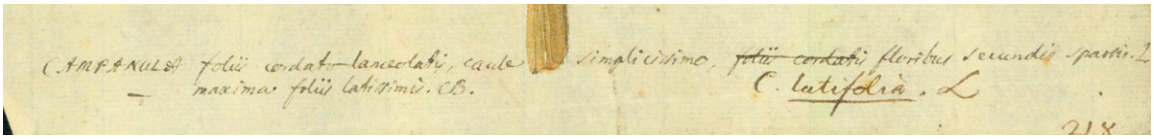
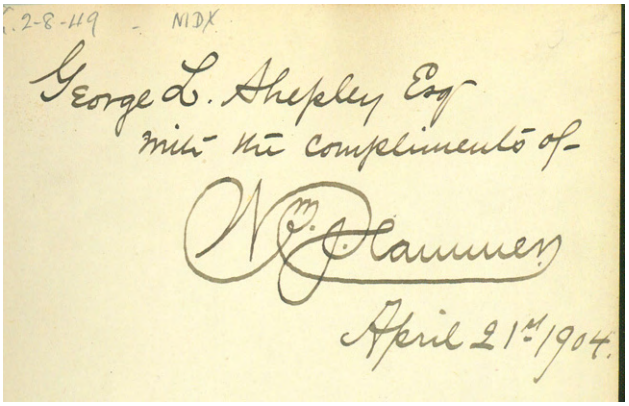


Haller's autograph caption

An original botanical drawing by the great Swiss scientist Haller, who made fundamental contributions to botany as well as to anatomy and physiology. In an effort to create "a complete, encyclopedic science of Swiss flora" (*Dictionary of Scientific Biography*), Haller published a major treatise on the subject, *Historia stirpium indigenarum Helvetiae inchoate* (1768), and amassed an herbarium of Swiss plants that is still used today. He corresponded with Linnaeus on the problem of nomenclature, seeking an alternative to Linnaus's binary nomenclature and sexual system of classification.

Haller's drawing is of a species of campanula (bellflower). His caption, written in Latin, reads: "CAMPANULA foliis cordato-lanceolatis, caule simplicissimo, foliis cordatis floribus secundis sparsis maxima foliis latissimis. CB.(?)" The words "foliis cordatis" have been crossed out and corrected in another hand to "C. latifolia." The unidentified French inscription on the verso reads: "Cette plante est dessiné et colorié par le grande Haller, ainsi que l'écriture est de sa main, verifiée par Mr. le Dr. Coindet qui a plusieurs autographes de Mr. Haller" [This plant was drawn and colored by the great Haller, and the writing is in his hand, verified by Dr. Coindet who has several autographs of Haller]. Haller's handwriting on the caption is similar to previous Haller autographs that we have handled. 40493



First American Book on Radium

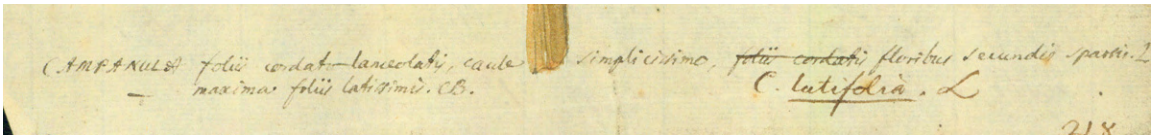
56. **Hammer, William J. (1858-1934).** Radium, and other radio-active substances; polonium, actinium, and thorium. . . . 8vo. viii, 72pp., adverts. Frontispiece and text illustrations. New York: Van Nostrand . . . , 1903. 230 x 150 mm. Original cloth, gilt, very slight traces of wear. Fine copy. **Author's presentation inscription** on the recto frontispiece in a flourishing hand: "Prof. R. Hitchcock with the compliments of Wm. J. Hammer, July 20, 1903." $750

First Edition of the *first American book on radium*, published in the same year as Marie Curie's landmark thesis, and the year before Rutherford's treatise on radioactivity. Hammer brought 9 tubes of radium from the Curies' laboratory to America, and his book (adapted from a lecture delivered at a meeting of the American Institute of Electrical Engineers) contains many first-hand references to the Curies, Becquerel, etc. Hammer invented the luminous radium preparation used in watch dials and other instruments, and is credited with the first suggestion and use of radium in cancer treatment. His lectures on radium, delivered to packed houses around the country, did much to popularize the subject. Grigg, *Trail of the Invisible Light,* p. 786 (noting that Hammer was the stepbrother of Edwin W. Hammer, co-author with William J. Morton of the first book on x-rays [1896]). Quinn, *Marie Curie,* p. 196. 12088

First Edition in English

57. **Harvey, William (1578-1657).** The anatomical exercises of . . . concerning the motion of the heart and blood. With the preface of Zachariah Wood . . . to which is added Dr. James de Back his discourse of the heart. . . . London: Francis Leach for Richard Lowndes, 1653. 8vo. [40, incl. initial blank], 111, [1], [20], 123, [1], [2], 86pp. Three title leaves, the first a cancel as noted in Keynes. London: Francis Leach for Richard Lowndes, 1653. 155 x 95 mm. Blind-ruled sheep ca. 1653, rebacked, retaining portions of original spine; in quarter morocco slipcase. Light marginal spotting and toning, two marginal tears in leaf L1 affecting the text, upper margin trimmed touching one or two headlines, but *an unusually fine and tall copy* of this work that usually has much shorter margins than this. Ownership inscription of John Jones, dated March 30, 1738; bookplate and gift inscription of [George] Huntington Williams to his son McKim Williams, dated June 26, 1971. $47,500

First Edition in English of Harvey's *De motu cordis* (1628) in which he first published his discovery and experimental proof of the circulation of the blood. That this epochal work did not appear in English until twenty-five



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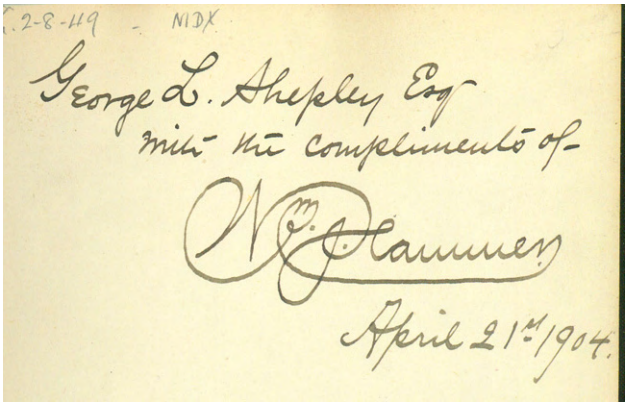

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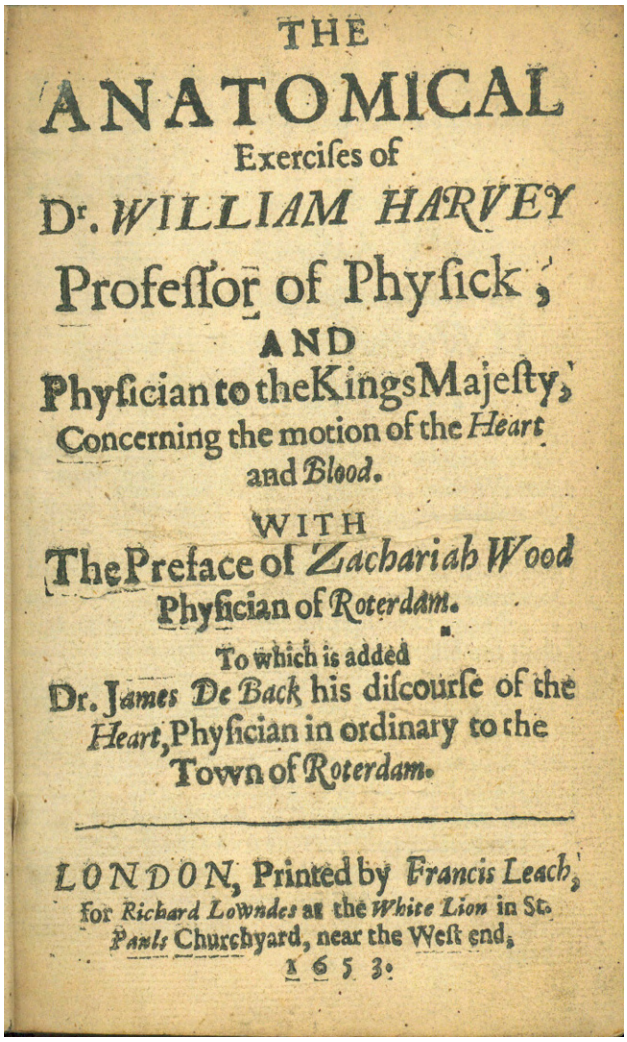
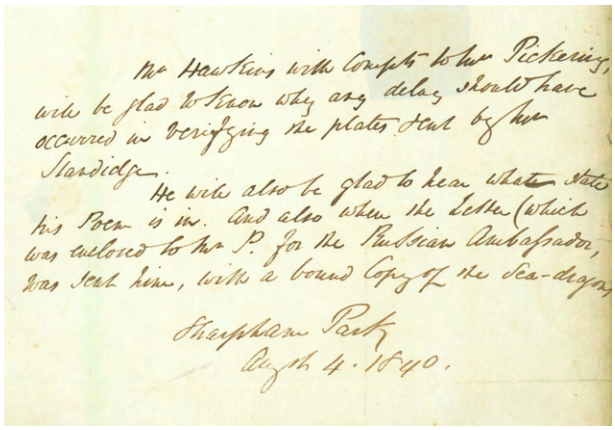

THE
ANATOMICAL
Exercises of
Dr. WILLIAM HARVEY
Professor of Physick,
AND
Physician to the Kings Majesty,
Concerning the motion of the Heart
and Blood.
WITH
The Preface of Zachariah Wood
Physician of Roterdam.
To which is added
Dr. James De Back his discourse of the
Heart, Physician in ordinary to the
Town of Roterdam.
LONDON, Printed by Francis Leach,
for Richard Lowndes at the White Lion in St.
Pauls Churchyard, near the West end,
1653.

years after it was originally published in Frankfurt is a reflection of the role that Latin played as the international language of medicine and science in Harvey's time.

Since antiquity, ideas about the physiology and pathology of most parts of the body had been based to an important degree on assumptions made about the function of the heart and blood vessels. In fundamentally changing the conception of these functions, Harvey pointed the way to reform of all of physiology and medicine. As a result of Harvey's work, by the middle of the seventeenth century new mechanical and chemical systems of physiology incorporated the circulation as a basic assumption in the explanation of a wide range of vital phenomena, and while subsequent developments in physiology have led to great changes in our conception of the function of the circulation, they also confirmed the importance of Harvey''s discovery.

The first English translation of *De motu cordis* is "a vigorous, if unpolished, version of Harvey's book in contemporary language" (Keynes, p. 5). The illustrations are omitted, although the references to them in the text remain. Also included in the translation are Back's *Dissertatio de corde*, written in support of Harvey circa 1647, and Harvey's two essays responding to Jean Riolan the younger, who had issued his own theory of the circulation in *Encheiridium anatomicum* (1648).

A previous owner of this copy, George Huntington Williams (1892-1992), "received his A.B. from Harvard in 1915 and his M.D. from the Johns Hopkins University School of Medicine in 1919. Williams graduated in the first class of the Johns Hopkins University School of Hygiene and Public Health in 1921, with a doctorate in public health. Williams's first professional appointment was for the New York State Health Department in Albany as a District State Health Officer from 1922 to 1931, supervising the work of part-time health officers in five counties. He also taught a public health course at the Albany Medical College. Returning to Baltimore, Williams became director of the Baltimore City Health Department in 1931 and also served as commissioner of the health department from 1933 to 1962. During this time, Williams was professor of hygiene and public health at the University of Maryland Medical School and a lecturer and adjunct professor at the Johns Hopkins University School of Hygiene and Public Health" (quoted from the website of Repository Guide to the Personal Papers Collections of Alan Mason Chesney Medical Archives, Johns Hopkins Medical Institutions.) See Dibner, *Heralds of Science*, 123; Norman (ed) Garrison-Morton 759; Horblit, *One Hundred Books Famous in Science*, 46; *Printing and the Mind of Man* 127. Hook & Norman, *The Haskell F. Norman Library of Science and Medicine,* 1008. Keynes, *Harvey*, 19. Osler 7698. Wing H-1083. 40445


Mr Hawkins with Compts to Mr Pickering,
will be glad to know why any delay should have
occurred in verifying the plates sent by Mr
Standidge.
He will also be glad to hear where State
his Poem is in. And also when the letter (which
was enclosed to Mr P. for the Prussian Ambassador,
was sent him, with a bound Copy of the Sea-dogs
Sharpham Park
Augt 4. 1840.

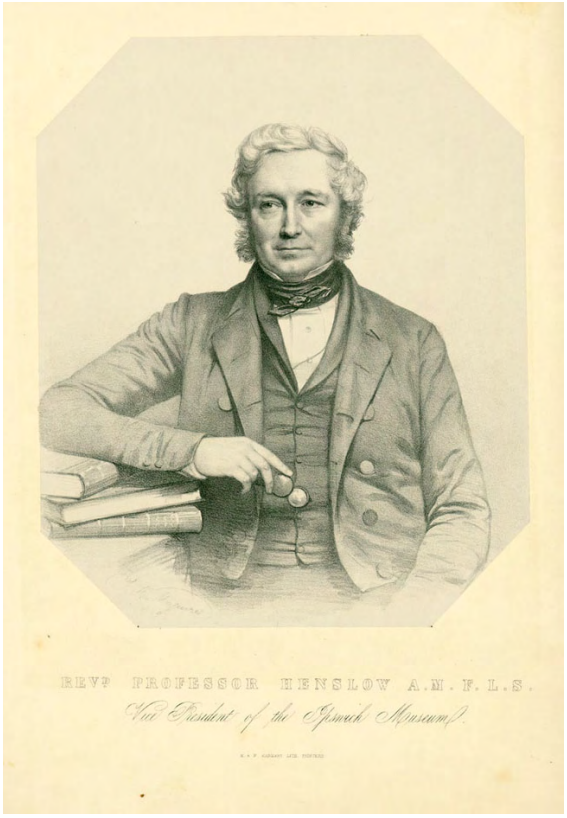
58. **Hawkins, Thomas (1810-89).** Autograph letter signed to William Pickering (1796-1854). Sharpham Park, Augst. 4, 1840. 1 page plus integral address leaf. 227 x 190 mm. Stamp cut out from address leaf, not affecting text, light soiling & fraying. $950

From fossil collector and dealer Thomas Hawkins, known for his collections of ichthyosaurs and plesiosaurs,

some of which are still on display at the Natural History Museum in London. Hawkins was the author of several works, the most famous of which is his *Book of the Great Sea Dragons, Ichthyosauri and Plesiosauri,* published in 1840 by William Pickering and referred to in the present letter:

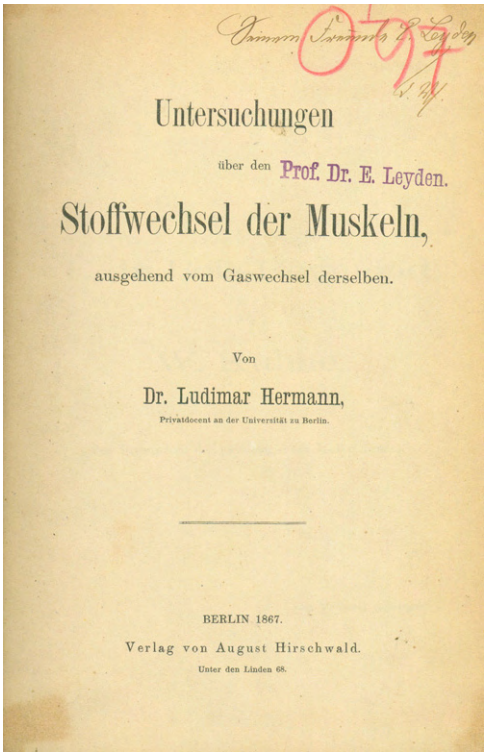
> Mr. Hawkins with compts. to Mr. Pickering, will be glad to know why any delay should have occurred in verifying the plates sent by Mr. Standidge.
>
> He will also be glad to hear what state his Poem is in. And also when the letter (which was enclosed to Mr. P. for the Russian Ambassador) was sent him, with a bound copy of the Sea-Dragons.

"Mr. Standidge" is a reference to Standidge & Co., the London firm of lithographers. The "Poem" referred to in Hawkins's letter was most likely his *The Lost Angel, and The History of the Old Adamites, Found Written on the Pillars of Seth* (1840), also published by Pickering. 40463



59. **Henslow, John Stevens (1796-1861).** Lithograph portrait with facsimile signature, by Thomas Herbert Maguire (1821-95), lithographed by M. & H. Hanhart. [Ipswich: G. Ransome,] 1849 (dated in the plate). 560 x 375 mm.; image (without signature) measures 240 x 292 mm. Unobtrusive crease and small tear in lower margin, a few faint spots, but very good. $950

First Edition. The largest and best portrait of Darwin's mentor, John Stevens Henslow, professor of botany at Cambridge and the man who helped Darwin obtain his post as naturalist on *HMS Beagle*. The portrait formed part of series titled *Portraits of Honorary Members of the Ipswich Museum* published in 1852. *Extremely rare*. 40419


Untersuchungen

über den Prof. Dr. E. Leyden.

Stoffwechsel der Muskeln,

ausgehend vom Gaswechsel derselben.

Von

Dr. Ludimar Hermann,

Privatdocent an der Universität zu Berlin.

BERLIN 1867.

Verlag von August Hirschwald.

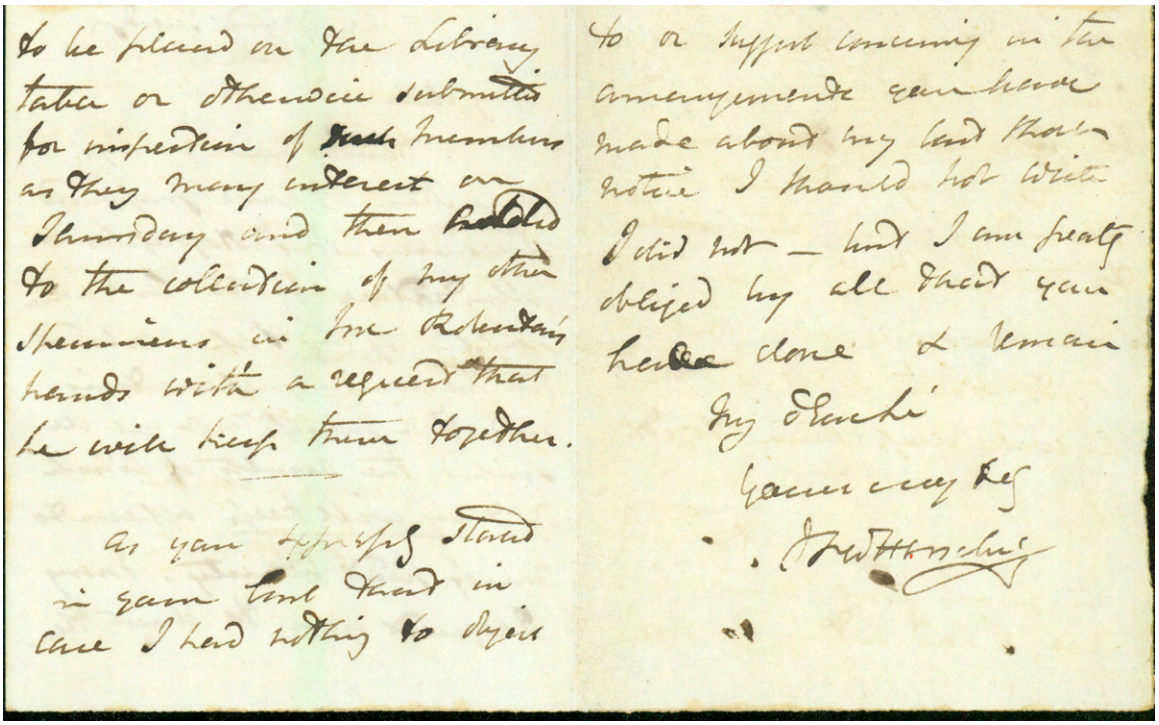
Unter den Linden 68.

