch, theorized that the uranium nucleus breaks up into two smaller nuclei through the mutual repulsion of the many protons in the uranium nucleus, which makes it behave like a droplet of water in which the surface tension has been reduced. By taking the difference between the mass of the original nucleus and the slightly smaller total mass of the two fragment nuclei, and using Einstein’s mass-energy equivalence, Meitner calculated the large amount of energy (equal to 200 million electron volts) that would be released during the splitting process, which she and Frisch named “fission.”

Meitner and Frisch made their epochal discovery in the first days of January 1939. To speed publication, they decided to submit a note, rather than a full article, to *Nature*; however, they delayed doing so until Frisch could perform further experiments to confirm their initial data. On January 16 Frisch sent “Disintegration of

uranium by neutrons” to *Nature*; its publication on February 11 marked the first announcement of the discovery of fission. Over the next few months Meitner and Frisch published several more papers in *Nature* on their findings, one of which (no. [2]) is included here.

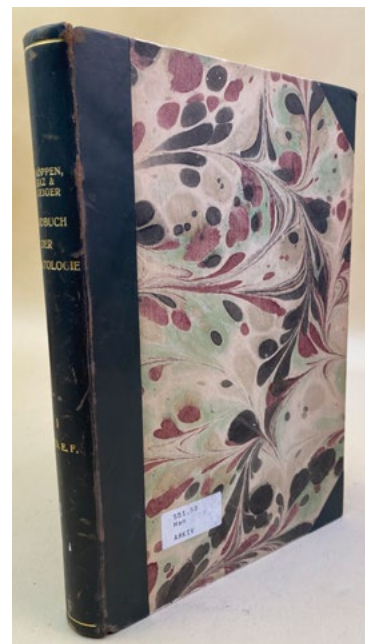
Our copy of Meitner and Frisch’s historic paper is from the library of Robert L. Platzman, one of the founders of radiation physics and chemistry, best known for his prediction of the hydrated electron and his theory of the yields of ionization. *Printing and the Mind of Man* 422b. Pais, *Niels Bohr’s Times*, pp. 452-56. Norman 1487. For Platzman see M. Inokuti, “Scientific legacy of Robert L. Platzman, Preliminary report,” *Proceedings of the International Symposium on Prospects for Application of Radiation towards the 21st Century* [2000]. 45913, 45996



Milanković Cycles: Classic Initial Exposition

52. Milanković, Milutin (1879-1958). *Mathematische Klimalehre und astronomische Theorie der Klimaschwankungen. Handbuch der Klimatologie*, ed. W. Köppen and R. Geiger, Band 1, Teil A. iv, 176pp. Berlin: Gebrüder Borntraeger, 1930. 256 x 169 mm. Bound with Teil D, Teil E and Teil F of the *Handbuch* in 20th-century half calf, marbled boards, library label on front cover, hinges a bit rubbed; original printed wrappers for each part bound in. First signature loose, a few leaves slightly creased. Very good. Library stamps on front wrappers and titles of all four parts. \$2750

First Edition. Milanković’s classic initial exposition of what are now known as Milanković cycles—cyclical changes in a planet’s climate caused by the variations in its orbit, which affect the amount of solar radiation (insolation) the planet receives. Milankovitch theorized that variations in eccentricity, axial tilt, and precession of the Earth’s orbit determined climatic patterns on Earth through orbital forcing, leading to periodic Ice Ages. On Earth these variations have played a decisive role in initiating the growth of glaciers, leading to at least five major periods of significantly colder temperatures.

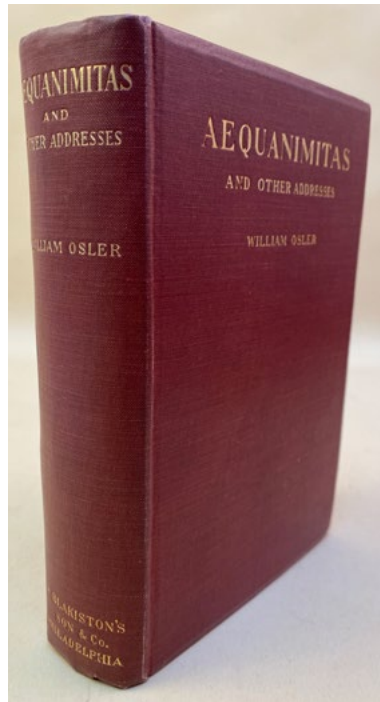
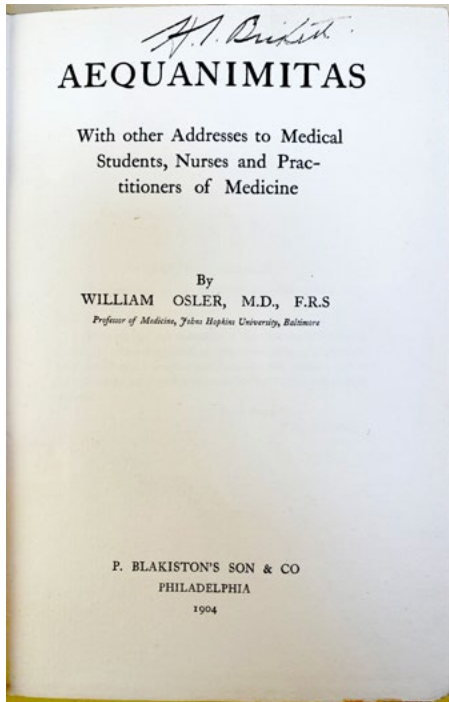


“Milanković revolutionized the understanding of climate dynamics. He put the astronomical theory of climate on a firm mathematical basis and founded cosmic climatology by calculating the temperature conditions on planets of the inner solar system, and the depth of atmosphere of the outer planets. In particular he calculated the impact of Earth’s secular orbital cycles on climate changes and explained the origin of the Pleistocene ice ages. The perennial periodic orbital variations (eccentricity, obliquity, precession) considered in his canon of insolation, along with their influence on planets’ climates, today are called ‘Milancović cycles’” (*New Dictionary of Scientific Biography*).

Milancović’s work is bound with the following: Rudolf Geiger, *Mikroklima und Pflanzenklima (Handbuch der Klimatologie, Teil D)*; W. Borchardt, K. Wegener and W. Köppen, *Einfluss des Klimas auf den Menschen (Handbuch der Klimatologie, Teil E)*; and A. Wagner, *Klimatologie der freien Atmosphäre (Handbuch der Klimatologie, Teil F)*, all published in 1930. Garrison-Morton.com 7308. 46108

Unusually Nice Copy

53. Osler, William (1849-1919). *Aequanimitas: With other addresses to medical students, nurses*



and practitioners of medicine. vii, 388, [2]pp. Philadelphia: P. Blakiston’s Son & Co., 1904. 199 x 133 mm. Original gilt-lettered red cloth, top edges gilt, very slight wear, inner hinges cracking. Very good to fine. From the library of Osler’s former student Herbert S. Birkett (1864-1942), dean of the McGill University Medical Faculty and one of Osler’s correspondents, with his signature on the title

\$1250

First Edition in Book Form

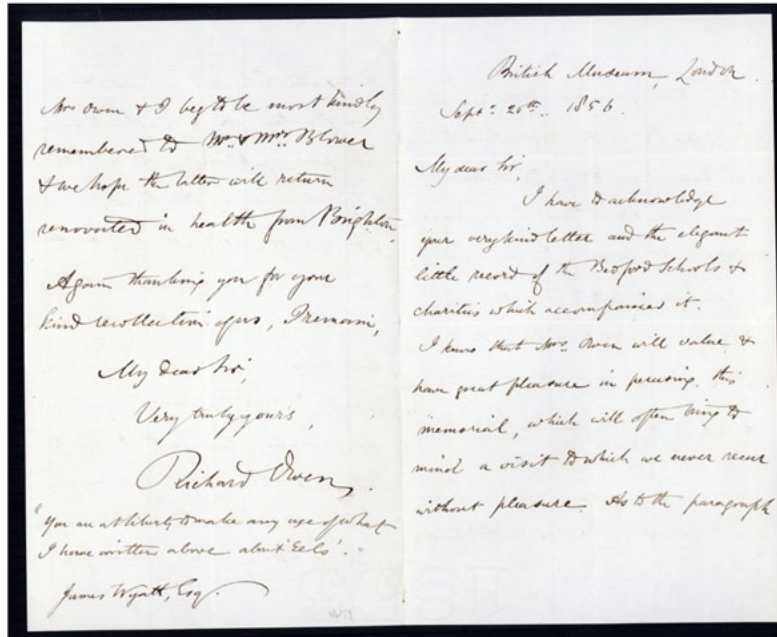
and in unusually good condition for this work. Birkett, the original owner of this copy, “entered medicine at McGill at age eighteen and graduated with the Holmes Gold Medal in 1886. Howard, Ross, Roddick,

Buller, Osler and Shepherd taught him . . . Birkett’s most notable contribution to McGill and to Canada was the founding of No. 3 Canadian General Hospital (McGill) [in France] in the fall of 1914 at the request of the federal government” (*McGill Medicine* 3, p. 219). Osler corresponded with Birkett several times in the last years of his life (see the McGill Library’s online William Osler Letter Index), in particular with regard to his son, Edward Revere, whom Birkett had offered to take on as an orderly in the McGill hospital unit in France. Cushing quotes Osler’s letter to Birkett of December 1915: “It is awfully good of you to offer to take Revere as an orderly. By the time you get over he will have had a good deal of training & could take messages. He is busy now working at French” (*Life of Osler*, 2, pp. 456-457). See Cushing, *Life of Osler* for numerous other references to Birkett. Golden and Roland, *Sir William Osler: A Bibliography*, no. 1356. 45601

On Eels, Referencing William Yarrell, John Hunter and Others

54. Owen, Richard (1804-92). Autograph letter signed to James Wyatt (1816-78), plus cover (mounted). 4pp. (bifolium). British Museum, London, 20 September 1856. 183 x 112 mm. Fine.

\$950



Letter with good zoological content from Richard Owen, the foremost British comparative anatomist and paleontologist of his era and founder of London's Natural History Museum, to James Wyatt, founder and editor of the *Bedford Times*. Wyatt was an early British supporter of Boucher de Perthes' claims regarding the antiquity of the stone tools discovered in the gravel beds at Abbeville and St. Acheul. In 1861 he discovered prehistoric flint implements in a gravel pit in Bedfordshire, publishing several papers on the subject.

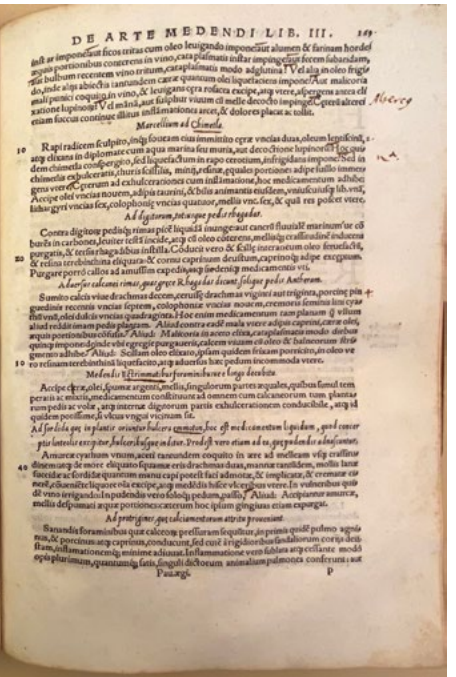
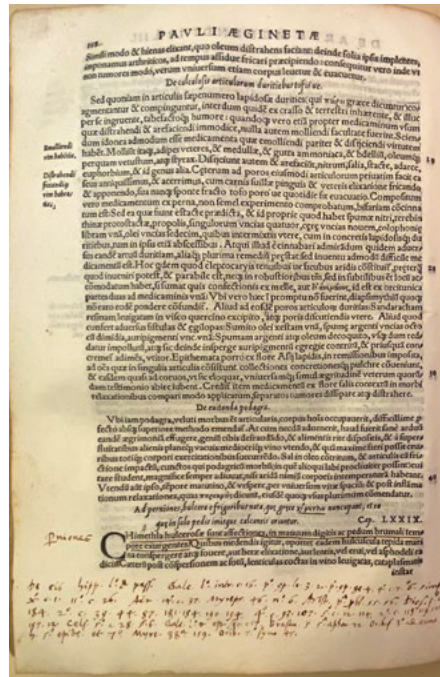
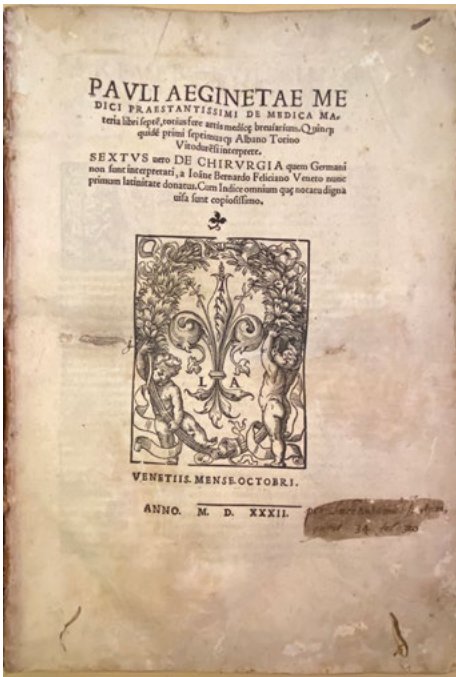
In his letter Owen corrects some misinformation that had been published in a biographical notice of naturalist William Yarrell (1784-1856), author of *The History of British Fishes* (1836):

... As to the paragraph relating to the generation and scales of eels which appeared in the biographical notice of my deeply lamented friend Mr. Yarrell, which was sent to the Times by my neighbour & friend Mr. Jesse, the only inaccuracy as I have pointed out to the latter, was his imagining Mr. Y. & himself to have been the discoverers of the facts stated. Artedi, in Linnaeus' time described the small scales of eels in terms repeated, on account of their accuracy, by every systematic writer down to Cuvier. The roe, and oviparous nature of the eel were demonstrated by John Hunter in an excellent memoir with plates published in the 5th vol. of the Physiological Catalogue of his collection.

