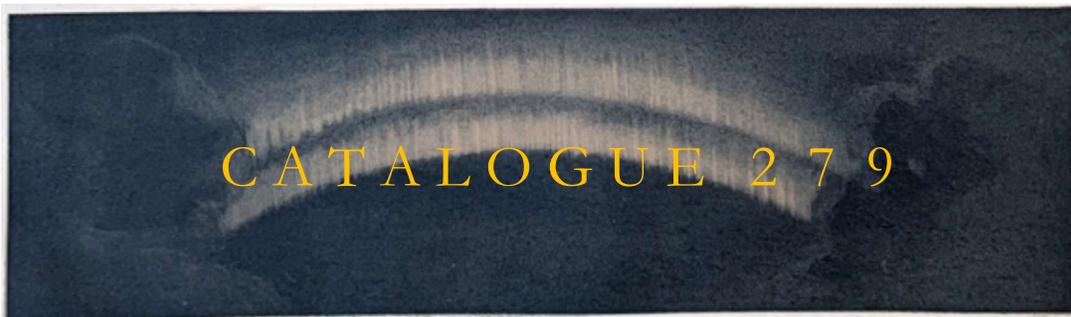


THE PERSONAL LIBRARY OF GEORGE ELLERY HALE
and the Mount Wilson Observatory



JEFF WEBER ■ RARE BOOKS ■ MONTREUX ■ SWITZERLAND



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and the Mount Wilson Observatory

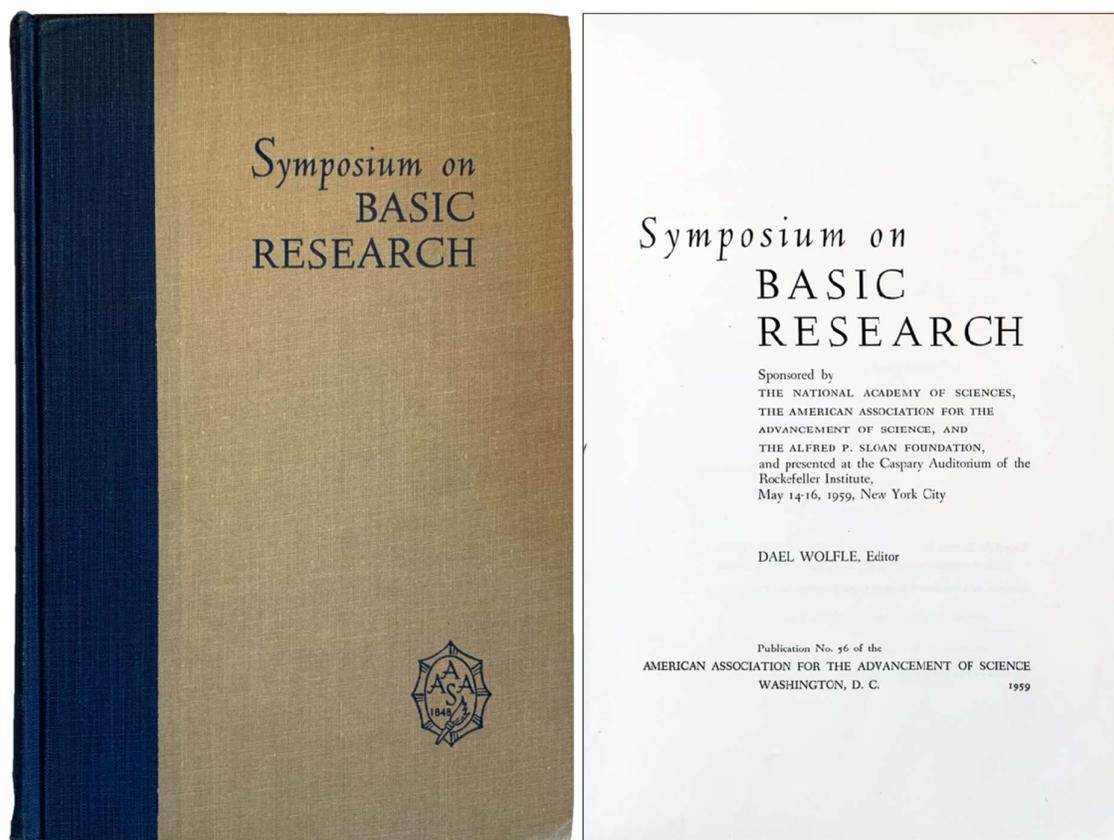
CATALOGUE 279

With a few additions

Featuring

André-Marie Ampère
Winston Churchill
William Kingdon Clifford
James B. Conant
Charles-Augustin de Coulomb
Henry Edward Crampton
Sir Humphrey Davy
Gérard De Vaucouleurs
Joseph Paul Gaimard
George Gore
Sir Richard Anstey Gregory
Caroline Lucretia Herschel
Alexander von Humboldt
Ernst Mach
Carlo Matteucci
George Sarton
Bernhard Woldemar Schmidt
Erwin Schrödinger
Mary Somerville
Sir George Gabriel Stokes
Isaac Todhunter
John Tyndall
Pehr Wilhelm Wargentin
and many more

JEFF WEBER ■ RARE BOOKS ■ MONTREUX ■ SWITZERLAND

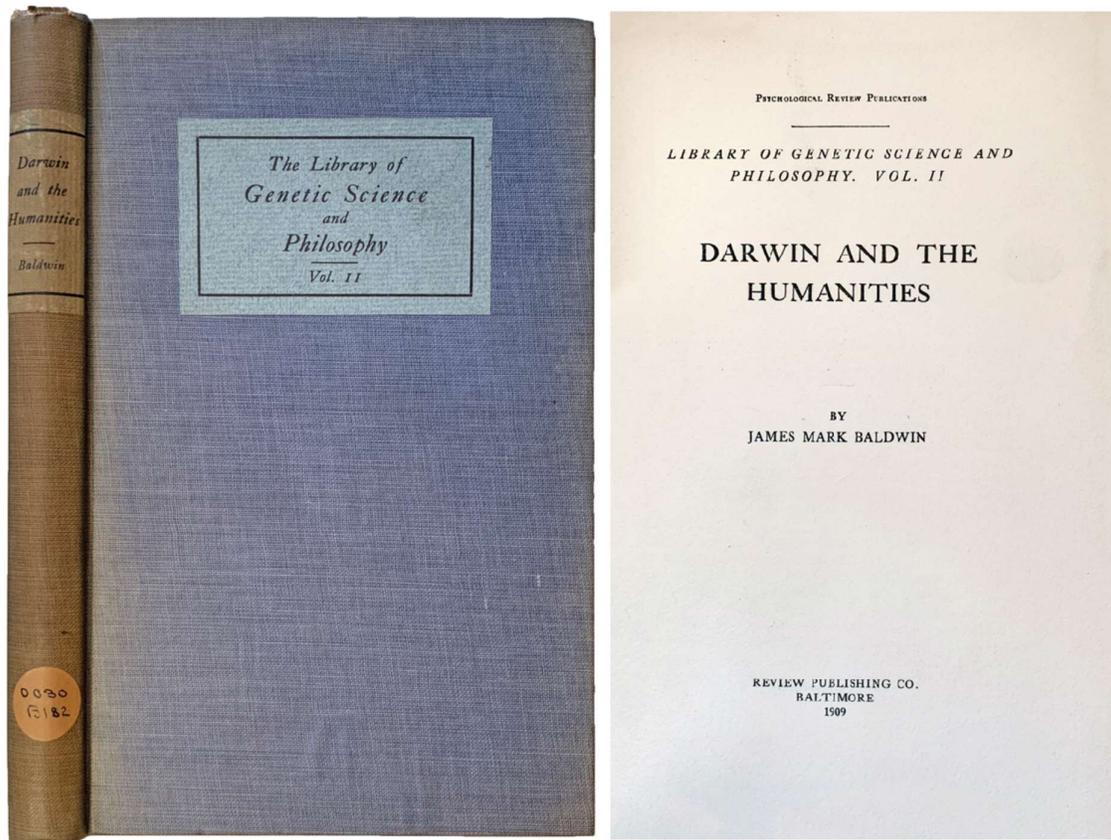


43. **American Association for the Advancement of Science, Washington, D.C.** *Symposium on Basic Research. ... presented May 14-16, 1959, New York City.* *Dael Wolfle, editor.* Washington, D.C.: American Association for the Advancement of Science, 1959. ¶ Series: AAAS, 56. 8vo. xx, 308 pp. Two-toned blue & beige cloth, spine title; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Presented to the library of Dr. Ira S. Bowen (see below).

\$ 15

Sponsored by The National Academy of Sciences, and the Alfred P. Sloan Foundation. Includes a list of those who attended and those who contributed to the symposium. Among those were President Dwight D. Eisenhower [“Science: handmaiden of freedom”], J. Robert Oppenheimer, [“The need for new knowledge”] Director of the Institute for Advanced Study. The list of persons present with their associations is remarkable.

PROVENANCE: Ira Sprague Bowen (1898-1973) was an American physicist and astronomer. In 1927 he discovered that nebulium was not really a chemical element but instead doubly ionized oxygen.

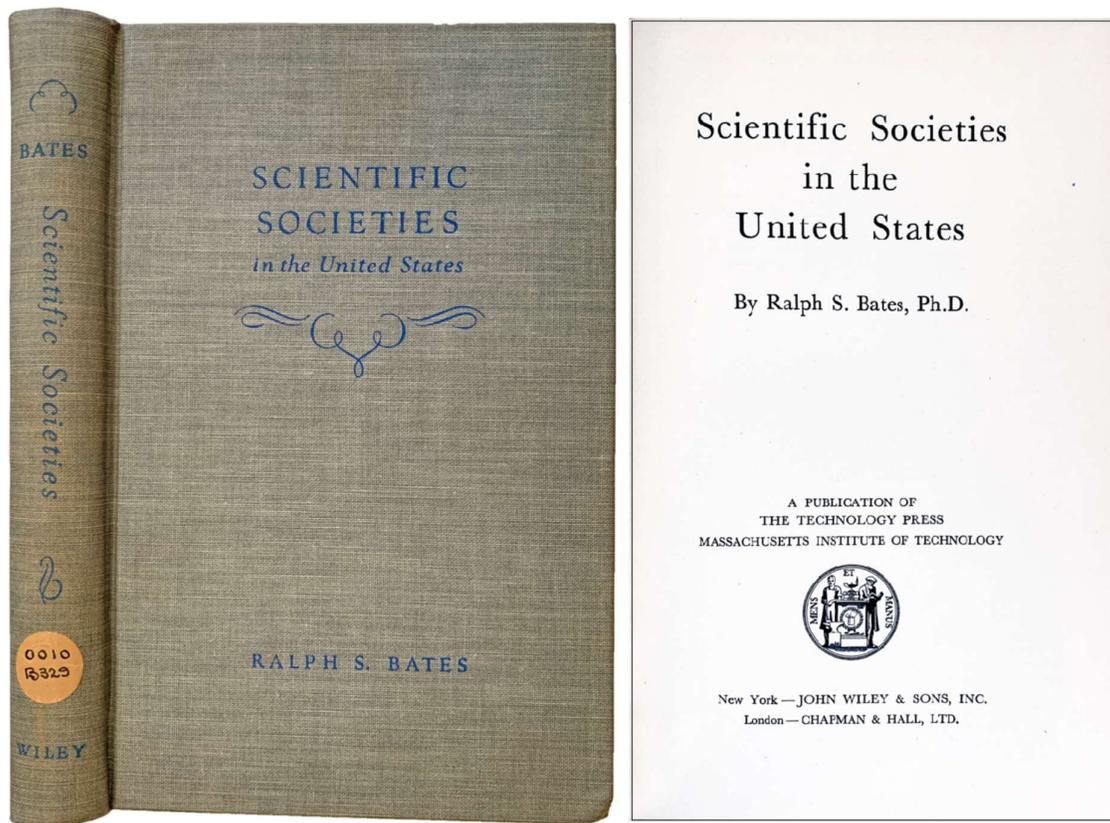


44. **BALDWIN, James Mark** (1861-1934). *Darwin and the Humanities*. Baltimore: Review Pub., 1909. ¶ Series: Library of Genetic Science and Philosophy, vol. II [*Psychological Review Publications*]. 8vo. x, [2], 118, [6] pp. Original pale blue cloth with paper spine and cover labels; upper spine end frayed some, spine darkened, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. PRESENTATION COPY, with the author's calling-card mounted (crossing out his Baltimore address & inscribing it "Compliments of ..." adding his Paris address by hand. Presented to Robert Simpson Woodward, the Mount Wilson Observatory. Very good.

\$ 20

First edition, a bit scarce. A second edition was issued in 1910. Dedicated to Alfred Russel Wallace.

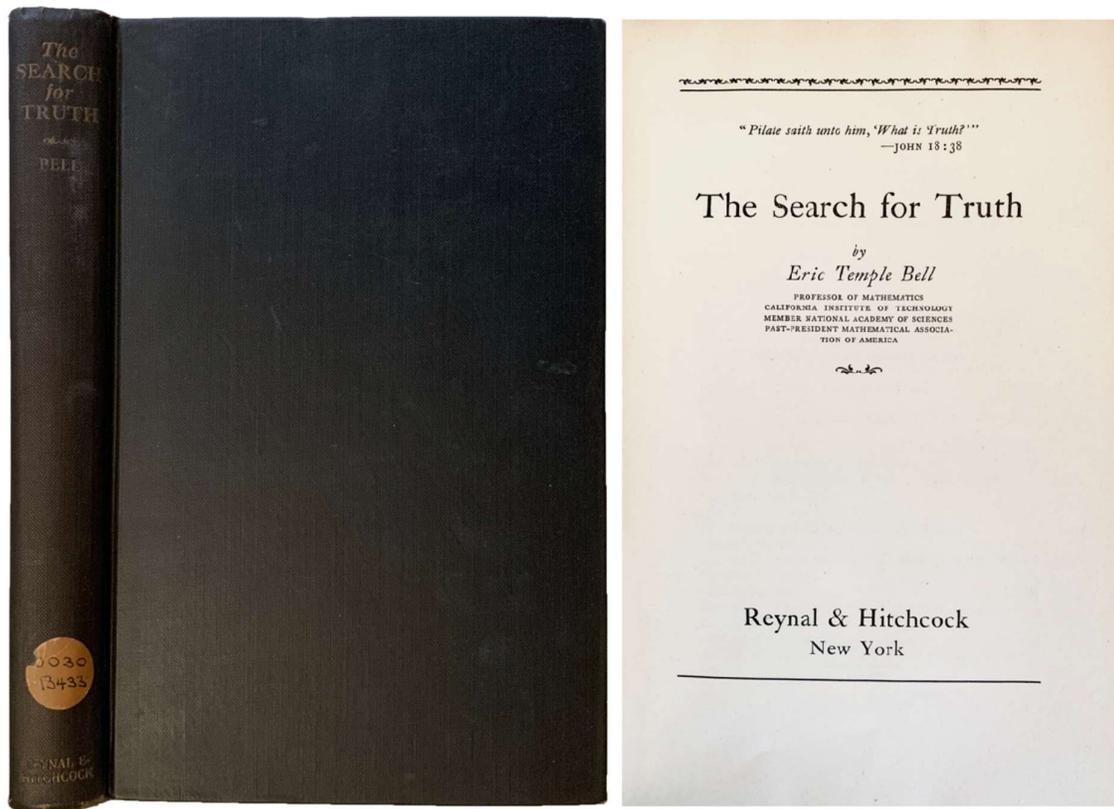
"In Baltimore also Baldwin was arrested in a raid on a "colored" brothel (1908), a scandal that put an end to his American career. Forced to leave Johns Hopkins, he looked for residence in Paris. He was to reside in France till his death in 1934." – [Wikip.] Hothersall, David. *History of Psychology*, (4th ed.). 2004.



45. **BATES, Ralph S.** *Scientific Societies in the United States*. New York: John Wiley & Sons, 1945. ¶ 8vo. vii, [1], 146 pp. Index. Blue-stamped grey cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 7.50

First edition. “When it was first published just twenty-five years ago, Bate’s history of the organization of scientific activity in the United States represented one of few sources to which the historian or historically minded scientist might turn in an effort to discover the sources of the seeming scientific miracles wrought during the Second World War.” *The British Journal for the History of Science*, 1965 for the third edition.