60. **Hermann, Ludimar (1838-1914).** Untersuchungen über den Stoffwechsel der Muskeln, ausgehend vom Gaswechsel derselben. 3 vols. in 1, 8vo. viii, 128; [6], 78; [4], 98pp. Folding plate. Berlin: August Hirschwald, 1867-68. 206 x 141 mm. Boards c. 1868, rebacked and recornered in morocco. Very good. **Author's presentation inscription to neurolgist Ernst von Leyden** (1832-1910) on title; see G-M 4666 and other entries. With Leyden's bookplate and embossed ownership stamp. $1250

First Edition. Garrison-Morton 625: "Hermann's views on nitrogen metabolism correctly anticipated the later conclusions of Fletcher, Hopkins, and others." Rothschuh, *Hist. Physiol.*, pp. 228-29. 29299

61. **Herschel, John F. W. (1792-1871).** Autograph letter signed to an unidentified correspondent [Samuel Hunter Christie (1784-1865)]. Collingwood [House, Hawkhurst], December 21, 1842. 3pp. 122 x 98 mm. Very good. $2500

Excellent letter discussing photographic researches from Sir John Herschel, whose intensive investigations in



photography and photochemistry during the late 1830s and early 1840s led to enormous advances in the field in its earliest days. Herschel coined the terms "positive" and "negative," invented new photographic processes and improved existing ones, and experimented with color reproduction.

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

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

Herschel refers here to one of the two important papers on photography that he submitted to the Royal Society in 1842: "On the action of the rays of the solar spectrum on vegetable colours, and on some new photographic processes" (*Philosophical Transactions* 132 [1842]: 181-214) and "On certain improvements on photographic processes described in a former communication, and on the parathermic rays of the solar spectrum" (*Philosophical Transactions* 133 [1843]: 1-6). These papers discussed Herschel's photochemical experiments with a wide range of organic and metallic materials, and announced his invention of two new photographic processes: the gold-based chrysotype and the cyanotype, an iron-based method using potassium ferricyanide. This last process, which produces white images on a blue ground directly onto paper, is the ancestor of the modern blueprint. Herschel described the working details of these processes fully in his second paper, to which he is likely referring in the present letter. The "process not yet described" probably refers to Herschel's experimental and ultimately unsuccessful mercury-based photographic process, which he christened "celanotype." Herschel's correspondent was mathematician and physicist Samuel Hunter Christie, who made important contributions to the study of magnetism; he served as secretary of the Royal Society from 1837 to 1843. See Schaaf, *Out of the Shadows* (1992), chs. 3-5 for a detailed discussion of Herschel's photographic researches, including excerpts from his unpublished scientific notebooks. Hannavy, *Encyclopedia of Nineteenth-Century Photography* (2008), p. 655. 40222

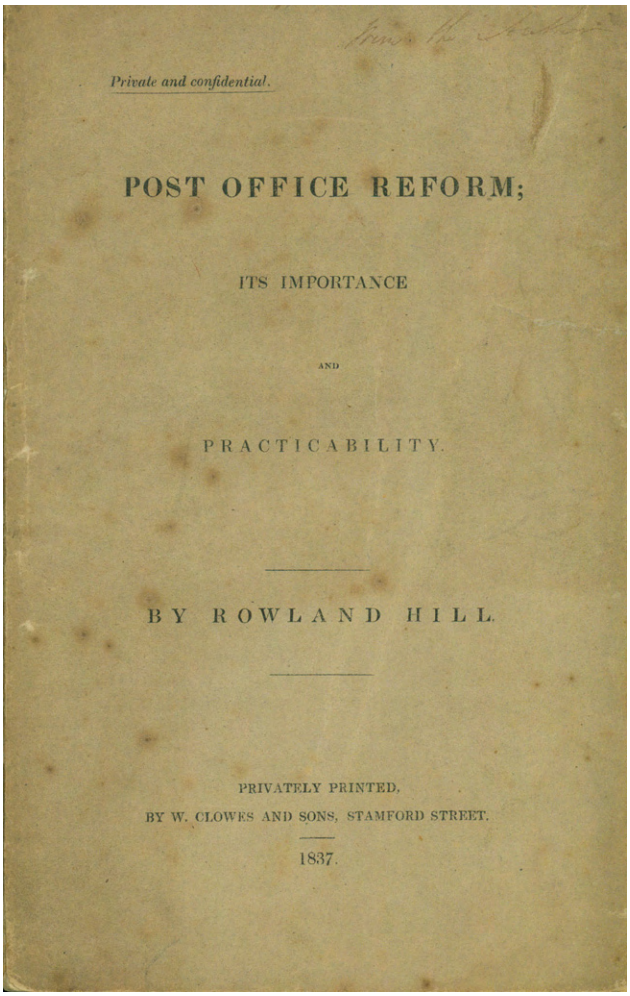
Postal Reform, Inscribed by Hill

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

$20,000

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

> The penny post inaugurated and administered by Rowland Hill required the adoption of four novel



Private and confidential.

POST OFFICE REFORM;

ITS IMPORTANCE

AND

PRACTICABILITY.

BY ROWLAND HILL.

PRIVATELY PRINTED.

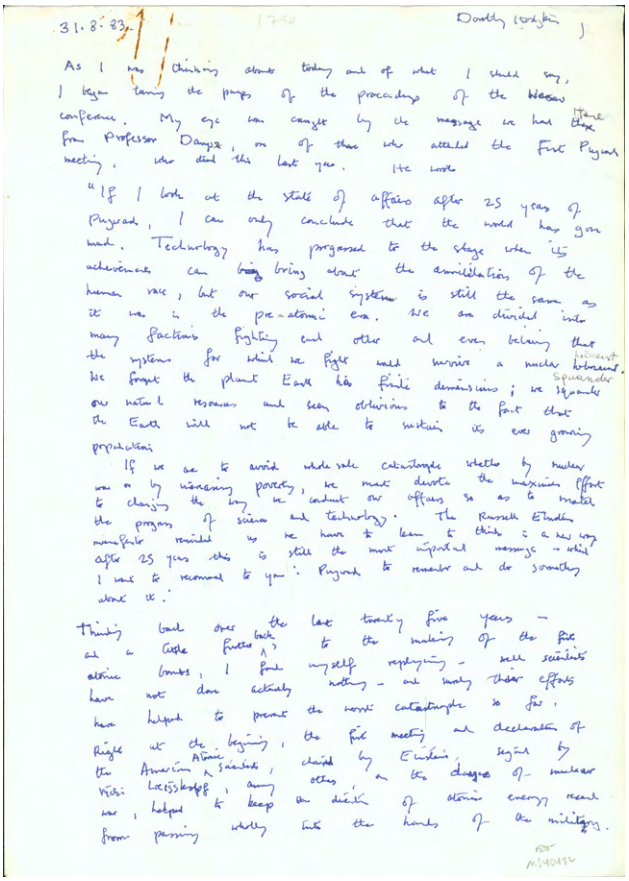
BY W. CLOWES AND SONS, STAMFORD STREET.

1837.

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

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

63. **Hodgkin, Dorothy Crowfoot (1910-94). (1)** Autograph manuscript signed of her closing address to the 1983 Pugwash Conference, corrected throughout in Hodgkin's hand. August 31, 1983. 4ff. 298 x 211 mm. Small rust-marks from paper clip on first and last leaves. **(2)** Photograph of a group including Hodgkin, Linus Pauling, Archbishop Desmond Tutu and the



mayor of Hiroshima, taken at Hiroshima in 1988. 83 x 116 mm. Signed and annotated by Hodgkin.

$1500

Signed manuscript in the hand of Nobel Laureate Dorothy Hodgkin, who received the 1964 Nobel Prize in chemistry for her work on determining, by X-ray diffraction techniques, the molecular structures of penicillin, vitamin B-12, insulin and other important biochemical compounds. Hodgkin was the first Englishwoman to receive the Nobel Prize in chemistry and the third woman to do so overall, following Marie Curie and Irène Joliot-Curie.

Hodgkin involved herself in a wide range of humanitarian and peace-promoting causes, and actively sought to curb the destructive uses of science by the military. From 1976 to 1988 she served as the President of the Pugwash Conferences on Science and World Affairs, an international organization of scientists, scholars and public figures working toward reducing the danger of armed conflict. Her closing address for the 1983 Pugwash Conference, held that year in Venice, Italy, looks back at the previous 25 years of the organization's efforts "to prevent the worst catastrophe so far," and describes the current meeting's discussions on arms control, disarmament and other pressing concerns:

> Security was a problem in all groups [of the conference] and particularly in III and V where

> conflicts in the Mediterranean and Middle East and in the third world were considered. How to resolve long and bitter conflicts was the major problem. . . . Several of the groups discussed the foundation of new nuclear free zones, which to all seem desirable whether formed through the MPT treaty or outside it. Our presence in Venice led us also to consider the particular dangers that appear in the Mediterranean Sea through conflicting interests and naval forces. Major scientific projects that will bring people from different countries together in cooperative efforts—many together may remove mountains [that] are needed to secure peace.

The photograph accompanying Hodgkin's manuscript shows her seated in a group that includes fellow Nobel Laureates Linus Pauling (Chemistry, 1954; Peace, 1962) and Desmond Tutu (Peace, 1984). Hodgkin signed the photograph and identified some of the subjects on the verso. 40472

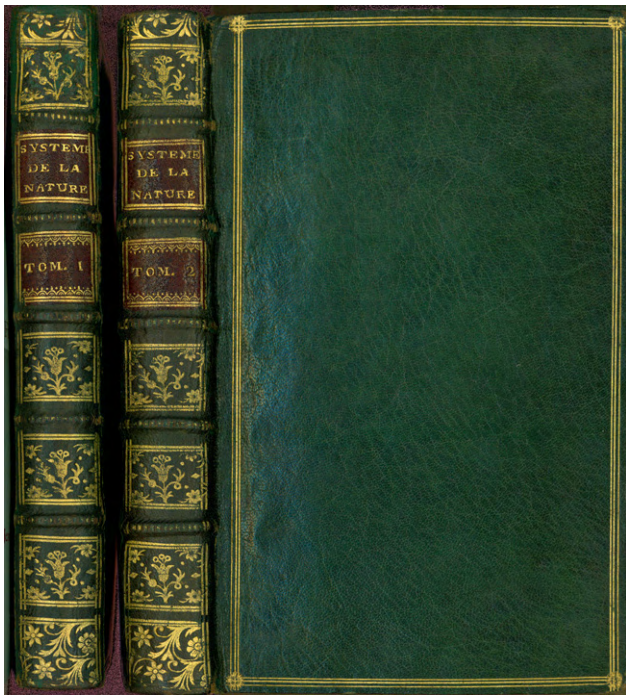
Atheism, in Contemporary Green Morocco, Gilt

64. **Holbach, Paul Henry Thiery, Baron d' (1723-89).** Système de la nature. Ou des loix du monde physique & du monde moral. Par M. Mirabaud. 2 vols., 8vo. [6], 370; [4], 412pp. London [i.e., Amsterdam: Marc-Michel Rey], 1770. 195 x 119 mm. Crushed green morocco gilt ca. 1770, all edges gilt, extremities lightly rubbed. First and last leaves browned, a few spots. Ownership signature of V. C. Auffret in Vol. I. $12,500

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

> rejected the Cartesian mind-body dualism and attempted to explain all phenomena, physical and mental, in terms of matter in motion. He derived the moral and intellectual faculties from man's sensibility to impressions made by the external world, and saw human actions as entirely determined by pleasure and pain. He continued his direct attack on religion by attempting to show that it derived entirely from habit and custom. But the *Systême* was not a negative or destructive book: Holbach rejected religion because he saw it as a wholly harmful influence, and he tried to supply a more desirable alternative (*Printing and the Mind of Man*).

The radical ideas expressed in the *Systême* came under widespread attack, and even the free-thinking Voltaire was moved

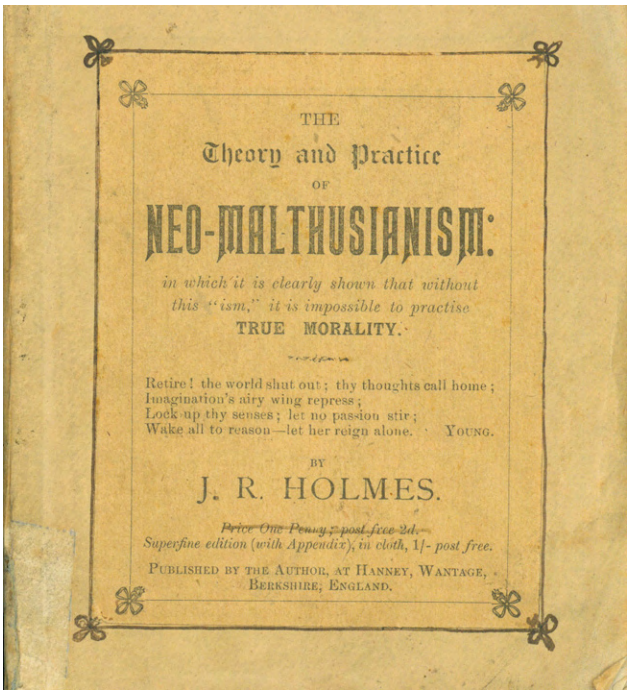


to refute the *Systême's* arguments in his own *Dictionnaire philosophique.* D'Holbach issued the work pseudonymously under the name of the late Jean-Baptiste de Mirabaud and had it published in Amsterdam in order to avoid censure. *Printing and the Mind of Man* 215. 40299.

Extremely Rare Trade Catalogue of Contraceptives

65. **Holmes, James Robins (b. 1859).** The theory and practice of neo-Malthusianism. . . . Sm. 4to. 140pp. (pagination differs from that given by OCLC for the "superfine edition"; see below). Text illustrations. Hanney, Wantage, Berkshire, England: by the author, [1891]. 150 x 126 mm. Later wrappers, portions of original printed wrappers laid on, lower portion of spine reinforced, light wear. Light browning and spotting, last 4 pages trimmed & mounted. Boxed. Very good copy. $1500

First Edition of a turn-of-the-century British pamphlet on contraception, written at a time when such works were routinely banned as obscene. Like Annie Besant and other nineteenth-century crusaders for birth control, Holmes embraced contraception as a means of combating poverty and preserving women's health, and stressed its role in the promotion of happy marriages. The latter part of the pamphlet contains a catalogue of contraceptive devices manufactured or distributed by Holmes, and a list of publications on birth control. Holmes's pamphlet appeared in at least four later editions between 1892 and 1905, under the title *True*

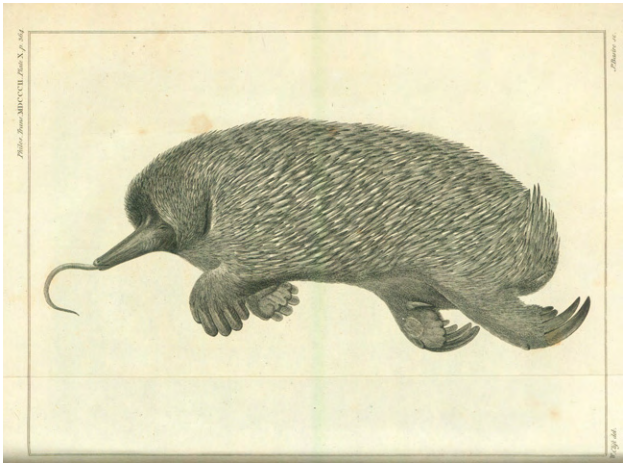

THE
Theory and Practice
OF
NEO-MALTHUSIANISM:
in which it is clearly shown that without this "ism," it is impossible to practise
TRUE MORALITY.
Retire! the world shut out; thy thoughts call home;
Imagination's airy wing repress;
Lock up thy senses; let no passion stir;
Wake all to reason—let her reign alone. YOUNG.
BY
J. R. HOLMES.
Price One Penny; post free 2d.
Superfine edition (with Appendix), in cloth, 1/- post free.
PUBLISHED BY THE AUTHOR, AT HANNEY, WANTAGE, BERKSHIRE, ENGLAND.

Morality, or the Theory and Practice of Neo-Malthusianism. All the editions are rare, but the first particularly so. When we last checked OCLC cited only one copy (Ohio State Univ.) 16474

Includes First Anatomical Description of the Spiny Anteater

66. **Home, Everard (1756-1832).** 15 offprints published between 1790 and 1804, either by Home or with contributions by him. 266 x 211 mm. Calf c. 1804, skillfully rebacked with period-style tooling. Light browning & foxing. 19th cent. owner's signature on front pastedown; modern bookplate. Complete listing available. $5000

First Editions, Offprint Issues. Home was the brother-in-law of John Hunter, who had married Home's sister Anne in 1771. Home trained as a surgical pupil under Hunter, and later served as Hunter's surgical, teaching and research assistant. After Hunter's death in 1793, Home, the executor of Hunter's will, persuaded the British government to buy Hunter's anatomical museum and to house it at the Royal College of Surgeons. Home became principal curator of the museum, and promised to prepare a catalogue of its contents, but produced only a synopsis. In 1817 Home was named master of the Royal College of Surgeons, where he endowed the Hunterian oration and gave courses in comparative anatomy. He published 120 scientific papers, including the first anatomical descriptions of the platypus (1802; not present here) and the echidna or spiny anteater ("Description of the anatomy of the ornithorhyncus hystrix" [1802],

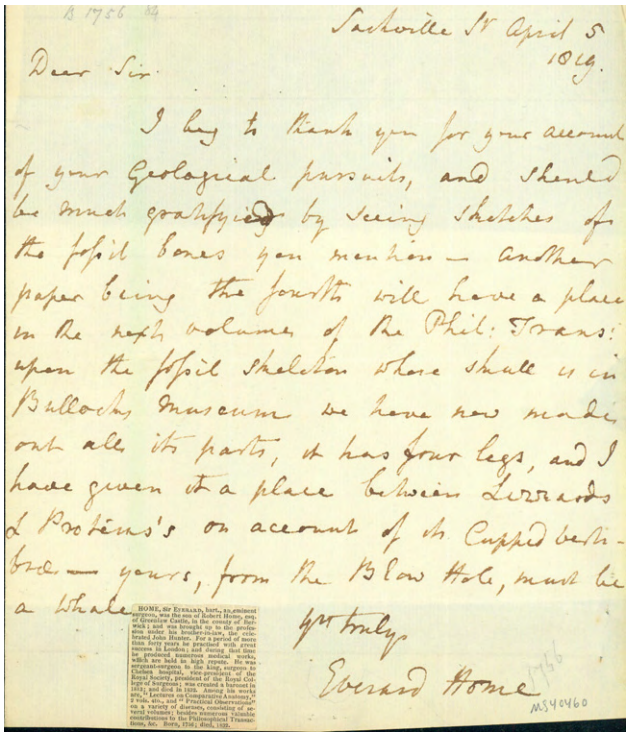


present in this collection). He was the first to recognize the relationship between the echidna and the platypus. Unlike much of what Home published, these studies of the platypus and echidna were wholly original.

When John Hunter died he left a large collection of unpublished manuscripts, which in 1800 were transferred to the custody of Home, ostensibly so that Home could prepare a catalogue of the collection. The manuscripts remained in Home's possession, uncatalogued, until 1823, at which time he burned them, claiming that he had published everything worthwhile in them in his own series of papers contributed to the *Phil. Trans.* However, the available evidence shows that Home plagiarized freely from Hunter's manuscripts, both in his *Phil. Trans.* papers (an astonishing 92 submitted between 1793 and 1823) and in his monumental five-volume *Lectures on Comparative Anatomy* (1814-23, with supplementary volume dated 1828). The offprints in the present volume (only one of which was published before 1793) are representative of Home's work during this period. Offprints from the *Phil. Trans.* published during this period are *rare*, and collections by a single author, such as the one offered here, are especially so. *Dictionary of Scientific Biography*. Qvist, *John Hunter,* pp. 195-97. Augee, Gooden & Musser, *Echidna,* p. 5 [internet reference]. Griffiths, "Preface to Platypus biology: recent advances and reviews," *Philosophical Transactions of the Royal Society London* B (1998) 353, 1059-1061. 40358

67. **Home, Everard (1736-1832).** Autograph letter signed to Mr. [William] Scoresby, Jr. (1789-1857). [London] Sackville St., April 5, 1819. 1 page plus integral address leaf. 217 x 184 mm. Margins of address leaf trimmed, not affecting text. Accomapnied by a small engraved portrait of Home. $950

From Everard Home, brother-in-law (and plagiarist) of John Hunter and first curator of the Hunterian Museum, to Arctic explorer and naturalist William Scoresby (whose name Home spelled "Scoursby" on the address leaf). Home's



Sackville St April 5
1819.