Mr. Yarrell called attention to the parasitic worms in eels, as having probably given rise to the notion of their being viviparous; and with his friend Dr. Roots of Kingston, added many corroborative facts to Hunter's statement. The share which my good friend Jesse had in the matter may be seen by referring to his "Gleanings" ...

"Jesse" refers to British naturalist Edward Jesse (1780-1868), author of *Gleanings in Natural History* (1832-35) and other popular works on natural history. Peter Artedi (1705-35), a colleague and close friend of Linnaeus, is regarded as the founder of modern ichthyology; his observations on eels were included in the posthumously published *Ichthyologia sive opera omnia de piscibus* (1738). Other eminent naturalists mentioned in Owen's letter are Georges Cuvier (1769-1832), who founded the fields of paleontology and comparative anatomy, and surgeon-anatomist John Hunter (1728-93), who published two papers on the anatomy of the eel in 1773 and 1775. Hunter's vast collection of human and animal skeletons was catalogued by Owen in the five-volume *Descriptive and Illustrated Catalogue of the Physiological Series of Comparative Anatomy in the Museum of Royal College of Surgeons in London* (1833-40); Owen cites the fifth volume of this catalogue here.

The cover included with this letter is postmarked Sept. 26, 1856, six days after the date of our letter; it is possible that the cover was used for a later letter. The top flap is inscribed in what is likely Owen's hand: "All right! With the Professor's best regards. Brit. Mus. Sept. 25 / 56." 46159



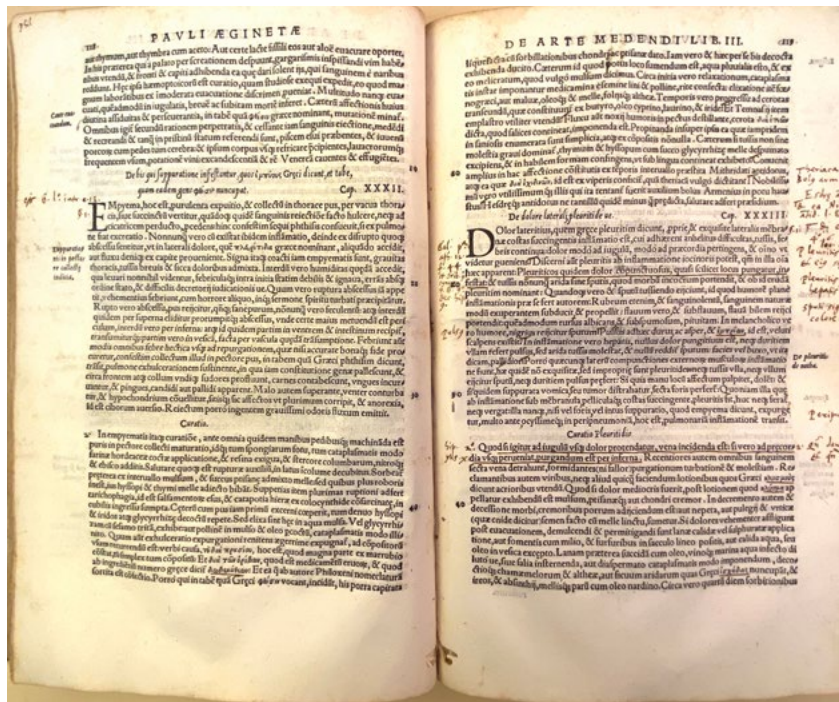
Possibly Annotated for a New Edition

55. Paul of Aegina (fl. 640). *De medica materia* libri septem, totius fere artis medicæ breviarum . . . Albano Torino Vitodure[n]si interprete . . . Sextus vero de chirurgia quem Germani non sunt interpretati, a Ioane Bernardo Feliciano Veneto nunc primum latinitate donatus. Folio. [28], 438pp. Venice: Lucantonio Giunta, 1532. 306 x 215 mm. 16th-century limp vellum, title inked on spine, some soiling and spotting, a few wormholes. Minor foxing and toning, some marginal worming in the first several leaves not affecting text, tear in leaf b4 (pp. 19-20). Very good. Extensively annotated in a 16th-century hand (some notes trimmed). “Luca Antonio I . . . tam” [the publisher’s name, inscription partially obscured] inscribed on the title page in what may be the same hand. \$8500

First Complete Edition in Latin of Paul of Aegina’s *Epitome*, which was first published in the original Greek by the Aldine Press in 1528. The Giunta edition used the Latin translation by A. Torinus published earlier in 1532 by Cratander; but included the *Epitome*’s sixth book on surgery which had been omitted from the Cratander edition. This copy has been extensively annotated in a 16th-century hand by a well-educated reader who knew Greek and was familiar with medical literature; the notes contain numerous references to Oribasius, Rhazes, Isidore, Celsus, Dioscorides, Gualter von Andernach and other medical authors. It is possible that the notes were made in preparation for another edition, or that they were written by a 16th century medical scholar as a key to Paul of Aegina’s work.

Paul of Aegina was the most important physician of his day and a skillful surgeon. His *Epitome* summarizes Greek medical thought and the Galenic tradition and was highly important for the transmission of classical medicine to Islamic and European physicians. The *Epitome* is divided into seven books on hygiene, fevers, bodily afflictions, surgery, medicines and poisons. It includes material on dietary therapeutics describing many





foods; an analysis of the pulse as a prognostic tool, with a classification of sixty-two varieties of pulse; an excellent discussion of the kidneys, liver and spleen; diseases of the uterus and complications of labor; the first clear description of the effects of lead poisoning, and a discussion of ninety minerals, six hundred plants and one hundred sixty-eight animals from Dioscorides.

Paul's book on surgery, however, is his single most important contribution. It represents the most complete system of operative surgery to come down from ancient times. Paul gives original descriptions of lithotomy, trephining, tonsillotomy, paracentesis and amputation of the breast. He was one of the earliest writers on plastic surgery, discussing operations on the eyelids, nose, lips and ears. He gives prescriptions for the treatment of burns, discusses military surgery, obstetrics and surgery of the eye. "Because of the completeness of his work, the conciseness and lucidity of his descriptions, and the systematic organization of his books, large portions of [Paul's] writings were incorporated into the texts of the principal Arabic authors. In surgery, in particular, he literally transmitted the entire body of Greek and Roman knowledge to Islam whence it ultimately returned to medieval and pre-Renaissance Europe" (Zimmerman & Veith, *Great Ideas in the History of Surgery*, p. 75). See Garrison-Morton.com 36 and 5549. 46044

Pauli's First Paper on his Exclusion Principle; Very Rare Offprint

56. Pauli, Wolfgang (1900-1958). Über den Einfluss der Geschwindigkeitsabhängigkeit der Elektronenmasse auf den Zeemaneffekt. Offprint from *Zeitschrift für Physik* 31 (1925). 373-385pp. 230 x 157 mm. Original printed wrappers. Fine copy. \$17,500

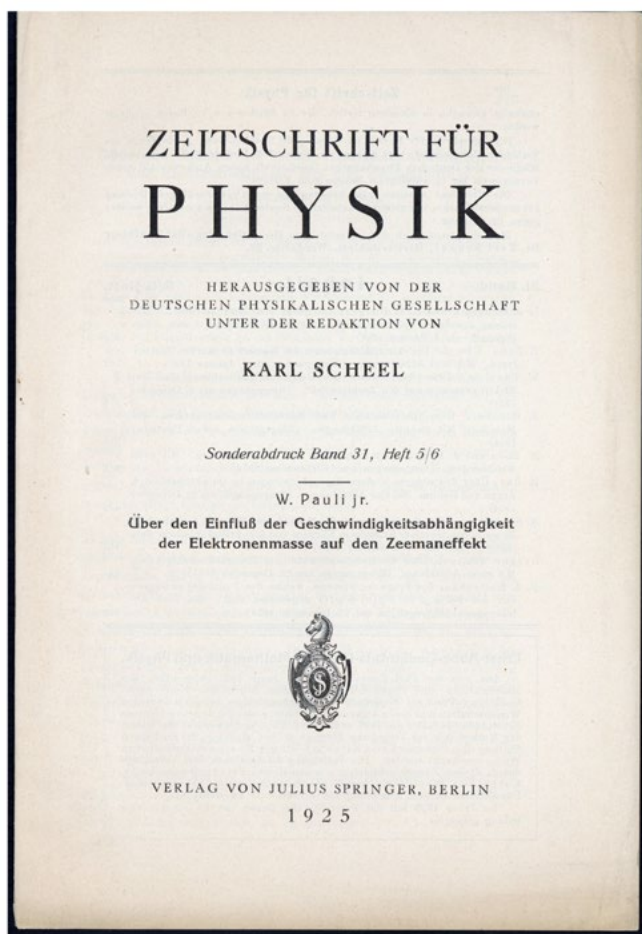
First Edition, Extremely Rare Offprint

Issue of Pauli's first paper on the exclusion principle, "the crowning conclusion to the old quantum theory" (*Dictionary of Scientific Biography*), for which Pauli was awarded the Nobel Prize in 1945. This is only the third copy of the offprint of Pauli's paper that we have seen on the market in our fifty years of experience.

Pauli's exclusion principle states that no two atoms in an electron can be in the same quantum state. The principle grew out of Pauli's investigations into the anomalous Zeeman effect, undertaken in 1922-1923 during his first visit to Copenhagen. The Zeeman effect (named after Pieter Zeeman, who won the Nobel Prize for discovering it) is the splitting of spectral lines in a strong magnetic field. Classical mechanics theory predicted that the spectral lines would split into three, but in 1898 it was observed that a certain line in the sodium spectrum actually splits into four lines—the first example of what is now called the anomalous Zeeman effect. After wrestling with the Zeeman problem in Copenhagen, Pauli returned to Germany where he began critically examining the attempts of Bohr and other physicists to explain the phenomenon.

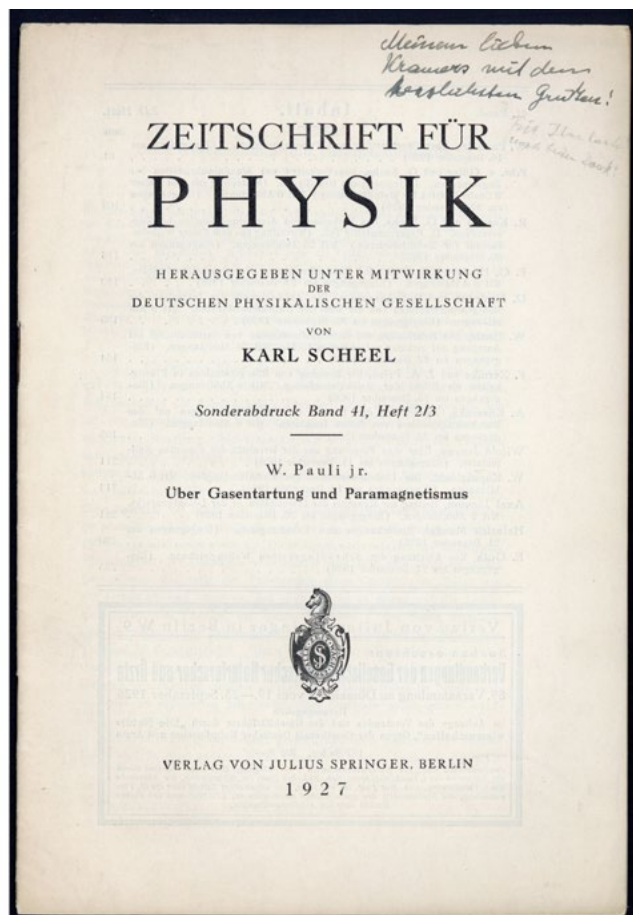
According to the view then orthodox, which was also taken over by Bohr . . . a non-vanishing angular momentum of the atomic core was supposed to be the cause of this doublet structure. In the autumn of 1924 [the date the present paper was submitted], I published some arguments against this point of view, which I definitely rejected as incorrect and proposed instead of it the assumption of a new quantum theoretic property of the electron, which I called a "two-valuedness not describable classically" (Pauli, p. 29).