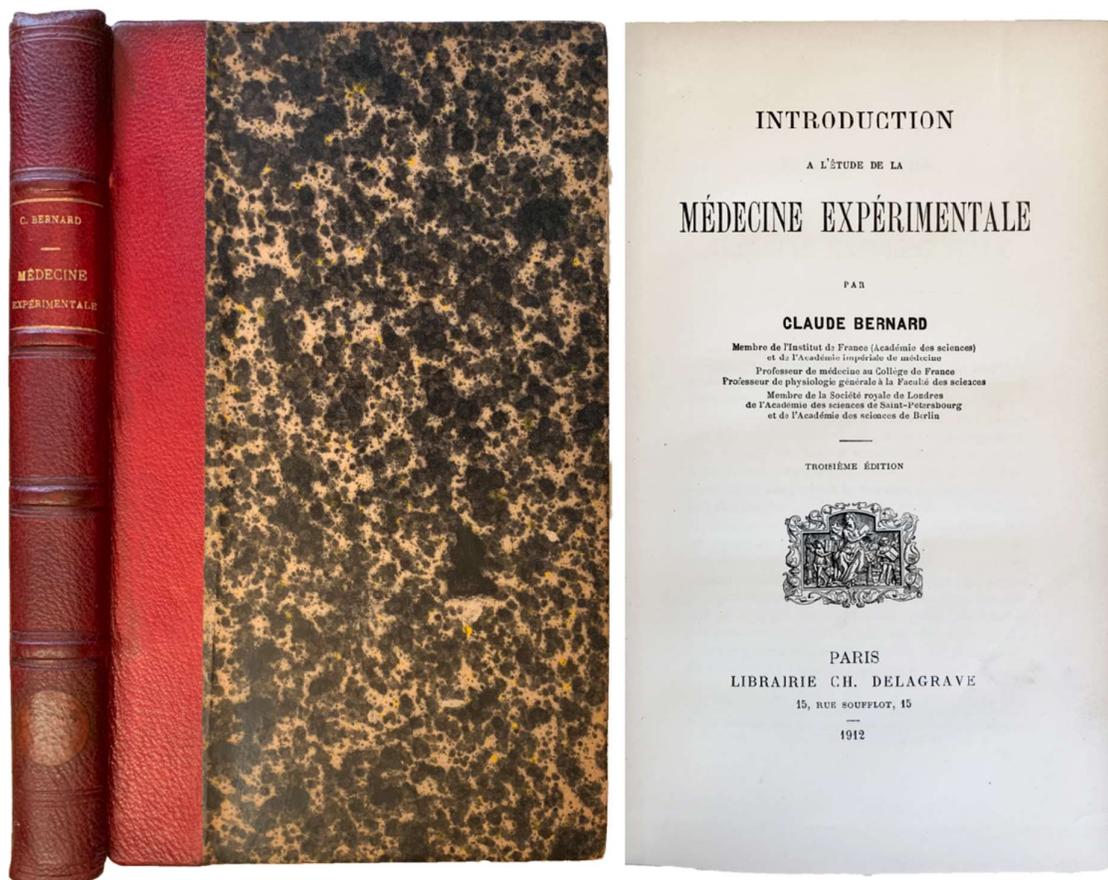


46. **BELL, Eric Temple** (1883-1960). *The Search for Truth*. New York: Reynal & Hitchcock, 1934. ¶ 8vo. x, 279, [1] pp. Original gilt-stamped black cloth; spine ends just starting to fray, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 30

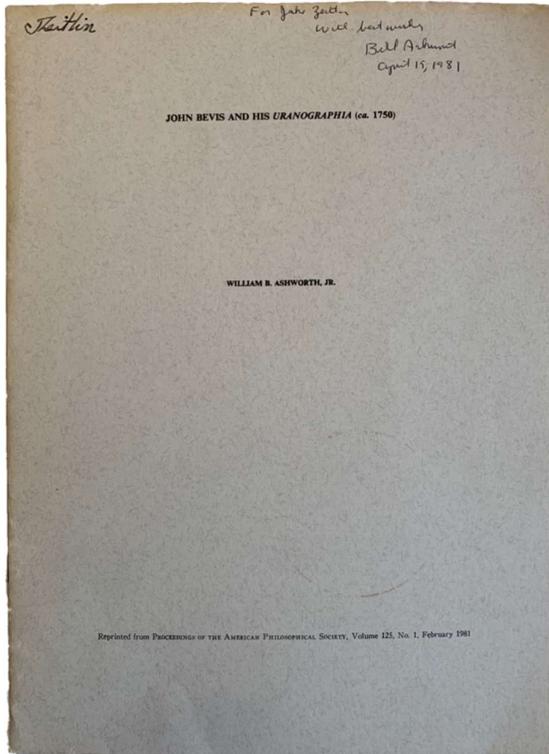
This is a gathering of the author's broadly reaching topical essays. Among these: What Rayleigh said; The Egyptian Madness; The Priesthood of Science; The Greek Vice; God and the Astronomers; The Alexandrian Library; False Gods, The Last Idol; Science and Religiosity; Monkeying with Time; Heathen Gods, and more.

Bell was part of the faculty first at the University of Washington and later at the California Institute of Technology. In 1924 Bell was awarded the Bôcher Memorial Prize for his work in mathematical analysis. In 1927, he was elected to the National Academy of Sciences.



47. **BERNARD, Claude** (1813-1878). *Introduction à l'étude de la Médecine Expérimentale*. Paris: Ch. Delagrave, 1912. ¶ Third edition. 8vo. 364 pp. Frontispiece portrait. Later blind- and gilt-stamped red morocco backed marbled boards; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 30

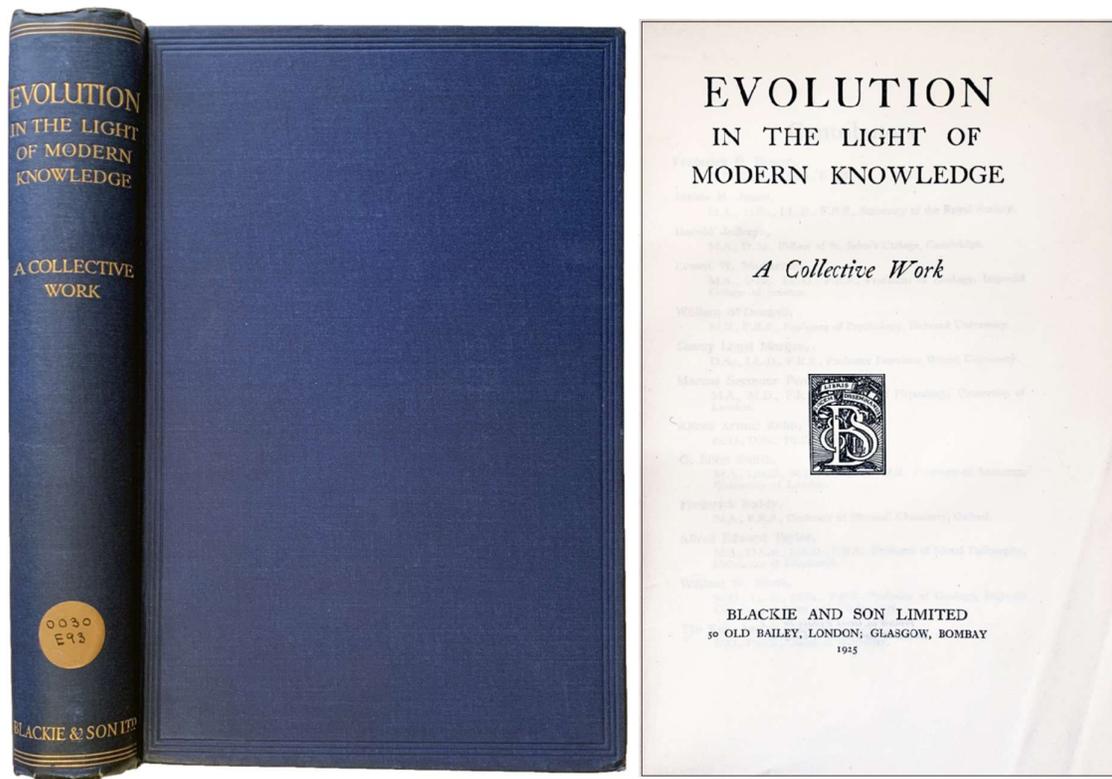


48. [BEVIS, John (1695-1771)] **William B. ASHWORTH, JR.** *John Bevis and his Uranographia (ca. 1750)*. [offprint]. Philadelphia: American Philosophical Society, 1981. ¶ Series: Proceedings of the American Philosophical Society, vol. 125, no. 1. 4to. pp. 52-73. [1].8 figs. Original printed wrappers. INSCRIBED by the author to the bookseller Jake Zeitlin, April 15, 1981.

\$ 20

Ashworth's statements as to the importance and character of this "mysterious" work, with a chequered publishing history.

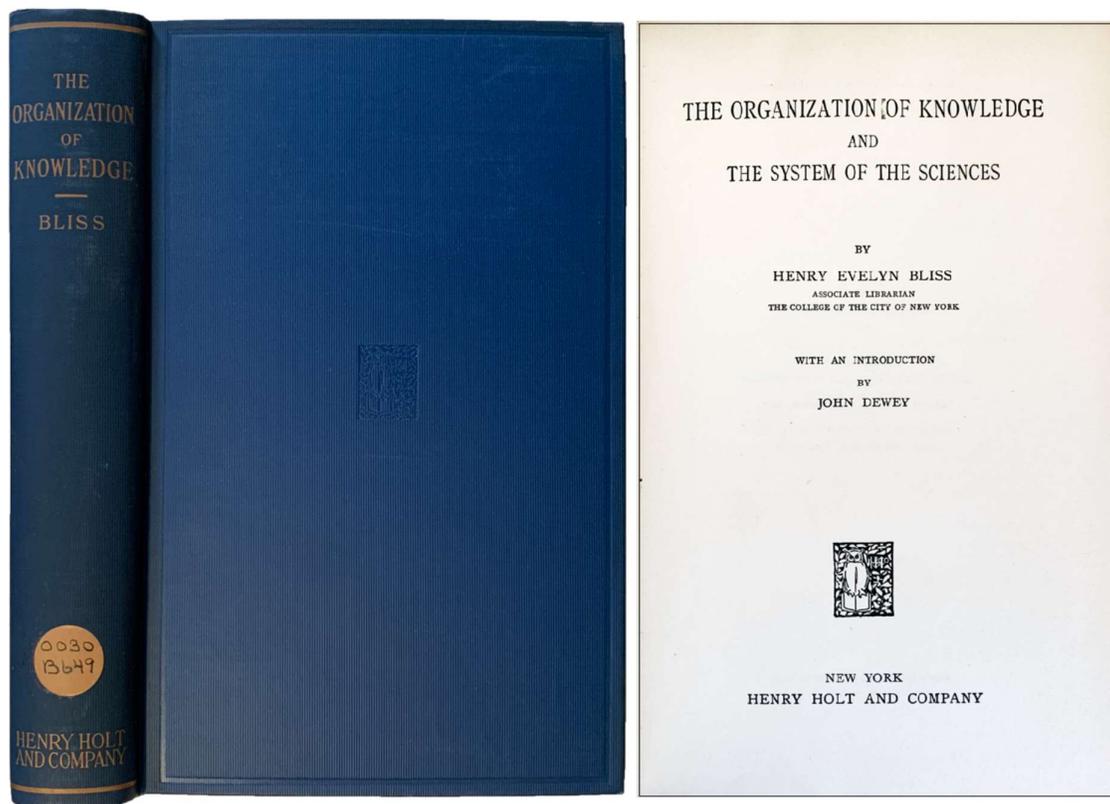
[nh]



49. **Blackie and Son** (publishers). *Evolution in the Light of Modern Knowledge: A collective work*. London, Glasgow, Bombay: Blackie and Son Limited, 1925. ¶ 8vo. xv, [1], 528 pp. 3 plates (1 folding), figures, index. Original blind- and gilt-stamped royal blue cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 10

With contributions by: Edward B. Schlesinger (Donor), and: Frederick O. Bower, James H. Jeans, Harold Jeffreys, Ernest W. MacBride, William McDougall, Conway Lloyd Morgan, Marcus S. Pembrey, Alfred A. Robb, Grafton Elliot Smith, Frederick Soddy, A.E. Taylor, William W. Watts, Rev. James Maurice Wilson.

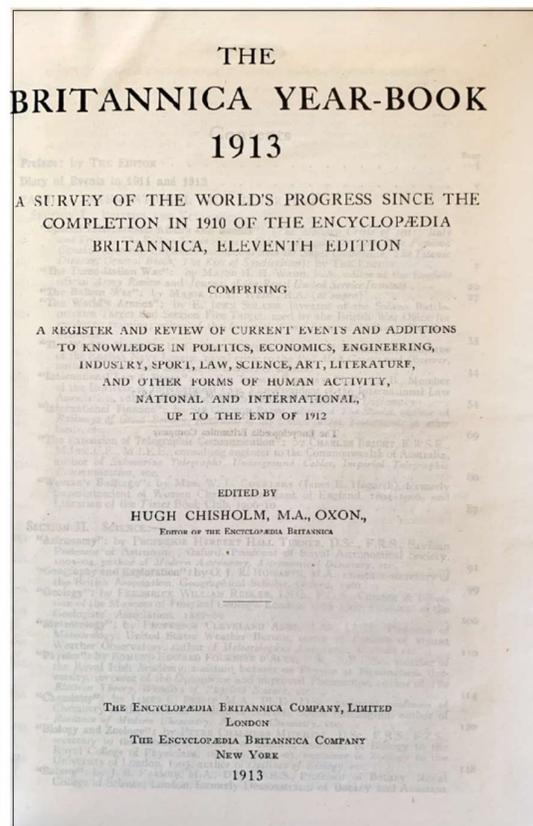
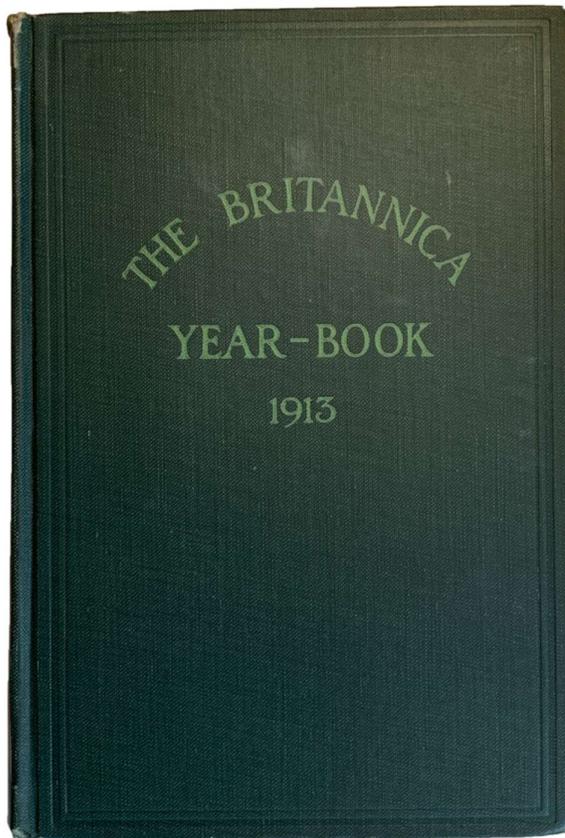


50. **BLISS, Henry Evelyn** (1870-1955). *The Organization of Knowledge and the System of the Sciences*. New York: Henry Holt, 1929. ¶ 8vo. xx, 433, [1] pp. Original deep blue blind- and gilt-stamped cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good. Scarce.

\$ 50

First edition. With an introduction by John Dewey. Henry Evelyn Bliss was the author of a subject classification system he called Bibliographic Classification which is often abbreviated to BC and is sometimes called Bliss Classification.

Bliss was associate librarian at the College of the City of New York. He became the deputy librarian of City College of the City University of New York.



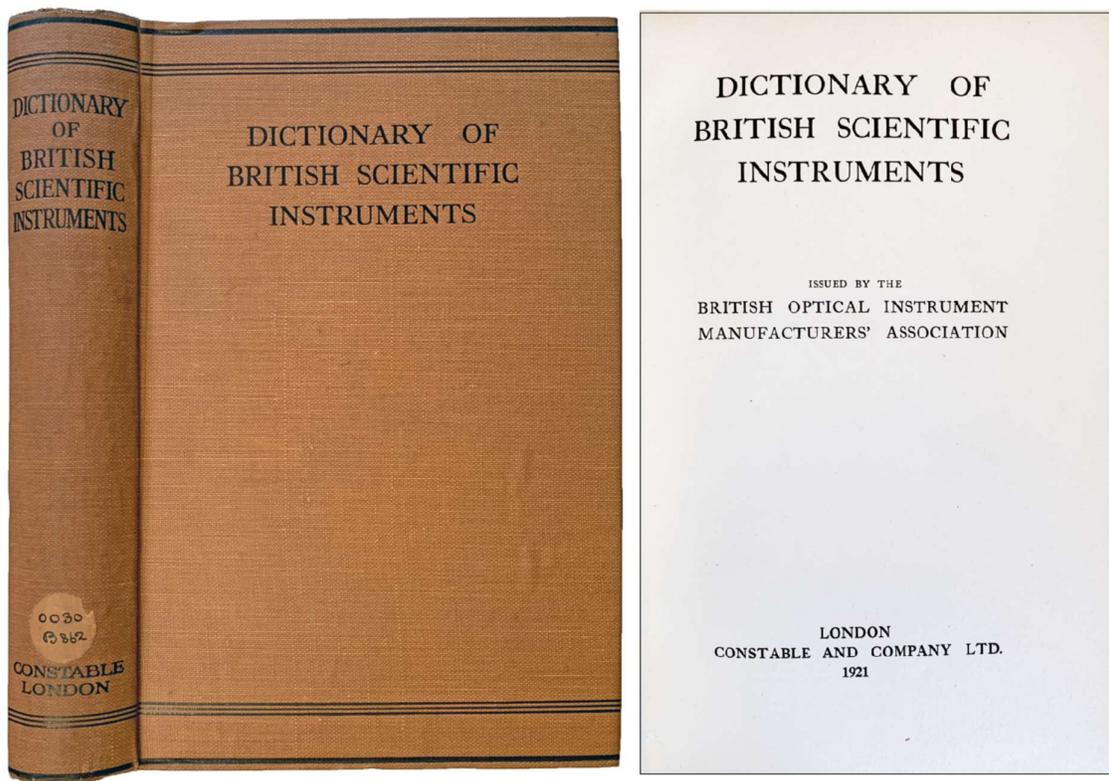
The Sinking of the Titanic

51. **Britannica, Encyclopaedia.** *The Britannica Year-Book 1913. A survey of the world's progress since the completion in 1910 of the Encyclopaedia Britannica eleventh edition. Comprising a register and review of current events and additions to knowledge in politics, economics, engineering, industry, sport, law, science, art, literature, and other forms of human activity, national and international, up to the end of 1913. Edited by Hugh Chisholm.* London & New York: Encyclopaedia Britannica, 1913. ¶ 8vo. xliii, [1], 1226, [10] pp. Original blind- and light-green-stamped dark green cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 25

This is like a news diary, but written by leading scholars. It is divided into large sections: International & general; Science, Art & Literature; Archaeology & Excavation; Philosophy, Education & Religion; Law; Military Engineering; Sports; National & Local. The paper on physics was written by Edmund Edward Fournier d'Albe. Stephen Paget wrote of Medicine, etc.