Dear Sir

I beg to thank you for your account of your Geological pursuits, and should be much gratified by seeing sketches of the fossil bones you mention — Another paper being the fourth will have a place in the next volume of the Phil: Trans: upon the fossil skeleton whose skull is in Bullocks Museum we have now made out all its parts, it has four legs, and I have given it a place between Lizzards & Proteus's on account of its Cupped vertebræ — yours, from the Blow Hole, must be a Whale

yrs truly
Everard Home

MS 40460

letter touches on his investigations of the ichthyosaurus, a fossil dinosaur that Home was the first to describe:

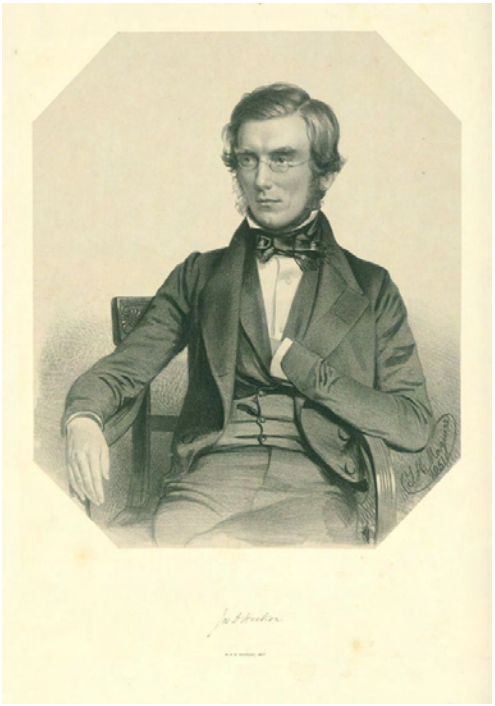
> I beg to thank you for your account of your Geological pursuits, and should be much gratified by seeing sketches of the fossil bones you mention—Another paper being the fourth will have a place in the next volume of the Phil. Trans. upon the fossil skeleton whose skull is in Bullock's Museum. We have now made out all its parts, it has four legs, and I have given it a place between Lizzards & Proteus's [salamanders] on account of its cupped vertebrae—yours, from the Blow Hole, must be a Whale.

The "fossil skeleton" was one of several ichthyosaurus specimens excavated from the cliffs of Lyme Regis in southern England by Mary Anning (1799-1847) and her brother Joseph in the second decade of the nineteenth century. Home published his observations on the ichthyosaurus in a series of six papers in the *Philosophical Transactions* (1814-20); however, his work was filled with errors and had little scientific merit. Home's letter refers to his fourth paper on the ichthyosaurus, "Reasons for giving the name Proteo-Saurus to the fossil skeleton which has been described" (*Philosophical Transactions* 109 [1819]: 212-216). Home proposed the name "Proteosaurus" in a mistaken belief that the ichthyosaurus was related to salamanders (*Proteus*).

William Scoresby, Jr., the recipient of Home's letter, studied the meteorology, geography and natural history of the Arctic regions while serving as chief officer and later captain of the whaling ship *Resolution.* In 1813 Scoresby sent Home the skull of a female narwhal, which Home described in a paper published in the *Philosophical Transactions.* Later in his career Scoresby made important contributions to the knowledge of terrestrial magnetism, publishing over sixty papers on the subject. Dean, *Gideon Mantell and the Discovery of Dinosaur* (1999), p. 60. 40460

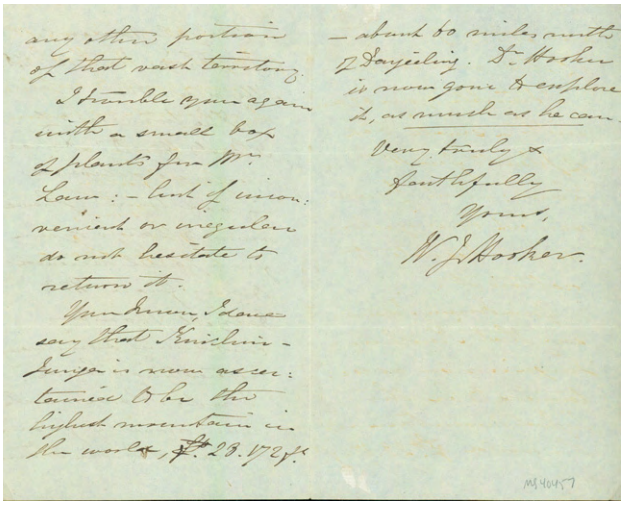
68. **Hook, Diana & Jeremy M. Norman.** Origins of cyberspace: A library on the history of computing, networking and telecommunications. With contributions by Michael R. Williams. 670pp. 284 illustrations. 8.5 x 11 inches. Cloth, 80-pound acid-free paper. ISBN 978-0-930405-85-4. Limited to 500 copies. Norman Bibliography Series no. 5. $500

Extensively annotated and illustrated bibliography describing 1411 books, technical reports, pamphlets, blueprints, typescripts, manuscripts, photographs and ephemera on the history of computing and computer-related aspects of telecommunications. Covers the period from the 17th century to circa 1970; includes several lengthy essays and a detailed timeline of significant events and publications in computer history. Indexed. Printed in two colors throughout. 38301



69.. **Hooker, Joseph Dalton (1817-1911).** Lithograph portrait with facsimile signature, by Thomas Herbert Maguire (1821-95), lithographed by M. & H. Hanhart. [Ipswich: G. Ransome,] 1851 (dated in the plate). 610 x 440 mm.; image (without signature) measures 242 x 292 mm. Small chips in the margins, a few faint spots, but with the image in excellent conditon. $1500

First Edition. The largest and best portrait of Joseph Dalton Hooker, the eminent taxonomic botanist and plant geographer, and a close friend and ally of Darwin. The portrait formed part of a series titled *Portraits of Honorary Members of the Ipswich Museum*, published in 1852. *Rare.* 40420



70. **Hooker, William Jackson (1785-1865).** Autograph letter signed to an unidentified correspondent. [London,] Royal Gardens, Kew, Nov. 16, 1848. 2-1/2pp. 178 x 112 mm. Fine. $1750

Hooker, the first full-time director of the Royal Botanic Gardens at Kew, devoted himself to the study of botany from an early age, specializing in mosses, liverworts and other cryptogamia. He served as regius professor of botany at the University of Glasgow from 1820 to 1841, when he was appointed to head Kew Gardens. Under Hooker's leadership Kew grew from eleven acres to its present size of nearly 300 acres, and its collections vastly increased, largely due to a network of Hooker's former students who brought in specimens from around the world. Hooker's own herbarium, which contained some 4000 volumes and one million dried plant specimens, was purchased by the British government for the nation after Hooker's death. Hooker was the author of over two dozen works on botany, including *British Jungermanniae* (1816), which established hepaticology (the study of liverworts) as a separate field; he also edited several botanical journals.

In his letter Hooker thanks his correspondent for sending him plant specimens from India:

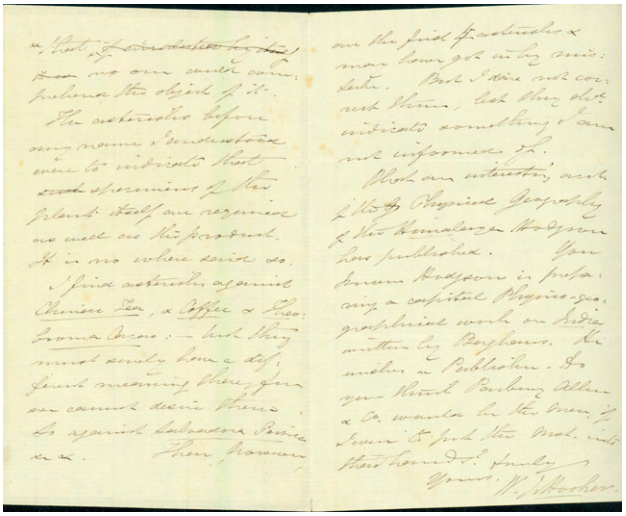
> The two cases of Plants for Dr. Falconer were delivered in good time. I have now to thank you for a parcel received today from Mr. Dalzell, Bombay, containing some very interesting Plants.
>
> Truly I have much more novelty from the East of India than any other portion of that vast territory.

"Dr. Falconer" refers to Hugh Falconer (1808-65), the distinguished botanist, geologist and paleontologist who was the first to come up with a "punctuated equilibrium" theory of evolution. Falconer spent many years in India, where he ran the Saharanpur and Calcutta botanical gardens and put together an enormous collection of plant and fossil specimens from the region.

Hooker also touches on the activities of his son, naturalist Joseph Dalton Hooker (1817-1911):

> You know, I dare say that Kinchinjunga [i.e., Kangchenjunga, in the Himalayas] is now ascertained to be the highest mountain in the world, 28,172 ft.—about 60 miles north of Darjeeling. Dr. Hooker is now gone to explore it, as much as he can.

Joseph Hooker spent three years (1848-50) exploring the Himalayas, and was the first European to collect plants from the region. Kangchenjunga, which straddles the border between India and Nepal, was believed to be the world's tallest mountain until 1852, when the results of the British Great Trigonometric Survey revealed that Mt. Everest was the taller peak. 40457



71. **Hooker, William Jackson (1785-1865).** Autograph letter signed to an unidentified correspondent. [London,] Royal Gardens, Kew, April 3, n.d. (probably 1857 or after). 3pp. 179 x 112 mm. Fine apart from a little faint spotting. $1750

The first part of Hooker's letter deals with the preparation of a forthcoming botanical publication, most likely *The Museum of Economic Botany, or a Popular Guide to the Useful and Remarkable Vegetable Products in the Two Museum Buildings of the Royal Gardens of Kew* (1858):

> I have received & read & made 2 or 3 verbal corrections & transmitted as you desired to Mr. Wyatt

(I presume at the Palace of Westminster) our Cat[alogue].

Having been unavoidably absent of late I know not what has been done by our Committee. If the present Catalogue is circulated by itself I think it requires a heading or title for not one word appears of the use & object of it: so that no one could comprehend the object of it.

The asterisks before any name I understood were to indicate that specimens of the plant itself are required as well as the product. . . . I find asterisks against Chinese Tea, & Coffee & Theobroma Cacao:--but they must surely have a different meaning there, for one cannot desire them so against Salvadora Persica [the "toothbrush tree"] &c. &c. . . .

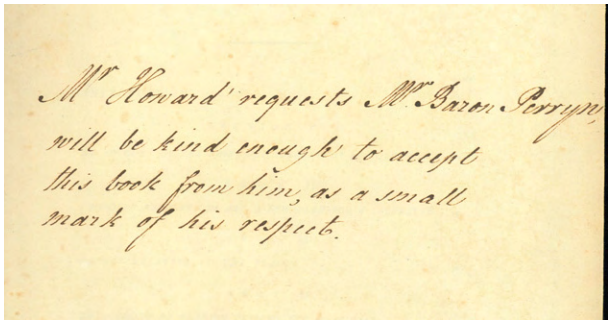
The next part of Hooker's letter touches on the work of Brian Houghton Hodgson (1800-1894), a naturalist and one of the pioneers of scientific ethnology. Hodgson spent much of his life in India, where he discovered 39 species of mammals and 124 species of birds that had hitherto been undescribed. He was the author of numerous books and papers, including *Papers Relative to the Colonization, Commerce, Physical Geography, &c., &c. of the Himalaya Mountains and Nepal*, published in Calcutta in 1857. He was a close friend of Hooker's son, the naturalist Joseph Dalton Hooker (1817-1911).

What an interesting acct. of the Physical Geography of the Himalayas Hodgson has published. You know Hodgson is preparing a capital Physico-geographical work on India written by Bagham[?]. He wishes a publisher. Do you think […] Allen & Co. would be the men if I were to put the mst. into their hands?

"Allen & Co." most likely refers to the publisher W. H. Allen & Co., which issued a large number of books relating to India in the 1850s. 40458

72. **Hoppe-Seyler, Felix (1825-95).** Ueber das Verhalten des Blutfarbstoffes im Spectrum des Sonnenlichtes. In *Archiv für pathologischen Anatomie und Physiologie und für klinische Medicin* 23 (1862): 446-49. Whole volume. iv, 596pp. 7 lithograph plates. 216 x 131 mm. Quarter black morocco c. 1862, corners a bit rubbed. $950

First Edition. Hoppe-Seyler was the first to describe the optical absorption spectrum of purified red blood pigment, which he named hemoglobin. He described hemoglobin's two distinctive absorption bands, and confirmed that hemoglobin contained iron. The present paper introduced the new spectroscope of Bunsen and Kirchhoff into medical chemistry. *Dictionary of Scientific Biography.* Garrison-Morton 870. 40484


Mr Howard requests Mr Baron Perryn will be kind enough to accept this book from him, as a small mark of his respect.

73. **Howard, John (1726?-1790).** An account of the principal lazarettos in Europe; with various papers relative to the plague: Together with further observations on some foreign prisons and hospitals; and additional remarks on the present state of those in Great Britain and Ireland. 4to. [v-vii] viii, 259, [15] pp. 22 engraved plates, fold. eng. table. Lacking half-title and (possibly) initial blank. Warrington: William Eyres for T. Cadell, J. Johnson, C. Dilly, and J. Taylor, 1789. 298 x 233 mm. Half calf, gilt spine, rubbed. Light browning & foxing. *Presentation copy,* with balnk leaf (possibly original initial blank) bound after the ttitle bearing Howard's inscription to Sir Richard Perryn, Baron of the Exchequer (1723-1803): "Mr. Howard requests Mr. Baron Perryn, will be kind enough to accept this book from him, as a small mark of his respect." Perryn's engraved bookplate on front pastedown.$3750

First Edition. Although best known as a prison reformer on the strength of his famous *State of the Prisons in England and Wales* (1777; see PMM 224), the English philanthropist John Howard was also concerned with the improvement of sanitary conditions in other public institutions. His work in this area represents an important link in the development of the public health movement. The present work, an investigation of the conditions of English and European hospitals (including mental hospitals and quarantine detention houses) contains both plans and notes on management and personnel; it also includes notes of Howard's latest inspections of Irish, Scottish and English prisons.

Howard preseneted this copy of his *Lazarretos* to British jurist Sir Richard Perryn, who was named Baron (i.e., judge) of the Court of Exchequer in 1776/ "AS a judge in criminal cases Perryn seems to have been inclined to ameliorate the law's harshness" (*Oxford Dictionary of National Biography*). He was thus likely to have been receptive to Howard's recommendations for prison reform. Arnold M. Muirhead, in his preface to Baumgartner's *John Howard*, notes that presentation copies of Howard's *State of the Prisons* usually have the half-title removed and a separate leaf with Howard's inscription inserted; Howard also followed

this custom with the *Lazarettos.* Garrison-Morton 1601. Baumgartner, *John Howard,* 21. Norman 1109. 35384

Inscribed by Baillie to Cruikshank in a Presentation Binding of Red Morocco

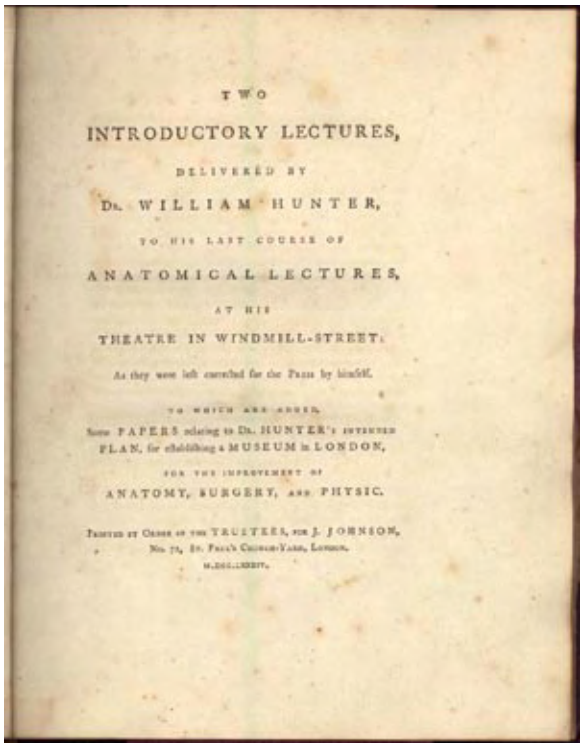
74. **Hunter, William (1718-83).** Nummorum veterum populorum et urbium, qui in museo Gulielmi Hunter asservantur, descriptio figuris illustrata. Opera et studio Caroli Combe . . . 4to. xi, [1], 354, [2, errata]pp. 68 engraved plates. London: J. Nichols; sold by T. Cadell; P. Elmsley, G. Nichol & J. Murray, 1782. 286 x 228 mm. Red crushed morocco gilt ca. 1784, a.e.g., slight wear at edges, evidence of bookplate removal inside front cover. Fine copy apart from some foxing to the plates. *Inscribed by Matthew Baillie* (1761-1823) *to William Cruikshank* (1745-1800) on the front flyleaf: "To Mr. Cruikshank with Mr. Baillie's best Compliments." 19th cent. ownership signature of Edward Thomas, dated Sept. 14, 1839, and later note, presumably by a Thomas descendent. $5000

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

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

Our copy of *Nummorum veterum populorum et urbium* has an outstanding association, being inscribed by Hunter's nephew Matthew Baillie to Hunter's assistant William Cruikshank. Baillie and Cruikshank took over the administration of Hunter's Windmill Street anatomy school after Hunter's death. Hunter bequeathed the use of his collections to Baillie for a term of thirty years; had Baillie died during this time, the use of the collections would have passed to Cruikshank. Both men made lasting contributions to medicine. Baillie is best known as the author of *The Morbid Anatomy of Some of the Most Important Parts of the Human Body,* the first systematic study of pathology and the first publication in English on pathology as a separate subject (see Garrison-Morton 2281). Cruikshank, together with John Hunter and William Hewson, laid the foundation of modern knowledge of the lymphatic system, as described in Cruikshank's *Anatomy of the Absorbing Vessels of the Human Body* (1786; see Garrison-Morton 1103). *Dictionary of Scientific Biography.* Simmons and Hunter, *William Hunter 1718-1783*, ed. C. H. Brock, p. 27. 40362

75. **Hunter, William (1718-83).** Two introductory lectures, delivered by William Hunter, to his last course of anatomical lectures . . . to which are added, some papers relating to Dr. Hunter's intended plan, for establishing a museum in London . . . 4to. [2], 130pp. Engraved folding plate. London: by order of the Trustees, for J. Johnson, 1784. 282 x 222 mm. Modern half



TWO

INTRODUCTORY LECTURES,

DELIVERED BY

Dr. WILLIAM HUNTER,

TO HIS LAST COURSE OF

ANATOMICAL LECTURES,

AT HIS

THEATRE IN WINDMILL-STREET.

TO WHICH ARE ADDED,

Some PAPERS relating to Dr. HUNTER's intended PLAN, for establishing a MUSEUM in LONDON,

FOR THE IMPROVEMENT OF

ANATOMY, SURGERY, AND PHYSIC.

morocco, cloth boards, gilt-lettered spine, t.e.g., very slightly rubbed. Folding plate somewhat foxed, minor foxing elsewhere, but very good. Early ownership signature of Edward Barlow, M.D. Bath" on the first blank. $3000

First Edition of William Hunter's posthumously published and **rare** *Two Introductory Lectures,* which treats the history of anatomy from earliest times, the scope of the subject of anatomy, and the requirements for its study. Hunter, who was London's leading obstetrician, taught anatomy for many years and played a key role in establishing it as a practical discipline through his influence as a teacher; however, little factual documentation remains as to the substance of his lectures. The *Introductory Lectures* represents the only material on the subject of the history and study of anatomy that Hunter saw fit to publish, and is one of only three books that Hunter produced, the others being his famous *Human Gravid Uterus* (1794) and the polemical *Medical Commentaries* issued in the 1760s.

The *Introductory Lectures* show Hunter at his most brilliant in his capacities as speaker, writer, teacher and historian. He writes here of the Windsor Castle collection of Leonardo da Vinci's anatomical drawings, of which he was the first to announce the existence and importance. He also makes disparaging remarks about Harvey as the "discoverer" of the circulation, citing the work of Harvey "precursors" Cesalpino, Columbo and Servetus. Hunter could speak authoritatively on this subject as he owned copies of the first editions of the relevant books, except for Servetus's *Christianismi restitutio* (1553), of which he possessed the semi-facsimile reprint issued in 1723. Perhaps some of the most fascinating comments Hunter makes in his lectures concern his supervisorial role in the discovery of the lymphatic system, for which his brother John and his pupils William Hewson and William Cruikshank have long received credit. Hunter, who was of course favorably prejudiced towards these three men, considered their work to be comparable to Harvey's discovery of the circulation.