Pauli expanded his arguments in a second paper published six weeks later, which contained the general formulation of his exclusion principle. "Wolfgang Pauli - Nobel Lecture: Exclusion Principle and Quantum Mechanics". Nobelprize.org. Nobel Media AB 2014. Web. Accessed 18 Dec 2014. Ezhela et al., *Particle Physics: One Hundred Years of Discoveries*, p. 42. 45882



*Beginning of “the Modern Electron Theory of Metals”—
Presentation Copy; Very Rare Offprint*

57. Pauli, Wolfgang (1900-1958). Über Gasentartung und Paramagnetismus. Offprint from *Zeitschrift für Physik* 41 (1927). 81-102pp. 228 x 156 mm. Original printed wrappers, slightly worn. Very good. *Presentation Copy, Inscribed by Pauli to H. A. Kramers* (1894-1952) on the front wrapper: “Meinem lieben Kramers mit den herzlichsten Grüßen! [in pen] Für Ihre Karte noch besten Dank! [in pencil].” Laid in is an autograph letter signed in Dutch to Kramers, dated 11 March 1927, from Fr. W. Wolthoff[?] at the Pharmaceutisch Laboratorium der Rijks-Universiteit, Utrecht; the letter contains some pencil calculations in the left margin possibly by Kramers. \$12,500

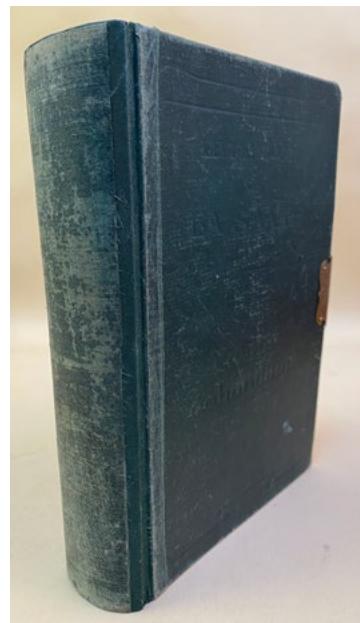
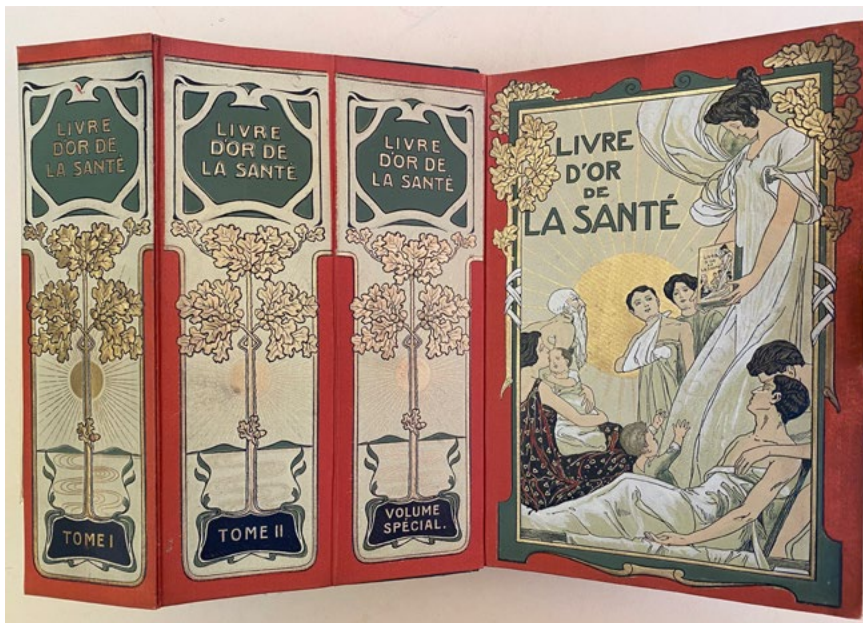


First Edition, Offprint Issue of Pauli’s paper on gas degeneracy and paramagnetism—“the point of departure for the modern electron theory of metals” (Enz, *No Time to be Brief: A Scientific Biography of Wolfgang Pauli*, p. 122). In the paper Pauli derived what is now known as Pauli paramagnetism, which Wikipedia defines as follows:

For some alkali metals and noble metals, conduction electrons are weakly interacting and delocalized in space forming a Fermi gas. For these materials one contribution to the magnetic response comes from the interaction between the electron spins and the magnetic field known as Pauli paramagnetism.

About this paper, Pauli’s student and assistant Rudolf Peierls stated that “it is probably no exaggeration to say that the modern electron theory of metals was started by Pauli’s paper on the paramagnetism of an electron gas” (quoted in Enz, “W. Pauli’s scientific work,” p. 782).

Pauli presented this copy to Dutch physicist H. A. Kramers, one of the main architects, together with Pauli, Heisenberg and Schrödinger, of quantum mechanics. Pauli’s inscription can be translated as “To my dear Kramers with warmest regards! Many thanks for your card!” Enz, “W. Pauli’s scientific work,” in J. Mehra, ed., *The Physicist’s Conception of Nature*, pp. 766-799. 45904



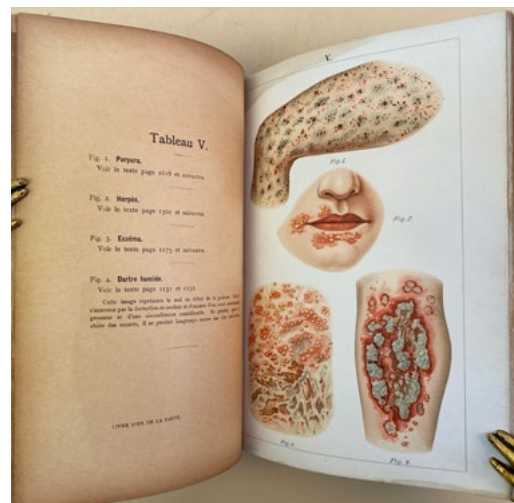
Salesman's Sample Book

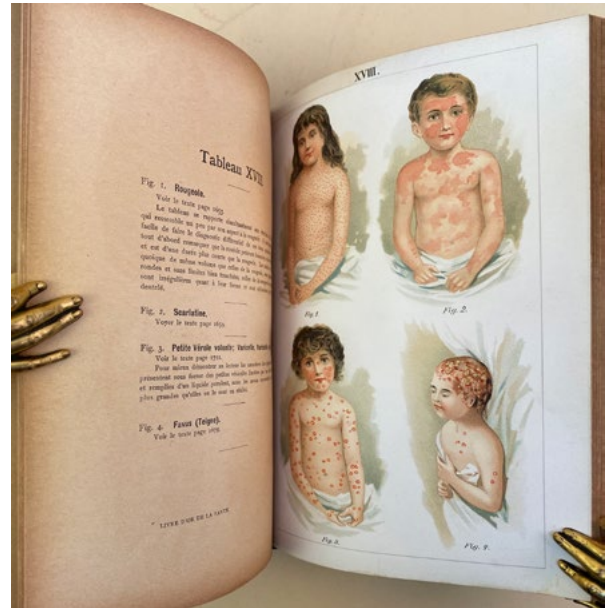
58. Platen, Magnus von. Livre d'or de la santé. Salesman's sample book. Ca. 280pp., irregularly numbered. 19 colored plates plus 2 laid-in "Modèles anatomiques" for the male and female body, each containing 7 colored plates lettered A-G, some folding and some with lift-up flaps, each "Modèle" with separate printed key, the laid-in materials contained in a folding case bound into the back of the volume. Text illustrations. Samples of the front cover and spines for the Livre d'or's three volumes bound in the front of the volume. Paris: Bong et Cie., n.d. [1909]. 221 x 153 mm. Original blindstamped cloth, rebacked preserving original spine (worn), original brass clasp present, "Volume échantillon" [Sample volume] stamped in blind on the front cover, light wear. Paper toned, plate "G" in the male "Modèle" loose and with some folds repaired, minor offsetting, but very good. Portions of cloth case skillfully restored.

\$1250

Unusual Salesman's Sample for the second edition of Platen's *Livre d'or de la santé* [Golden book of health], containing select pages and various plates from the complete three-volume work as well as samples of its beautiful Art-Nouveau inspired pictorial binding. Because few medically related books were distributed by traveling salesmen (colporteurs) it is very unusual to find a salesman's sample book for a medically related volume. This is the first that we can recall handling in more than 50 years.

Originally published between 1900 and 1904, Platen's populist treatise promised on its title-page to provide a "new, complete and practical method of natural medicine and personal hygiene,





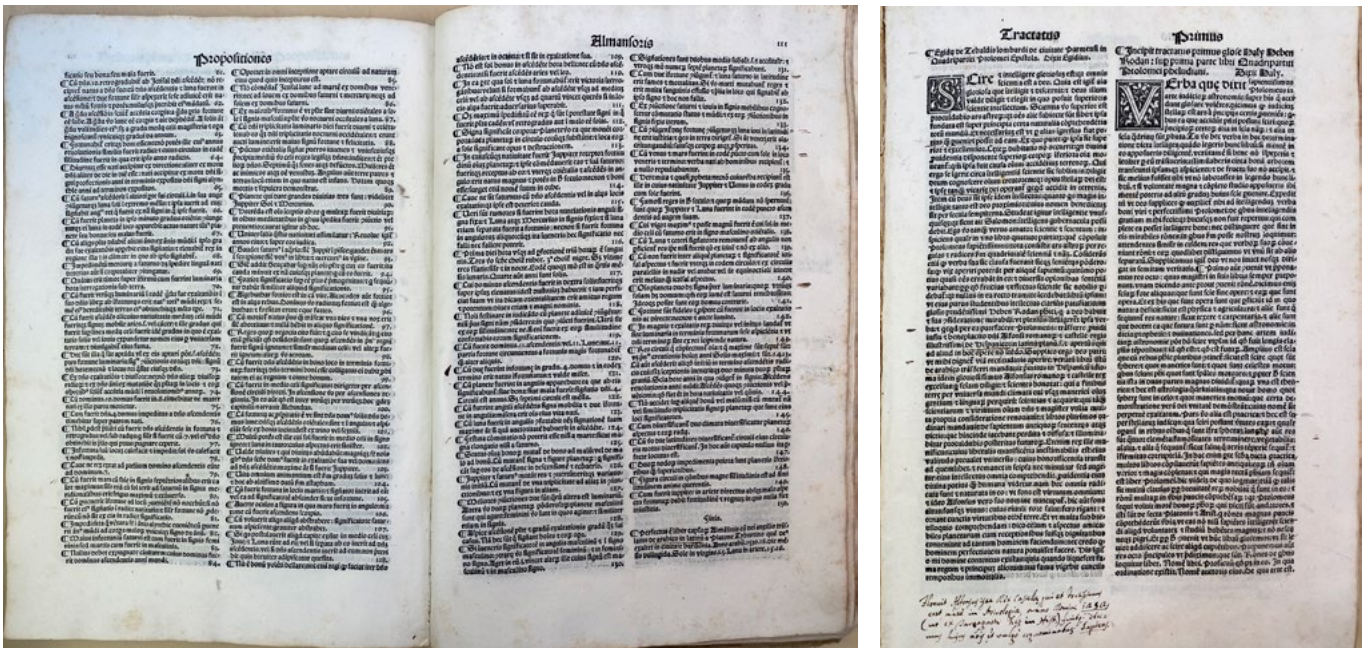
allowing the self-treatment of all illnesses and ensuring the preservation of health.” The plates in this work were unusually detailed for a work of semi-popular medicine, including many gross plates of skin diseases and venereal disease, and other medical issues that would be recognizable to the public as well as to physicians. This sample book includes excerpts from the treatise’s “volume spécial,” which contained information on such “dangerous” topics as sexuality, venereal disease, reproduction and mental health; the publishers provided this volume with a lockable brass clasp—as seen in the publisher’s sample—to keep it from being read by children. 46095

59. Ptolemy (c. 100 – c. 170). *Quadripartite Ptolomei*. Que in hoc volumine continentur hec sunt: Liber quadripartite Ptolomei . . . Folio. [4], 140ff. Woodcut initials and text diagrams. Venice: Heirs of Octavianus Scotus, 1519. 310 x 216 mm. Old quarter vellum, boards, rebaked, corners worn, covers a bit scuffed. Library stamp erased from first leaf, last few leaves browned and with faint dampstaining in lower margins, occasional foxing but very good. \$7500

Second edition of Hieronymus Salius’s edition of Ptolemy’s *Quadripartitum*, first printed in Venice in 1493. *Quadripartitum*, or “four books,” is the Latin name traditionally given to the treatise on astrology that Ptolemy composed in the second half of the second century CE, after completing his treatise on astronomy known as the *Almagest*. “In the *Tetrabiblos* [the Greek name for the *Quadripartitum*] the art of astrology receives sanction and exposition from perhaps the ablest mathematician and closest scientific observer of the day or at least from one who seemed so to succeeding generations. Hence from that time astrology was able to take shelter from any criticism under the aegis of his authority” (Thorndyke, p. 110).