Of special interest: the contemporary account of the Titanic Disaster (pp. 15-16). In medicine, Florence Nightingale and Lord Lister died (recently), and the cause of beri-beri was discovered (a lack of vitamin B1).



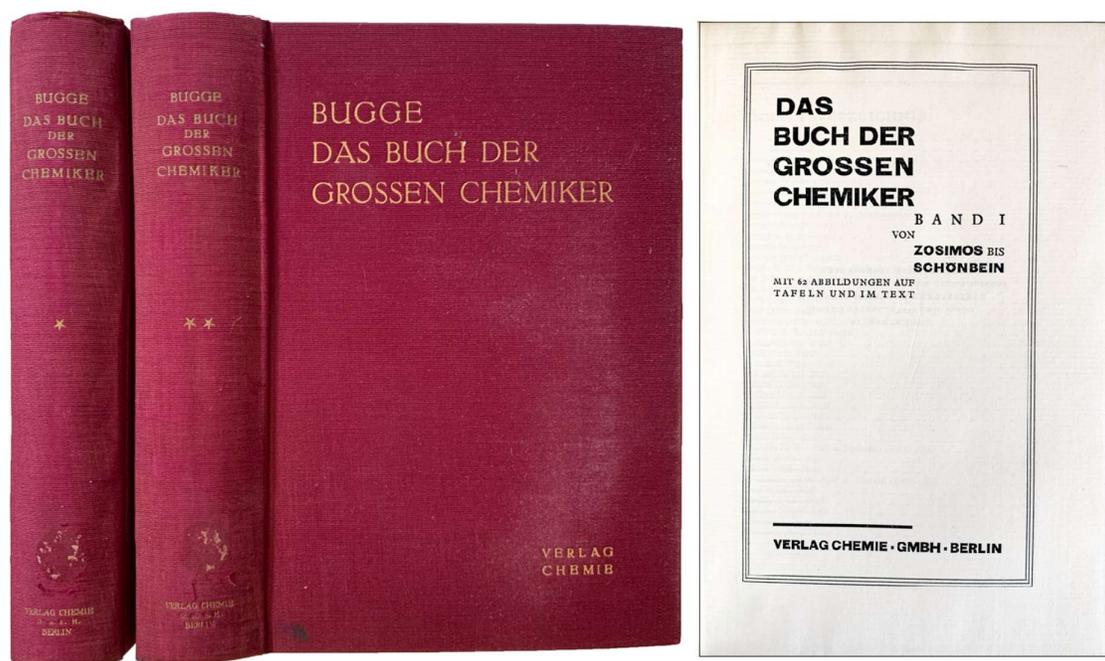
With 313 Illustrations of Different British Scientific Instruments

52. **British Optical Instrument Manufacturers' Association.** *Dictionary of British Scientific Instruments*. London: Constable, 1921. ¶ 8vo. XII, 335, [15] pp. 5 plates (including frontispiece), 313 figures, blank section at rear for notes (here blank). Original tannish-brown cloth stamped in black paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good. An unusually nice copy.

\$ 95

This work provides concise definitions and illustrations of a large number of scientific instruments in use at the beginning of the twentieth century, demonstrating the variety of instruments being manufactured in Britain.

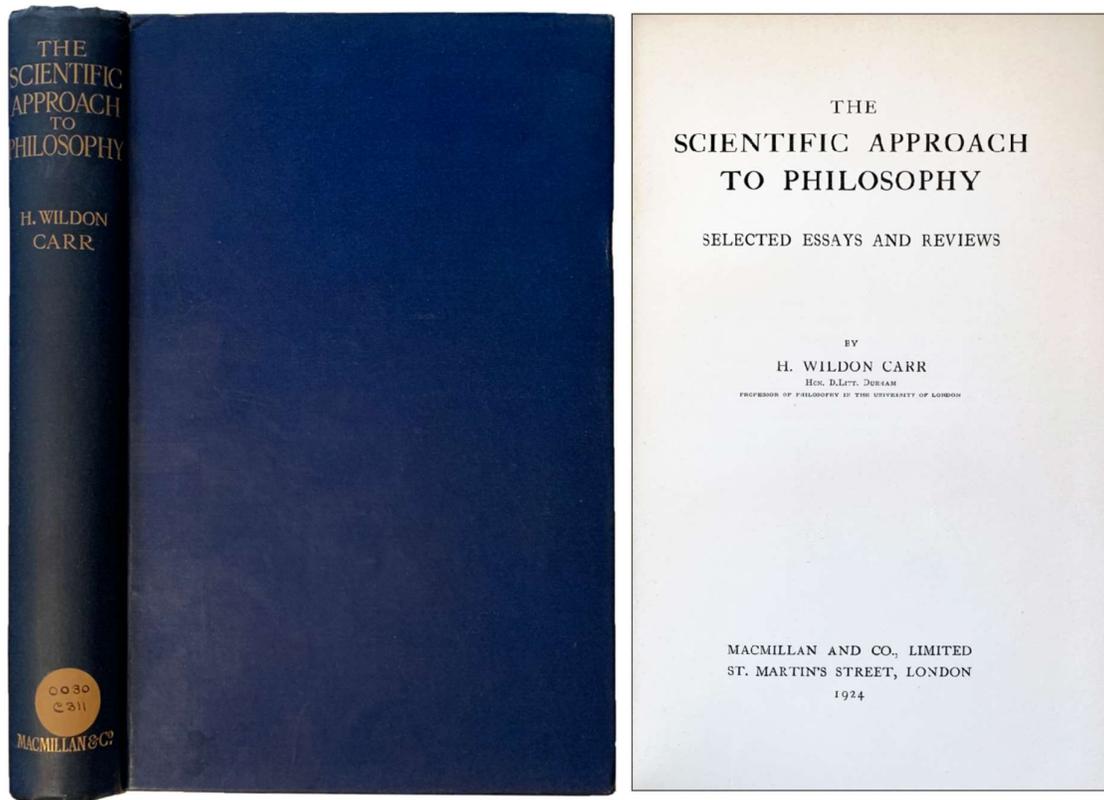
The chapters include: Navigating instruments, Royal Meteorological Society, British Optical Glass, The Royal Observatory, Greenwich; Dictionary of British Scientific Instruments.



53. **BUGGE, Günther** (editor). *Das Buch der Großen Chemiker. Band 1: Von Zosimos bis Schönbein. Band 2: Von Liebig bis Arrhenius.* (Leipzig: Arno Pries), [no date, but ca. 1950s or 60s]. ¶ Reprint by Arno Pries, Leipzig. 2 volumes. 8vo. XII, 496; X, 559, [1] pp. 62 + 52 plates, figs. Original full dark red gilt-stamped cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 40

Biographies of the great chemists. Reprint by Arno Pries, Leipzig, of the 1929-30 original issue, Berlin, Verlag Chemie. With contributions from numerous scholars.

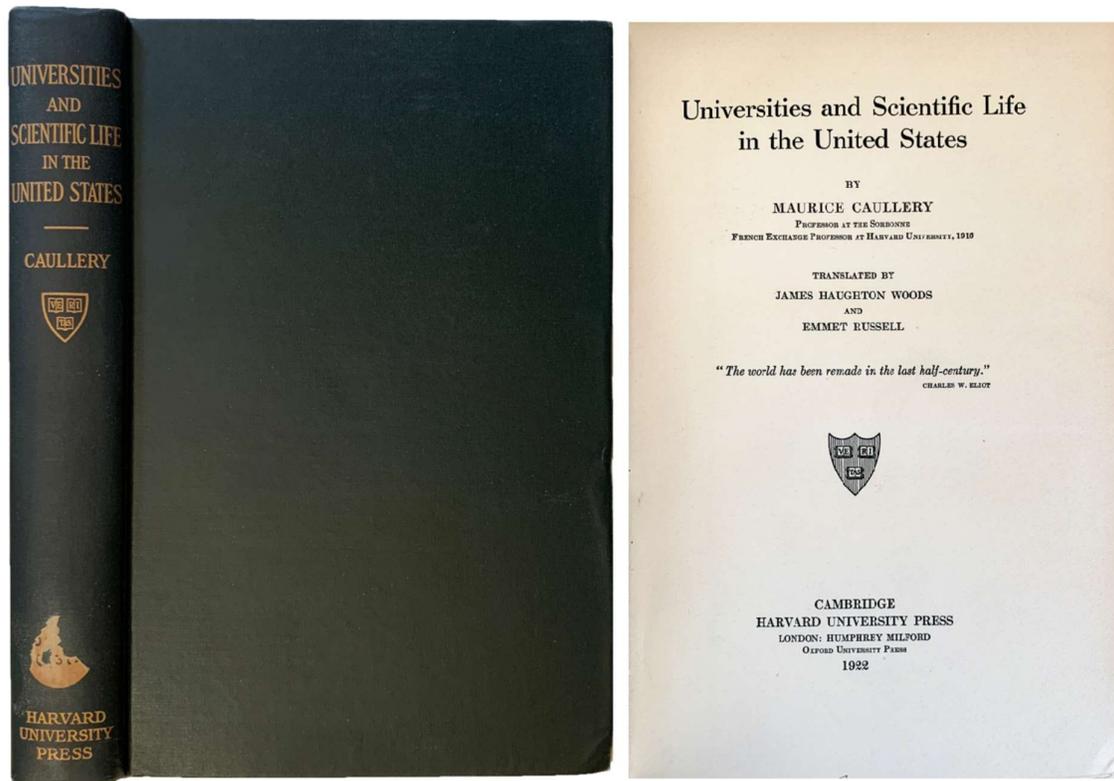


54. **CARR, H. Wildon** (1857-1931). *The Scientific Approach to Philosophy; selected essays and reviews*. London: Macmillan, 1924. ¶ 8vo. viii, 278, [2] pp. Original navy blue gilt-stamped cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 28

Contains 17 papers by Carr, whose interest in Henri Bergson (1859-1941) and Benedetto Croce (1866-1952), Einstein, Descartes and Pascal, all detailed herein.

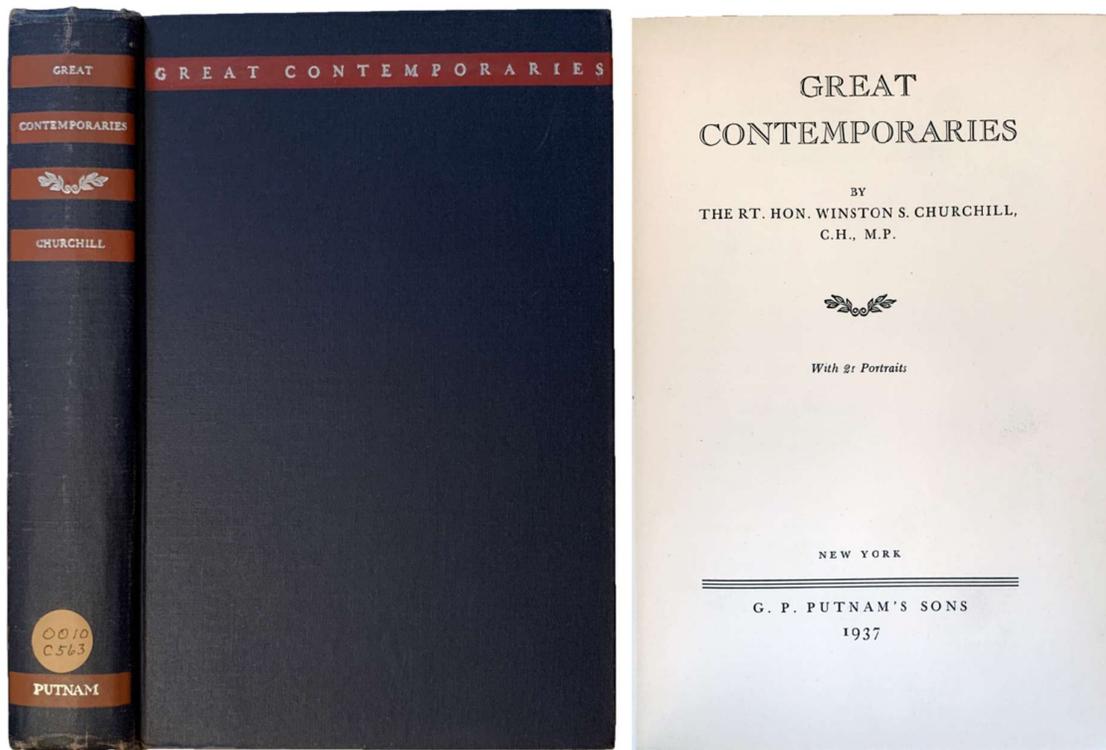
Herbert Wildon Carr was a British philosopher, Professor of Philosophy, King's College, London from 1918 until 1925 and Visiting Professor at the University of Southern California from 1925 until his death. See: NUNN, T. Prof. H. Wildon Carr. *Nature*, 128, 98-99 (1931).



55. **CAULLERY, Maurice** (1868-1958). *Universities and Scientific Life in the United States*. Translated by *James Haughton Woods and Emmet Russell*. Cambridge: Harvard University Press, 1922. ¶ 8vo. xvii, [1], 269, [1] pp. Black gilt-stamped cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 30

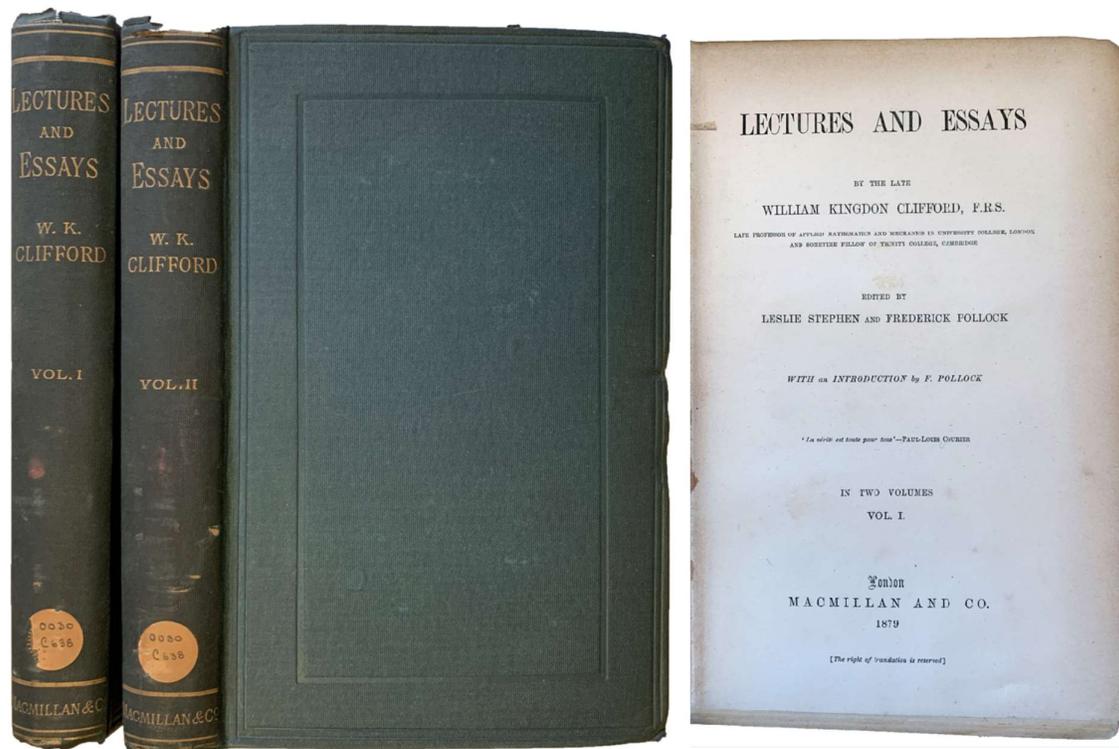
First edition. Maurice Jules Gaston Corneille Caullery was a French biologist who taught classes at the Sorbonne. At the time of this work, in 1915-6, he was a French Exchange Professor at Harvard University.