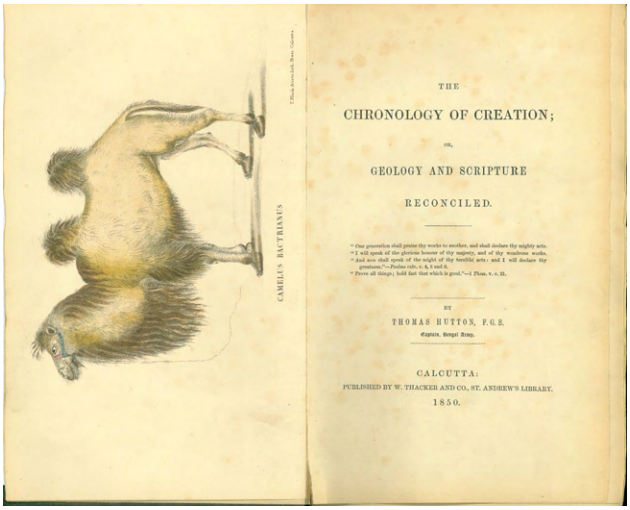
Hunter was intensely devoted to his profession: he never married, kept long hours, and worked even in declining health. His dream was to see the establishment of an anatomical school in London, and in the 1760s he began to set his plans in motion. The various forms and proposals he submitted to the British government form the supplementary material to his *Introductory Lectures*; they are included here perhaps because they contain pertinent remarks on the nature and value of anatomy as a discipline. Hunter did not succeed in convincing the government to found a school of anatomy; his own Windmill Street school, where the *Introductory Lectures* were first delivered, was established privately at Hunter's substantial personal expense after his proposals to the government had failed. Of this unfortunate turn of events, William Osler lamented (entry 3027 in the *Bibliotheca Osleriana*), "It is cruel to think that Hunter's generous proposal to found a school of anatomy in London, in which his museum would be housed, was never accepted. What a difference it might have made in medical education in the metropolis!" *Dictionary of Scientific Biography. Dictionary of National Biography.* Ferguson, *The Printed Books in the Library of the Hunterian Museum* (1930). Illingworth, *The Story of William Hunter.* Cushing H528. 40356

Printed in Calcutta

76. **Hutton, Thomas.** The chronology of creation; or, geology and scripture reconciled. [2, half-title], xvi, [2, errata], 503pp. Half-title printed in red. Hand-colored lithograph frontispiece and 3 handcolored plates. Calcutta: W. Thacker & Co., 1850. 227 x 139 mm. Original green blind-stamped cloth, gilt-lettered spine, light rubbing. Minor dust-soiling, but very good. Ownership signature on half-title. $950

First Edition. A rebuttal of Buckland's *Geology and Mineralogy Considered With Reference to Natural Theology* (1837). Hutton, a strict Biblical literalist, rejected the more liberal views of earth history and species development expressed by Buckland, who

> particularly emphasized William Paley's position that the world was not made for man alone but for the pleasure of all species of life; in relation to the object to be attained, all organic mechanisms are equally good, are evidence of beneficent adaptation. He reasserted



that it is futile to try to reconcile geological epochs with the days of creation in Genesis . . .

As a geological system Buckland chose, possibly borrowing from De la Beche and Conybeare, progressive development from an initially hot earth, with discontinuous assemblages of organic life being created and dying out. To express a secular development while simultaneously rejecting continuous progress and transmutation, he deliberately kept the rhetoric of the Great Chain of Being, but with missing links or gaps in the present creation being filled up by fossil organisms from past time periods. This was a noteworthy change from Cuvier, and a major step in the conversion of a balanced Malthusian ecology into a system maintaining its balance while it changed over time (*Dictionary of Scientific Biography*).

Buckland's advocacies of change over time—an idea basic to evolutionary theory—were anathema to Hutton, who refused to accept Buckland's theory of successive creations.

[W]ith regard to our Earth having arisen out of the "wreck and ruins" of a former world, there is decidedly not the slightest foundation for such a belief to be gathered from any sentence in the Mosaic narrative, but, on the contrary, when we are told that "in the beginning God created the Heaven and the Earth,"—we are told so in reference solely to our own actual planet, and not to any world which may have preceded it. The materials from which our Earth was at length produced, were apparently called into being expressly for that purpose. We are not taught to believe that in the beginning, God created *a Heaven and an Earth*, from whose ruins our world was at length phoenix-like to spring forth; but that they were created with reference to the present system alone, for in the whole narrative of Creation nothing appears to be brought forward but what has strict and sole reference to us, and to the Earth which we now inhabit (Hutton, pp. 53-54).

Hutton's book was first published in India, where he was a captain in the Bengal Army. A London edition was issued in 1851. Morton, G. R., "Nineteenth Century Opponents of Geology and Evolution," <http://home.entouch.net/dmd/nineteenth.htm> 40430

The Most Famous Image in the Early History of Computing Of the Greatest Rarity

77. **Jacquard, Joseph Marie (1752-1834). Portrait of Joseph-Marie Jacquard**, manufactured by Didier, Petit et Cie; woven in silk 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. It was after an original oil portrait by Claude Bonnefond. Minor wear from folding slightly visible in the image, but with the image in clear, unfaded and fresh condition. The weaving was professionally treated by a textile conservator, and framed according to textile conservation standards. The textile conservator's report and images of before and after are available. Staining in the large outer mar-

gins of the silk, not affecting the image, has been concealed by the conservation frame. $25,000

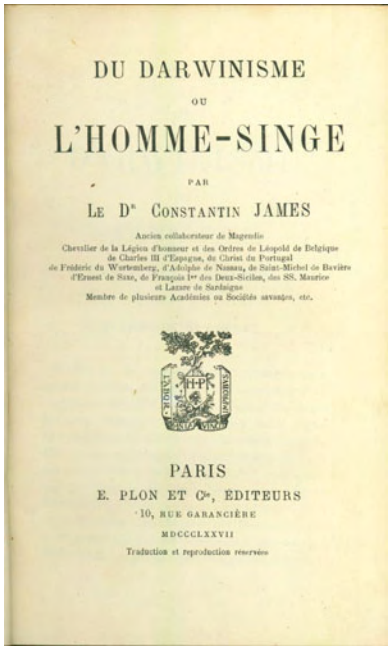
This famous image, of which only about six examples are known, was woven by machine using 24,000 Jacquard cards, each of which had over 1000 hole positions. The process of *mis en carte*, or converting the image details to punched cards for the Jacquard mechanism, for this exceptionally large and detailed 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 an exceptionally small number of examples. The only 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.

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).

Here is the link to the example of the Jacquard portrait at the Metropolitan Museum of Art: http://www.metmuseum.org/TOAH/hd/txtn/ho_31.124.htm#. 40497


DU DARWINISME

OU

L'HOMME-SINGE

PAR

LE Dr CONSTANTIN JAMES

PARIS

E. PLON ET Cie, EDITEURS

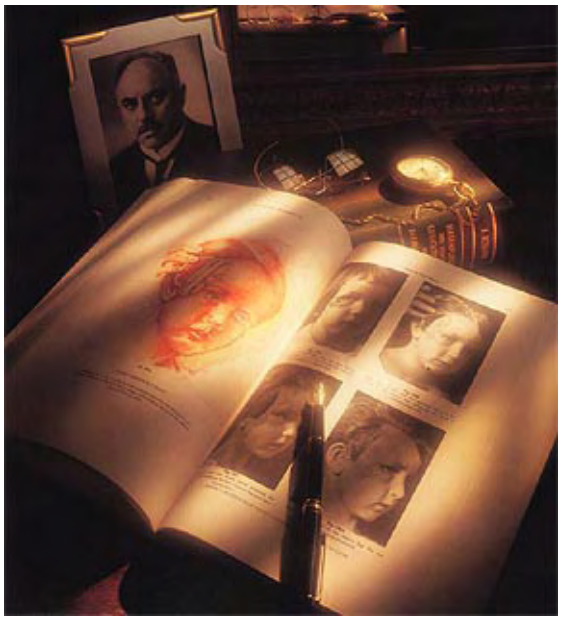
10, RUE GARANCIÈRE

MDCCCLXXVII

Traduction et reproduction réservées

78. **James, Constantin (1813-88).** Du Darwinisme ou l'homme-singe. [4], 323pp. Paris: E. Plon, 1877. Bound with: **Lapparent, Albert de** (1839-1908)**.** Les silex taillés et l'ancienneté de l'homme. 122, [2]pp. Paris: Librairie Bloud, 1908. Together 2 works in 1. 173 x 110 mm. 20th cent. half cloth, marbled boards, front wrapper of Lapparent's work bound in. Very good. $200

First Edition of James's work; third edition of Lapparent's. James was a French Catholic physician and author of several medical works. His *Du Darwinisme ou l'homme-singe* (On Darwinism or the Man-Ape) was probably the most virulent rebuttal of Darwin's *Descent of Man* (1871), the work in which Darwin compared man's physical and psychological traits to similar ones in apes and other animals, and showed how even man's mind and moral sense could have evolved through processes of natural selection. "Dr. James not only refuted Darwin scientifically but poured contempt on his book, calling it 'a fairy tale,' and insisted that a work 'so fantastic and so burlesque' was, doubtless, only a huge joke, like Erasmus's *Praise of Folly*, or Montesquieu's *Persian Letters*" (White, *A History of the Warfare of Science with Theology in Christendom,* p. 96). James's book found such favor with the Catholic Church, which opposed evolution at the



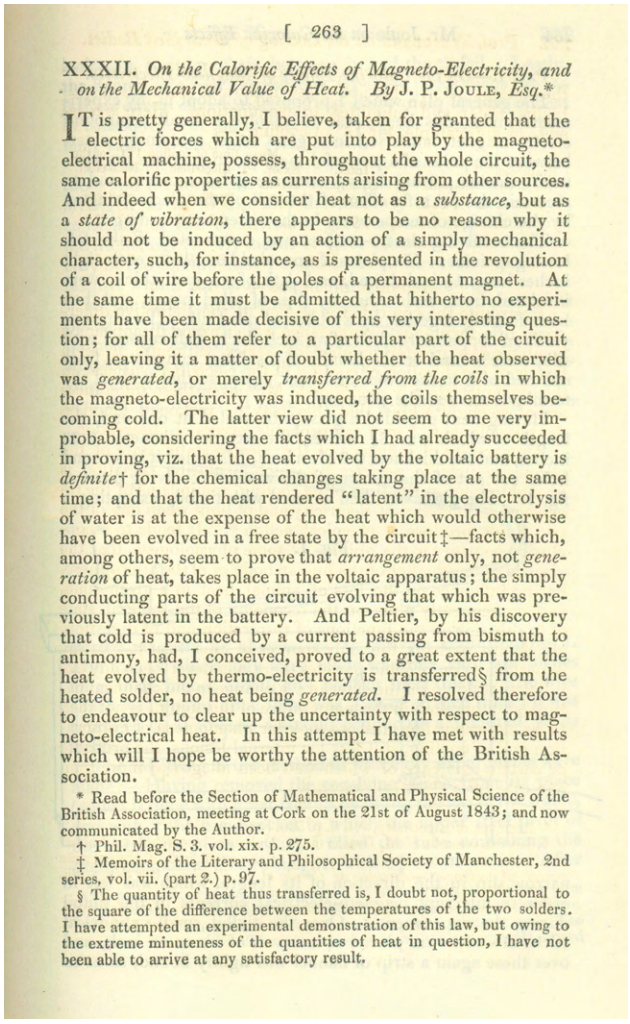
time, that the Pope made James an officer of the Papal Order of St. Sylvester. 40435

79. **Joseph, Jacques (1865-1934).** Rhinoplasty and facial plastic surgery, with a supplement on mammaplasty and other operations in the field of plastic surgery of the body. . . . English translation by Stanley Milstein. Large 8vo. xxxi, [1], 843, [1]pp. 1718 line and halftone illustrations, some in color. Phoenix, AZ: Columella Press, 1987. 268 x 178 mm. Quarter calf gilt, linen boards, slipcase. As new. $225

First Edition in English of Joseph's *Nasenplastik und sonstige Gesichtsplastik* (1931; probably the most famous classic of plastic and aesthetic surgery published in the 20th century. This deluxe limited edition English translation, issued in 1987, publishes the English translation of Joseph's text and his original illustrations in a format that follows the German edition page for page. see Garrison-Morton 5763.01). 38970

Mechanical Equivalent of Heat

80. **Joule, James Prescott (1818-1889).** On the calorific effects of magneto-electricity, and on the mechanical value of heat. In: *London, Edinburgh and Dublin Philosophical Magazine and Journal of Science*, 3rd series, 23 (1843), pp. 263-276, 347-355, 435-455. Whole volume, 8vo. viii, 552pp. Engraved frontispiece, text illustrations. 215 x 133 mm. 19th century half calf, marbled boards, light rubbing. Minor foxing but very good. Binder's stamp on rear paste-down. $9500



[263]

XXXII. *On the Calorific Effects of Magneto-Electricity, and on the Mechanical Value of Heat.* By J. P. Joule, *Esq.**

IT is pretty generally, I believe, taken for granted that the electric forces which are put into play by the magneto-electrical machine, possess, throughout the whole circuit, the same calorific properties as currents arising from other sources. And indeed when we consider heat not as a *substance*, but as a *state of vibration*, there appears to be no reason why it should not be induced by an action of a simply mechanical character, such, for instance, as is presented in the revolution of a coil of wire before the poles of a permanent magnet. At the same time it must be admitted that hitherto no experiments have been made decisive of this very interesting question; for all of them refer to a particular part of the circuit only, leaving it a matter of doubt whether the heat observed was *generated*, or merely *transferred from the coils* in which the magneto-electricity was induced, the coils themselves becoming cold. The latter view did not seem to me very improbable, considering the facts which I had already succeeded in proving, viz. that the heat evolved by the voltaic battery is *definite*† for the chemical changes taking place at the same time; and that the heat rendered "latent" in the electrolysis of water is at the expense of the heat which would otherwise have been evolved in a free state by the circuit‡—facts which, among others, seem to prove that *arrangement* only, not *generation* of heat, takes place in the voltaic apparatus; the simply conducting parts of the circuit evolving that which was previously latent in the battery. And Peltier, by his discovery that cold is produced by a current passing from bismuth to antimony, had, I conceived, proved to a great extent that the heat evolved by thermo-electricity is transferred§ from the heated solder, no heat being *generated*. I resolved therefore to endeavour to clear up the uncertainty with respect to magneto-electrical heat. In this attempt I have met with results which will I hope be worthy the attention of the British Association.

* Read before the Section of Mathematical and Physical Science of the British Association, meeting at Cork on the 21st of August 1843; and now communicated by the Author.

† Phil. Mag. S. 3. vol. xix. p. 275.

‡ Memoirs of the Literary and Philosophical Society of Manchester, 2nd series, vol. vii. (part 2.) p. 97.

§ The quantity of heat thus transferred is, I doubt not, proportional to the square of the difference between the temperatures of the two solders. I have attempted an experimental demonstration of this law, but owing to the extreme minuteness of the quantities of heat in question, I have not been able to arrive at any satisfactory result.

First Edition, Journal Issue. "Experimental proof of the mechanical equivalent of heat for physical phenomena" (*Printing and the Mind of Man*, p. 196). Joule demonstrated that the conversion of heat into force, and vice versa, takes place at a fixed rate. This discovery led to two conclusions: first, that heat is a form of energy; and second, that within a given system, the sum total of energy is both constant and convertible. Joule's work, along with that of Mayer and Helmholtz, was fundamental to the establishment of the principle of the conservation of energy. Dibner, *Heralds of Science*, 158. Norman 1179. 40295

First Monograph on Speech Synthesis

81. **Kempelen, Wolfgang von (1734-1804).** Mechanismus der menschlichen Sprache nebst Beschreibung seiner sprechenden Maschine. 8vo. [20], 456pp. Engraved frontispiece portrait and 26 plates. Vienna: J. B. Degen, 1791. 191 x 118 mm. Calf, gilt spine, light wear to hinges, extremities and corners.

Occasional light soiling, but very good. 18th or early 19th century ownership stamp of Joseph Richter on the half-title. Bookplate of Andras Gedeon. $7500

First Edition in German, issued simultaneously with the French edition, which was also published by Degen. The **first monograph on speech synthesis,** containing a description with 26 copperplate illustrations of von Kempelen's voice synthesizer, the forerunner not of sound recording devices such as the phonograph but of today's electronic computerized devices which actually synthesize speech. The work is also significant from a linguistic standpoint, as it contains a thorough analysis of phonetics (the study of the physical sounds of human speech) and discusses the nature and history of language, as noted by Andras Gedeon, the former owner of this copy, who discussed it in his *Science and Technology in Medicine* (2006):

> Kempelen first discusses in general terms the origins of languages and then considered the mechanisms and physiology of speech generation . . . On the nature of language Kempelen argues that human speech and reason are connected and that they develop together over time and he rejects the theory that all languages come from a single (divine) source. He studies the function of the organs of speech and discovers that the cavities over the larynx play the most important role in acoustic articulation (Gedeon, *Science and Technology in Medicine,* p. 139).

The difficult problem of artificial speech has interested inventors since earliest times, and there are numerous fake "talking heads" on record; however, it was not until the end of the 18th century that genuine automata capable of approximating even a few simple speech sounds began to be constructed by such inventors as von Kempelen, von Knaus, the Abbé Mical and Kratzenstein. Von Kempelen's machine, which could make both vowel and consonant sounds, was by far the most successful of these attempts—little is known

about von Knaus's and Mical's machines, but Kratzenstein's device (for which he won a prize from the Russian Imperial Academy of Science) could reproduce only the five vowels.

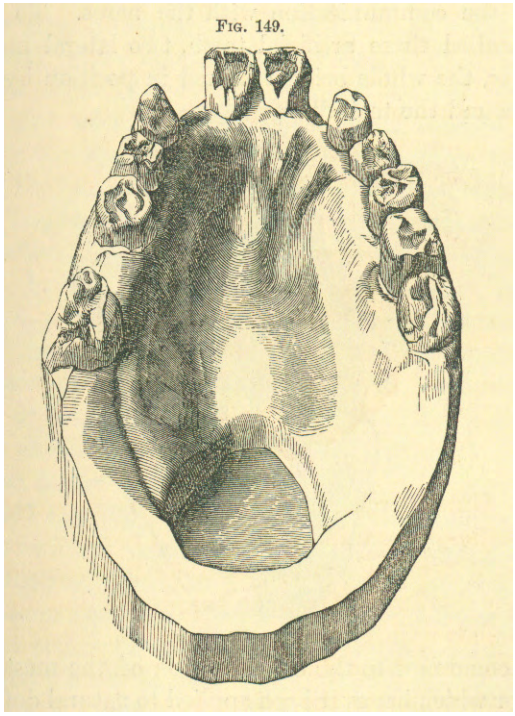
Von Kempelen's machines were founded on an expert knowledge of speech physiology, as can be seen by the following passage from Chapuis & Droz's *Automata*:

> After a detailed examination of the organs of speech von Kempelen devised a hollow oval box divided into two parts and fitted with hinges which made it like jaws. This box caught the sound coming from a tube connected to a bellows. By opening and shutting the jaws, the sounds *a*, *o*, and *u* could be produced, then the sound *e* could be rendered imperfectly but there was no provision for *i*.
>
> After several years of investigation the inventor succeeded in securing by similar means the consonant sounds *p, m, l,* and by means of the vowels and consonants he could compose syllables and words such as *maman, papa, aula, lama* and *mulo.* But the sounds of letters of similar pronunciation became mixed. . . . Von Kempelen overcame these difficulties in imitating the human voice by means of a single mouth fitted with a glottis. The mouth was made up of a funnel or a bell-shaped device made of stretchable rubber. . . . To this mouth he added a nose made up of two tin tubes connected to it. When the two tubes were opened and the mouth was shut, a perfect *m* sound could be produced, and when one was open and the other shut, the *n* sound was obtained. . . . [Kempelen's machine] succeeded in reproducing entire words and phrases such as *opera, astronomy, Constantinopolis, secundus, Romanorum Imperator semper augustus,* etc. . . . Goethe heard it and reports that it was "able to say some childish words very nicely" (p. 322).

Besides being a skilled inventor (he took out a patent on a steam turbine in the 1780s), von Kempelen was also something of a practical joker, and even a bit of a charlatan—he is notorious for his fraudulent "chess-playing Turk," which purported to be fully automated but in reality was operated by a dwarf hidden inside the machine. Guyot, *Liste littéraire sur les sourds-muëts,* p. 7. Strandh, *History of the Machine,* pp. 130, 178. 40440

82.**Kingsley, Norman W.** (1829-1913). A treatise on oral deformities as a branch of mechanical surgery. 8vo. xii, 541, [1]pp., 8-page publisher's catalogue. Over 350 text wood-engravings. New York: Appleton, 1880. 222 x 145 mm. Original cloth, one corner bumped, front free endpaper lacking. Light toning, but a very good copy. Bookplate on front pastedown (name covered over by tipped-on slip).$1500

First Edition of the first scientific textbook on irregularities of the teeth and oral deformities. Kingsley, often



called "the father of orthodontics," made the first attempt at systematizing the treatment of occlusal abnormalities, offering many practical procedures. He devised the artificial velum of soft rubber for cleft palate, advocated abrupt repositioning of the mandible by putting in a bite plane, and recommended the head-chin cap. He invented the first portable gas blowpipe for dentists' use, and was a founder of the New York College of Dentistry, one of the three oldest still in existence today.