The first book of the *Quadripartitum* contains a defense of astrology and a discussion of technical concepts; the second deals with astrological influences on Earth, including astrological geography and weather prediction; and the third and fourth books discuss astrological influences on individuals. The





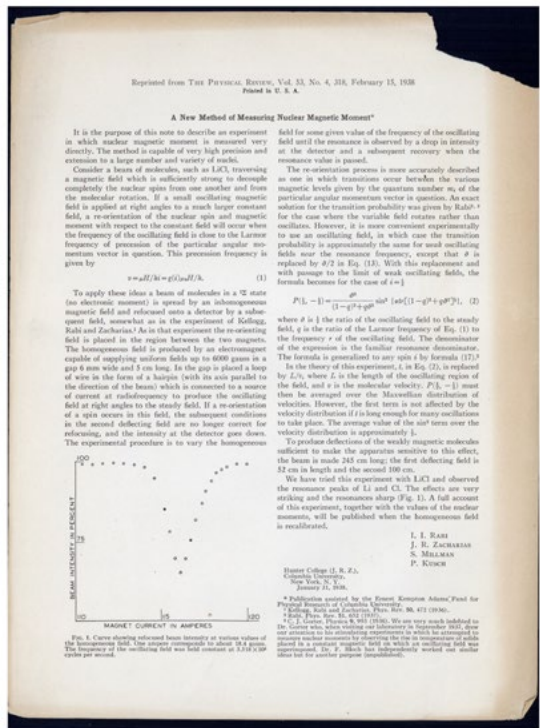
Salius edition of Ptolemy's work includes eleven other tracts on astrology by Hermes Trismegistus, al-Battani, Rhazes, Zabel and Messahala. Thorndyke discusses the *Quadripartitum* at length in Vol. I of his *History of Magic and Experimental Science*, ending by stressing the work's influence on later writers. Stillwell, *The Awakening Interest in Science During the First Century of Printing*, no. 96. Thorndyke, *History of Magic and Experimental Science*, pp. 110-116. 45939

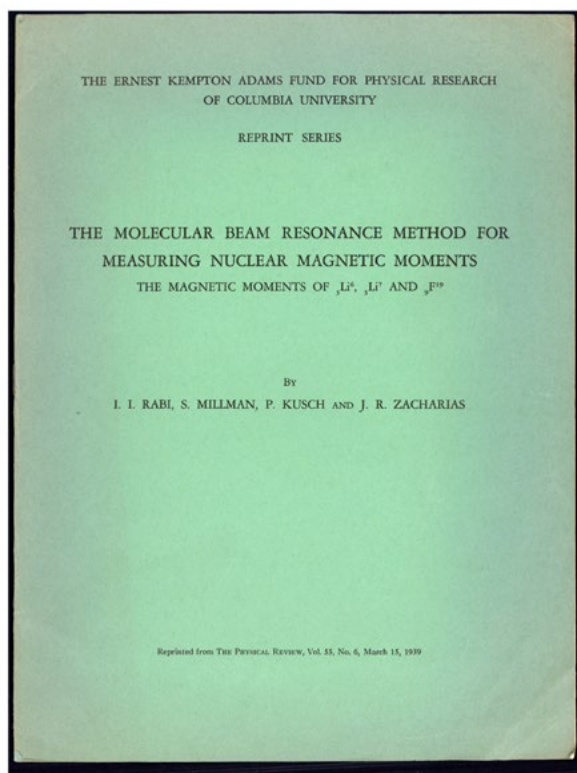
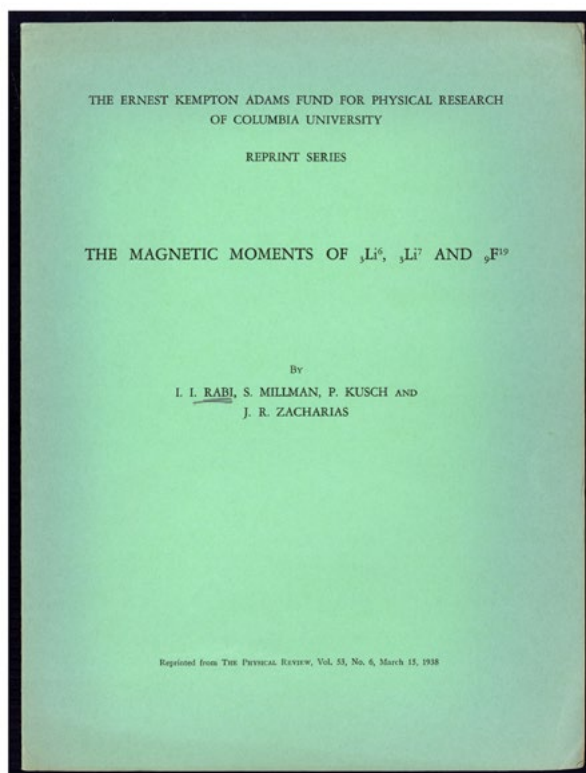
Discovery of Nuclear Magnetic Resonance

60. Rabi, Isidore I. (1898-1988); **Sidney Millman** (1904-2006); **Polykarp Kusch** (1911-93); **Jerrold R. Zacharias** (1905-86).

(1) A new method of measuring nuclear magnetic moment. Offprint from *Physical Review* 53 (1938). Single sheet, unbound. 267 x 200 mm. Browned at edges, light fraying, piece missing from upper corner (not affecting text). (2) The magnetic moments of ${}^6_3\text{Li}$, ${}^7_3\text{Li}$, and ${}^{19}_9\text{F}$. Offprint from *Physical Review* 53 (1938). [1] page. 267 x 200 mm. Original printed wrappers, slightly sunned, Rabi's name underlined in pencil on front wrapper. (3) The molecular beam resonance method for measuring nuclear magnetic moments: The magnetic moments of ${}^6_3\text{Li}$, ${}^7_3\text{Li}$, and ${}^{19}_9\text{F}$. Offprint from *Physical Review* 55 (1939). 526-535pp. 267 x 200 mm. Original printed wrappers, slightly sunned, lower corner lightly creased. Together 3 items. Very good. \$9500

First Editions, Offprint Issues of Rabi's first papers on his resonance method of magnetic moment measurement, which earned him the Nobel Prize for physics in 1944. Rabi's resonance method is not only of central importance in physics,



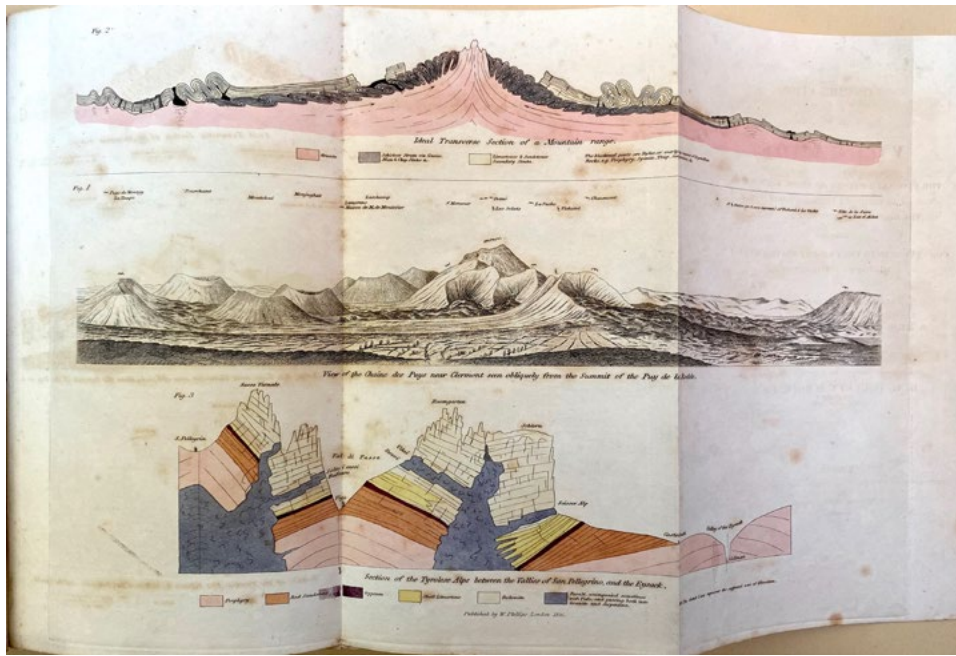


but is also the foundation of magnetic resonance imaging (MRI), which revolutionized medical imaging in the last decades of the twentieth century.

Rabi received his doctorate in physics from Columbia University in 1927 and afterwards traveled to Europe to study physics with Niels Bohr, Wolfgang Pauli, Otto Stern and Werner Heisenberg. From Stern, Rabi learned the molecular-beam method, which appealed to him so much that he established his own molecular beam laboratory at Columbia in 1931, shortly after being appointed to the university's physics faculty. Over the next few years Rabi refined his molecular-beam apparatus, working with a team that included future Nobel Laureate Polykarp Kusch. In 1937, after learning of the failed attempts of Dutch physicist Cornelis Gorter to detect nuclear magnetic resonance in solid matter, the Rabi team began their experimental investigations in earnest. As Norman Ramsey, then one of Rabi's team members, writes:

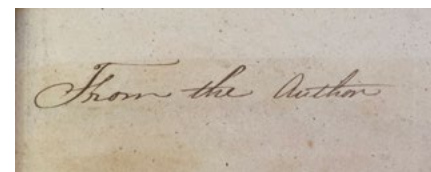
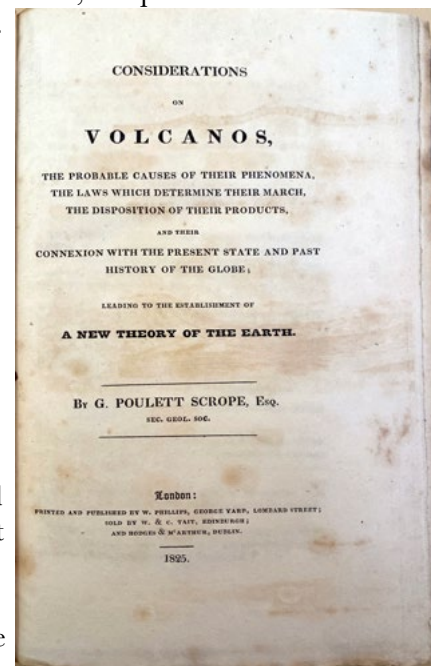
In September 1937, Gorter visited Rabi's laboratory at Columbia University and described his brilliantly conceived but experimentally unsuccessful efforts to observe resonant heating of a substance in a strong static magnetic field when also subjected to a weak field oscillating at the precession frequency of the nucleus in the static field. Rabi then fully appreciated the advantage of using an oscillatory field and promptly invented the molecular beam magnetic resonance method. Two successful molecular beam magnetic resonance apparatuses were soon constructed by Rabi, J. R. Zacharias, S. Millman, and P. Kusch, and by J. M. B. Kellogg, Rabi, Ramsey and Zacharias . . . As expected, the first magnetic resonance was observed by Rabi, Zacharias, Millman and Kusch, who were studying the easily detected LiCl molecule (Ramsey, p. 126).

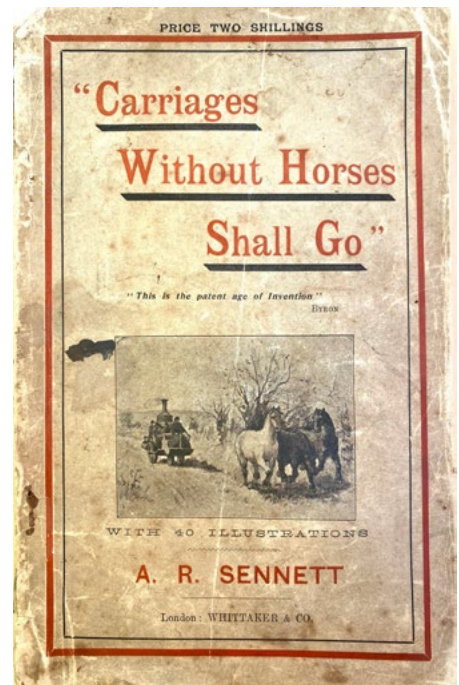
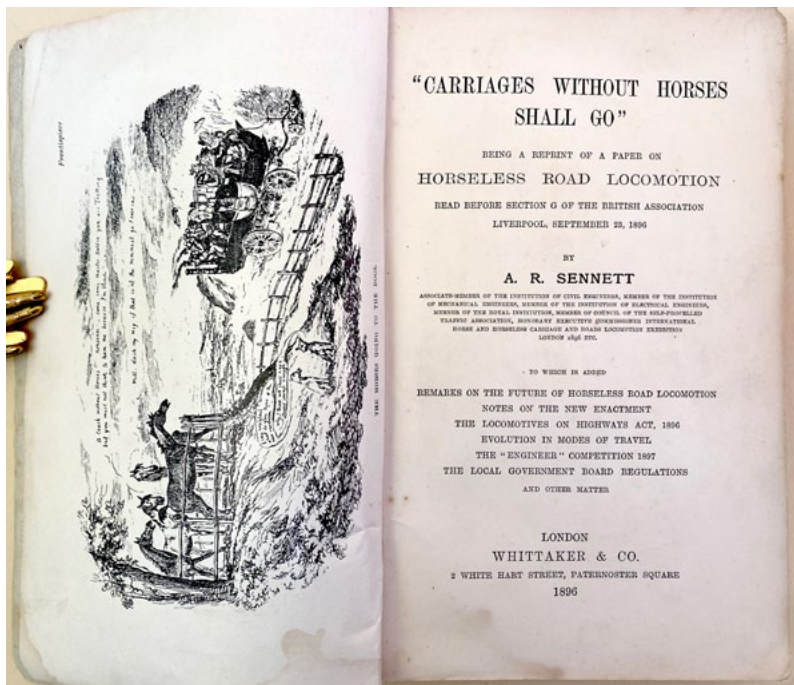
In the spring of 1938 Rabi and his team published two short papers in the *Physical Review* (nos. [1] and [2] above) "report[ing] briefly on a new precision method of measuring nuclear moment, and on some results" (Rabi et al. [1939], p. 526). These were followed in 1939 by "The molecular beam resonance method for measuring nuclear magnetic moments: The magnetic moments of ${}^3\text{Li}^6$, ${}^3\text{Li}^7$, and ${}^9\text{F}^{19}$ " (no. [3] above), containing the first complete account of the Rabi team's magnetic resonance experiments. N. Ramsay, "Early history of magnetic resonance," *Phys. Perspectives* 1 (1999): 123-135. Rabi's achievement is documented in detail in the first chapter of Mattson and Simon's *The Pioneers of NMR and Magnetic Resonance in Medicine: The Story of MRI* (1996). 46008