56. **CHURCHILL, Rt. Hon. Winston S.** (1874-1965). *Great Contemporaries*. New York: G.P. Putnam's Sons, 1937. ¶ 8vo. x, 299, [1] pp. 21 plates, index. Original red- and gilt-stamped navy cloth; rubbed, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Good.

\$ 25

First American edition. In this work, highlighting 21 persons of the day, Churchill writes about Adolf Hitler, George Bernard Shaw, Lawrence of Arabia, Leon Trotsky, and others.

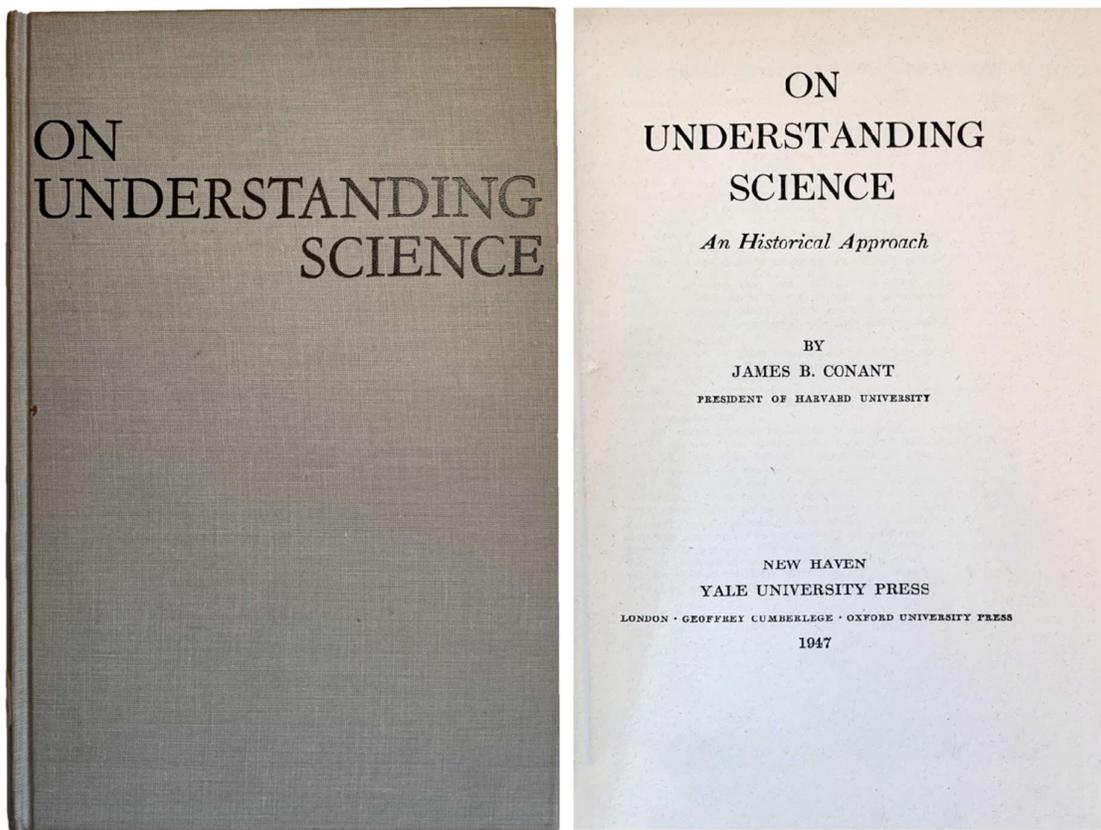


With original mounted Photographic Portrait of Clifford (vol. II).

57. **CLIFFORD, William Kingdon** (1845-1879). *Lectures and Essays*. Edited by *Leslie Stephen and Frederick Pollock*. London: Macmillan, 1879. ¶ 2 volumes. 8vo. [vi], 340; [vi], 321, [1], 30, [2] pp. Two frontispieces (vol. I: frontis. is engraved; vol. II: frontis. is an original mounted photograph), ads (dated March 1879). Original blind- and gilt-stamped dark green cloth; spine ends frayed, vol. II inner joint cracked, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good. Early bookplate [moto: sic viresco “thus I flourish”] of A.H. Christie.

\$ 100

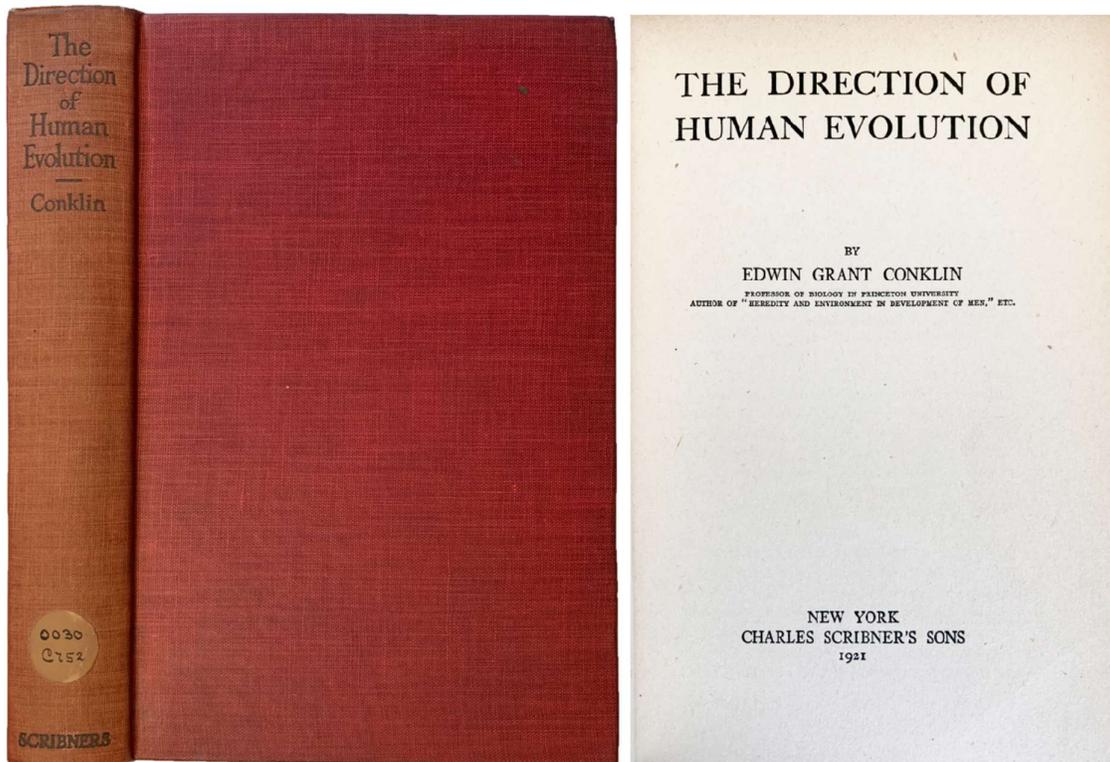
William Kingdon Clifford FRS was an English mathematician and philosopher. He followed the work of Hermann Grassmann and introduced what is now termed geometric algebra, a special case of the Clifford algebra named in his honour.



58. **CONANT, James B.** (1893-1978). *On Understanding Science; an historical approach*. New Haven: Yale University Press, 1947. ¶ 8vo. xv, [1], 145, [1] pp. 10 figs., index. Grey cloth, black stamping; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 10

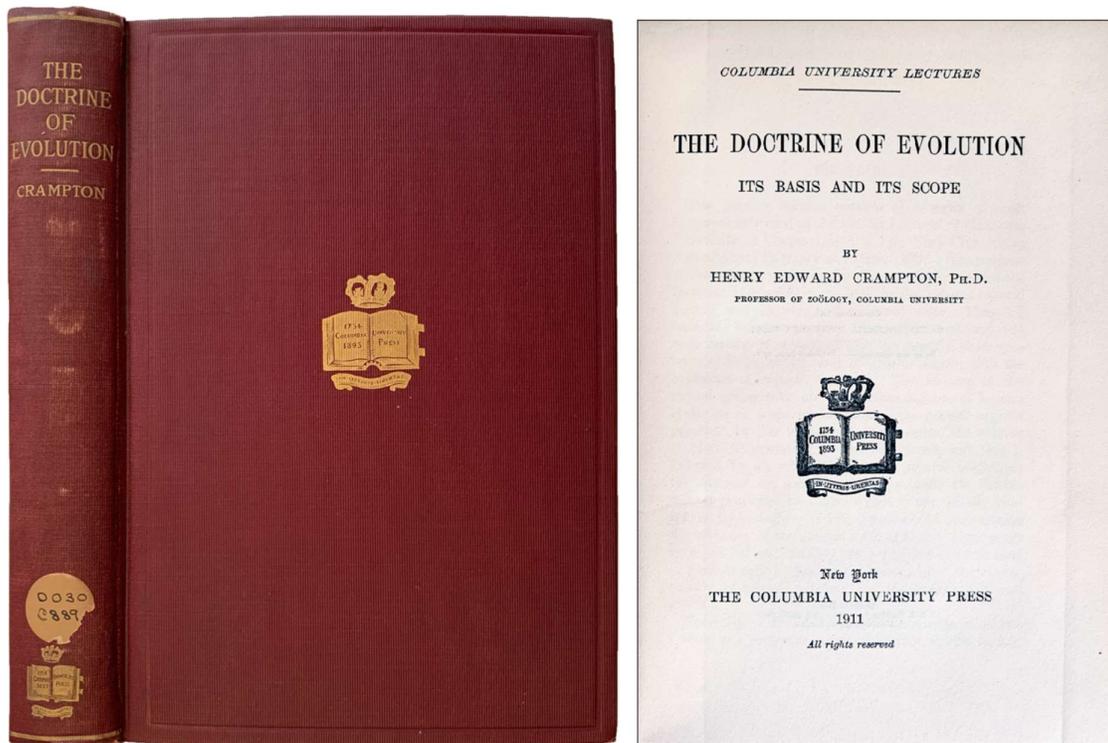
James Bryant Conant was an American chemist, a transformative President of Harvard University, and the first U.S. Ambassador to West Germany.



59. **CONKLIN, Edwin Grant** (1863-1952). *The Direction of Human Evolution*. New York: Charles Scribner's Sons, 1921. ¶ 8vo. xiii, [1], 247, [1] pp. Frontispiece; p. 49 soiled. Original red cloth with black stamping, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 20

Conklin was educated at Ohio Wesleyan University and Johns Hopkins University. He was professor of biology at Ohio Wesleyan (1891–94) and professor of zoology at Northwestern University (1894–96), the University of Pennsylvania (1896-1908), and Princeton University (1908-1935).



As a small token of cordial regard
 to
 President Robert Simpson Woodward
 for
 Henry Edward Crampton.

60. **CRAMPTON, Henry Edward** (1875-1956). *The Doctrine of Evolution; its basis and its scope*. New York: Columbia University Press, 1911. ¶ Series: Columbia University Lectures. 8vo. ix, [1], 311, [1], [4] pp. Ads. Original blind- and gilt-stamped maroon cloth, t.e.g.; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. INSCRIBED BY THE AUTHOR to President of the Carnegie Institute of Washington DC, Robert Simpson Woodward. Very good copy.

\$ 45

First edition. "The present volume consists of a series of eight addresses delivered as the Hewitt Lectures of Columbia University at Cooper Union in New York City during the months of February and March, 1907. The purpose of these lectures was

to describe in concise outline the Doctrine of Evolution, its basis in the facts of natural history, and its wide and universal scope.”

Henry Edward Crampton was Curator of Invertebrate Zoology, American Museum of Natural History. He was an evolutionary biologist and malacologist, specializing in land snails. He had earned his degree in biology at Columbia. After a stint at MIT, Crampton began teaching at Columbia in 1897 and remained there for the rest of his career, primarily instructing women at Barnard College. He achieved the rank of professor in 1904, retiring in 1943. Crampton taught embryology at the Marine Biological Laboratory in Woods Hole (1895–1902), and, at the Cold Spring Harbor Laboratories (1903–1906), he was in charge of embryology.

CONTENTS: [I] Evolution. The Living Organism and its Natural History. [II] The Structure and Development of Animals as Evidence of Evolution. [III] The Evidence of Fossil Remains. [IV] Evolution as a Natural Process. [V] The Physical Evolution of the Human Species and of Human Races. [VI] The Mental Evolution of Man. [VII] Social Evolution as a Biological Process. [VIII] Evolution and the Higher Human Life.

PROVENANCE: Robert Simpson Woodward (1849-1924), was teaching at Columbia early on in his career, as professor of mechanics and then of mathematical physics. He served as President of the Carnegie Institute of Washington DC – Henry Edward Crampton [Columbia & Barnard College] – Carnegie Institute, Pasadena (Hale collection).

Dec^r 22^d.

My dear Mother

My sister letter of this evening gave me very sincere grief. I have long been afraid that my dear child would not recover. but from John's account, I still had hopes of seeing her again, although these hopes are gone: but I trust that excellent & worthy woman is enjoying a more perfect state of happiness than belongs to her chequered & uncertain life. - I beg you will give my kindest love to my dear Mother & express my deep concern in her illness: -

I shall enclose a £10 note which I beg you will lay out in the way you think best, for my sister's children & my dear grandsons that have an inordinate coveting. but I believe they are all gone, save the stream of time. -

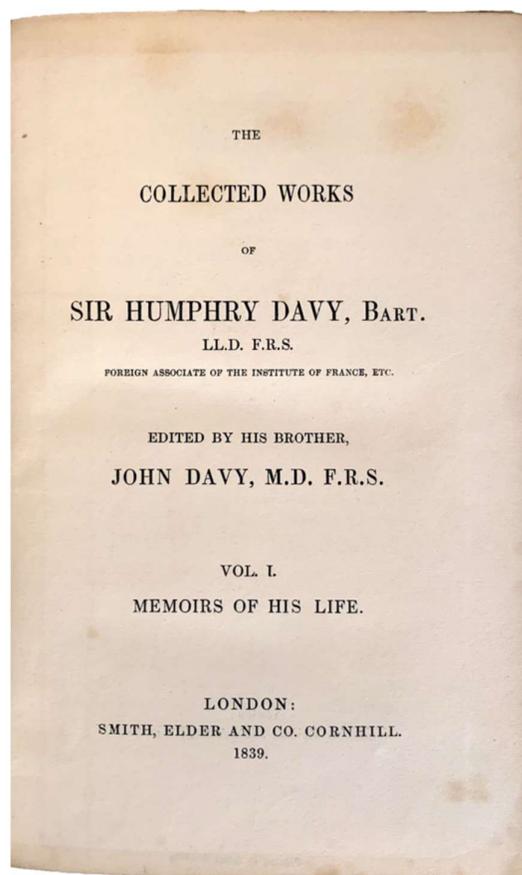
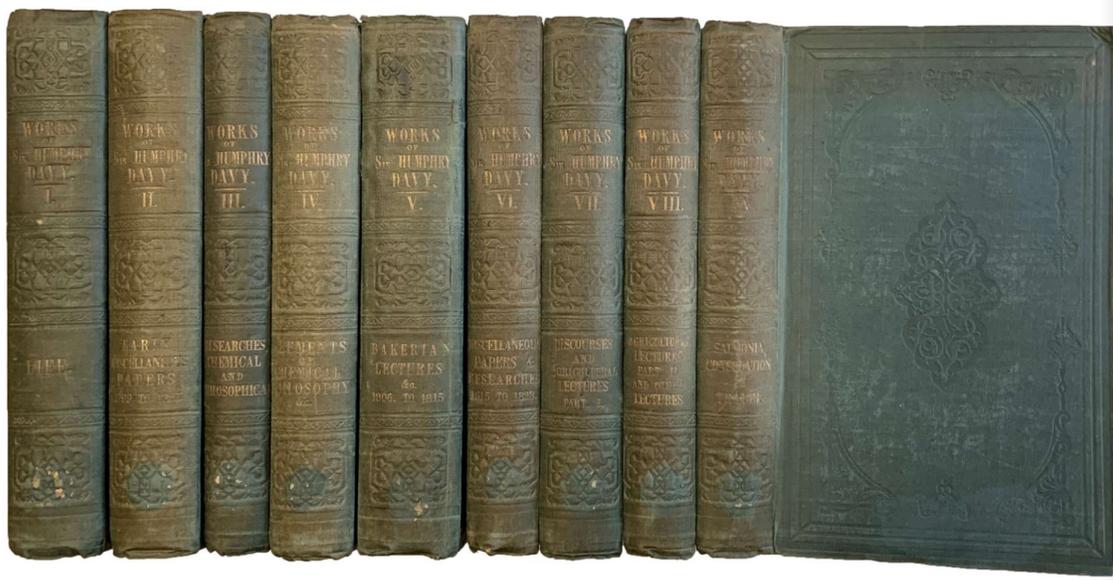
I thank you for your importunities in my election to the highest situation a private man can fill -

I hope it will increase my power & my wealth to my fellow creatures & my country. I am my dear Mother

my sincere aff^o

John
H. Davy

* The words which I, and the mother's sister, in my former edition, it was inadvertently stated, that the mother was the youngest of the three; - she was the eldest.