The final pages of Kingsley's textbook are devoted to the aesthetics of dentistry, including a section titled "Experiments in Remodelling a Face," and a study of the anatomy and physiology of expression based on Charles Bell's classic, with illustrations drawn from it. Kingsley had some reputation himself as an artist, especially as a sculptor. Garrison-Morton 3685.1. Hoffmann-Axthelm 372-74. Ring 299. DAB. Weinberger 77. Patterson 319; also 384. 40347

83. **Kirkup, John, MD, FRCS.** The evolution of surgical instruments: An illustrated history from ancient times to the 20th century. Introduction by James Edmonson. xvi, 507pp. Frontispiece, 30 color illustrations, 527 black and white illustrations. Novato: Historyofscience.com, 2006. Cloth, dust-jacket, acid-free paper. ISBN 978-0-930405-86-1. $275

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

[129]

What are the MANURES most advantageously applicable to the VARIOUS SORTS of SOILS, and what are the CAUSES of their BENEFICIAL EFFECT in each PARTICULAR INSTANCE.

——— Ignotus Patella, sit Utilis Agris.
Juven. Sat. 14.

AGRICULTURE is the art of making the earth produce the largeſt crop of uſeful vegetables at the ſmalleſt expenſe; it has often been remarked that, amidſt the various improvements which moſt of the practical arts have derived from the progreſs lately made in natural philoſophy and chemiſtry, none have fallen to the ſhare of agriculture, but that it remains nearly in the ſame ſtate in which it exiſted two thouſand years ago.

Vol. V. R I am

Agricultural Chemistry

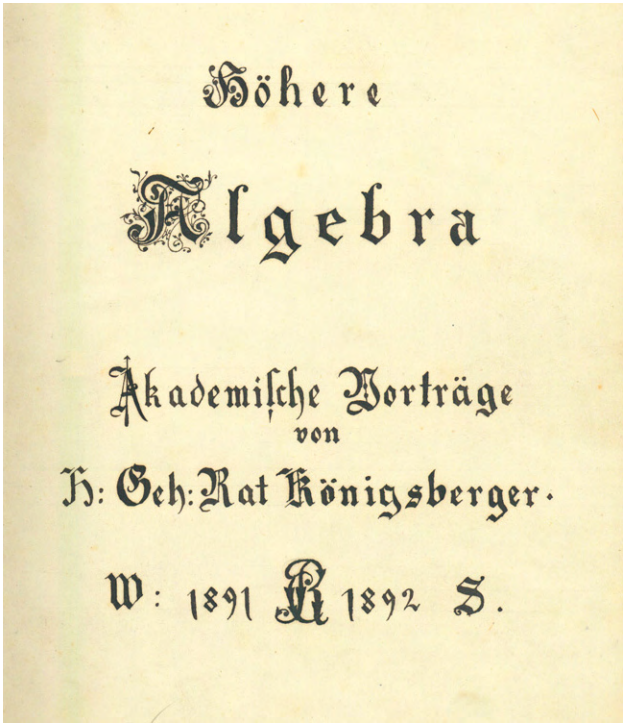
84. **Kirwan, Richard (1733?-1812).** **(1)** Essay, in answer to the following question . . . "What are the manures most advantageously applicable to the various sorts of soils, and what are the causes of their beneficial effect in each particular instance?" In *Trans. Royal Irish Acad.*: 5 (n.d. [1794]): 129-198. **(2)** A comparative view of meteorological observations made in Ireland since the year 1788, with some hints towards forming prognostics of the weather. In *ibid*: 3-29. **(3)** Reflections on meteorological tables, ascertaining the precise signification of the terms Wet, Dry, and Variable. In *ibid.*: 31-38. **(4)** State of the weather in Dublin from the 1st of June 1791 to the 1st of June 1793. In *ibid.*: 39-50. **(5)** Examination of the supposed igneous origin of stony substances. In *ibid.*: 51-81. **(6)** Meteorological observations made in Ireland in the year 1793. In *ibid.*: 227-242. **(7)** Experiments on a new earth found near Stronthian in Scotland. In *ibid.*: 243-255. Whole volume, 4to. xvi, [2], 324, [2], 92, [2], 63, [1], 4pp. 7 plates. 261 x 197 mm. Half calf, marbled boards c. 1794, front hinge cracking, one corner bumped. Light dampstaining on some leaves and plates, otherwise very good. $1500

First Edition of an important early contribution to agricultural chemistry. Kirwan's analysis of fertilizers suitable to different soils, first published in this volume of the *Transactions of the Royal Irish Academy,* was issued in book form in 1796 and went through numerous editions in both England and America. The Irish chemist Kirwan is known for his experiments on the specific gravities and attractive powers of various saline substances, which formed a substantial contribution to the methods of analytical chemistry, and earned him the Copley Medal from the Royal Society in 1782. Kirwan is also known for his pioneering work in meteorology, some of which is discussed in the meteorological papers contained in this volume: "From records of Irish weather covering forty-one years, compiled by John Rutty, [Kirwan] worked out a system of probabilities with a view to forecasting the weather for seasons ahead. His predictions were more often right than wrong and were much valued by farmers; though the sequences he observed have not persisted in Ireland, methods of autocorrelation similar to Kirwan's are today proving successful elsewhere" (*Dictionary of Scientific Biography*). Kirwan also wrote on geology, disputing the igneous nature of basalt, taking issue with Hutton's uniformitarian theory of the earth, and publishing an early report on the element strontium, discovered in 1790. This volume of the *Transactions of the Royal Irish Academy* also contains a paper by George Graydon, "On the fish inclosed in stone of Monte Bolca" (pp. 281-318), illustrated with several striking engravings of fossil fish. 40387

85. **Königsberger, Leo (1837-1921).** Höhere Algebra. Akademische Vorträge . . . W: 1891 1892 S. Bound manuscript, written in a neat German hand. Title (in black letter) and 735 numbered pages. N.p. [Heidelberg], ca. 1892. 206 x 164 mm. Half morocco, mottled boards c. 1892, light wear, one corner bumped. A few pencil annotations in the margins. Ownership signature of "Heinrich H[illeg.], stud. math., Heidelberg" on the verso of the front free endpaper. $3750

A unique record of the academic work of Königsberger, one of the most famous mathematicians of his time. Königsberger spent most of his career at the University of Heidelberg, where he taught mathematics from 1869 to 1875 and again from 1884 until his retirement in 1914. He contributed to several fields of mathematics, most notably analysis and analytical mechanics.

> Königsberger . . . was extremely skillful in treating material from the Riemannian point of view, as can be seen from his textbooks on elliptic functions (1874) and hyperelliptic integrals (1878). In addition he worked intensively on the theory of differential equations. This subject, which grew out of function theory, is associated especially with Lazarus Fuchs, with whom Königsberger was friendly during his youth. Königsberger was the first to treat not merely one differential equation, but an entire system of such equations in complex variables (DSB).



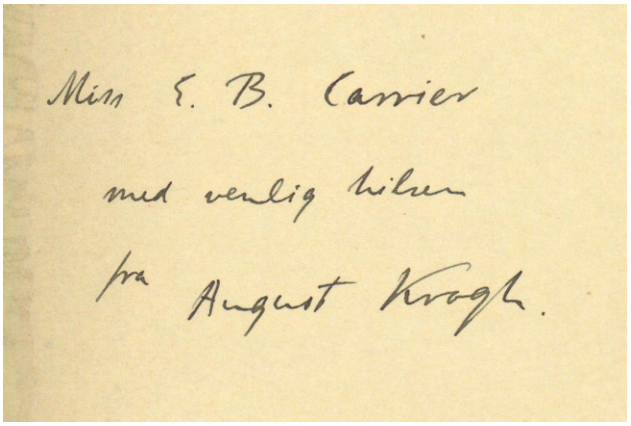
While at Heidelberg Königsberger became close friends with the chemist Robert Bunsen and physicists Hermann Helmholtz and Gustav Kirchhoff; these contacts provided him with the stimulation for his series of works on the differential equations of analytical mechanics. He also published some notable historic works, including an account of his teacher Weierstrass's first lecture on elliptic functions (1917) and a biography of Helmholtz (1902).

The present manuscript is a transcription of Königsberger's lectures on higher algebra given at Heidelberg during the academic year 1891-92; it was most likely prepared by the mathematics student who inscribed his name in the volume. The lectures were not published, and we can find no record of any similar manuscript transcriptions in either OCLC or the Karlsruhe database. *Dictionary of Scientific Biography.* 40418

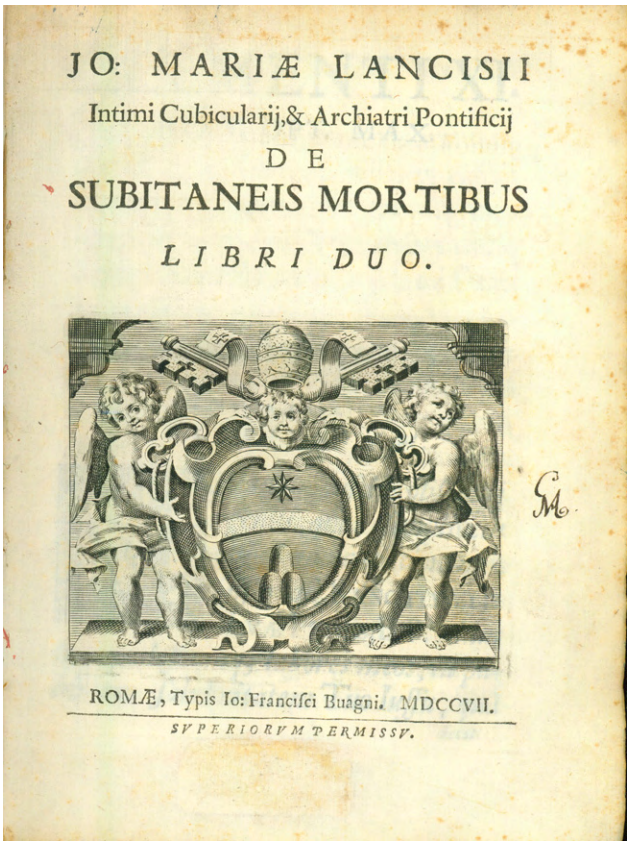
86. **Krogh, August (1874-1949).** The anatomy and physiology of capillaries. xvii, 276pp. New Haven: Yale U.P.; London: Humphry Milford / Oxford U.P., 1922. 235 x 165 mm. Original cloth, corners and extremities a bit worn. **Presentation copy, with tipped-in slip inscribed by the author** to Miss E. B. Carrier.

$850

First Edition. Krogh received the 1920 Nobel Prize in physiology or medicine for discovering the causes of capillary constriction and expansion. In 1922 Krogh published his classic *Anatomy and Physiology of Capillaries,* which showed that capillaries are regulated both by the nervous system and



by hormonal secretions. "Many of the scientists who became the most prominent physiologists of the United States in succeeding decades participated in the studies that made up Krogh's famous monograph. His influence on American physiology cannot be overstated" (Magill, *Nobel Prize Winners: Physiology or Medicine,* p. 210). Garrison-Morton 793. 40485

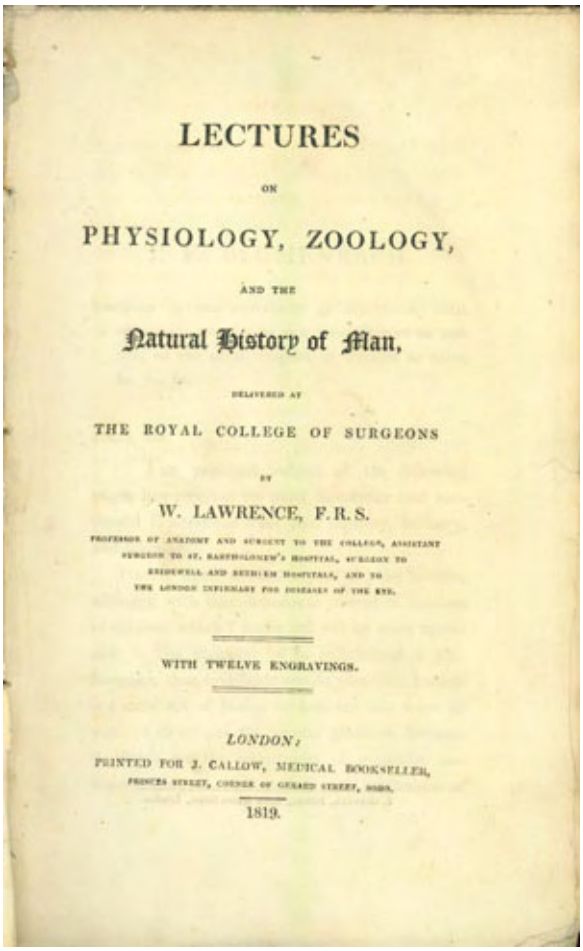


87. **Lancisi, Giovanni Maria (1654-1720).** De subitaneis mortibus libri duo. 4to. [22], 243pp. Lacking blank a1. Errata on last page. Rome: Giovanni Francisco Buagni, 1707. 231 x 172 mm. Contemporary vellum, leather spine label, minor worming in

spine. Effaced ink stamp or signature repaired on title, lower blank margin of N4 restored, light foxing and browning, but a fine copy. Boxed. Contemporary signature "Michael Angelus/Philosoph: et Medic: Doctor" on half-title. The Haskell F. Norman copy, with bookplate. $3000

First Edition, state of the title with the largest version of the engraved arms of Pope Clement XI. Lancisi, physician to Pope Clement XI, undertook this study of sudden deaths under papal directive after an unusually large number of such deaths had occurred in Rome the previous year. Autopsies of the deceased showed that their deaths were often due to hypertrophy and dilatation of the heart, and to various kinds of valve defects. Lancisi also gave the first description of valvular vegetations, and included in his book a historical survey of the literature and a classification of the cardiac diseases then recognized. Leibowitz suggests that Lancisi's work "must be the first epidemological study of a non-communicable condition" (*History of coronary heart disease*, pp. 74-75).

There are three states of the title-page: one with a skull-and-crossbones vignette, one with woodcut arms of Pope Clement XI measuring 65 x 60 mm., and one with a larger engraved version of the Pope's arms measuring 95 x 120 mm. The engraved version of the arms is larger and more elaborate than the woodcut title decorations; howver the order of the states may never be ascertained. Garrison-Morton 2731. Willius & Dry, pp. 76-77. 40482



LECTURES

ON

PHYSIOLOGY, ZOOLOGY,

AND THE

Natural History of Man,

DELIVERED AT

THE ROYAL COLLEGE OF SURGEONS

BY

W. LAWRENCE, F.R.S.

WITH TWELVE ENGRAVINGS.

LONDON:

PRINTED FOR J. CALLOW, MEDICAL BOOKSELLER,

1819.

Controversial Early Work on Human Evolution

88. **Lawrence, William (1783-1867).** Lectures on physiology, zoology and the natural history of man. 8vo. xxiii, [1], 579, [1]pp., plus 16-page publisher's catalogue. 12 plates. London: J. Callow, 1819. 226 x 138 mm. (uncut and partially unopened). Boards ca. 1819, recased, light wear. Minor foxing, but very good. Bookplate of W. H. Whinfield. Embossed library stamps on plates. $4750

First Edition of the highly controversial *Natural History of Man,* which sets forth Lawrence's radical—and to our eyes, remarkably advanced—ideas concerning evolution and heredity. Arguing that theology and metaphysics had no place in science, Lawrence relied instead on empirical evidence in his examination of variation in animals and man, and the dissemination of variation through inheritance. On the question of cause, Lawrence disagreed with those who ascribed variation to external factors such as climate, and rejected the Lamarckian notion of the inheritance of acquired characteristics. His understanding of the mechanics of heredity was well ahead of his time: he stated that "offspring inherit only [their parents'] connate qualities and not any of the acquired qualities," and that the "signal diversities which constitute differences of race in animals . . . can only be explained by two principles . . . namely, the occasional production of an offspring with different characters from those of the parents, as a native or congenital variety; and the propagation of such varieties by generation" (p. 510). While Lawrence did not grasp the role that natural selection plays in the origination of new species, he recognized that "selections and exclusions," including geographical separation, were the means of change and adaptation in all animals, including humans. He noted that men as well as animals can be improved by selective breeding, and pointed out that sexual selection was responsible for enhancing the beauty of the aristocracy: "The great and noble have generally had it more in their power than others to select the beauty of nations in marriage; and thus . . . they have distinguished their order, as much by elegant proportions of person, as by its prerogatives in society" (p. 454). He investigated the human races in detail, and insisted that the proper approach to this study was a zoological one, since the question of variation in mankind "cannot be settled from the Jewish Scriptures; nor from other historical records" (p. 243).

The *Natural History of Man* came under fire from conservatives and clergy for its materialist approach to human life, and Lawrence was accused of atheism for having dared to challenge the relevance of Scripture to science. In 1822 the Court of Chancery ruled the *Natural History* blasphemous, thus revoking the work's copyright. Lawrence was forced to withdraw the book, a fact reflected in the comparative rarity of the first edition: OCLC cites three copies, at the University of Pennsylvania, Cambridge University and the National Library of Israel, and there are also copies at the British Library and the Library of Congress. However, the book's notoriety was such that several publishers issued their own pirated editions, keeping the work in print for several decades. A list of the London editions of Lawrence's work, taken from OCLC, follows:

1819 J. Callow (authorized)

1819 s.n. (?)

1822 W. Benbow

1822 J. Smith

1822 Kaygill & Price (unillustrated)

1823 R. Carlile

1823 J. Smith

1834 J. T. Cox

1838 J. Taylor

1840 J. Taylor

1844 J. Taylor

1848 H. G. Bohn

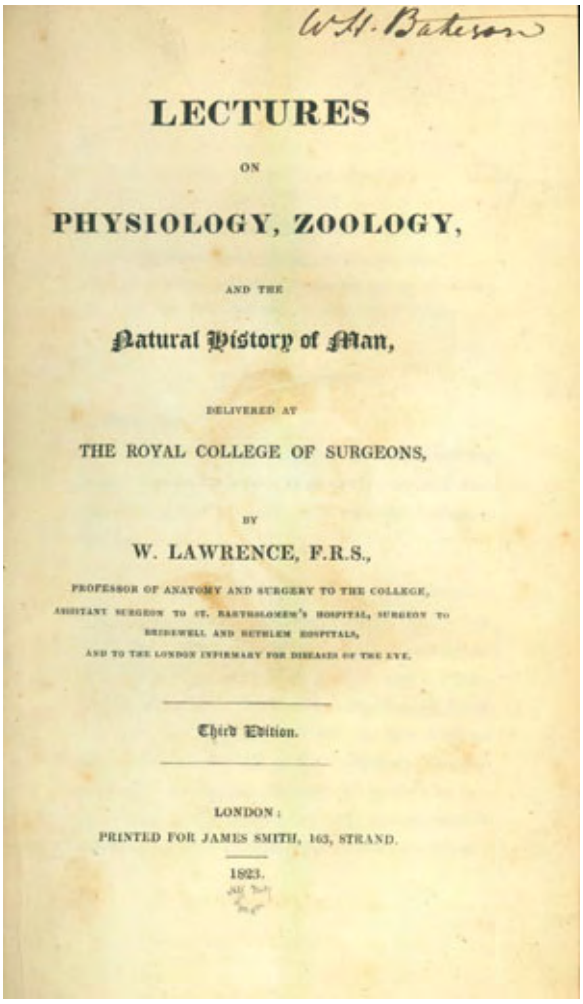
1866 Bell & Daldy

Editions were also published in Edinburgh and America.