61. Scrope, George Poulett (1797-1876). Considerations on volcanos, the probable causes of their phenomena, the laws which determine their march, the disposition of their products, and their connexion with the present state and past history of the globe, leading to the establishment of a new theory of the earth. xxxi, 270pp. 3 folding plates (2 hand-colored), text illustrations. London: W. Phillips [etc.], 1825. 227 x 144 mm. (untrimmed). Quarter morocco, marbled boards in period style, endpapers renewed, light edgewear. Minor foxing and toning but very good. Presentation Copy, inscribed "From the Author" on the front flyleaf. Bookplate of Leonard Wilson, biographer of Charles Lyell, inside front cover. \$1750

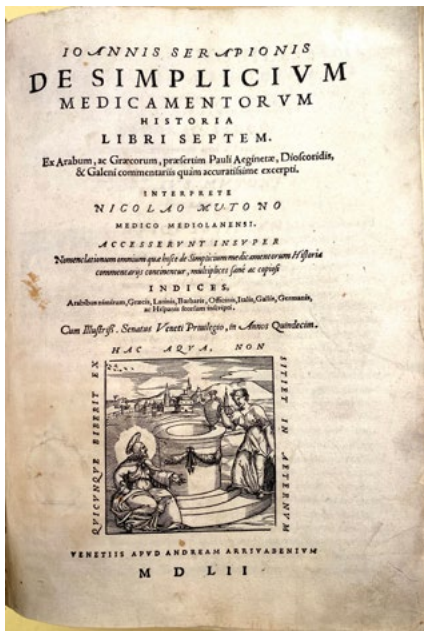
First Edition. Scrope's work is considered "the earliest systematic treatise on volcanology, since it was the first attempt to frame a satisfactory theory of volcanic action and to show the part volcanoes have played in the Earth's history" (*Encyclopaedia Britannica*). Scrope was among the first to address the role of pressure in volcanic systems: "In his work *Considerations on Volcanos*, Scrope had realized the effect of pressure on the solubility of water in magmas, and was one of the first to point out that decrease of pressure on a water-rich magma could explain volcanic explosions due to the release of dissolved water" (Sigurdsson et al., *Encyclopedia of Volcanoes*, p. 29). Scrope's uniformitarian views on geology, expressed in *Considerations* and his later works, had a great influence on his friend Charles Lyell; Scrope in turn was influential in promoting Lyell's new geology, helping Lyell complete the first volume of his *Principles of Geology* (1830) and reviewing the work favorably in the *Quarterly Review*. 46066





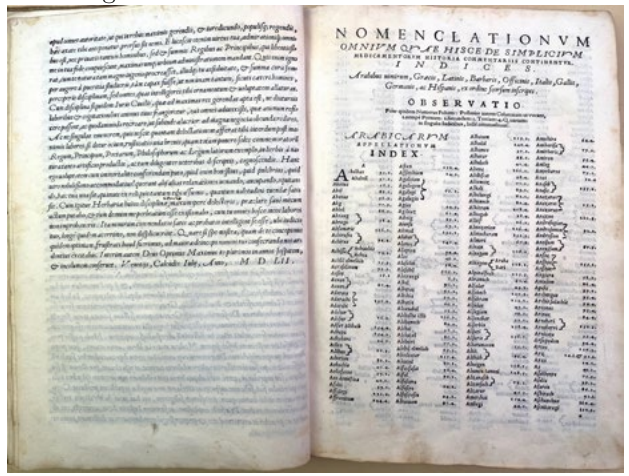
62. Sennett, Alfred Richard. “Carriages without horses shall go.” Being a reprint of a paper on horseless road locomotion . . . to which is added remarks on the future of horseless road locomotion; notes on the new enactment; the Locomotives on Highways Act, 1896; evolution in modes of travel; the “Engineer” competition 1897; the local government board regulations; and other matter. 8vo. xvi, 131, [1]pp. Frontispiece and 30 wood-engraved and half-tone plates. London: Whittaker & Co., 1896. 216 x 139 mm. Original printed wrappers, some wear and spotting, spine chipped, split in front hinge. Very good. \$1250

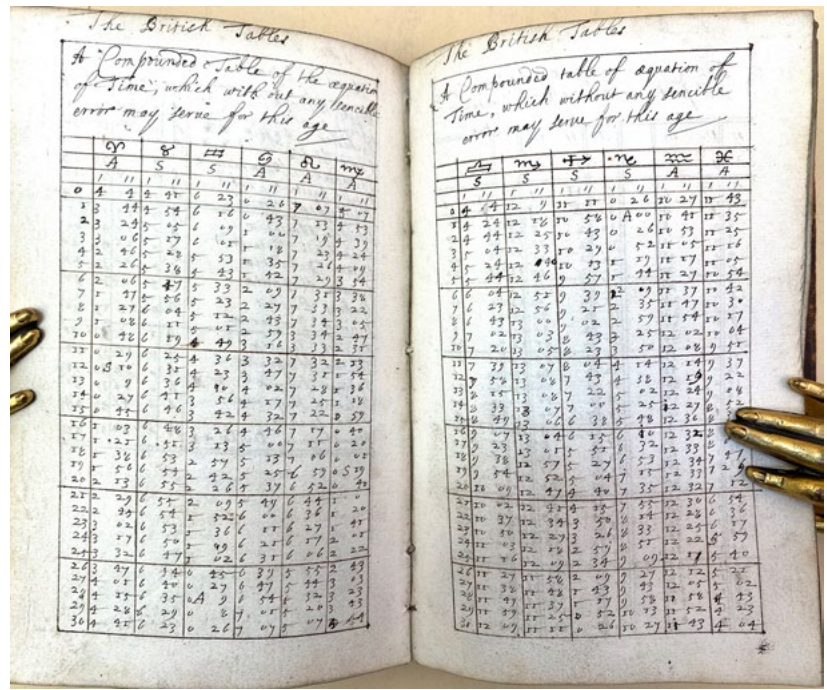
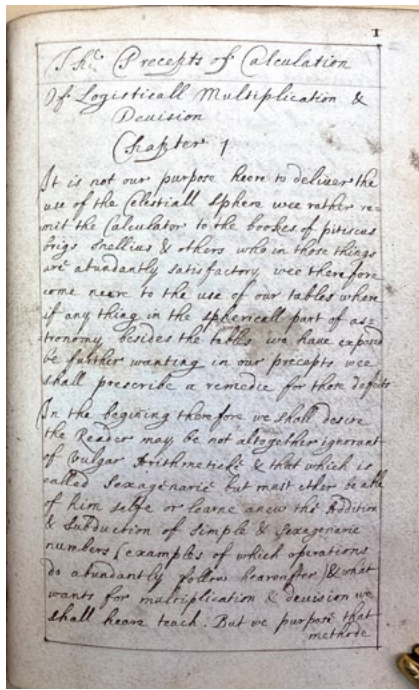
First Edition of one of the earliest books on the automobile, especially remarkable for its many illustrations of early “horseless carriages.” The original printed wrappers in which this copy was bound were fragile and generally did not survive. Norman 1931. See Dibner, *Heralds of Science*, 184. 46120



63. Serapion the Younger (fl. 12th – 13th century). *De simplicium medicamentorum historia libri septem*. Ex Arabum, ac Graecorum, praesertim Pauli Aeginetae, Dioscoridis, & Galeni commentariis quam accuratissime excerpti. Folio. [24], 167, [1] ff. Venice: Apud Andream Arrivabenum, 1552. 299 x 211 mm. Quarter vellum, vellum boards ca. 1552, rebounded. Minor foxing, a few wormholes, stamps bleached from front free endpaper and last leaf. Good to very good. \$5000

Later edition, elegantly printed, of a widely used work on botanic medicine and pharmacology. Serapion the Younger's *Book of Simple Medicaments*, a botanical work intended for physicians and apothecaries, was written in Arabic in the twelfth or thirteenth century; it was translated into Latin in the fourteenth century and first printed in 1473, with editions following in 1479, 1525 and 1531. "In the book's early part, Serapion the Younger classifies substances according to their medicinal properties, and discourses on their actions. The remainder and largest part of the book is a compendium of information on individual medicaments quoted from Dioscorides, Galen and numerous named medieval Arabic writers on medicaments, with relatively brief supporting remarks by himself" (Wikipedia). The work includes excerpts from Dioscorides' *De materia medica*, Paul of Aegina's *De re medica* and Galen's *De simplicium medicamentorum facultatibus*. Serapion is called "the Younger" to distinguish him from the ninth-century Serapion the Elder (Yahya ibn Sarafyun); both were Syrian Christians who wrote in Arabic. *De simplicium medicamentorum* played a significant role in the transmission of medieval Arabic medical knowledge to the Latin-speaking world. 46045





64. [Shakerley, Jeremy (1626 – ca. 1655).] *Tabulae Britannicae*, the British tables . . . Manuscript copy in an unidentified 17th or 18th-century hand. 63, [1], [16]pp., plus several blank leaves in front and back. N.p., n.d. [1653 or after]. 153 x 98 mm. Old sheep ruled in blind on front and back covers, spine worn and chipped, some rubbing and wear. Internally fine. \$6000



Shakerley, a British mathematician and astronomer, came from astrological traditions but later embraced a more observational and scientific approach to astronomy, as can be seen in his final work, the *Tabulae Britannicae* of 1653. Shakerley was the first to discover and publicize the work of Jeremiah Horrocks, now regarded as one of the founding fathers of British astronomy; the *Tabulae Britannicae* makes use of some of Horrocks' then-unpublished observations, which Shakerley had found among the papers of his onetime patron, the Lancashire antiquary Christopher Towneley. The *Tabulae Britannicae* appeared in print when its author was in India, where in 1651 he became only the second person to observe the transit of Mercury across the sun. It is likely that Shakerley died a few years later, as nothing more is known of him after 1653.

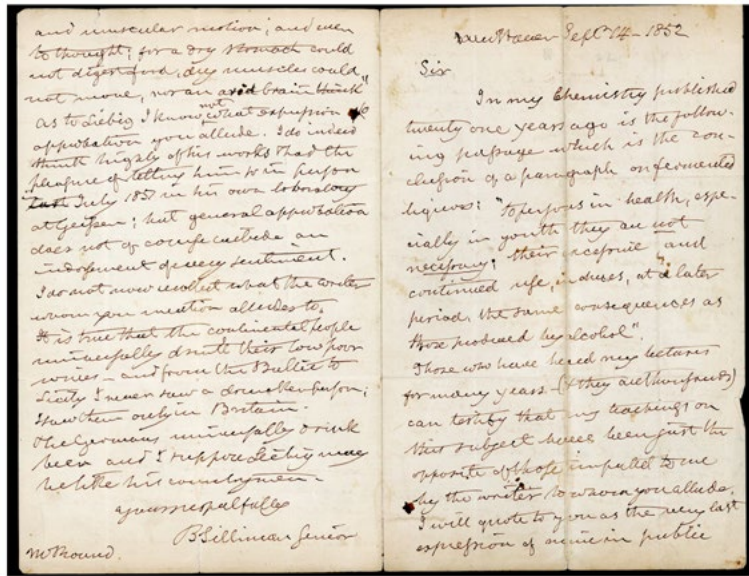
“We see in Shakerley the evolution of a scientific mind of remarkable potential. After first learning how to calculate horoscopes, he came to doubt astrology. In its place, he became a staunch supporter of the new science, began to make observations and defend his position with all the zeal of a convert . . . As one of the most vociferous and restless scientific Englishmen of his day, Shakerley casts a great light onto the circle of men who pursued the new science in Lancashire” (Chapman, p. 11).

We are offering here a contemporary or near-contemporary manuscript copy of the *Tabulae Britannicae*, made in a spidery but clear and legible hand. The copy contains all of the printed work's main text except for the title-page and author's preface, but includes only 10 (nos. 5 – 14) of Shakerley's 33 tables—possibly suggesting that the copy was made before publication. A. Chapman, “Jeremy Shakerley (1626-1655?): Astronomy, astrology and patronage in Civil War Lancashire,” *Transactions of the Historical Society of Lancashire* 135 (1985): 1-14. 46153

65. Silliman, Benjamin (1779-1864). Autograph letter signed (“B. Silliman Senior”) to N. O. Round [?]. Bifolium (4pp.). New Haven, 14 September 1852. 206 x 134 mm. Small tears along folds, light soiling but very good.