61. **DAVY, Sir Humphry** (1778-1829). *The Collected Works of Sir Humphry Davy, Bart. LL.D. F.R.S. ... Edited by his brother, John Davy, M.D. F.R.S.* London: Smith, Elder, 1839-40. ¶ 9 volumes. 8vo. viii, 475, [1], [6], 24; xii, 466, [2]; xvi, 343, [1]; xx, [4], 376, [4]; xv, [1], 527, [1]; xi, [1], 364; xiii, [3], 391, [1]; viii, 365, [1], [2]; xi, [1], 388, [2] pp. Frontispiece portrait, facsimile of Davy's handwriting on a folding plate, 40 plates, figs., tables, 7 errata slips [I, II, III, V, VI, VII, VIII], ads (dated January, 1845); vol. V with internal kozo applied to inner spine, occasional foxing. Lacks 2 plates (3 figs.) from vol. IX (on fishing). Original blind- and gilt-stamped dark green cloth. Embossed stamp of Carnegie Institution [HALE]. Bookplates of William Charles Henry. Very good.

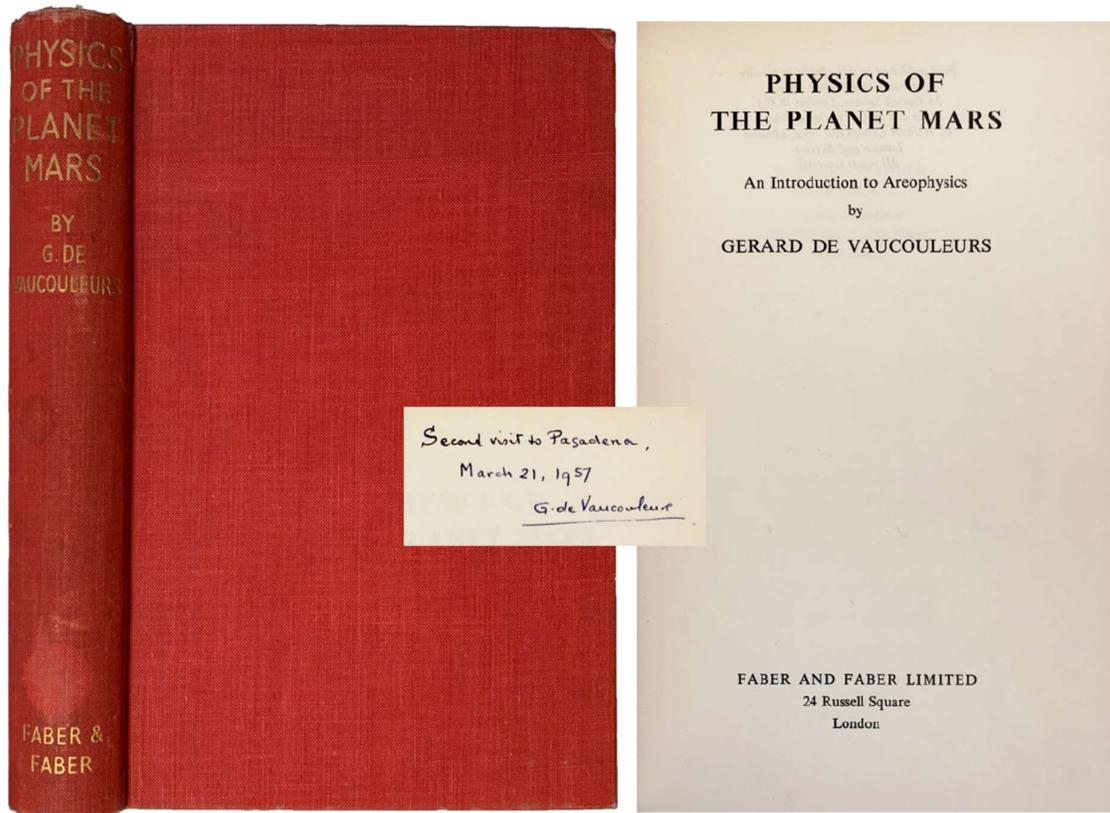
\$ 1,500

FIRST COLLECTED EDITION. Vol. I: Memoirs of the life of Sir Humphry Davy by his brother, John Davy. Vol. II: Early miscellaneous papers, from 1799 to 1805. Vol. III: Researches, chemical and philosophical, chiefly concerning nitrous oxide. Vol. IV: elements of chemical philosophy. Vol. V: Bakerian lectures and miscellaneous papers from 1806 to 1815. Vol. VI: Miscellaneous papers and researches ... from 1815 to 1826. Vol. VII: Discourses delivered before the Royal Society, Elements of Agricultural chemistry, Part I. Vol. VIII: Elements of Agricultural chemistry, Part II. Vol. IX: Salmonia, or, days of fly-fishing..., Consolation of travel, or, the last days of a philosopher.

Sir Humphry Davy, the eminent British chemist, is best-known for his invention in 1815 of the miner's safety lamp and was responsible for many discoveries in electrochemistry (a term he coined) and discovered the elements sodium and potassium (among others). Includes the life of the author.

PROVENANCE: William Charles Henry (1804-1892), physician and chemist – [George Ellery Hale] – Carnegie Institution, Mount Wilson Observatory, Pasadena.

☼ Partington IV, 36; Zeitlinger 964-965.

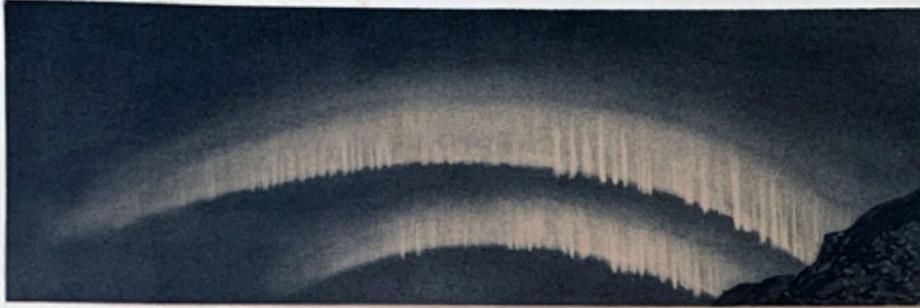


Inscribed by the Author

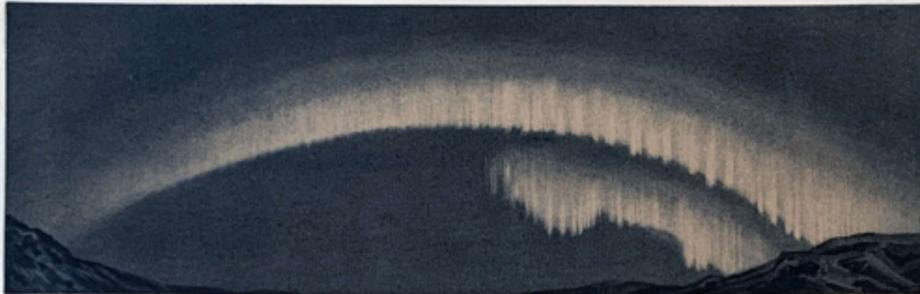
62. **DE VAUCOULEURS, Gérard** (1918-1995). *Physics of the Planet Mars; an introduction to areophysics*. London: Faber and Faber, 1954. ¶ 8vo. 365, [1] pp. 9 plates, index. Original gilt-stamped red cloth; rubbed, spine head a bit worn. Embossed stamp of Carnegie Institution [HALE]. INSCRIBED BY THE AUTHOR, "Second visit to Pasadena [Mount Wilson Observatory], March 21, 1957." Good +.

\$ 35

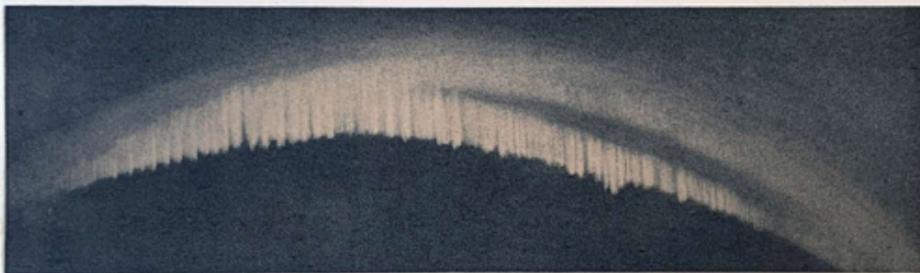
De Vaucouleurs' earliest work had concerned the planet Mars and while at Harvard he used telescope observations from 1909 to 1958 to study the areographic coordinates of features on the surface of Mars.



5^h 50^m
du soir



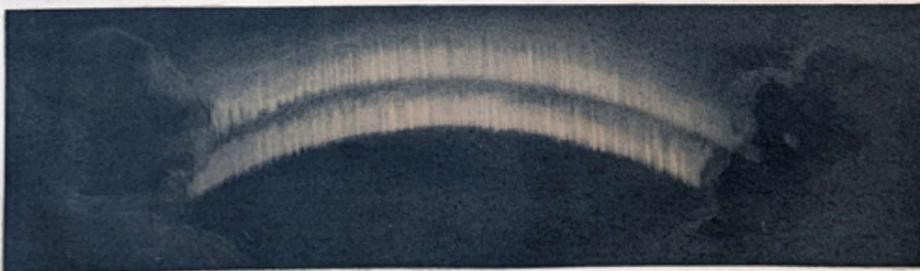
6^h 15^m
du soir



6^h 50^m
du soir



7^h 0^m
du soir



7^h 30^m
du soir

Dessiné par Berzelii.

Imp. par Lemercier, à Paris.

Lith. par Müller.

APPARENCES SUCCESSIVES DE L'AURORE BOREALE DANS LE NORD-NORD-OUEST.

à Boosekop (Finmark), le 12 Janvier 1839

Paris: Arthur Bertrand, éditeur.

Londres: Asher, Mann et C^o 96 Strand.



Extremely Rare

63. **GAIMARD, Joseph Paul** (1793-1858). [AURORA BOREALIS SET OF PLATES] [*Atlas géologique*] *Voyages de la Commission scientifique du Nord, en Scandinavie, en Laponie, au Spitzberg et aux Feroe pendant les Années 1838, 1839 et 1840, sur la Corvette La Recherche commandée par M. Fabvre, Publiés par ordre du Roi sous la Direction de M. Paul Gaimard*. Paris: Arthus Bertrand [1840-55]. ¶ Atlas folio (in sheets). 55 x 35.5 cm. 10 lithographic plates with drawings by Louis Bevalet & lithographed by Müller [and] Himely (engr.), 2 additional maps or charts. With the original printed wrapper chemise. Wrapper is a bit worn. Plates are in excellent condition. Very good. [n.h.] [S13863]

\$ 10,000

First printing, extremely rare, of the unfinished publication of Gaimard expedition, containing what is often missing from the main body of the expedition report (probably due to the size of the plates and their non-bound format?). It seems Rudolph Ackermann (1764-1834), the famous lithographer from London, may have also been involved in the production of these plates as his name is on the plates themselves.

Gaimard, a French naval surgeon and naturalist, built an observatory at Bossekop, Finnmark, where he made his scientific observations of the Aurora Borealis. There were 10 striking lithographs used to illustrate the *Atlas géologique*, among the most

impressive astronomical images produced during the period. Gaimard's expedition of 1838-40, supported by the French King Louis Philippe, "included [an international team of] nine French and ten Scandinavian scientists, historians and painters. The aims and scope of the expedition was to explore almost every aspect of nature, climate and human life in northernmost Europe, including Spitsbergen. ... Among the 26 volumes of text and several illustrations that were issued, however, one can find detailed information on geomagnetic research, astronomical observations, geological field work, and a wide range of other activities undertaken by the crew of Paul Gaimard over the years 1838-1840." - Pippin Aspaas.



"In August 1838 a group of researchers arrived to overwinter here and, amongst other things, study the Northern Lights. They had initially planned to establish a winter base in Hammerfest, but they heard that there was less cloud cover and fog in Altafjord, which would give better conditions for observations of the night sky. They rented accommodation in Madame Klerck's inn at Bossekop farm (later called Nielsen farm in north-east Bossekop towards Skaialuft). To aid their observations they were allowed to build three small log cabins close to the farmyard and on Lille-Berget (on the south side of Nielsenberget).

The beautiful illustrations of the Northern Lights phenomena made by the expedition's artist, Louis Bevalet, made Bossekop famous throughout the whole of Europe. According to the Northern Lights researcher Asgeir Brekke, the lithographs have "inspired many a keen traveller to experience the Northern Lights in their rightful element," based as they were on sketches that were "dashed off

with frostbitten nails in the winter's night."" – Alta Museum, Hans Christian Soborg, "The Northern Lights – from mythology to science in Alta."

Charles Darwin and Joseph Paul Gaimard were at the same time period investigating the occurrences of nature in geology, zoology and botany. These plates show his meteorological studies in the northern lights.

"Gaimard became one of the most widely traveled naturalists in the history of scientific expedition. . . he conducted extensive explorations in Lapland and on Spitsbergen and the Faeroes. With the latter journey (1838-1840) Gaimard's frenetic, albeit highly productive, wandering came to an end. His later years remain a supreme mystery, but he evidently settled in Paris and was fully occupied with the preparation and publication of the official reports of the expeditions to Iceland and to northern Europe. . . . Clearly, Gaimard was devoted as much to the sheer pleasure of travel as to the joy of scientific discovery. His talents as a naturalist were great, and he was assiduous and successful in seeing to completion the official reports of every expedition in which he participated." – DSB, V, pp. 224-5.



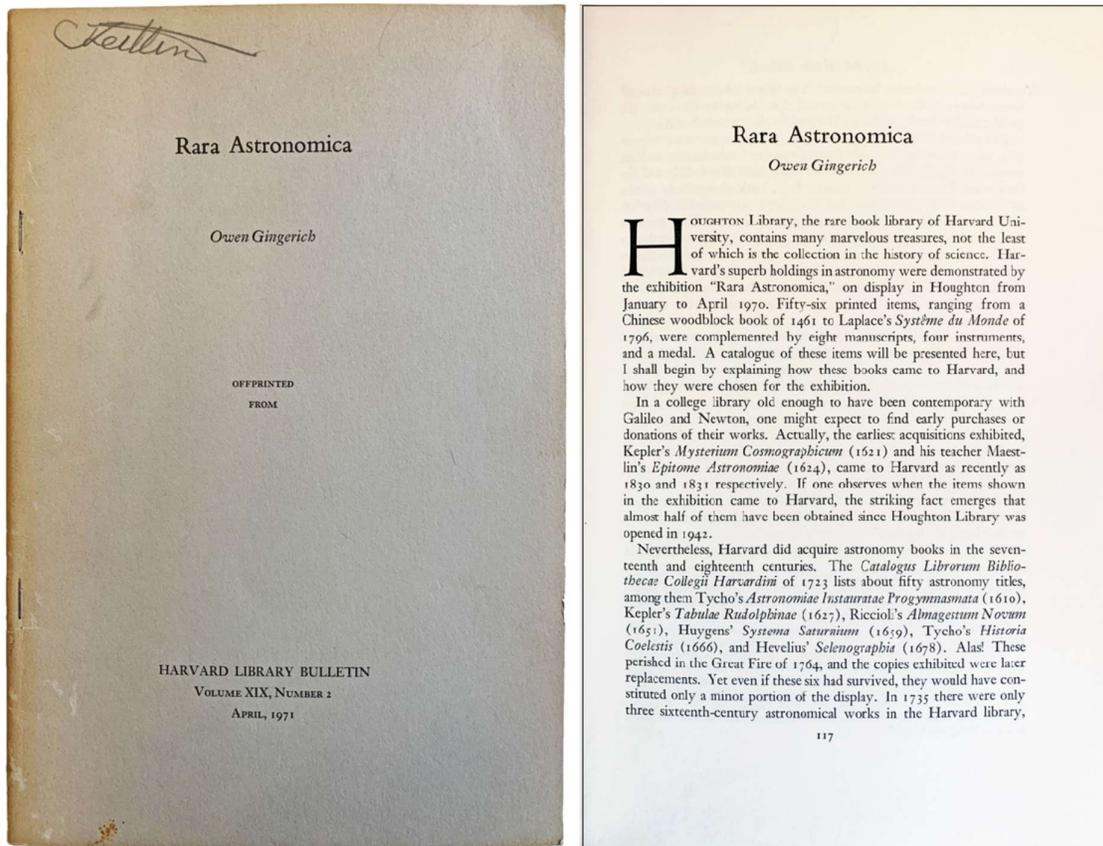
The Aurora Borealis are a result of streams of high energy particles from our sun (the solar wind) impinging upon the earth's magnetosphere and ionizing elements such as oxygen and nitrogen. Oxygen emits either a greenish-yellow light (the most familiar color of the aurora) or a reddish light; nitrogen generally emits a blue color.