Darwin owned one of the unauthorized editions listed above, the one issued by "the notorious shoemaker-turned-publisher William Benbow, who financed his flaming politics by selling pornographic prints" (Desmond & Moore, *Darwin,* p. 253). Darwin was obviously impressed with Lawrence's work, citing it five times in *The Descent of Man* (1871). 34693

Bateson's Copy

89. **Lawrence, William (1783-1867).** Lectures on physiology, zoology and the natural history of man. 8vo. xix, [1], 496pp. Frontispiece and 11 plates. London: James Smith, 1823. 219 x 135 mm. Later half morocco, cloth boards. Occasional foxing, but very good. **From the library of British geneticist William Bateson (1861-1926), with his signature ("W. H. Bateson") on the title and pencil notes on the rear free endpaper.** $1500


W. H. Bateson

LECTURES

ON

PHYSIOLOGY, ZOOLOGY,

AND THE

Natural History of Man,

DELIVERED AT

THE ROYAL COLLEGE OF SURGEONS,

BY

W. LAWRENCE, F.R.S.,

PROFESSOR OF ANATOMY AND SURGERY TO THE COLLEGE,
ASSISTANT SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, SURGEON TO
BRIDEWELL AND BETHLEM HOSPITALS,
AND TO THE LONDON INFIRMARY FOR DISEASES OF THE EYE.

Third Edition.

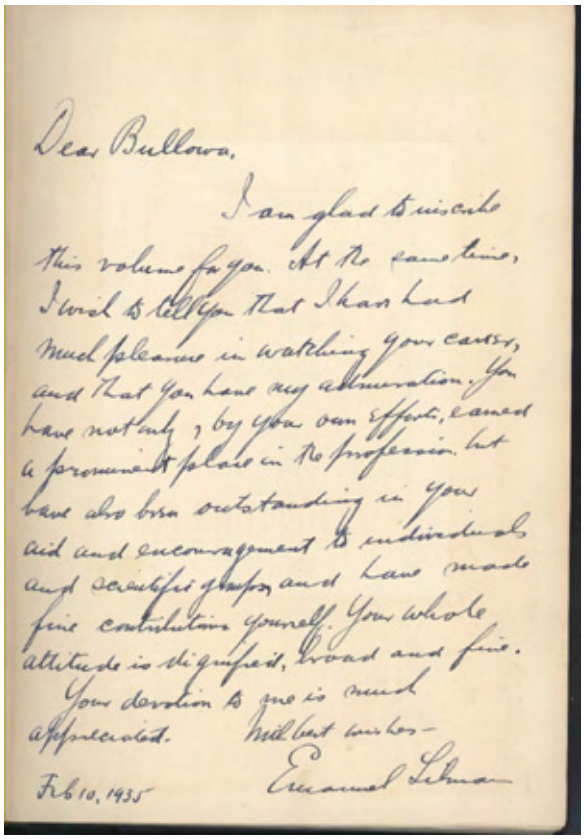
LONDON:
PRINTED FOR JAMES SMITH, 163, STRAND.

1823.

Third edition of the above. This copy of the 1823 Smith edition belonged to British geneticist William Bateson, the first person to use the term "genetics" to describe the study of heredity and biological inheritance, and the chief popularizer of the ideas of Gregor Mendel following their rediscovery in 1900. 40439

90. **Libman, Emanuel (1872-1946).** Contributions to the medical sciences in honor of Dr. Emanuel Libman. 3 vols., 8vo. Frontispiece portrait, 1 color plate. New York: International Press, 1932. Original cloth, light wear at corners. Endpapers a little foxed. **Presentation copy, with Libman's signed, letter-length inscription to Dr. Jesse G. M. Bullowa** (1879-1943) on the front free endpaper of Vol. I. Bullowa's bookplate in Vol. I. $950

First Edition. Festschrift published to mark the 60th birthday of Emanuel Libman, founder of the cardiology department at New York's Mount Sinai Hospital, and a legendary diagnostician and teacher. Libman is associated with


Dear Bullowa,

I am glad to inscribe this volume for you. At the same time, I wish to tell you that I have had much pleasure in watching your career, and that you have my admiration. You have not only, by your own effots, earned a prominent place in the profession, but have also been outstanding in your aid and encouragement to individuals and scientific groups and have mad fine contributions yourself. Your whole attitude is dignified, broad and fine.

Your devotion to me is much appreciated. With best wishes,

Feb 10, 1935

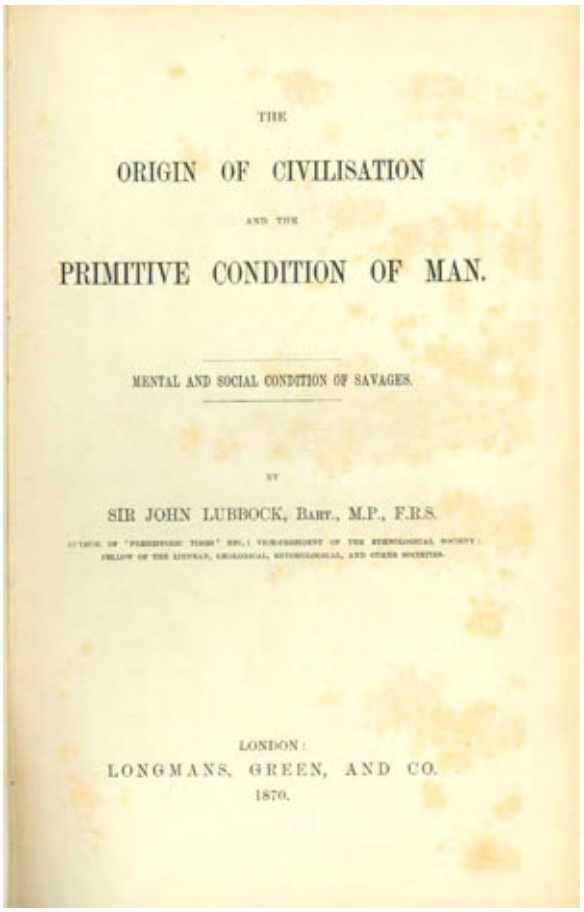
Emanuel Libman

Libman-Sachs syndrome, a type of endocarditis. The festschrift contains contributions from 147 of Libman's former pupils, colleagues and friends, including W. C. Alvarez, Simon Flexner, L. Aschoff, Albert Einstein, Fielding Garrison, and Alexis Carrel, who remarked in his tribute that "Libman is medicine itself." Also among the contributors was Jesse G. M. Bullowa, a professor of medicine at New York University Medical School, noted for his researches on the serum treatment of pneumonia. Libman presented this copy of his festschrift to Bullowa; his letter-length inscription to Bullowa reads as follows:

> Dear Bullowa,
>
> I am glad to inscribe this volume for you. At the same time, I wish to tell you that I have had much pleasure in watching your career, and that you have my admiration. You have not only, by your own effots, earned a prominent place in the profession, but have also been outstanding in your aid and encouragement to individuals and scientific groups and have mad fine contributions yourself. Your whole attitude is dignified, broad and fine.
>
> Your devotion to me is much appreciated. With best wishes, Emanuel Libman. Feb. 10, 1935

40304

91. **Lubbock, John (1834-1913).** The origin of civilisation and the primitive condition of man. London: Longmans, Green & Co., 1870. xvi, 380pp., plus


THE

ORIGIN OF CIVILISATION

AND THE

PRIMITIVE CONDITION OF MAN.

MENTAL AND SOCIAL CONDITION OF SAVAGES.

BY

SIR JOHN LUBBOCK, Bart., M.P., F.R.S.

LONDON:

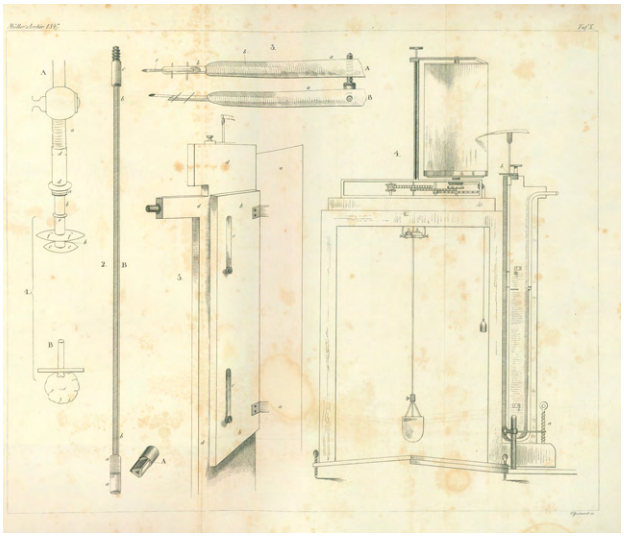
LONGMANS, GREEN, AND CO.

1870.

24-page publisher's catalogue. Wood-engraved frontispiece and 4 plates. 223 x 142 mm. Original green cloth stamped in black and gilt, light wear to hinges and extremities, hinges cracking. Occasional foxing. Presentation copy, with engraved bookplate reading "From the Author" tipped to the front paste-down.

$600

First Edition. Lubbock made his name in scientific circles as a Darwinian anthropologist and archeologist who sought to delineate the evolutionary mental continuum between human beings and other non-human animals. He is remembered for having introduced the terms "Paleolithic" and "Neolithic" to describe the Old and New Stone Ages; these terms first appeared in his *Pre-Historic Times* (1865), the most influential archeological text of the nineteenth century. In the *Origins of Civilisation,* the sequel to *Pre-Historic Times,* "Lubbock identified prehistoric cultures as evolutionary precursors of modern civilization and contended for the independent organization of cultural inventions as against diffusion or borrowing" (*Dictionary of Scientific Biography*). Lubbock was a friend and neighbor of Darwin; he first leased and then sold to Darwin the land on which Darwin made his famous "Sand Walk." A banker by profession, Lubbock is also known for having enacted the British Bank Holidays Act of 1871. 40434



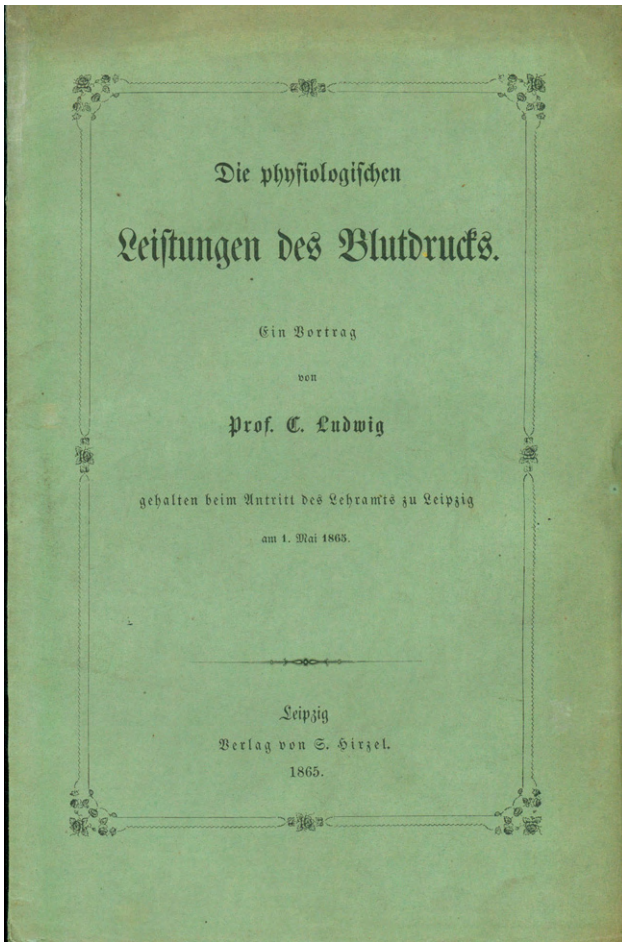
92. **Ludwig, Carl Friedrich Wilhelm (1816-95).** Beiträge zur Kenntniss des Einflusses der Respirationsbewegungen auf den Blutlauf im Aortensysteme. In *Archiv für Anatomie, Physiologie und wissenschaftliche Medizin* (1847): 242-302; accompanied by 5 plates (Tafeln X-XIV). Whole volume. [2], 214, 511pp. 17 plates. 221 x 140 mm. Modern quarter morocco, marbled boards. $950

First Edition the first description of Ludwig's kymograph, the first instrument to record scientific information in graphic form in real time on paper, which Ludwig created by modifying Poiseuille's hemodynamometer so that it could record its results graphically. This device, further modified by Marey and Chaveau, became a standard tool for the graphic recording of experimental results; it is illustrated in plate 10 of the present volume. "Ludwig hoped to elucidate physiological problems by combining the study of the anatomy of an organ with a knowledge of the physicochemical changes that occur in its functioning. . . . Ludwig's combination of ingenuity, resourcefulness and knowledge of physical sciences enabled him to become one of the greatest experimenters in the history of physiology" (*Dictionary of Scientific Biography*). Garrison-Morton 770. 40483

Artificial Circulation

93. **Ludwig, Carl Friedrich Wilhelm (1816-95).** Die physiologischen Leistungen des Blutdrucks. 8vo. 24pp. Leipzig: Hirzel, 1865. 232 x 150 mm. Original green printed wrappers, repaired; in quarter morocco box. Light browning, otherwise fine. $5000

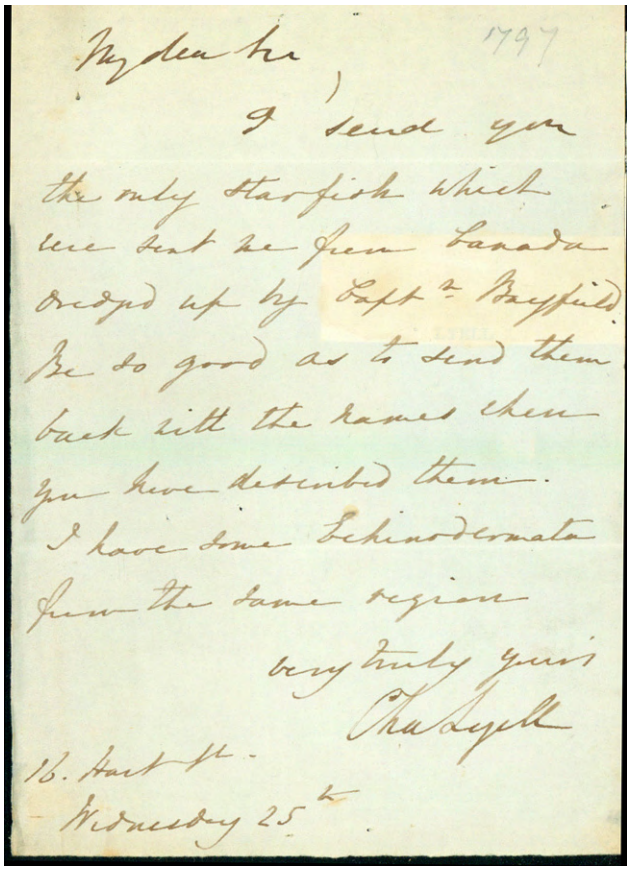
First Edition of "Ludwig's inaugural address at Leipzig, in which he introduced the idea of keeping alive excised portions of organs by means of artificial circulation,



or perfusion. He suggested that the blood-pressure had a stimulating effect on the vagus." (G-M 778). As the first professor of physiology at the University of Leipzig, Ludwig created a model physiological institute where he studied vital phenomena in terms of the laws of physics and chemistry. "Ludwig hoped to elucidate physiological problems by combining the study of the anatomy of an organ with a knowledge of the physicochemical changes that occur in its functioning. . . . Ludwig's combination of ingenuity, resourcefulness and knowledge of physical science enabled him to become one of the greatest experimenters in the history of physiology" (*Dictionary of Scientific Biography*). Garrison-Morton 778. 38048

"I Send You the Only Starfish"

94. **Lyell, Charles (1797-1875).** Autograph letter signed to an unidentified correspondent. N.p., n.d. (1835 or after). 1 page. 163 x 115 mm. Small pin-holes in upper margin, 19th cent. printed biographical notice tipped to the verso. $950

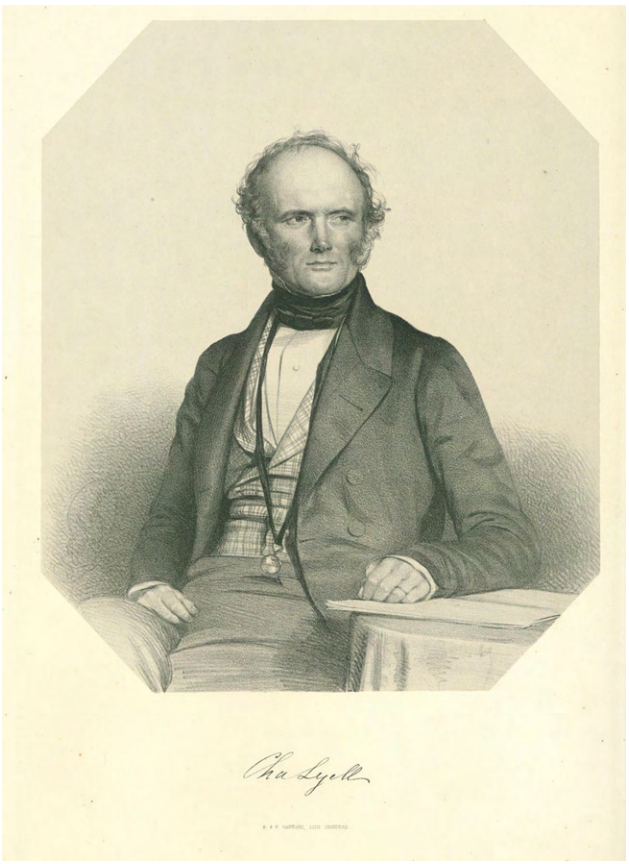


From Charles Lyell, the foremost British geologist of the nineteenth century and author of *Principles of Geology* (1830-33).

> My dear Sir,
>
> I send you the only starfish which was sent me from Canada dredged up by Captn. Bayfield. Be so good as to send them back with the names when you have described them. I have some Echinodermata from the same region. Very truly yours, Chas. Lyell.

Lyell here refers to the Canadian fossil shells sent to him in 1835 by Captain Henry Bayfield, who had collected them from Beauport near Quebec City. "Lyell was astonished to find all the species identical with ones he had collected the year before at Uddevalla in Sweden. The species of fossil shells from both places were still living in Arctic waters but were quite different from seashells living at present in the Gulf of St. Lawrence. . . . They showed that in the recent past the climate of the St. Lawrence Valley had been far colder" (Wilson, *Lyell in America* [1998], pp. 111-13). 40468

95. **Lyell, Charles (1797-1875).** Lithograph portrait with facsimile signature, by Thomas Herbert Maguire (1821-95), lithographed by M. & H. Hanhart. [Ipswich: G. Ransome,] 1849 (dated in the plate). 610 x 440 mm.; image (without signature) measures



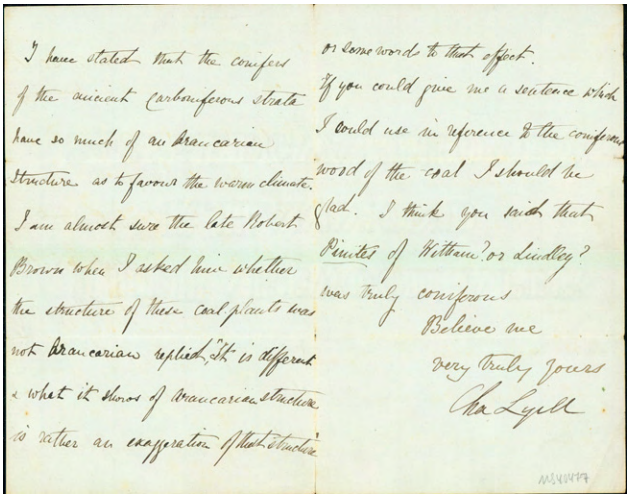
242 x 292 mm. One corner chipped, small tear in lower margin, but image in excellent condition.$2500

First Edition. The largest and best portrait of Charles Lyell, the foremost British geologist of the nineteenth century, and author of *Principles of Geology* (1830-33), which had an enormous influence on Charles Darwin. The portrait formed part of a series titled *Portraits of Honorary Members of the Ipswich Museum*, published in 1852 by G. Ransome. *Rare*. 40421

96. **Lyell, Charles (1797-1875).** Letter signed to an unidentified correspondent [probably **William Carruthers** (1830-1922)]. [London,] 53 Harley Street, June 23, 1866. 3pp. 180 x 114 mm. Light soiling along folds, tiny tears at top and bottom of center fold. $950

Letter signed from Charles Lyell most likely to British botanist William Carruthers of the British Museum. In June 1866 Carruthers published a paper titled "On Araucarian Cones from the Secondary Beds of Britain" (*Geological Magazine* 3 [1866]: 249-52), discussing two fossil specimens found in strata from the Jurassic period. Lyell's letter appears to be a response to this paper:

> May I ask you two questions with regard to fossil coniferae. 1st Are not the Araucarian fossils which you



I have stated that the conifers of the ancient Carboniferous strata have so much of an Araucarian structure as to favour the warm climate. I am almost sure the late Robert Brown when I asked him whether the structure of these coal plants was not Araucarian replied "It is different. What it shows of Araucarian structure is rather an exaggeration of that structure" or some words to that effect.