\$1250

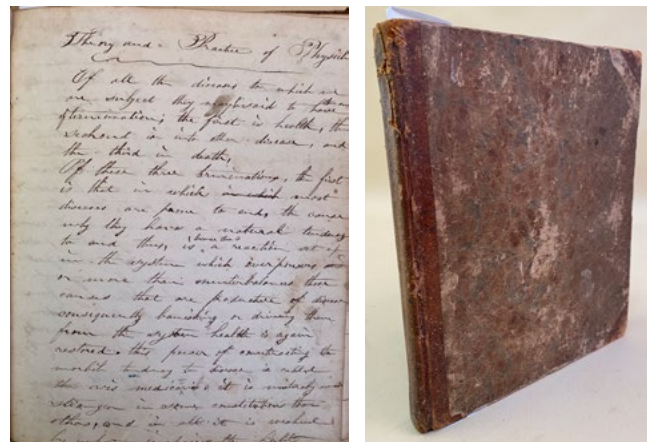
From chemist and geologist Benjamin Silliman, one of the first American professors of science (at Yale University), founding faculty member of the Yale Medical School and the first to distill petroleum, on the comparative effects of water and “fermented liquors” on the body; he also mentions meeting German chemist Justus von Liebig (1803-73), one of the founders of organic chemistry. “As to Liebig I know not what expression of approbation you allude. I do indeed think highly of his works & had the pleasure of telling him so in person in his own laboratory at Geissen [sic]; but general approbation does not of course include an indorsement of every sentiment.” We have not been able to identify Silliman’s correspondent. 45602



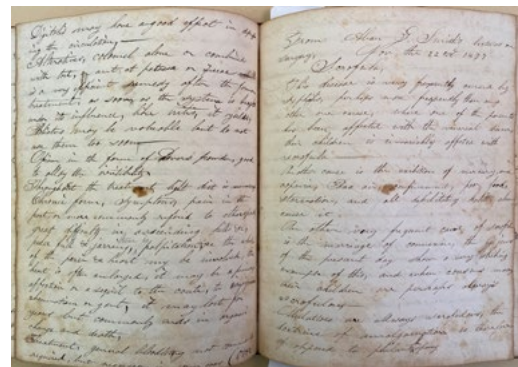
66. Smith, Joseph M. (1789-1866); **Alban G. Smith** (1795-1861); **John B. Beck** (1794-1851).

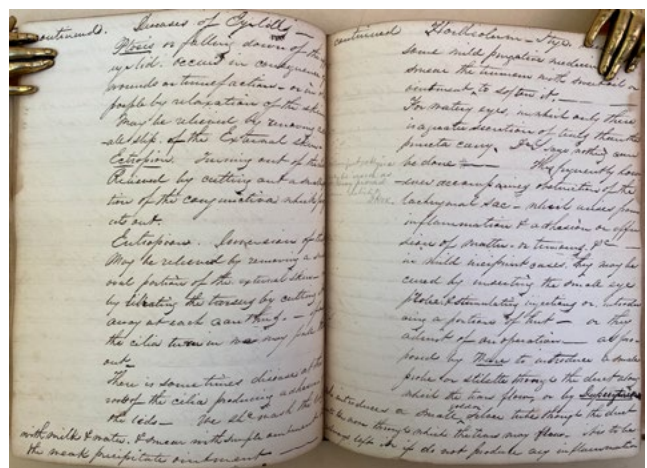
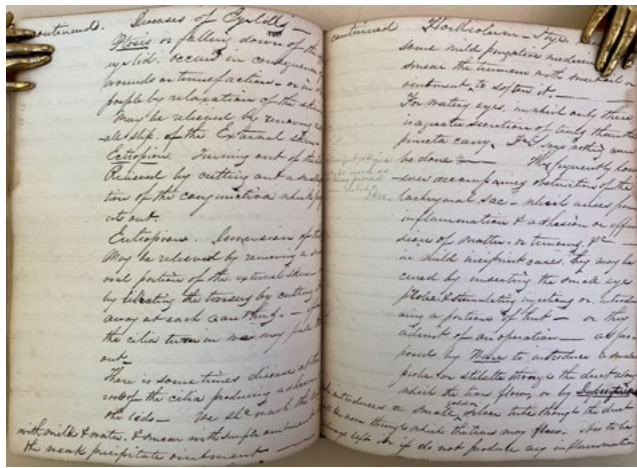
Manuscript notes of lectures given at the College of Physicians and Surgeons of New York, taken by E. Smith. Ca. 85 leaves, unnumbered; written from both ends, and with numerous notes in ink and pencil on the endpapers. N.p. [New York], 1837-38. 195 x 159 mm. Half sheep, marbled boards ca. 1837, some rubbing and wear. One leaf torn, another 1-2 leaves, possibly missing occasional offsetting from botanical specimens pressed between the leaves but very good. Scattered botanical artwork presumably by someone else on a few leaves.

\$1000



Manuscript notes recording lectures given in 1837-83 at the College of Physicians and Surgeons of New York by three of its faculty members: Joseph Mather Smith, professor of the theory and practice of medicine; Alban Gilpin Smith (later Alban Goldsmith), chair of surgery; and John Brodhead Beck, professor of materia medica, botany and medical jurisprudence. The notes are the work of either Edward Smith of New York, who received his degree from the NYCPS in 1838, or Elijah Smith of New Jersey, who was a student at the College in 1837-38 but did not receive a degree from the institution. Interestingly, one of the notes on the first leaf reads, “In surgical operations perform the most painful part first”—the note was of course written eight or nine years before the discovery of surgical anesthesia. Lecture notes such as these help to shed light on the way medicine was taught in the United States in the first half of the nineteenth century. 45609



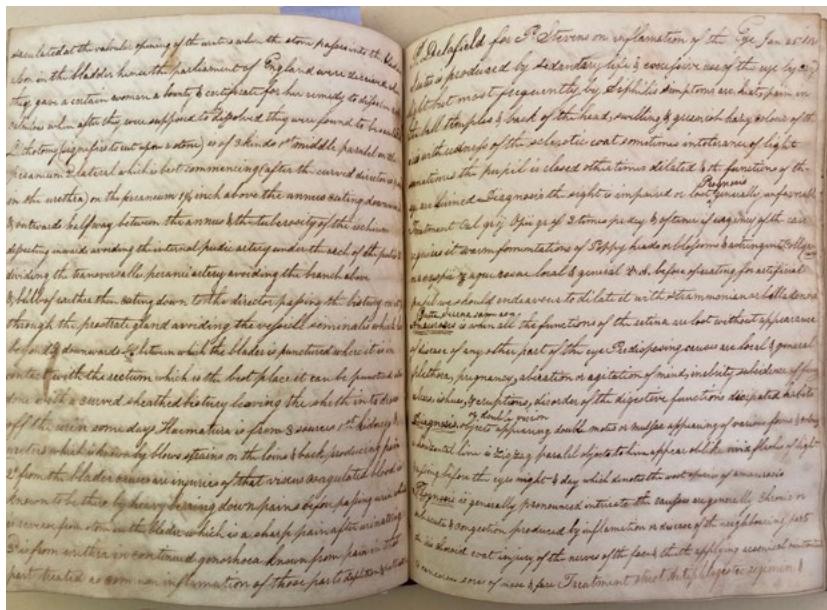
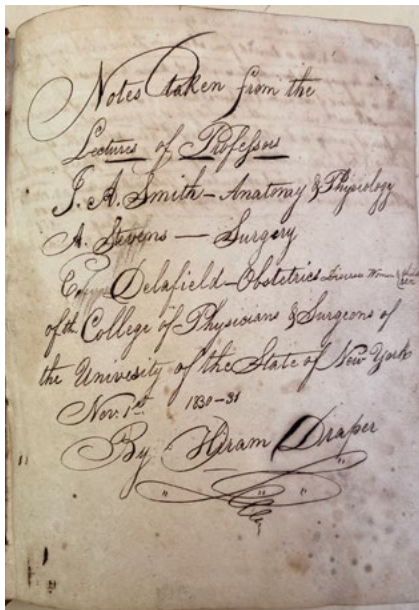


67. [Stevens, Alexander H. (1789-1869); John Augustine Smith (1782-1865).] Notes taken

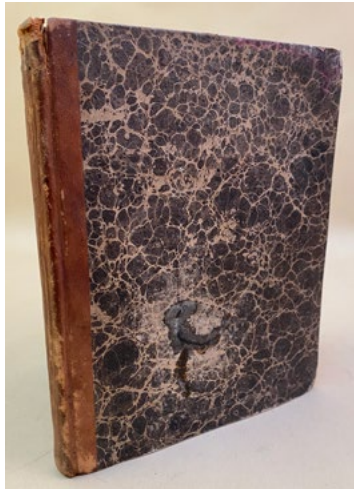
by John R. van Kleeck on the lectures of Alexander Stevens, M.D. & Prof. of Surgery—in session of 1829-30 & reviewed & reconsidered in following the lectures, session of 1830-31. Notes on the lectures of John Augustine Smith, M.D. & Prof. on anatomy & physiology. Manuscript lecture notes taken by John R. van Kleeck (1809-76), written from both ends of the volume. Ca. 140 leaves, unnumbered. New York, 1829-31. 195 x 160 mm. Original boards rebaked in calf, rubbed. Light browning but very good. Stamp of John R. Rhineland (d. 1857) on rear free endpaper. \$1000



Manuscript notes of lectures by two members of the faculty of the New York College of Physicians and Surgeons: Alexander H. Stevens, professor of the principles and practice surgery; and John Augustine Smith, professor of anatomy and president of the NYCPS. The lectures cover academic years 1829-30 and 1830-31. Stevens, a student of Astley Cooper, John Abernethy and Dominique Jean Larré, introduced the European system of bedside surgical demonstrations and instruction to the New York Hospital in 1818; he later served as president of both the NYCPS (1843-55) and the American Medical Association (1848-49). John Augustine Smith studied medicine in New York and lectured on anatomy at the NYCPS before leaving to serve as the tenth president of the College of William and Mary. He returned to the College in 1826 and became its president in 1831. He is best known for his advocacy of scientific racism, seeking to demonstrate the supposed inferiority of Black people in his anatomy lectures. John R. van Kleeck, the taker of these lecture notes, graduated from the NYCPS and became a prominent New York City physician. 45611



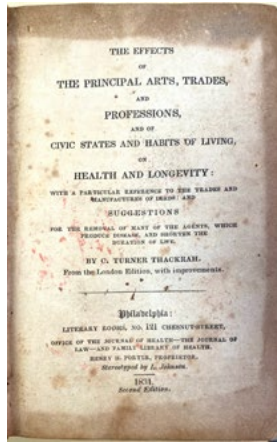
68. [Stevens, Alexander H. (1789-1869); John Augustine Smith (1782-1865); and Edward Delafield (1794-1875).] Notes taken from the lectures of Professors J. A. Smith—anatomy & physiology, A. Stevens—surgery; E. Delafield—obstetrics diseases women & children of the College of Physicians & Surgeons of the University of the State of New York. Manuscript lecture notes taken by Hiram Draper (1804-81). Ca. 70 leaves (including several blanks), unnumbered. New York, 1830-31. 193 x 160 mm. Quarter sheep, marbled boards ca. 1830, light wear and rubbing, stain on front cover. Dampstaining affecting some of the text, light foxing but very good. Pasteboard ticket to Stevens’s lectures laid in (foxed, lower portion defective). \$1250



Manuscript notes of lectures by three members of the faculty of the New York College of Physicians and Surgeons: Alexander H. Stevens, John Augustine Smith, and Edward Delafield, professor of obstetrics. For Stevens and Smith see the preceding entry. Delafield, better known as an ophthalmologist, co-founded the New York Eye Infirmary and served as the first president of the American Ophthalmological Society; he was appointed the NYCPS’s professor of obstetrics and the diseases of women and children in 1826 and later served as the College’s president.