The oxygen and nitrogen molecules also emit ultraviolet light, which can only be detected by special cameras on board satellites.

In the early 17th century, the astronomer and scientist Galileo Galilei named the phenomenon the Aurora Borealis. Aurora was the Roman goddess of dawn, and Boreas was the Greek name for the north wind.

Insights from studying the Aurora Borealis are profound, and even involve models of climate change: "A modern geophysicist will often use past observations of Northern Lights in order to test models of solar activity over the centuries. A period when the aurora displays are frequent is as sign of a high level of solar activity in the same period. Reversely, a period when the aurora displays are rare means the solar activity is low. This modern scientific activity is in fact related to the current debate of climate change, that is, how great is the influence of human activity and how great is the influence of a natural factor like the sun upon the changing global temperature. In this debate, sources from an age before large-scale carbon emissions had started become highly relevant, from a scientific point of view." - Pippin Aspaas, Research Fellow, Department of History, University of Tromsø. "From the *Expedition Litteraria* of Maximilian Hell (1768-1770) to *La Recherche* of Paul Gaimard (1838-1840): Northernmost Fennoscandia in the encyclopaedic tradition of science."

Joseph Paul Gaimard (31 January 1793 - 10 December 1858) was a French naval surgeon and naturalist. Gaimard was born at Saint-Zacharie on January 31, 1793. He studied medicine at the naval medical school in Toulon, subsequently earning his qualifications as a naval surgeon. Along with Jean Rene Constant Quoy, he served as naturalist on the ships *L'Uranie* under Louis de Freycinet 1817-1820, and *L'Astrolabe* under Jules Dumont d'Urville 1826-1829. During this voyage they discovered the now extinct giant skink of Tonga, *Tachygia microlepis*. From his studies of cholera in Europe, he co-authored *Du cholera-morbus en Russie, en Prusse et en Autriche, pendant les années 1831-1832* (Cholera morbus in Russia, Prussia and Austria in the years 1831 & 1832). He was the scientific leader on *La Recherche* (1835 - 1836) during its expedition to the Arctic Sea, making voyages to coastal Iceland and Greenland from 27 April to 13 September 1835 and from 21 May to 26 September 1836. Along with exploratory and scientific goals, the crew of the expedition was tasked with searching for Jules de Blosseville, who disappeared aboard the *Lilloise* in Arctic waters a few years earlier. Out of these trips came the 9-volume *Voyage en Islande et au Groenland* (8 text volumes, one of geographical illustrations), which was said at the time to be the definitive study of the islands. From 1838 to 1840, again aboard *La Recherche*, he was the leader of a scientific expedition to Lapland, Spitzbergen and the Faroe Islands.

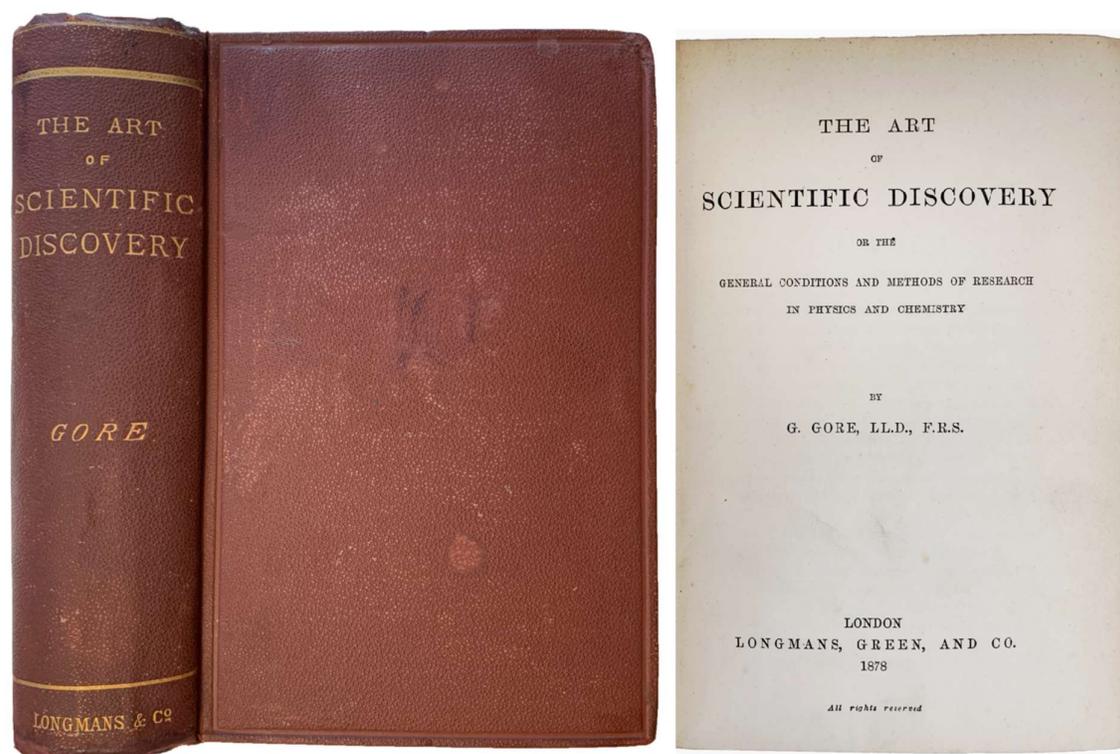


64. **GINGERICH, Owen** (1930-). *Rara Astronomia*. Cambridge: Harvard Library Bulletin, 1971. ¶ Series: *Harvard Library Bulletin*, vol. XIX, no. 2, April 1971. 8vo. pp. 117-139, [1]. 12 illus. on plates. Original printed wrappers. Ownership signature of the bookseller Jake Zeitlin.

\$ 45

A personal list of 69 items contained at Harvard, being printed, manuscript, or scientific instruments, arranged in approximate chronological order, with Gingerich's pithy notes.

Gingerich is professor emeritus of astronomy and of the history of science at Harvard University and a senior astronomer emeritus at the Smithsonian Astrophysical Observatory. [nh]



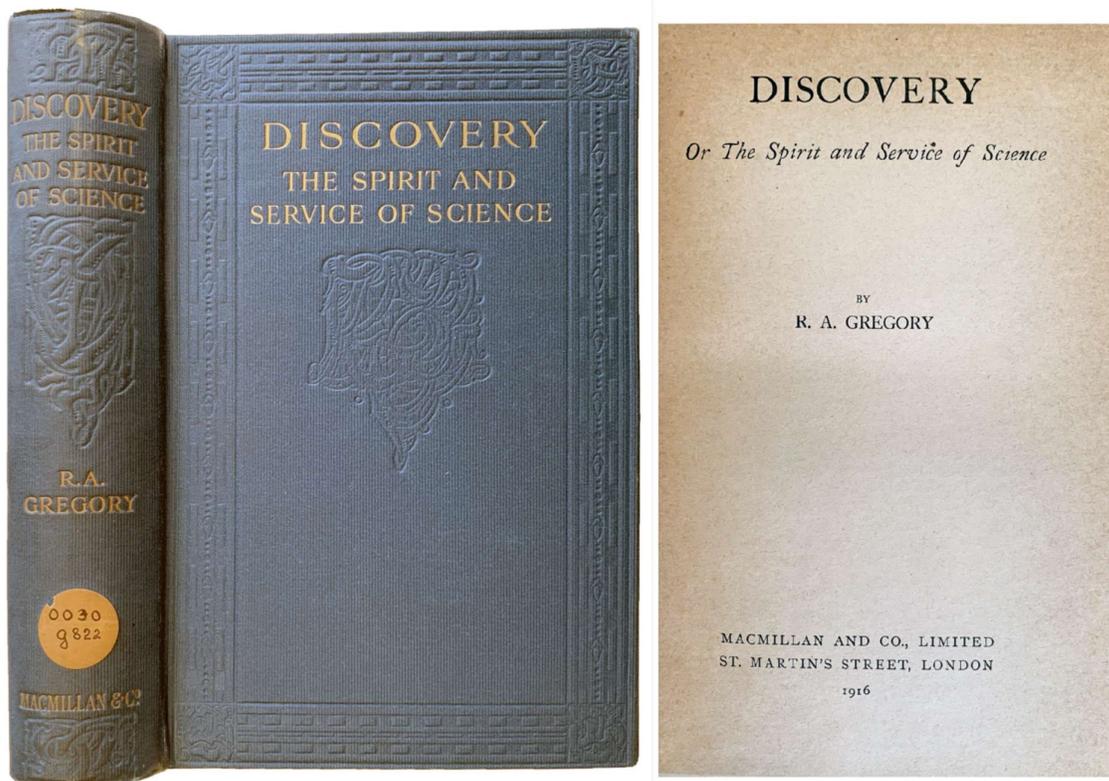
Signed by George E. Hale

65. **GORE, George**, LL.D., F.R.S. (1826-1909). *The Art of Scientific Discovery; or, The general conditions and methods of research in physics and chemistry*. London: Longmans, Green, 1878. ¶ Small 8vo. xx, 648, 4, 12 pp. Index, ads; some foxing, a couple of pencil marginalia. Original blind- and gilt-stamped maroon cloth; corners & spine tips refreshed with kozo. Embossed stamp of Carnegie Institution [HALE]. INSCRIBED BY THE AUTHOR "To Dr. Francis Wrightson from the author; ownership inscription by George E. Hale, May 1915. Mount Wilson bookplate. Very good.

\$ 125

This unusual work describes and makes an analysis of various forms of discovery in science. He discusses errors and fallacy of judgement, trustworthiness in scientific research, probability, personal preparation, the value of study, necessity of imaginative power, working conditions, methods of observation, "Discovery by means of calculations based upon known truths."

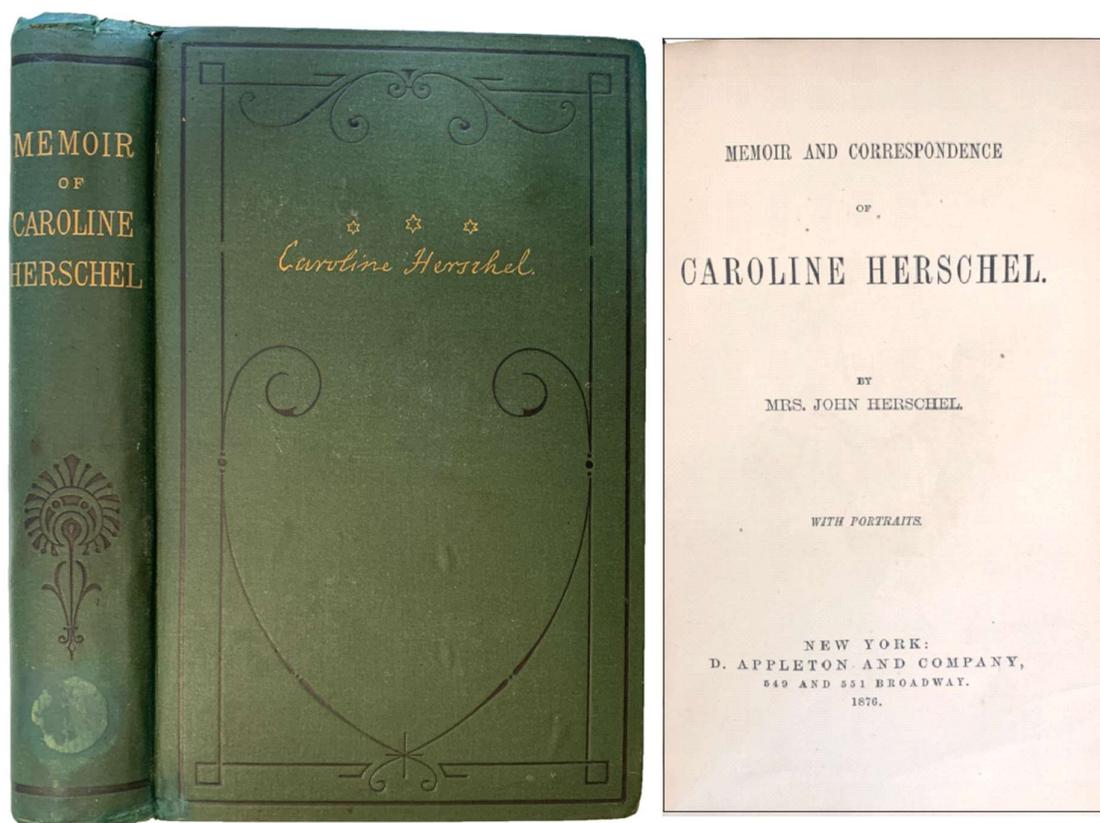
George Gore, LL.D., F.R.S. Born at Bristol; entirely self-educated after the age of twelve; elected Fellow of the Royal Society, 1865; LL.D. of Edinburgh, 1877; chief subjects electro-chemistry, electro-metallurgy, and chemistry.



66. **GREGORY, R. A. [Richard Arman, Sir]** (1864-1952). *Discovery; or, The spirit and service of science*. New York: Macmillan, 1916. ¶ 8vo. viii, [4], 340 pp. 8 plates, index; title browned. Original blind- and gilt-stamped blue cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 30

Gregory was professor of astronomy at Queen's College, London, and wrote textbooks on astronomy, chemistry, hygiene, physics and other scientific subjects. Gregory was elected by the old students of the Royal College of Science to be president of the Royal College of Science Association of Imperial College London, and served from 1919 until 1922. He was a Fellow of the Royal Society.

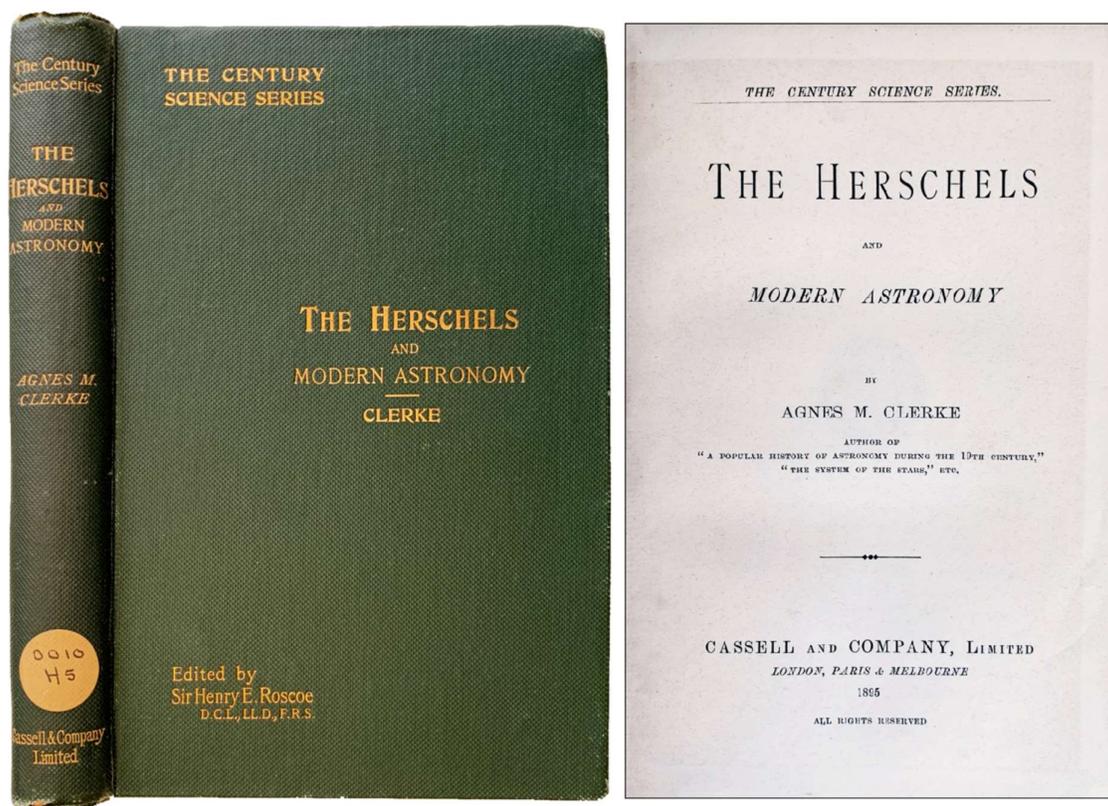


67. **HERSCHEL, Caroline Lucretia** (1750-1848); **Lady John [Margaret Brodie] HERSCHEL** (editor) (1810-1884). *Memoir and Correspondence of Caroline Herschel*. New York: D. Appleton, 1876. ¶ Large 12mo. xii, 355, [1], [4] pp. 3 plates (including frontis.), index, ads. Original black- and gilt-stamped dark green cloth; rubbed, spine ends frayed, paper label removed. Embossed stamp of Carnegie Institution [HALE]. Very good.