If you could give me a sentence which I could use in reference to the coniferous wood of the coal I should be glad. I think you said that Pinites of Witham? or Lindley? was truly coniferous.

Believe me

Very truly Yours

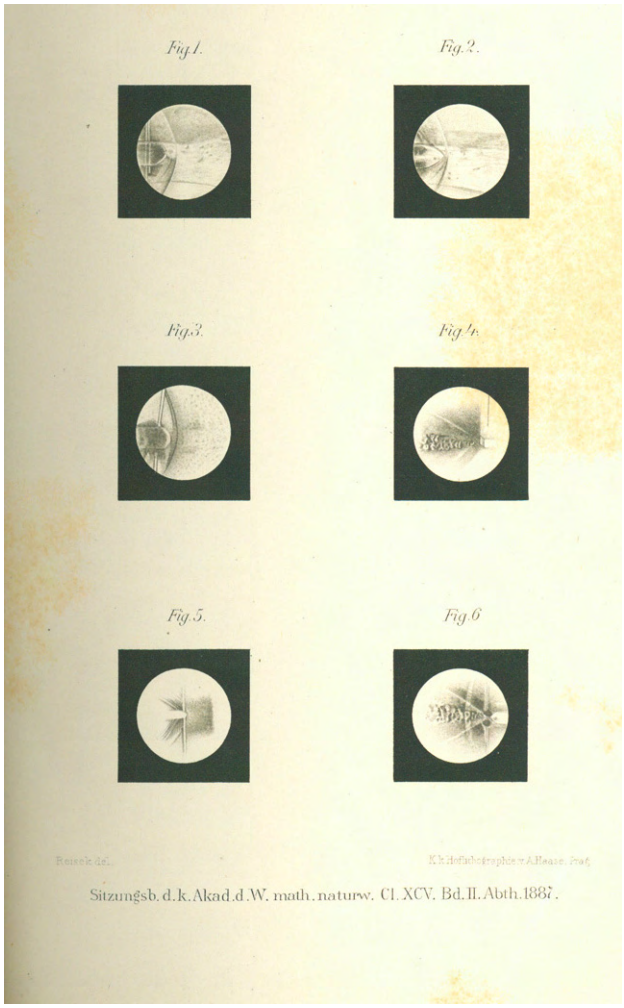
Chas Lyell

describe in the Geol. Mag. in favour so far as they go of a warmer climate in British latitudes.

2ndly In former editions of the Principles I have stated that the conifers of the ancient Carboniferous strata have so much of an Araucanian structure as to favour the warm climate. I am almost sure the late Robert Brown when I asked him whether the structure of these coal plants was not Araucarian replied "It is different. What it shows of Araucarian structure is rather an exaggeration of that structure" or some words to that effect.

If you could give me a sentence which I could use in reference to the coniferous wood of the coal I should be glad. I think you said that Pinites of Witham? or Lindley? was truly coniferous.

Araucaria is a genus of coniferous evergreen trees found in New Caledonia, Norfolk Island, eastern Australia, New Guinea and parts of South America; the genus contains nineteen species, including the monkey-puzzle tree. Araucarias are living fossils, dating back to the early Mesozoic, and geological evidence indicates that they were found in the northern hemisphere up to the end of the Cretaceous period. Lyell here wonders about the possibility of identifying the conifers of the earlier Carboniferous period as araucarian, noting that botanist Robert Brown (1773-1858) had not favored such an identification; Brown is best known for having named the cell nucleus and for being the first to observe the seemingly random movement of particles suspended in a liquid or gas (Brownian motion). Lyell also refers to naturalists Henry T. M. Witham (1799-1844) and John Lindley (1799-1865), authors of earlier works on fossil plants. "Pinites" is a term describing the fossilized wood of members of the pine family. 40477

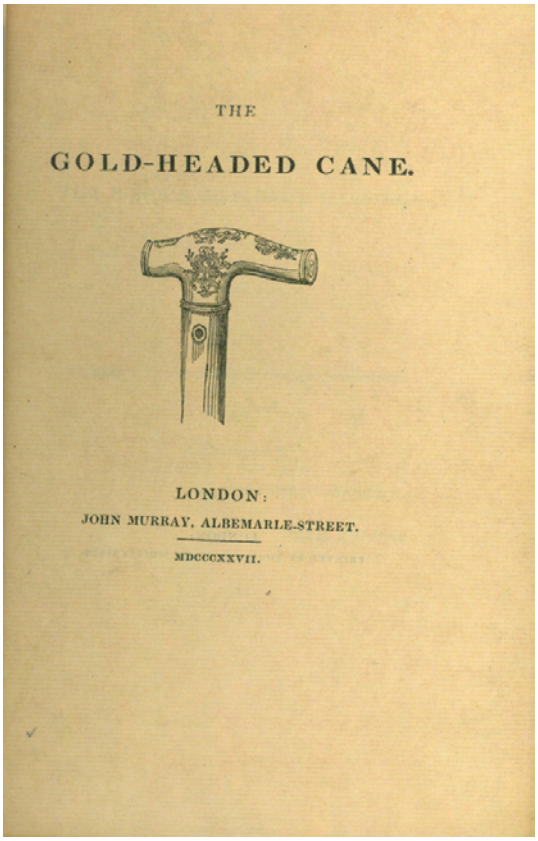


First Photograph of a Shock Wave

97. **Mach, Ernst (1838-1916) & Salcher, P.** Photographische Fixirung der durch Projectile in der Luft eingeleiteten Vorgänge. In *Sitzungsber. k. Akad. Wiss., math.-naturwiss. Classe*, 95 (1887): 764-80. Plate, text illustrations. Whole number, 8vo. viii, [2], 761-1119pp. 2 fold. plates (in addition to Mach plate), text illustrations. 248 x 160 mm. (uncut & unopened). Original printed wrappers, slight dust-soiling & chipping. Light foxing, otherwise fine. $950

First Edition. Mach's classic paper contains the first photograph of a shock wave in front of an object (in this case a bullet) moving at supersonic speed, and the first mathematical formula describing the physics of this wave. "The angle α, which the shock wave surrounding the envelope of an advancing gas cone makes with the direction of its motion, was shown to be related to the velocity of sound ν and the velocity of the projectile ω as sinα = ν/ω when ω > ν. After 1907, following the work of Ludwig Prandtl at the

Kaiser Wilhelm Institut für Strömungsforschung in Göttingen, the angle α was called the Mach angle. Recognizing that the value of ω/ν (the ratio of the speed of an object to the speed of sound in the undisturbed medium in which the object is traveling) was becoming increasingly significant in aerodynamics for high-speed projectile studies, J. Ackeret in his inaugural lecture in 1929 as Privatdozent at the Eidgenössischen Technische Hochschule, Zürich, suggested the term 'Mach number' for this ratio. The Mach number was introduced into the literature in English by the late 1930s and since the end of World War II has taken on considerable importance in theoretical and fluid dynamics" (*Dictionary of Scientific Biography*). Anderson, *Hist. Aerodynamics,* p. 376. 38720


THE

GOLD-HEADED CANE.

LONDON:

JOHN MURRAY, ALBEMARLE-STREET.

MDCCCXXVII.

Extra-Illustrated with 40 Plates

98.**[MacMichael, William (1784-1839).]** The gold-headed cane. 8vo. [8], 179 [1]pp. Text wood-engravings. *Extra-illustrated with 40 engraved plates and portraits, one printed in colors.* London: John Murray, 1827. 198 x 122 mm. Bound by Riviere and Son in full calf, gilt spine and inner dentelles, t.e.g., other edges uncut, original boards and spine label bound in, bookplate removed from inside front cover. Occasional foxing and browning, light offsetting from some of the plates, but very good. $2750

First Edition. G-M 6709: "This charming 'autobiography' tells of the adventures of the famous gold-headed cane, successively in the possession of [John] Radcliffe, [Richard] Mead, [Anthony] Askew, [David] Pitcairn, and [Matthew] Baillie, and then retired to a glass case in the library of the Royal College of Physicians of London. Besides good biographies of the several owners of the cane, the book gives interesting information on the condition of medicine in England in the 18th century." Norman 1409. Waller 16091. 30716

"The Most Complete Collection of Alchemical Texts Ever Published"

99. **Manget, Jean Jacques (1652-1742), editor.** Bibliotheca chemica curiosa. 2 vols., folio. [20] 936; [4] 904pp. Vol. I title in red and black. Engraved portrait frontispiece and 30 plates. Geneva: Sumpt. Chouet, G. de Tournes, Cramer, Perachon, Ritter, & S. de Tournes, 1702. 353 x 218 mm. Calf c. 1702, rebacked. Browned and foxed throughout, as usual due to the quality of paper, very minor, unnoticeable repair to frontispiece portrait and one plate, but a fine copy as far as this work goes, with the plates in excellent condition. $18,500

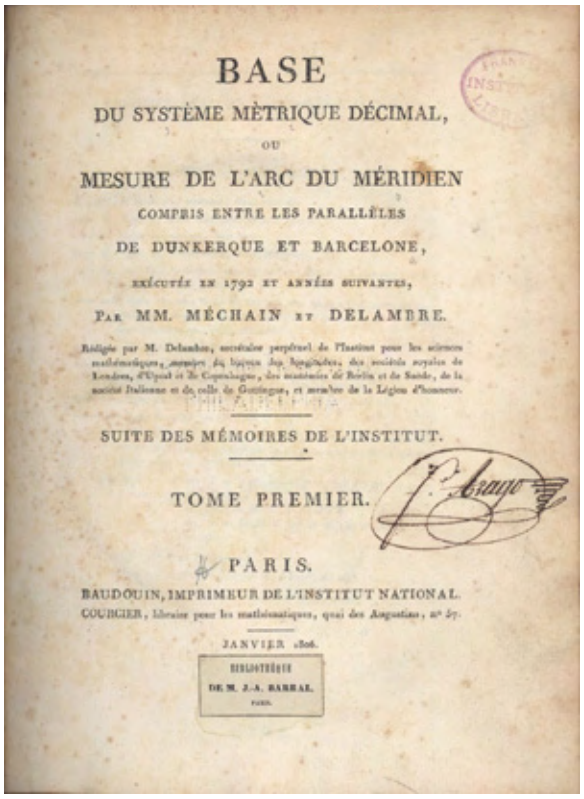
First Edition of this rare compilation, which Duveen called "the most complete collection of alchemical texts ever published." Manget, the compiler and editor, was first physician to the King of Prussia; "his collections and publication of large volumes on medicine and surgery are still very valuable sources of information" (Neville, II, p. 136).

Manget's work reproduces 140 alchemical texts, including treatises by Geber, Athanasius Kircher, Raymond Lully, Arnold de Villa Nova, Bernard Trevisan, Maria the Jewess, etc.; many of these are now impossible to obtain as separate works. Noteworthy among these is the *Mutus Liber*, "one of the outstanding enigmas of alchemical literature" (Read, p. 156), consisting entirely of 15 engraved plates that show the operations of the Grand Magistery leading up to the discovery of the Philosopher's Stone (see Read, pp. 155-59 for a detailed explication of each plate in the series). These engravings, thought to be the work of the physician-alchemist Jacques Tollé (1630-96), were first published in La Rochelle in 1677; however, this 1677 edition is *virtually unobtainable*, so that Manget's 1702 reprint is the earliest edition now available. Jung relied heavily on the *Bibliotheca chemica curiosa* in his own extensive psychological researches in alchemy; see Mellon, p. 513. Duveen, p. 387. Mellon 147. Neville, *Historical Chemical Library,* II, p. 136. Read, *Prelude to Chemistry*, pp. 116; 155-59. 40033

The Metric System, Ex Libris François Arago, One of the Authors

100. **Méchain, [Pierre F. A.] (1744-1804) & Delambre, [Jean B. J.] (1749-1822).** Base du système mètrique décimal. 3 vols. **With**: **Biot**, **[Jean Baptiste]** (1774-1862) & **Arago, [François]** (1786-1853). Recueil d'observations géodésiques, astronomiques et physiques. Together 4 vols., 4to. c. 2500pp. 30 mostly folding engraved plates. Modern half morocco. Minor spotting. From the library of **François Arago,** with his signature on the title and his annotations on some of the folding plates. Bookplate of chemist Jean Augustin Barral (1819-84), who prepared the collected works of Arago, on the titles of all four volumes. Unobtrusive perforated stamp of the Franklin Institute Library on titles of vols. 1-3 & on 2 or 3 other leaves, ink stamp of the library on title of vol. 1 & a few other leaves. Very good set. Paris: Baudouin, 1806-10; veuve Courcier, 1821. $42,500

First Edition of the complete series establishing the metric system, *from the library of one of its co-authors, François Arago*. In 1788 the French Academy of Sciences, at the suggestion of Talleyrand, proposed the establishment of a new universal decimal system of measurement founded upon some "natural and invariable base" to replace Europe's


BASE

DU SYSTÈME MÈTRIQUE DÉCIMAL,

OU

MESURE DE L'ARC DU MÉRIDIEN

COMPRIS ENTRE LES PARALLÈLES

DE DUNKERQUE ET BARCELONE,

EXÉCUTÉE EN 1792 ET ANNÉES SUIVANTES,

PAR MM. MÉCHAIN ET DELAMBRE.

SUITE DES MÉMOIRES DE L'INSTITUT.

TOME PREMIER.

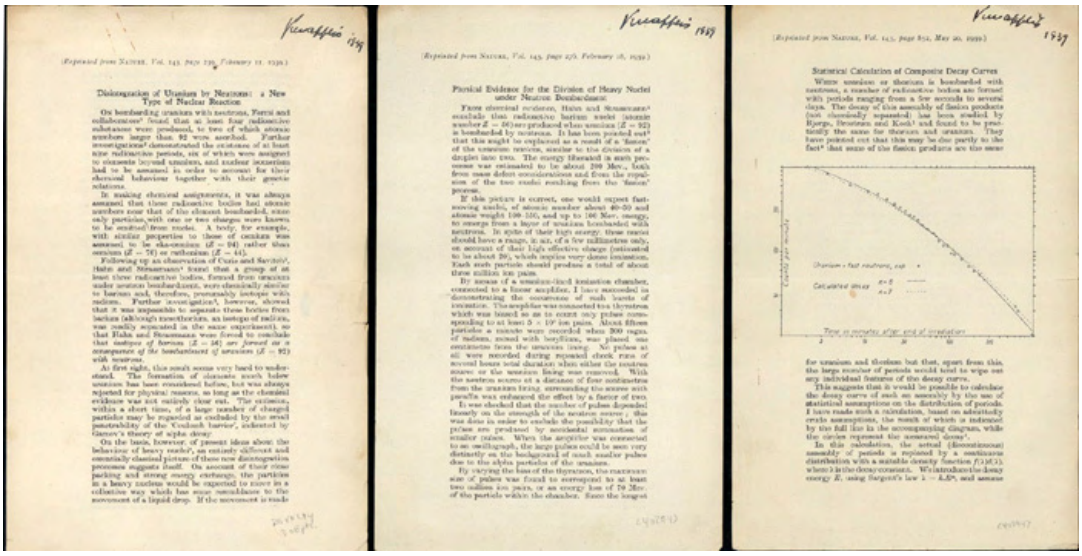
PARIS.

BAUDOUIN, IMPRIMEUR DE L'INSTITUT NATIONAL.

JANVIER 1806.

diverse regional systems. This project was approved by the National Assembly in 1790 and a basic unit or "meter" of measurement proposed, which was to be one ten-millionth of the distance between the terrestrial pole and the Equator. In 1792 Méchain and Delambre were appointed to make the necessary geodetic measurements of the meridian passing through Dunkirk and Barcelona, from which the meter would be derived. The project was hampered by France's political revolution, by the death of Méchain in 1804, and by the tedious calculations involved in converting one system to another; it was not until 1810 that Delambre was able to complete the final volume of the *Base du système mètrique décimal*.

Méchain and Delambre had determined the length of the meter by taking measurements over a meridian arc of 10 degrees. After Méchain's death in 1804, the Bureau of Longitudes proposed that the meter's length be redetermined more accurately by extending measurement of the arc of the meridian south to the Balearic Islands of Mallorca, Menorca and Ibiza. François Arago and Jean Baptiste Biot were assigned to this task. Arago, who later became famous for his work in physics and astronomy, was twenty years old at the start of this project. He and Biot journeyed to Spain and began triangulating the Spanish coast. Their work was disrupted by the political unrest that developed after Napoleon's invasion of Spain in 1807; Biot managed to escape to France but Arago, who had remained behind to finish the measurements, was captured and imprisoned as a French spy. After a series of adventures, Arago returned to France in



1809, bringing his completed survey data with him. These results, together with geodetic data obtained in France, England and Scotland, were published in the *Recueil d'observations géodésiques*, issued as a supplement to Méchain and Delambre's work.

Arago was showered with honors after his return from Spain: he was elected a member of the Académie des Sciences, appointed to the chair of analytical geometry at the École Polytechnique, and named an astronomer to the Royal Observatory. His most important scientific contributions were in physics, particularly optics and magnetism: he discovered the phenomena of rotary magnetism (the greater sensitivity for light in the periphery of the eye) and rotary polarization, invented the first polariscope, and performed important experiments supporting the undulatory theory of light. In his capacity as secretary of the Académie des Sciences, he championed the photographic process invented by Louis Daguerre, announcing its discovery to the Académie in 1839, and using his influence to obtain publicity and funding for its inventor. *Dictionary of Scientific Biography* under Biot. Daumas, *Arago: La jeunesse de la science,* ch. IV. Norman 1481. *Printing and the Mind of Man* 260. 40311

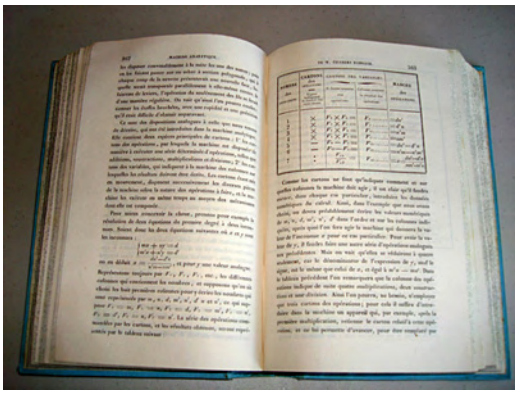
Nuclear Fission

101.(**1) Meitner, Lise (1878-1968) and Frisch, Otto (1904-79).** Disintegration of uranium by neutrons: A new type of nuclear reaction. Offprint from *Nature* 143 (1939). [3]pp. **(2) Frisch.** Physical evidence for the division of heavy nuclei under neutron bombardment. Offprint from *ibid*. [2]pp. **(3) Frisch.** Statistical calculation of composite decay curves. Offprint from *ibid.* [2]pp. Together 3 offprints. 210 x 141 mm. Unbound as issued. Creased horizontally, a few short marginal tears, faint rust-mark from paper clip on no. **(1).** Preserved in a half morocco case. Indecipherable signature dated 1939 on all three offprints. $15,000

First Editions, Offprint Issues. In 1938 Hahn and Strassmann, who were 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 submitted papers **(1)** and **(2)** to *Nature*; they appeared on Feb. 11 and Feb. 18 respectively. These two key papers, together with papers by Fermi (PMM 422a), von Halban *et al.* (PMM 422d) and H. D. Smyth (PMM 422e) were selected for inclusion in the *Printing and the Mind of Man* exhibition and catalogue under its entry for "The Atom Bomb." The offprints of the Meitner and Frisch papers are practically unfindable—the authors received only a few copies, and the ephemeral nature of these offprints would tend

to militate against their survival. Pais, *Niels Bohr's Times,* pp. 452-56. Norman 1487 (no. 1) & 1488 (no. 2). *Dictionary of Scientific Biography*. *Printing and the Mind of Man* 422b, c (nos. 1, 2). 40294



The First Computer Programs Ever Published

102. **Menabrea, Luigi Federico (1809–96).** Notions sur la machine analytique de M. Charles Babbage. In *Bibliothèque universelle de Genève,* nouvelle série 41 (1842): 352–76. Whole volume, 8vo. 424pp. Folding table, plate. 210 x 137 mm. Blue boards, leather spine label, upper extremity of spine a bit worn, circa 1842. Fine copy. 19th cent. library stamps and markings on title and front free endpaper. $25,000

First Edition of the first computer programs ever published, though the word program was not used in this sense in Babbage's era. Menabrea's paper is also the first published account of Babbage's Analytical Engine and the first account of its logical design. As is well known, Babbage's conception and design of his Analytical Engine—the first general purpose programmable digital computer-- were so far ahead of the imagination of his mathematical and scientific colleagues that few expressed much curiosity regarding it. The only presentation that Babbage made concerning the design and operation of the Analytical Engine was to a group of Italian scientists.