Hiram Draper, the taker of these notes, began practicing medicine and surgery in New York City in 1833. 45608

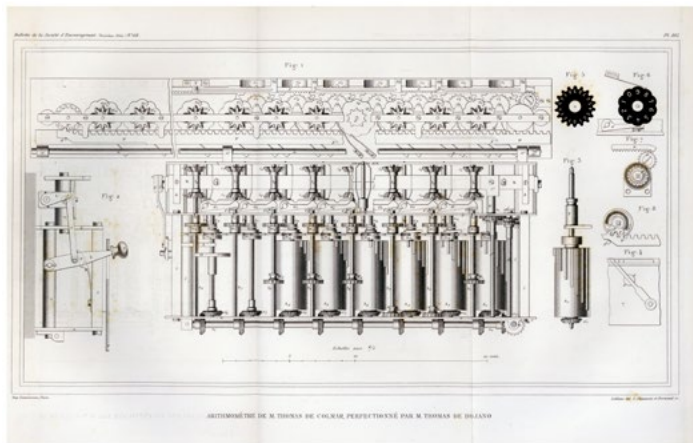
69. Thackrah, Charles Turner (1795-1833). The effects of the principal arts, trades, and professions, and of civic states and habits of living, on health and longevity . . . 180pp. Philadelphia: Literary Rooms . . . Office of the Journal of Health . . . 1831. 128 x 81 mm. Sheep ca. 1831, gilt-ruled spine with leather label, rubbed, hinges tender. Browned and foxed as is common with American books of the period, but on the whole good. \$450



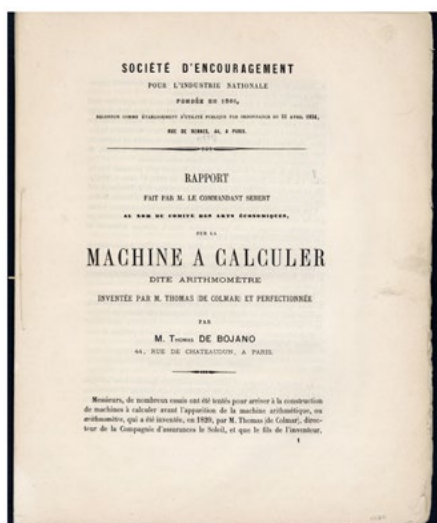
First American Edition of Garrison-Morton.com 2123, the first English treatise on industrial disease and its prevention, which attracted attention from both medical men and laymen and played an important part in stimulating the factory and health legislation that mitigated some of the worst

features of the Industrial Revolution. The book also includes important information on the harmful effects of child labor. The American edition, published in a small pocketbook format, appeared a year after the first English edition. Hunter, Diseases of Occupations (1957), pp. 116-21. 46068

70. [Thomas de Colmar Arithmometer.] Sebert, H. Rapport . . . sur la machine à calculer dite arithmomètre inventée par M. Thomas (de Colmar) et perfectionnée par M. Thomas de Bojano. Offprint from Bulletin de la Société d'Encouragement pour l'Industrie Nationale, series 3, 6 (1879). 34pp. 2 folding plates showing details of the Arithmometer's construction. 282 x 227 mm. Unbound; stitched. Edges a bit frayed, plates lightly foxed, a few fingermarks but very good. \$950



First Edition. The arithmometer was invented by Charles Xavier Thomas de Colmar (1785–1870), who patented its design in 1820.

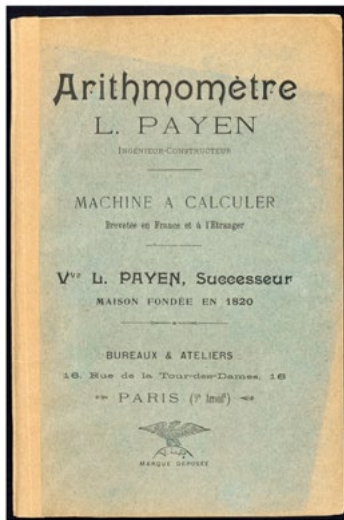


The Thomas Arithmometer, manufactured between 1851 and 1915, was the first commercially successful calculating machine; its debut at the Great Exhibition of 1851 launched the mechanical calculator industry. Between 1851 and 1890 the arithmometer was the only type of mechanical calculator in commercial production, and its design was copied by several European companies. The brand name “Arithmometer” became a generic term referring to any four-function calculating machine.

“Although based on the Leibnitz stepped-drum gears, the arithmometer incorporated several features which made it easier to use . . . These changes, together with the improvements introduced because of better manufacturing techniques for the gears, resulted in a machine which was basically reliable in operation even if it was large enough to cover a complete desk and often required two men to move it safely from place to place.

“Arithmometers remained in production until about the start of the First World War. They were produced in several standard models, some with six, seven, or even eight figures in the set-up mechanism and twice that number of digits in the result register . . . Individual machines were produced before M. Thomas started up his firm, but he ranks as the first to actually create an industry which manufactured mechanical devices to aid in calculation. He was the acknowledged leader in this field for most of the nineteenth century, being awarded the Chevalier of the Legion of Honor for his achievement” (Williams, A History of Computing Technology, pp. 151–52). Randell, The Origins of Digital Computers: Selected Papers, pp. 508-509. 46122

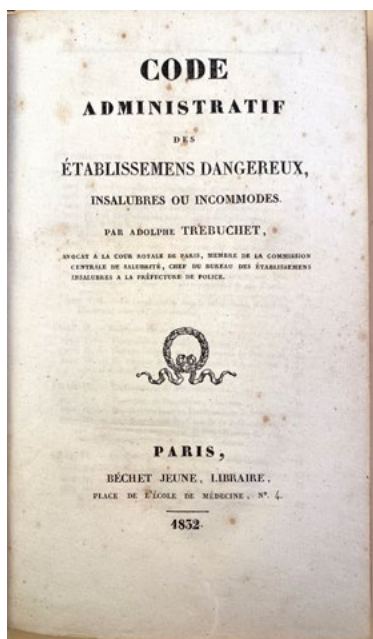
71. [Thomas de Colmar Arithmometer.] Payen, L. (Veuve [Widow]). (1) Arithmomètre



Payen modèle 1908 . . . Machine à calculer . . . [4]pp. Text illustrations N.p., n.d. [ca. 1910]. 287 x 231 mm. Unbound advertising circular. Creased horizontally, a few marginal tears. (2) Arithmomètre L. Payen . . . Machine à calculer . . . xxviii, 15pp. Text illustration. Paris, n.d. [ca. 1910]. 238 x 158 mm. Original printed wrappers, sunned, spine repaired with paper tape. Last leaf repaired with clear tape and with small lacuna affecting a bit of the text. Together 2 items. Very good. \$500

Rare promotional materials issued circa 1910 for the latest version of the Thomas de Colmar Arithmometer. The Arithmometer was invented by Charles Xavier Thomas de Colmar (1785-1870), who managed its manufacture from 1851 until his death. The company continued under family management until 1887 when Louis Payen, an engineer with the firm, purchased it from Thomas’s grandson; after Payen’s death in 1902 his widow managed the business until 1915, when she sold it to the company’s final owner, Alphonse Darras.

The second pamphlet listed above contains instructions for operating the Arithmometer and includes several numerical tables in the back for calculating square and cube roots, simple and compound interest, etc. 46124



(281)

ÉTAT GÉNÉRAL

Des Ateliers et Établissements qui, à raison de l'insalubrité, ou de l'incommode, ou des dangers qui en résultent pour le voisinage, ne peuvent être formés spontanément et sans permission, soit qu'ils ne produisent qu'un de ces inconvénients, soit qu'ils en réunissent plusieurs.

DÉSIGNATION DES ÉTABLISSEMENTS.	INDICATION DE LEURS INCONVÉNIENTS.	CLASSES.	DATES des arrêtés de classement.	Observations.
Ateliers (Batterie d'essai) ou usines à vapeur d'eau.	Danger d'incendie.	1	9 fév. 1835.	
Ateliers de plâtre, Sol de sulfate, l'Acide, de l'Acide sulfurique (Fabr. d').	Quelques inconvénients, mais seulement pour l'Acide sulfurique.	2	14 janv. 1835.	
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	3	5 nov. 1835.	
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	4	14 janv. 1835.	
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	5	16 oct. 1835.	Les classifications opérées par le décret susdésigné ont été maintenues, l'exception des ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	6	9 fév. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	7	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	8	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	9	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	10	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	11	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	12	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.
Atelier métallurgique (Fabr. d'acier de 17 à 2000 tonnes).	Odorés désagréables et nuisibles, surtout pendant les opérations de fonte, et qui se font de temps à autre.	13	16 janv. 1835.	Les ateliers de fabrication des fleurs de soufre par l'indus-trie de la soufre.



72. Trebuchet, Adolphe (1801-65). Code administrative des établissements dangereux, insalubres ou incommodes. [6], xvi, 17-320pp. Paris: Béchét jeune, 1832. 211 x 126 mm. 19th-century quarter calf gilt, marbled boards, paper label on spine, light rubbing and edgewear. Minor foxing but very good. 19th-century French library stamp on the half-title. \$650

First Edition. Trebuchet was one of the most eminent and influential authorities on public health in France, serving in various official capacities including head of the sanitary office at Paris's Prefecture de Police and Secretary of the Council of Public Health in the same city. His *Administrative Code* sets out the rules and regulations governing dangerous and unhealthy work environments (particularly those involving steam engines) and public nuisances. Pages 281-301 contain a table of businesses classed by their products, listing their specific offenses against public health and citing the laws governing their activities. Garrison-Morton. com 10393. 46064

Discovery of "Heavy Hydrogen"

73. Urey, Harold C. (1893-1981); F. G. Brickwedde; G. M. Murphy. A hydrogen isotope of mass 2. Offprint from *Physical Review* 39 (1932). Single sheet, unpaginated. 254 x 177 mm. Unbound. Edges a bit frayed, faint dampstain in lower corner. Very good. \$2750

First Edition, Rare Offprint Issue. Urey, an American chemist, was the first to detect and identify deuterium (H^2), an achievement that earned him the 1934 Nobel Prize in chemistry. Deuterium, also known as "heavy hydrogen," has a nucleus containing a neutron as well as a proton. It is one of two stable isotopes of hydrogen, the other being the far more abundant protium (hydrogen-1), whose nucleus contains only a proton. "Heavy hydrogen," discovered one year before the neutron, was at first seen as a contradiction of accepted theory, but Chadwick's identification of the neutron in 1932 made the isotope's existence explainable.



Deuterium is one of the elements that makes up “heavy water,” which consists of only deuterium and oxygen. Heavy water was essential to the development of nuclear energy and plays a key role in many other scientific processes. Ezhela et al., *Particle Physics: One Hundred Years of Discoveries*, p. 64. 45916

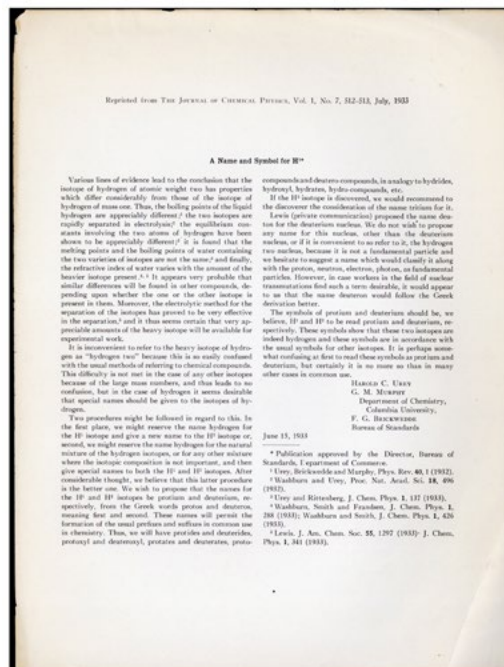
Urey Names Heavy Hydrogen “Deuterium”

74. Urey, Harold C. (1893-1981); **G. M. Murphy**; F. G. Brickwedde. A name and symbol for H₂. Offprint from *Journal of Chemical Physics* 1 (1933). Single sheet, unbound. 1 page. 266 x 201 mm. Edges a bit frayed, light creasing at corners. Very good. \$2750

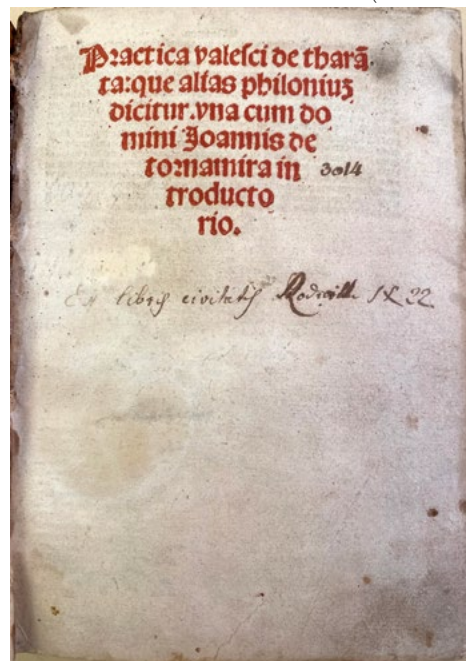
First Edition, Rare Offprint Issue. Urey and his team discovered heavy hydrogen in 1932, but had trouble coming up with an acceptable name for the H² isotope. After considering several possibilities suggested by both team members and scientific colleagues, Urey and his team wrote a letter on 15 June 1933 to the *Journal of Chemical Physics* introducing the terms we now use for hydrogen’s isotopes.

We wish to propose that the names for the H¹ and H² isotopes be protium and deuterium, respectively, from the Greek words protos and deuterios, meaning first and second . . . If the H³ isotope is discovered, we would recommend to the discoverer the consideration of the name tritium for it.