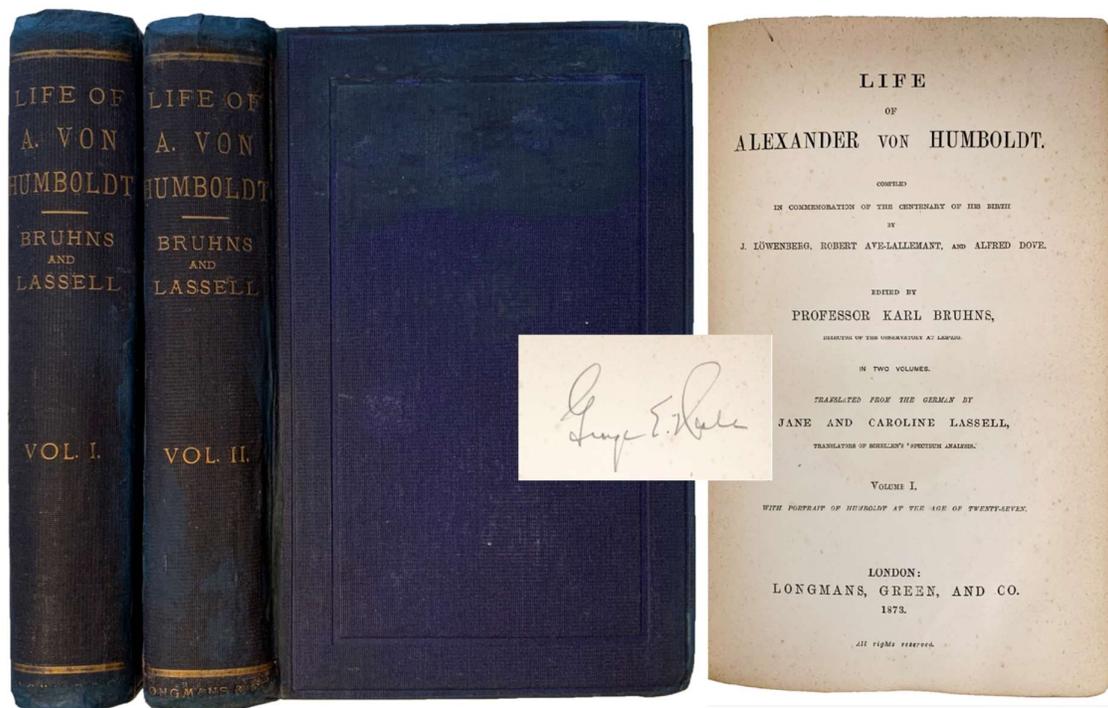
\$ 125

First American edition, issued the same year as the British edition. Lady Herschel, the wife of Sir John Herschel, compiled this work with his support:

“Now, my dearest aunt, you must let me make an earnest petition to you, and that is, that you will go on with your memoir until you leave England and take up your residence in Hanover. How can I tell you how much my heart is set upon the accomplishment of this work?... You know you cannot be idle while you live. But indeed, if I could tell you the influence which a short account by a stranger of your labours with your dear Brother had upon me when a child, and of my choosing you (then so unknown to me) as my guiding star and example, you would understand how the possession of such a record by your own hand would make me almost believe in auguries and presentiments, and perhaps inspire some future generations more worthily, as the record would be more genuine.” Sir John Herschel (1792-1871), August 9th 1841.



68. [HERSCHEL] CLERKE, Agnes M. (1842-1907). *The Herschels and Modern Astronomy*. London: Cassell and Co., 1895. ¶ Series: The Century Science Series. Small 8vo. vi, [2], [9]-224, [16] pp. Frontispiece portrait, 2 plates, index, ads. Original gilt-stamped green cloth; extremities rubbed, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Early book-label of William Ingall. \$ 50

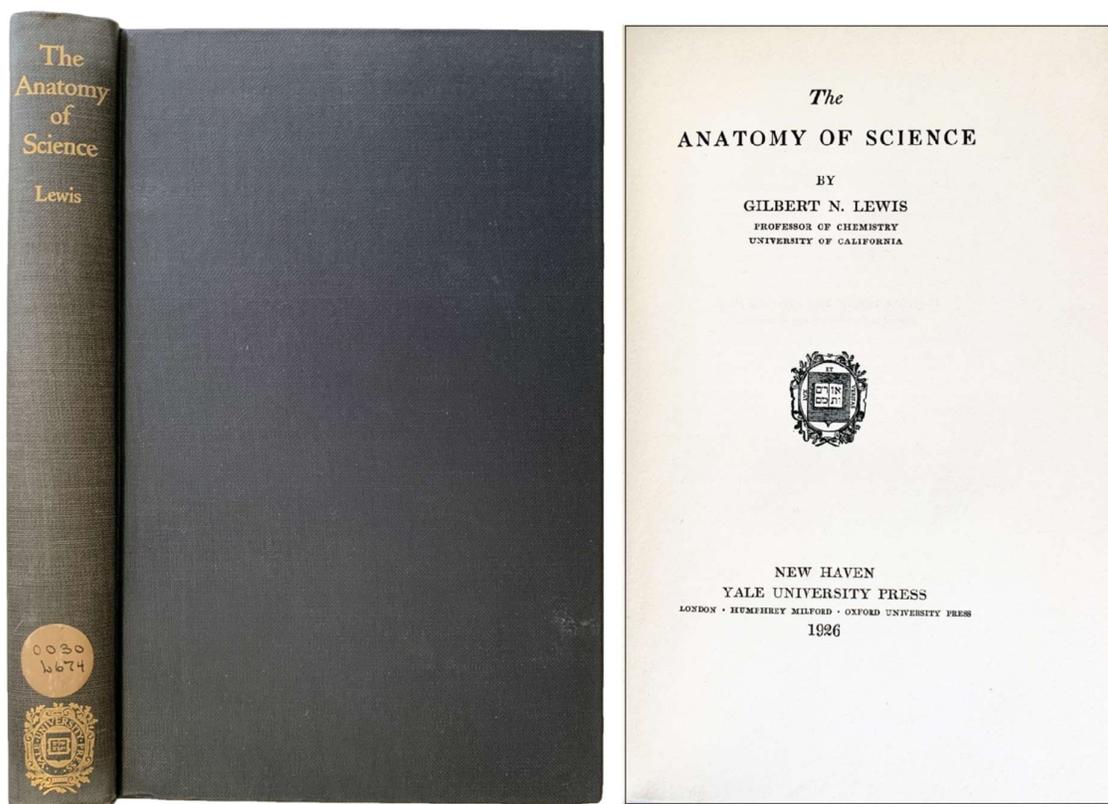


Twice Signed by George E. Hale

69. [HUMBOLDT, Alexander von (1769-1859)] **Professor Karl BRUHNS** (editor) (1830-1881). *Life of Alexander von Humboldt. Compiled in commemoration of the Centenary of his birth by J. Löwenberg, Robert Ave-Lallemant, and Alfred Dove. Translated from the German by Jane and Caroline Lassell.* London: Longmans, Green, 1873. ¶ 2 volumes. 8vo. xxiii, 412, 24; vii, [1], 447, [1] pp. Two frontispieces, engr. portrait at age 80, 2 errata notices. index. Pencil notes at rear (vol. II) but not written by Hale. Original blind- and gilt-stamped deep blue cloth; heavily mended with kozo repairs to corners, spine ends, joints. Embossed stamp of Carnegie Institution [HALE]. WITH THE OWNERSHIP SIGNATURES OF GEORGE ELLERY HALE in both volumes. Very good (noting repairs).

\$ 195

Among the first and most significant biographies of the great naturalist and polymath, edited by his contemporary, the astronomer Karl Bruhns.

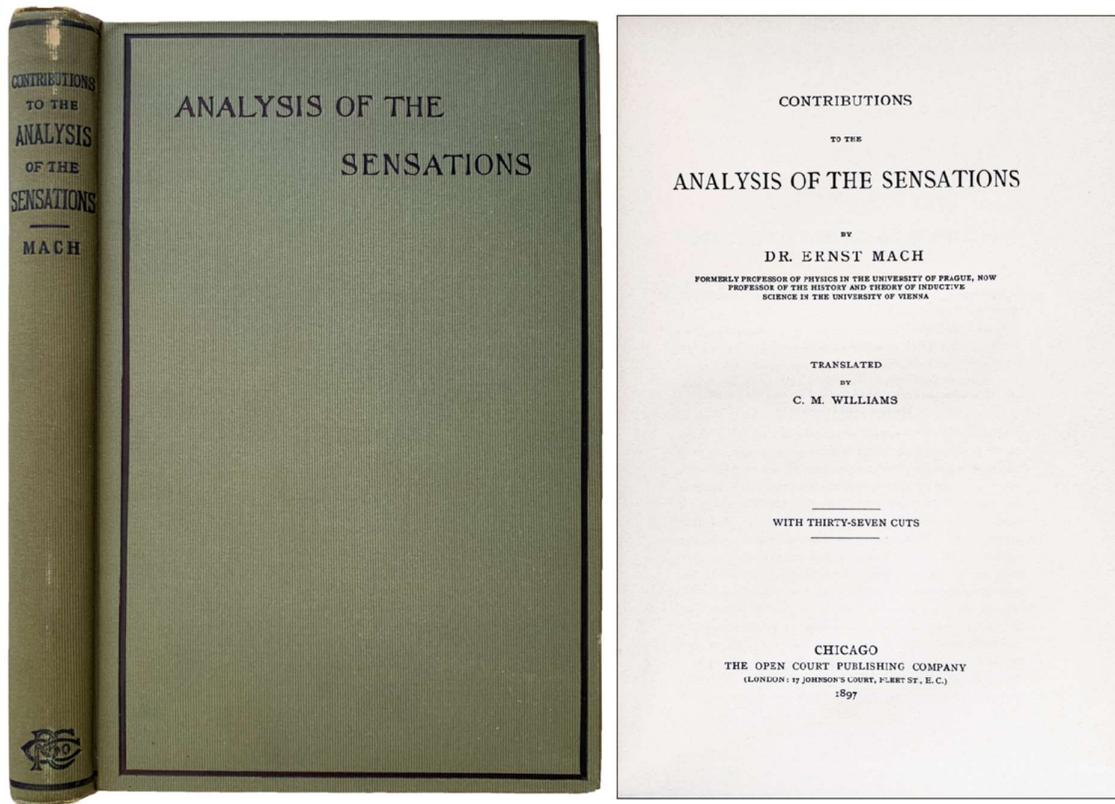


70. **LEWIS, Gilbert N.** (1875-1946). *The Anatomy of Science*. New Haven: Yale University Press, 1926. ¶ Small 8vo. ix, [3], 221, [1] pp. 27 figs. Original black gilt-stamped cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 38

First edition. The author's purpose in this volume is to present “a kind of contemporaneous cross section showing the inner structure of science, “and the book is addressed to those “who are interested not so much in the products of science as in its methods.” – Alex. Findlay, *Nature*, vol. 119, pages 228–229 (1927).

Lewis was Dean and professor of chemistry at Berkeley. He was best known for his discovery of the covalent bond and his concept of electron pair. He was nominated 41 times for the Nobel Prize, but never received one.

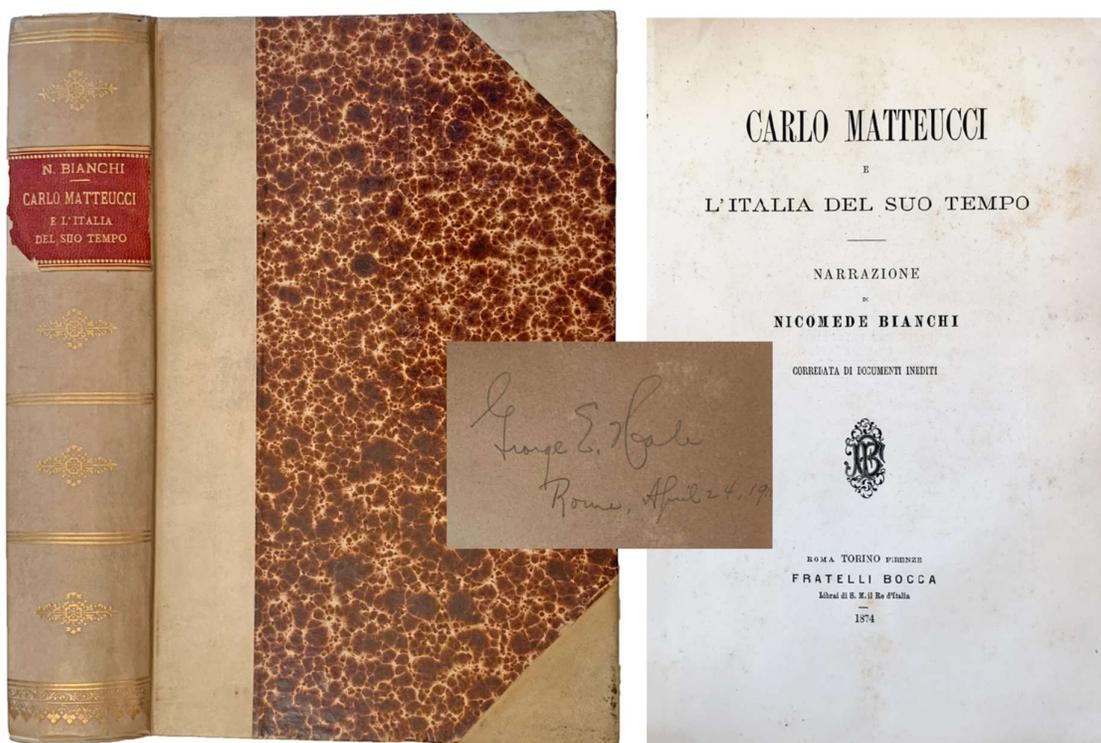


71. **MACH, Ernst** (1838-1916). *Contributions to the Analysis of the Sensations*. Translated by C.M. Williams. Chicago: The Open Court Pub. Co., 1897. ¶ 8vo. viii, [4], 208, [12] pp. 37 figs., index, ads. Original black gilt-stamped olive-green cloth. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 100

First edition in English. “The frequent excursions which I have made into this province have all sprung from the profound conviction that the foundations of science as a whole, and of physics in particular, await their next greatest elucidations from the side of biology, and especially, from the analysis of the sensations.” – Mach, *Analysis of Sensations*, preface to first edition.

“In psychology, he studied the relationship of our sensations to external stimuli. Space, time, color, sound, once the domain of physics, were now also being studied by psychologists and conceived of as not only the stuff of the physical external world but also the elements of our inner experience. Mach was deeply inspired by Gustav Fechner’s psychophysics here. Psychologists today regard him as a founder of Gestalt theory as well as the discoverer of neural inhibition. Importantly, although in the twentieth century he was better known to philosophers for his influence upon physics and the philosophy of physics, it was psychology that was the primary driving force behind his philosophy of science.” – Paul Pojman, “Ernst Mach”, *Stanford Encyclopedia of Philosophy*.



Inscribed by George E. Hale

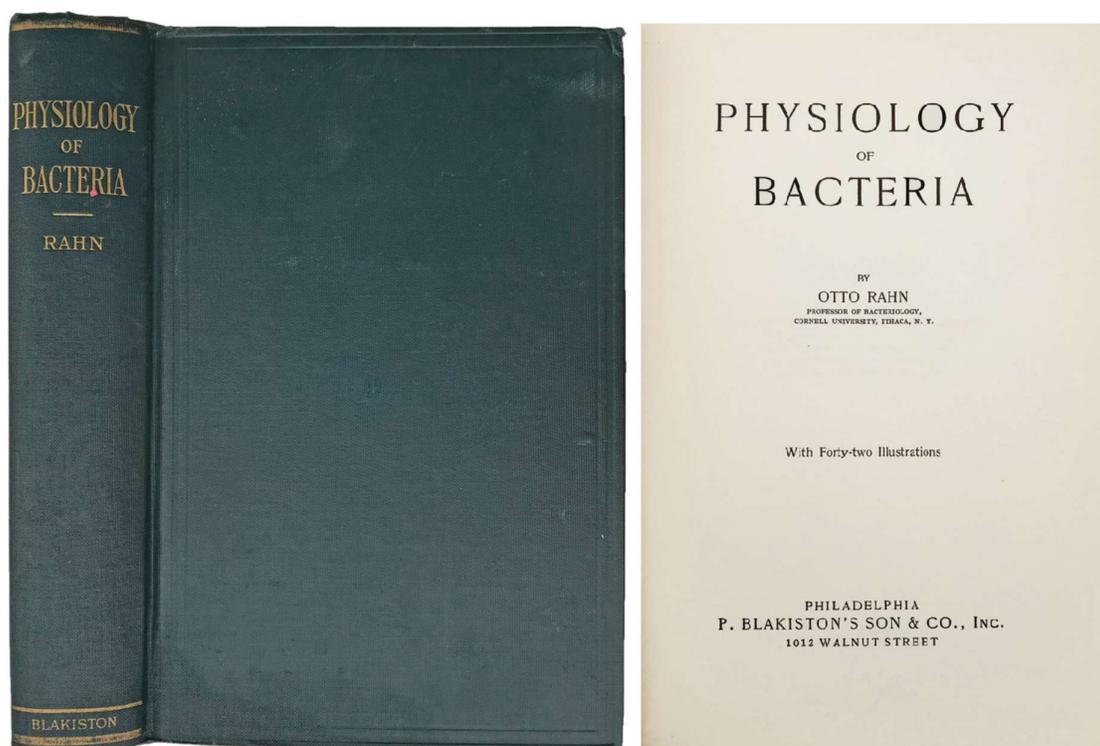
72. [MATTEUCCI, Carlo (1811-1868)] Nicomede BIANCHI (1818-1886). *Carlo Matteucci e l'Italia del suo tempo. Narrazione di Nicomede Bianchi, Corredata di documenti inediti*. Roma, Torino, Firenze: Fratelli Bocca, 1874. ¶ 8vo. XI, [1], 595, [1] pp. Original photographic mounted frontispiece. Early half vellum, marbled board, gilt-stamped spine, red morocco spine title (a bit chipped). Embossed stamp of Carnegie Institution [HALE]. SIGNED BY GEORGE E. HALE, Rome, April 24, 1911. Very good.