In 1840 Babbage traveled to Torino to make a presentation on the Analytical Engine. Babbage's talk, complete with charts, drawings, models, and mechanical notations, emphasized the Engine's signal feature: its ability to guide its own operations-- what we call conditional branching. In attendance at Babbage's lecture was the young Italian mathematician Luigi Federico Menabrea (later prime minister of Italy), who prepared from his notes an account of the principles of the Analytical Engine. Reflecting a lack of urgency regarding radical innovation unimaginable to us today, Menabrea did not get around to publishing his paper until two years after Babbage made his presentation, and when he did so he published it in French in a Swiss journal. Shortly after Menabrea's paper appeared Babbage was refused government funding for construction of the machine.

> In keeping with the more general nature and immaterial status of the Analytical Engine, Menabrea's account dealt little with mechanical details. Instead he described the functional organization and mathematical operation of this more flexible and powerful invention. To illustrate its capabilities, he presented several charts or tables of the steps through which the machine would be directed to go in performing calculations and finding numerical solutions to algebraic equations. These steps were the instructions the engine's operator would punch in coded form on cards to be fed into the machine; hence, the charts constituted the **first computer programs** [emphasis ours]. Menabrea's charts were taken from those Babbage brought to Torino to illustrate his talks there (Stein, *Ada: A Life and Legacy,* p. 92).

Menabrea's 23-page paper was translated into English the following year by Lord Byron's daughter, Augusta Ada, Countess of Lovelace, who, in collaboration with Babbage, added a series of lengthy notes enlarging on the intended design and operation of Babbage's machine (see following item). Menabrea's paper and Ada Lovelace's translation represent the only detailed publications on the Analytical Engine before Babbage's account in his autobiography (1864). Menabrea himself wrote only two other very brief articles about the Analytical Engine in 1855, primarily concerning his gratification that Countess Lovelace had translated his paper. No offprints of Menabrea's paper are recorded, and this volume is extremely rare on the market. This is the second copy we have handled in more than forty years of trading. The previous copy was rebound. See Randell 1982a, 494. *Origins of Cyberspace* 60. 40364

"The Most Important Paper in the History of Digital Computing before Modern Times"

103. **Menabrea, Luigi Federico (1809–96).** Sketch of the Analytical Engine invented by Charles Babbage . . . with notes by the translator [**Augusta Ada King, Countess of Lovelace** (1815–52)]. In *Scientific Memoirs, Selected from the Transactions of Foreign Academies of Science and Learned Societies* 3 (1843): 666-731, plus folding chart. Whole volume, 8vo. [6], 734pp., 10 plates. 214 x 135 mm. 19th cent. half calf, cloth boards, rebacked, endpapers renewed. Light toning, otherwise fine. Library shelf-mark on title. $35,000

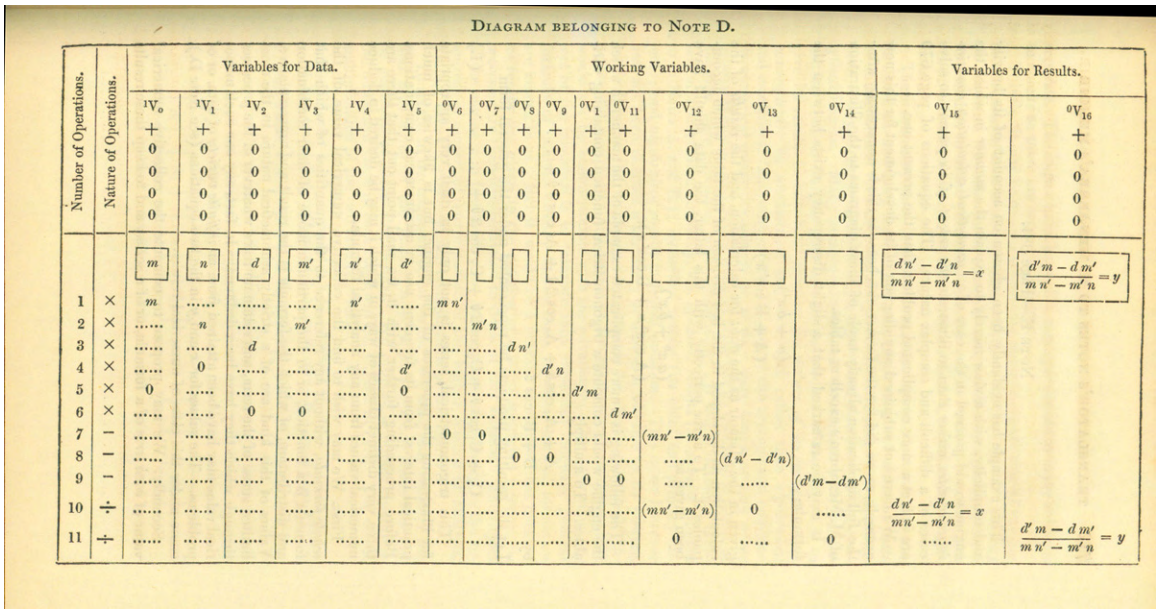


DIAGRAM BELONGING TO NOTE D.

Number of Operations.	Nature of Operations.	Variables for Data.						Working Variables.								Variables for Results.	
		$^1V_0$	$^1V_1$	$^1V_2$	$^1V_3$	$^1V_4$	$^1V_5$	$^0V_6$	$^0V_7$	$^0V_8$	$^0V_9$	$^0V_{10}$	$^0V_{11}$	$^0V_{12}$	$^0V_{13}$	$^0V_{14}$	$^0V_{15}$	$^0V_{16}$
		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		m	n	d	m'	n'	d'										$\frac{d\,n'-d'\,n}{m\,n'-m'\,n}=x$	$\frac{d'\,m-d\,m'}{m\,n'-m'\,n}=y$
1	×	m	.....	.....	.....	n'	.....	$m\,n'$										
2	×	.....	n	.....	m'	.....	.....	.....	$m'\,n$									
3	×	.....	.....	d	.....	.....	.....	.....	.....	$d\,n'$								
4	×	.....	0	.....	.....	.....	d'	.....	.....	.....	$d'\,n$							
5	×	0	.....	.....	.....	.....	0	.....	.....	.....	.....	$d'\,m$						
6	×	.....	.....	0	0	.....	.....	.....	.....	.....	.....	.....	$d\,m'$					
7	−	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	.....	$(m\,n'-m'\,n)$				
8	−	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	.....	.....	$(d\,n'-d'\,n)$			
9	−	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0	.....	.....	$(d'\,m-d\,m')$		
10	÷	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$(m\,n'-m'\,n)$	0	.....	$\frac{d\,n'-d'\,n}{m\,n'-m'\,n}=x$	
11	÷	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	0	.....	$\frac{d'\,m-d\,m'}{m\,n'-m'\,n}=y$

First Edition in English, with additions, of the previous item. Menabrea's paper was translated into English by Babbage's close friend Ada, Countess of Lovelace, daughter of the poet Byron and a talented mathematician in her own right. At Babbage's suggestion, Lady Lovelace added seven explanatory notes to her translation, which run about three times the length of the original. Her annotated translation has been called "**the most important paper in the history of digital computing before modern times**" (Bromley, "Introduction" in Babbage, Henry Prevost, *Babbage's Calculating Engines*, xv). As Babbage never published a detailed description of the Analytical Engine, Ada's translation of Menabrea's paper, with its lengthy explanatory notes, represents the most complete contemporary account in English of this much-misunderstood machine.

Babbage supplied Ada with algorithms for the solution of various problems, which she illustrated in her notes in the form of charts detailing the stepwise sequence of events as the machine progressed through a string of instructions input from punched cards (Swade, *The Cogwheel Brain*, 165). This was the first published example of a computer "program," though neither Ada nor Babbage used this term. She also expanded upon Babbage's general views of the Analytical Engine as a symbol-manipulating device rather than a mere processor of numbers, suggesting that it

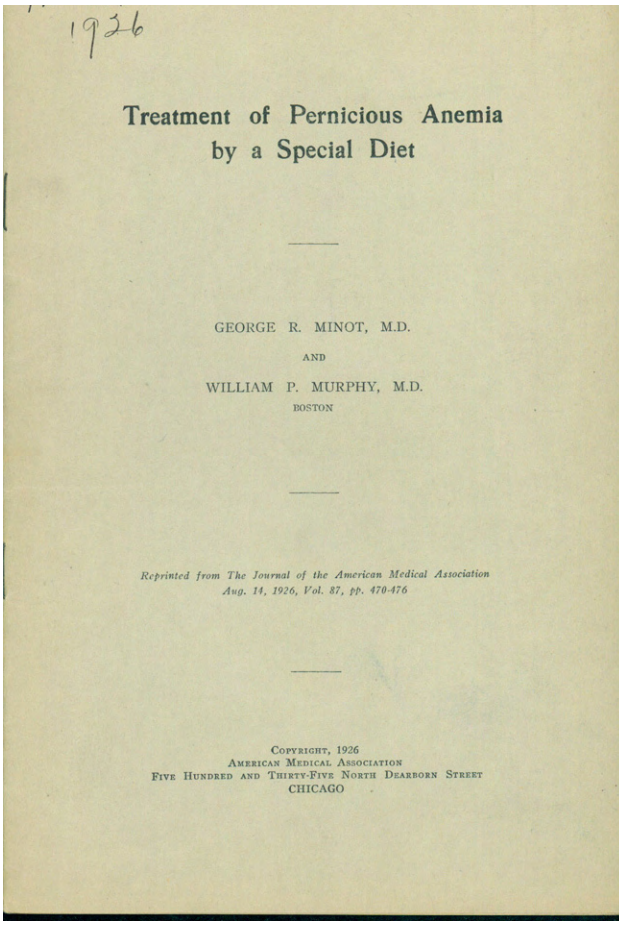
> might act upon other things besides *number*, were objects found whose mutual fundamental relations could be expressed by those of the abstract science of operations. . . . Supposing, for instance, that the fundamental relations of pitched sounds in the science of harmony and of musical composition were susceptible of such expression and adaptations, the engine might compose elaborate and scientific pieces of music of any degree of complexity or extent (p. 694) . . . Many persons who are not conversant with mathematical studies, imagine that because the business of the engine is to give its results in *numerical notation,* the *nature of its processes* must consequently be *arithmetical* and *numerical*, rather than *algebraical* and *analytical.* This is an error. The engine can arrange and combine its numerical quantities exactly as if they were *letters* or any other *general* symbols; and in fact it might bring out its results in algebraical *notation*, were provisions made accordingly (p. 713).

Much has been written concerning what mathematical abilities Ada may have possessed. Study of the published correspondence between her and Babbage (see Toole 1992) is not especially flattering either to her personality or mathematical talents: it shows that while Ada was personally enamored of her own mathematical prowess, she was in reality no more than a talented novice who at times required Babbage's coaching. Their genuine friendship aside, Babbage's motives for encouraging Ada's involvement in his work are not hard to discern. As Lord Byron's only legitimate daughter, Ada was an extraordinary celebrity, and as the wife of a prominent aristocrat she was in a position to act as patron to Babbage and his engines (though she never in fact did so).

Ada Lovelace's translation of Menabrea's paper was published in the *Scientific Memoirs,* a journal edited by the printer and naturalist Richard Taylor (1781-1858), and devoted entirely to the publication of English translations of important scientific papers. DSB. *Origins of Cyberspace* 61. Randell, *Origins of Digital Computers* (3rd ed.), p. 489. 40255

Pernicious Anemia

104. **Minot, George Richards (1885-1950). (1)** [with William P. Murphy (1892-)]. Treatment of pernicious anemia by a special diet. Offprint from *JAMA*


1926

Treatment of Pernicious Anemia
by a Special Diet

GEORGE R. MINOT, M.D.
AND
WILLIAM P. MURPHY, M.D.
BOSTON

Reprinted from The Journal of the American Medical Association
Aug. 14, 1926, Vol. 87, pp. 470-476

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American Medical Association
Five Hundred and Thirty-Five North Dearborn Street
Chicago

87 (1926). 19pp. 216 x 141 mm. Original printed wrappers, docketed in upper left corner of front wrapper. **(2)** T.L.s. from Minot to medical historian **Walter R. Bett** (1903-68; see G-M 2243), dated May 9, 1935, on Minot's engraved stationery. 1 page. 275 x 214 mm. Creased where folded, light toning. Docketed by Bett. Together with Minot's clipped signature mounted on card. **(3)** Collection of 37 additional offprints by Minot, Murphy and others on pernicious anemia and related medical subjects, as listed below. 1917-1936. In original wrappers or without wrappers; complete listing available. The whole collection preserved in a cloth drop-back box. Presented by Minot to Walter R. Bett, as noted in Minot's T.L.s. Overall very good. $3750

(1) First Edition, Offprint Issues. Garrison-Morton 3140. Minot, a graduate of Harvard Medical School, spent most of his career at that institution, except for a brief but important period at Johns Hopkins University Hospital where he "was introduced to organized research and the meticulous attention to detail required in quality research" (Magill, p. 384). In 1934 Minot and his associate, William P. Murphy, received a share of the Nobel Prize in physiology / medicine for developing and conducting the first human clinical trials of a diet rich in liver for the treatment of pernicious anemia. The remainder of the prize was awarded to George H. Whipple, whose researches on experimentally induced anemia in dogs established the value of certain foods, especially liver, in accelerating the production of red blood cells after blood loss.

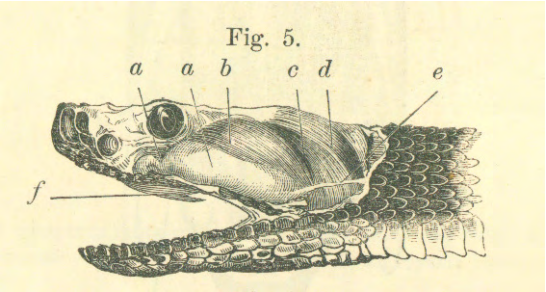
Pernicious anemia, caused by the lack of an intrinsic factor that helps the body absorb vitamin B-12, causes a severe reduction in the number of red blood cells and a decreased concentration in the blood of hemoglobin; without proper treatment it is inevitably fatal. Building on Whipple's researches, Minot and Murphy developed a special diet rich in liver and tested it on 45 patients suffering from pernicious anemia. The patients improved rapidly; before the end of the first week of treatment, Minot and Murphy noted a marked increase both in the number of young red blood corpuscles (reticulocytes) and in overall red blood cell count. Six months later the patients' average red blood cell count had risen from 1.47 million to 4.5 million per cubic milliliter.

Minot and Murphy reported their results in the present paper, following it a year later with another paper confirming their findings in 105 pernicious anemia patients. With the help of Edwin Cohn, a professor of physical chemistry at Harvard Medical School, Minot developed a therapeutic liver extract which he, Murphy and Cohn tested successfully on 160 patients (the active principle in this extract was identified in 1948 as vitamin B-12). Minot and Murphy's liver-based treatment of pernicious anemia "ranks as one of the greatest modern advances in therapy" (G-M).

"Minot's work and that of numerous pupils during the decade after 1926 initiated a new era in clinical hematology by replacing the largely morphologic studies of the blood and blood-destroying organs with dynamic measurements of their functions. . . . Among the many significant contributions of Minot and his associates were early work on blood transfusion, blood coagulation, and blood platelets, and classical studies of the hematological effects of irradiation in chronic leukemias and lymphoid tumors" (DSB).

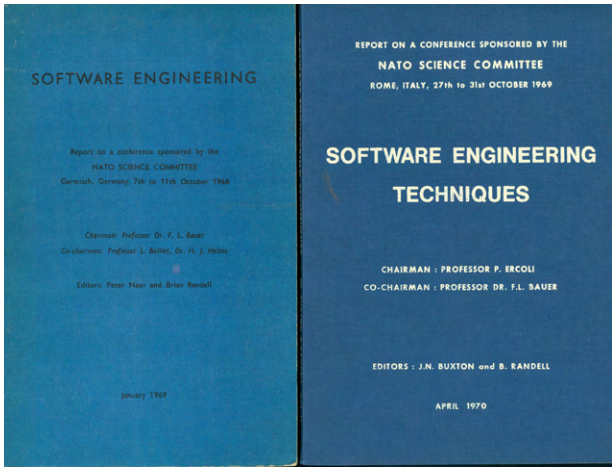
(2) Minot's letter to Bett discusses an encounter with John Fulton; Minot's interest in H. W. Fowler, author of the classic *Dictionary of Modern English Usage*; and Bett's request "to send you for your library some reprints dealing with pernicious anemia." Minot fulfilled Bett's request by sending him the offprints listed below.

(3) First Editions, Offprint Issues. This collection of offprints by Minot, Murphy and others contains six of the primary papers cited in Magill: "Treatment of pernicious anemia by a special diet" (described above), "A diet rich in liver in the treatment of pernicious anemia. Study of one hundred and five cases", "Treatment of pernicious anemia with liver extract", and Minot's three classic papers on radiation therapy in leukemias. Complete listing available. Garrison-Morton 3140. Magill, *The Nobel Prize winners; Physiology or Medicine*, pp. 381-389. 39622



105. **Mitchell, Silas Weir (1829-1914).** Researches upon the venom of the rattlesnake . . . viii, [2], 145pp. Washington, D.C.: Smithsonian Institution; New York: D. Appleton, 1861. 321 x 242 mm. Modern cloth, original printed wrappers (repaired, with some spotting) bound in at the back. Title-leaf repaired. Stamp of the Société Impériale Zoologique d'Acclimatation on the title, front wrapper and one or two other leaves. Bookplate. $450

First Edition of Mitchell's pioneering study of rattlesnakes and their venom. Mitchell, best known for his contributions to neurology, was one of the first American scientists to engage in large-scale animal experimentation. He began investigating rattlesnakes in 1858, studying their anatomy and physiology, their habits in captivity and the toxicology and physiological effects of their venom. 14130

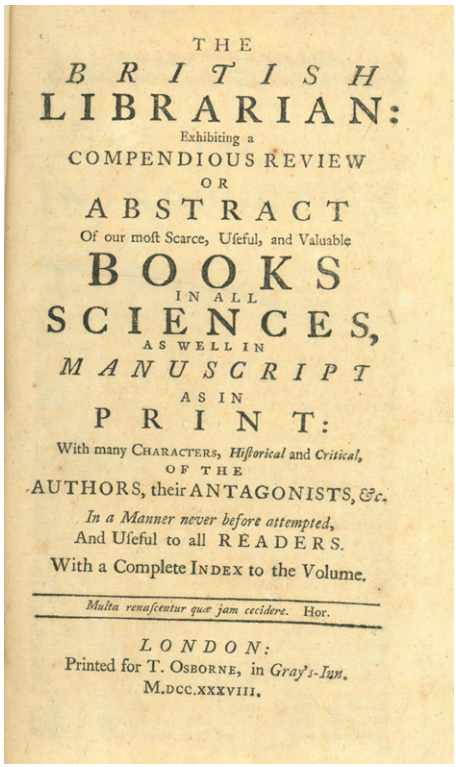


Software Engineering

106. **Naur, Peter and Brian Randell.** Software engineering. Report on a conference sponsored by the NATO Science Committee . . . 7th to 11th October 1968. 231pp. Brussels: NATO Science Committee, 1969. 249 x 169 mm. Original blue printed wrappers. Light wear. **With: Buxton, John N.** and **Randell.** Software engineering techniques: Report on a conference sponsored by the NATO Science Committee. . . . 27th to 31st October 1969. 8vo. 164pp. Brussels: NATO Science Committee, 1970. 249 x 169 mm. Original blue printed wrappers. Occasional underlining in red pencil, otherwise very good. Together 2 items.

$500

First Edition of the proceedings of the first and second NATO conferences on software engineering. The first NATO Software Engineering Conference, held in Garmisch, Germany in 1968, marked the introduction of the term "software engineering" into the general literature to describe the controlled analysis, specification, design, development, testing and maintenance of software—a subject then in its earliest infancy. The second conference, held in Rome, focused on technical problems and on the communications gap between various divisions of the field. Randell, "The 1968/69 NATO Software Engineering Reports," Dagstuhl-Seminar 9635: History of Software Engineering (web reference). 40491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First English Periodical on Rare Books

107. **Oldys, William (1696-1761).]** The British librarian: Exhibiting a compendious review or abstract of our most scarce, useful, and valuable books in all sciences, as well in manuscript as in print. 8vo. [2], vii, [5], 402, [2, adverts.]pp. London: T. Osborne, 1738. 218 x 138 mm. (uncut). Quarter morocco, marbled boards in period style. Fine copy. $1500