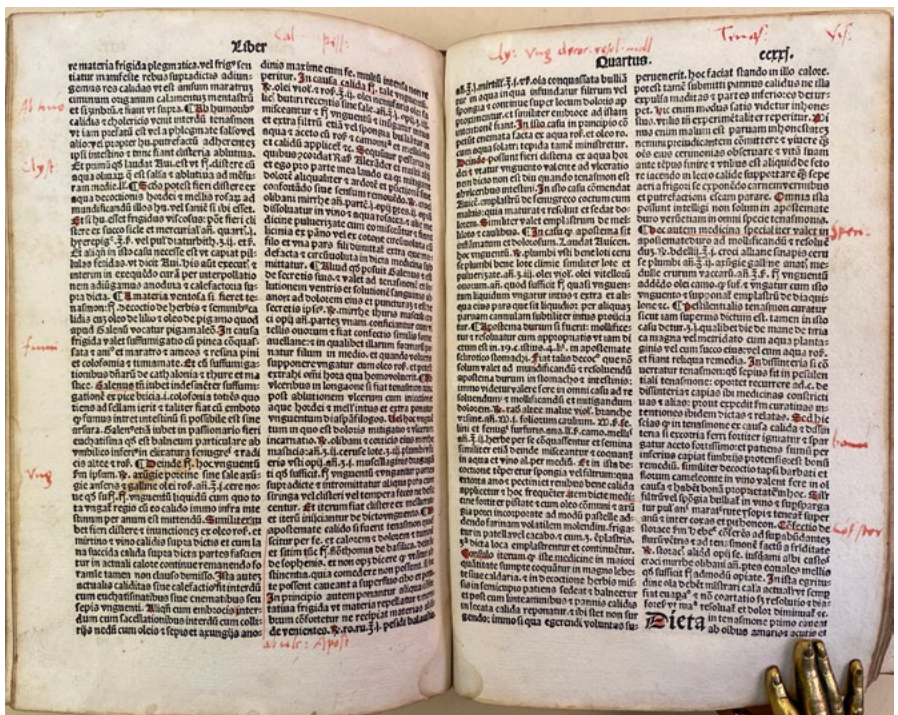
Tritium, a rare and radioactive form of hydrogen, was detected by Rutherford in 1934 and isolated in 1939 by Alvarez and Cornog. O’Leary, Dan, “The Deeds to Deuterium.” *Nature News*, Nature Publishing Group, 21 Feb. 2012. Accessed 22 October 2020. 45918



75. Valesco de Tarenta (fl. 1382-1418). *Practica Valesci de Thara[n]ta: Que alias Philonius dicitur. Una cum domini Joannis de Tornamira introductio.* 8vo. [8], 424pp. (paginated in roman numerals). Lyons: Jacobus Myt, 1516. 178 x 123 mm. Old half calf, paste paper boards, original clasps lacking, spine wormed and chipped, some wear. Light toning, first and last leaves somewhat soiled, but very good. Rubricated throughout with numerous marginal annotations in both red and black ink; manuscript index in what appears to be a 16th-century hand on the last two leaves. Old French library inscription on the title (“Ex libris civitatis Rouville”); 20th-century owner’s stamp on the front pastedown. \$6500



Later edition of Valesco de Tarenta’s 15th-century medical treatise, written circa 1418 and first published in print in 1484. This edition is rare; there are no auction records, and only six copies cited in OCLC (Stanford, Chicago, Rochester, LC, NLM, McGill). Valesco, a Portuguese-born physician, studied medicine in Montpellier, receiving his medical license (but not the master’s diploma) in 1387. He traveled extensively in Spain, Portugal and France before joining the household of the counts of Foix, where he remained for the rest of his life.



Valesco's *Practica* (also known as the *Philonium*) “gives prominence to facts, and, in spite of its being mainly a compilation, evidences a sense of clinical observation and many therapeutic novelties” (Neuburger, *History of Medicine*, p. 95). The work “is unusual as an encyclopedic survey by an academically-trained physician who apparently never became a master or taught in the schools. A remarkable feature of the work is the number and variety of medical authorities it cites, not just Greco-Arabic sources but recent and even contemporary Latin practitioners as well, the latter almost all figures from the Montpellier tradition in which Valesco had been trained. These citations of recent authors may partly be a consequence of the enlarged medical literature in the fourteenth century, and of the size of his patrons’ library, but it may also reflect Valesco’s removal from an academic community, where professional jealousies were inevitable. Valesco is not hesitant to praise the practice—as distinct from the writings—of his own masters at Montpellier; of other masters there in his time, like François Conili and Jean Jacme . . . or of other practitioners of his acquaintance, like Guillem sa Garriga of Girona in Catalunya, not a physician but a surgeon.

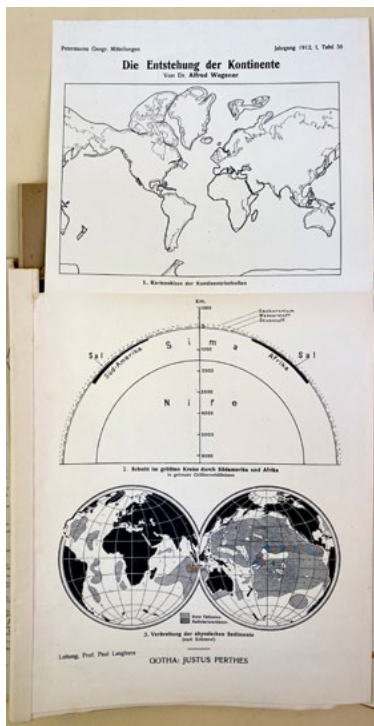
“For, like Guy [de Chauliac], Valesco was a practitioner who cared little for the frontier between medicine and surgery. Book VII of the *Philonium* not only incorporates an independent treatise on surgery, it also includes separate discussion of a number of surgical topics of interest to its author, and one of these is hernia . . . his account of the traditional methods [of hernia treatment] often incorporates new elements which seem again to represent contemporary practice and innovations in technique” (M. McVaugh, “Treatment of hernia in the later Middle Ages: Surgical correction and social construction,” in French et al., *Medicine from the Black Death to the French Disease* (1998). 45942





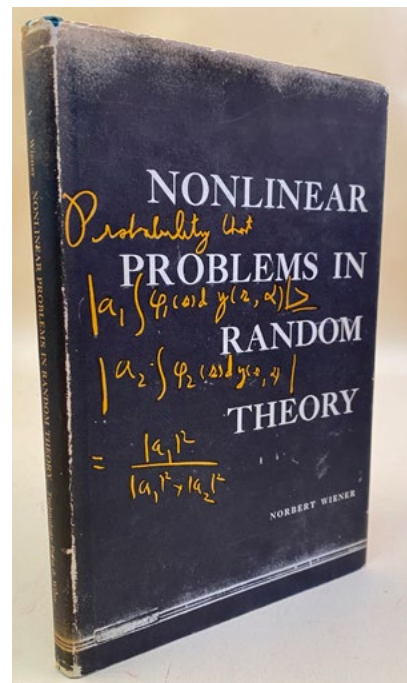
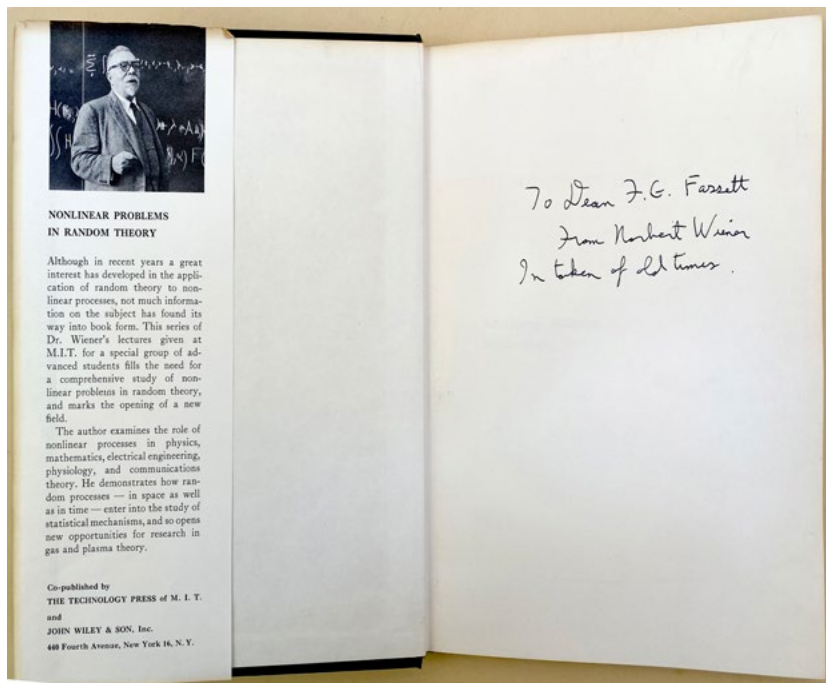
Continental Drift

76. Wegener, Alfred (1880-1930). Die Entstehung der Kontinente. In: *Dr. A. Petermanns Mitteilungen aus Justus Perthes' geographischer Anstalt* 58 (1912): 185-195; 253-256; 305-309. Together three numbers. 280 x 231 mm. Original brown printed wrappers, spines restored, minor chipping. Occasional foxing, but very good to fine. Preserved in a cloth drop-back box. \$3750



First Edition. Wegener originated the theory of continental drift in this paper on the origin of continents, which he conceived after being struck by the apparent correspondence in the shapes of the coastlines on the west and east sides of the Atlantic, and supported with extensive research on the geological and paleontological correspondences between the two sides. He postulated that 200 million years ago there existed a supercontinent (“Pangaea”), which began to break up during the Mesozoic era due to the cumulative effects of the “Eötvös force,” which drives continents towards the equator, and the tidal attraction of the sun and moon, which drags the earth’s crust westward with respect to its interior. Wegener’s theory attracted little interest until 1919, when he published the second edition of his treatise *Die Entstehung der Kontinente und Ozeane*. Between 1919 and 1928 continental drift was the focus of much controversy and debate. Later the theory fell into obscurity because Wegener’s drift mechanism was shown to be untenable. Wegener died at the early age of 50 on an arctic expedition at Eismitte in Greenland.

With the discovery of new paleomagnetic evidence in the 1950s, and especially with the discovery of plate tectonics in the 1960s, Wegener’s theory of continental drift eventually became widely accepted. Wegener’s paper is rare and very difficult to find in the original three separate journal issues in their original printed wrappers. Norman 2192. *Dictionary of Scientific Biography*. 41526



77. Wiener, Norbert (1894-1964). *Nonlinear problems in random theory*. ix, 131pp. Text diagrams. Cambridge: Technology Press of the Massachusetts Institute of Technology; New York: John Wiley & Son, 1958. 228 x 147 mm. Original cloth, printed dust-jacket (lightly worn). Fine copy, *inscribed by Wiener* to Frederick G. Fassett, Jr. (1901-91) on the front endpaper: “To Dean F. G. Fassett from Norbert Wiener in token of old times.” \$950

First Edition of the first book on the mathematical analysis of nonlinear random processes, a work that arose from Wiener’s pioneering analyses of brain waves performed in the early 1950s. The story of the book’s genesis is an amusing one. Amar Bose, founder and chairman of the Bose Corporation, was a doctoral student at MIT at the time, and Wiener asked Bose to work with him on the nonlinear random processes project.

“He wrote it over two or three years on my blackboard every day,” Bose recalled. “He would go along with the chalk in one hand and the eraser in the other. He would write and erase as he went, working out all the equations in his head. He never put two lines on the blackboard. Then one day he came in and put the last result down and said, ‘Okay Bose, that’s it! Write it up!’” Bose was dumbfounded. “I said, ‘What do you mean, write it up? There’s one line on the blackboard. You erased everything’” (Conway & Siegelman, p. 285).

With the help of Y. W. Lee, the senior figure in MIT’s electrical engineering department, Bose was able to persuade Wiener to reconstruct his new mathematics in a series of lectures given before a special group of advanced students. Bose and Lee photographed and recorded Wiener’s lectures, transcribing and correcting them for publication in book form. The book was published simultaneously in the United States and England.

Wiener presented this copy of the book to Frederick Gardiner Fassett, Jr., director of publications and of the Technology Press at MIT. Fassett served as MIT’s associate dean of students from 1952 to 1966. Conway & Siegelman, *Dark Hero of the Information Age: In Search of Norbert Wiener*, pp. 285-86. 36823

Independent-Particle Model of Nuclear Structure—Wigner’s Nobel Prize-Winning Work

78. Wigner, Eugene (1902-95). On the consequences of the symmetry of the nuclear Hamiltonian on the spectroscopy of nuclei. Offprint from *Physical Review* 51 (1937). 107-119pp. 267 x 200 mm. Original printed wrappers, slightly darkened at margins. Very good. H. A. Kramers’ copy, with his name in pencil in block letters on the front wrapper. \$2750

First Edition, Offprint Issue. Wigner’s paper contains the initial development of the independent-particle model (IPM) of nuclear structure, describing the atomic nucleus in terms of a face-centered cubic lattice; this led to the development of the nuclear shell model in the 1940s and 1950s. “In a paper concerning the ‘Symmetry of the nuclear Hamiltonian,’ [Wigner] proposed what was soon acknowledged to be the foundation of the independent-particle model—and indeed was awarded the Nobel Prize in Physics in 1963 specifically for that work . . . the independent-particle quantal description of nucleon states established by Wigner has been in use by nuclear theorists ever since” (N. Cook, *Models of the Atomic Nucleus* [2nd ed.], pp. 202-203). Page 112 of Wigner’s paper contains the first illustration of the lattice geometry of the nucleus.

This copy is from the library of Dutch physicist H. A. Kramers (1894-1952), one of the major contributors to quantum theory. 46054