\$ 125

Carlo Matteucci was an Italian physicist and neurophysiologist who pioneered in the study of bioelectricity, following the work of Galvani. Bianchi here offers a exhaustive life history of Matteucci, the scientist and citizen.

Grateful to Carlo Matteucci, an illustrious scientist from Romagna who had left him his Di lui papers "out of affectionate friendship", Bianchi published his biography (this work).

DBI, pp. LXXII, 270.



73. **RAHN, Otto** (1881-1957). *Physiology of bacteria*. Philadelphia: P. Blakiston's Son, 1932. ¶ 8vo. xiv, 438 pp. 42 illus., index. Dark green cloth. Very good. Ownership signature of Kenneth J. Silberberg, Lawrence, Kansas. [nh] [S13740]

\$ 25

First edition. “Dr. Otto Rahn served as Professor of Bacteriology at Cornell University from 1927 until 1949. In those 22 years, Dr. Rahn endeared himself to a large group of undergraduate and graduate students. . . . His early interests led him first toward the ministry but later toward mathematics and chemistry. In 1899 he matriculated at the University of Gottingen to major in organic chemistry and he received the degree of Ph.D. cum laude on December 24, 1902.

Young Dr. Rahn accepted a position as assistant in Dairy Science at Gottingen and served there from 1902 to 1906. In addition to his duties as an assistant, Rahn found time to do research on the biochemistry of bacterial growth. When it became evident that his chances of advancing to the rank of instructor were rather poor, he left Gottingen and became

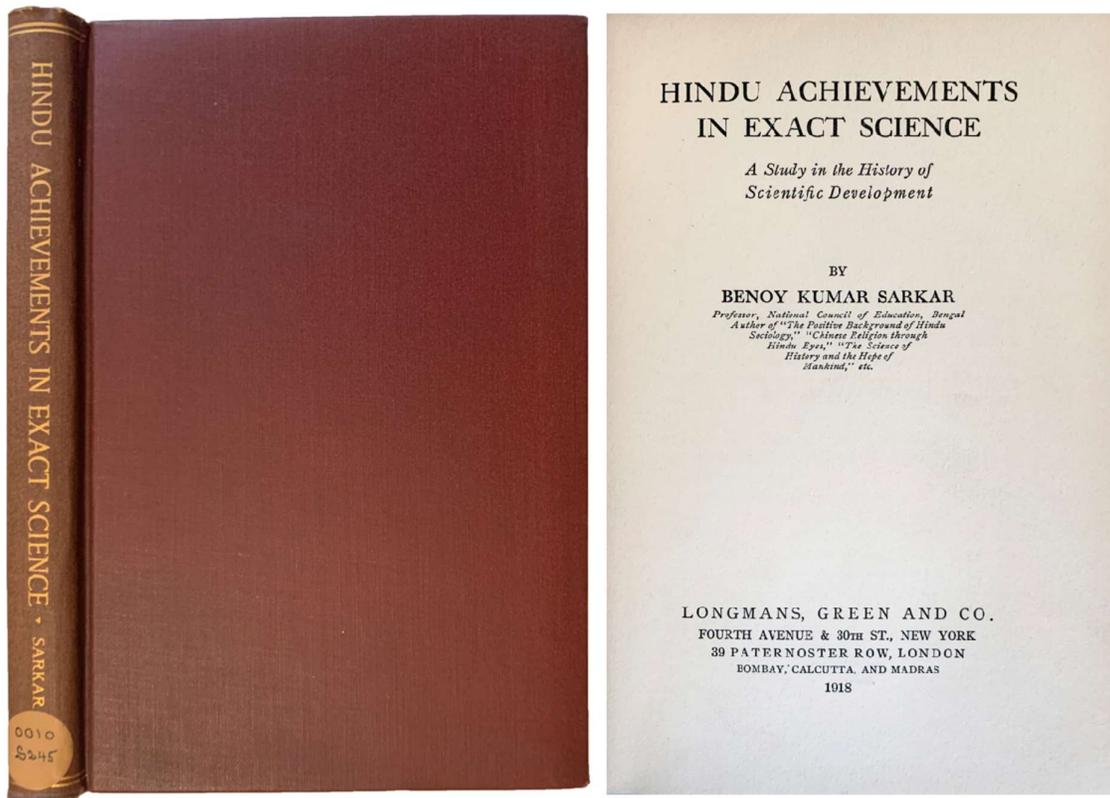
an assistant at the Agricultural Experiment Station at Halle where he remained for one year. During these years as an assistant, Dr. Rahn had corresponded frequently with bacteriologists in the United States. Through this correspondence and the reputation gained from publications in scientific journals, Rahn was offered an assistant professorship in bacteriology at Michigan State College which he readily accepted. From 1907 to 1912, Dr. Rahn divided his time between teaching and research. He and his assistant, Miss Belle Farrand, worked together on many bacteriological problems, both fundamental and applied in nature. This partnership became a permanent one on September 4, 1911, when Dr. Rahn and Miss Farrand were married in Lansing, Michigan. In 1912, Dr. Rahn left Michigan to accept a position at the University of Illinois, where during the next two years he built up a strong Department of Bacteriology. In 1914, Dr. Rahn took his family to Germany to meet his relatives from whom he had been separated for seven years. . . . His work on the physical properties of dairy products so interested American investigators that in 1926 he received an invitation from a group of American universities to lecture in this country. He spent nearly a year lecturing in the United States. Cornell University was one of the inviting institutions and he so impressed the staff in Dairy Industry that in 1927, after his return to Germany, he was invited to become Professor of Bacteriology at Cornell University. At Cornell, he became an outstanding teacher and his laboratory in bacterial physiology was a highlight in the Cornell teaching program. He studied biological radiation, fermentations, and the growth and aging of cells. . . ." [web-source].



74. **ROWAN-ROBINSON, Michael** (1942-). *Das Flüstern des Urknalls; Die verschlüsselten Botschaften vom Anfang des Universums*. Heidelberg: Spektrum Akademischer Verlag, 1994. ¶ Small 8vo. [viii], 288 pp. Figs., index. Cloth, dust-jacket. Fine. ISBN: 3860251112

\$ 8

“The Whisper of the Big Bang; The Encrypted Messages from the Beginning of the Universe.” Rowan-Robinson was awarded the 2008 Hoyle Medal by the Institute of Physics for his research in infrared and submillimetre astronomy, and observational cosmology.



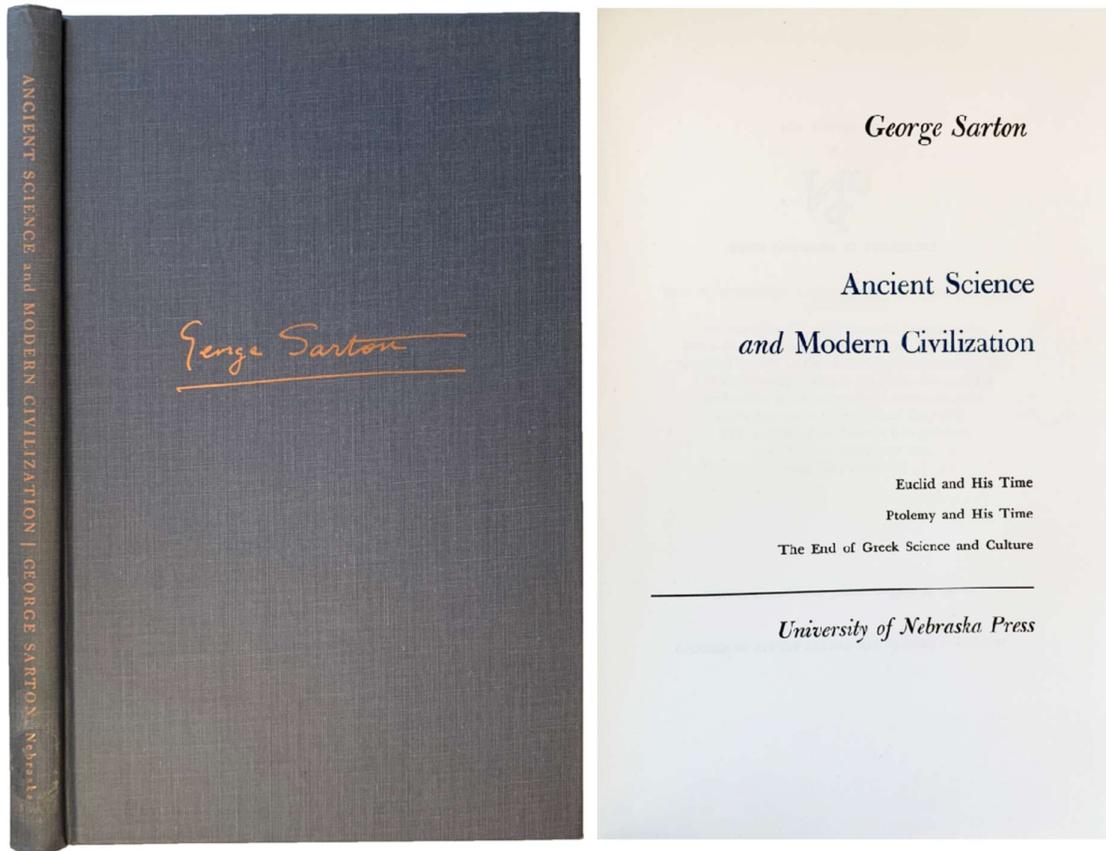
75. **SARKAR, Benoy Kumar** (1887–1949). *Hindu Achievements in Exact Science; a study in the history of scientific development*. New York: Longmans, Green and Co., 1918. ¶ Small 8vo. xiii, [1], 82, [2] pp. Index. Original gilt-stamped maroon cloth; spine somewhat faded, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 15

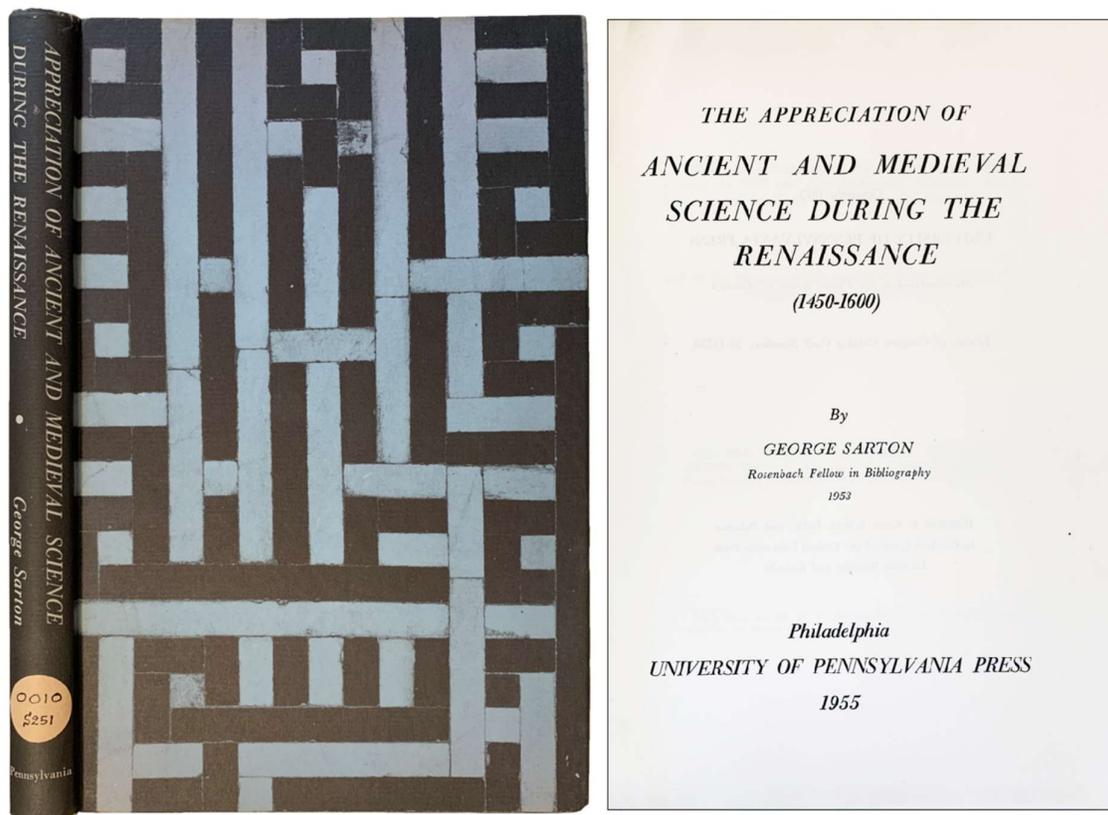
First edition. This book, arranged in 16 chapters, offers the achievements of Hindu achievement in 16 fields, including: various aspects of mathematics, astronomy, physics, chemistry, metallurgy, chemistry, medicine, surgery, anatomy, embryology, and natural sciences.

Sarkar founded several institutes in Calcutta, including the Bengali Institute of Sociology, Bengali Asia Academy, Bengali Dante Society, and Bengali Institute of American Culture.

See: Sen, Satadru, "Benoy Kumar Sarkar. Restoring the nation to the world", Taylor and Francis: London, 2015.



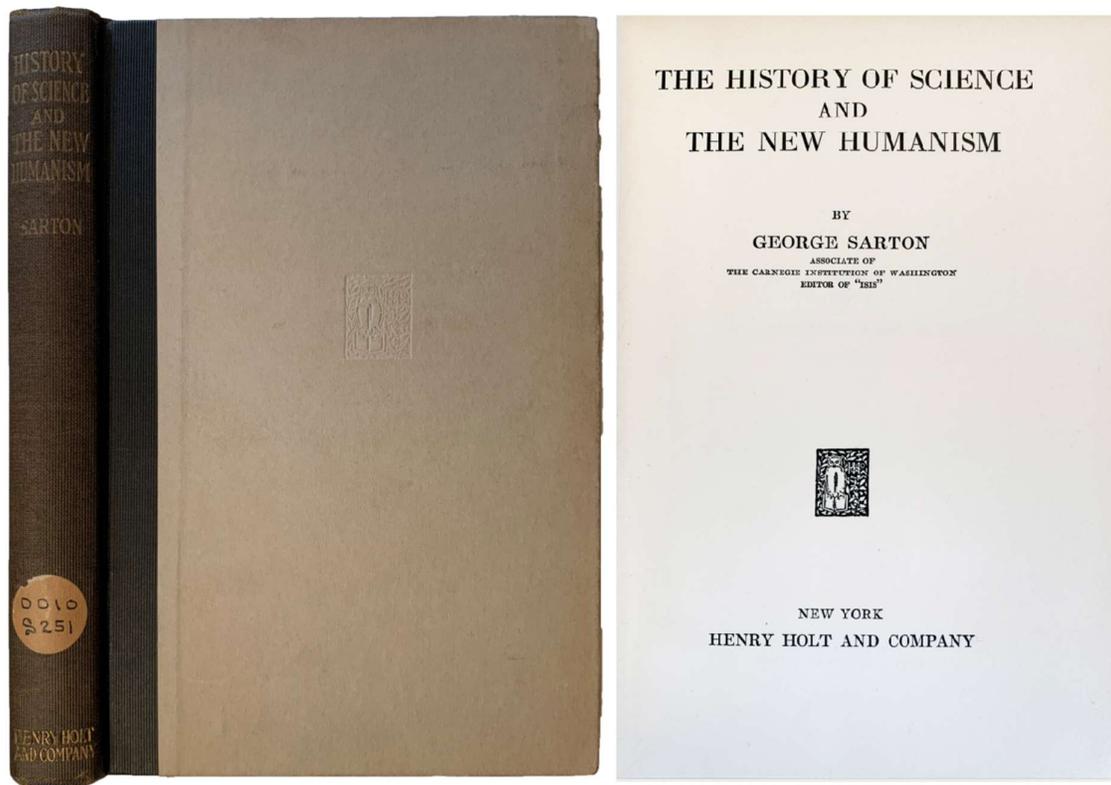
76. **SARTON, George** (1884-1956). *Ancient Science and Modern Civilization. Euclid and his time; Ptolemy and his time; the end of Greek science and culture.* [Omaha]: University of Nebraska Press, 1954. ¶ 8vo. [viii], 111, [1] pp. Gray gilt-stamped cloth. Embossed stamp of Carnegie Institution [HALE]. Very good. \$ 5



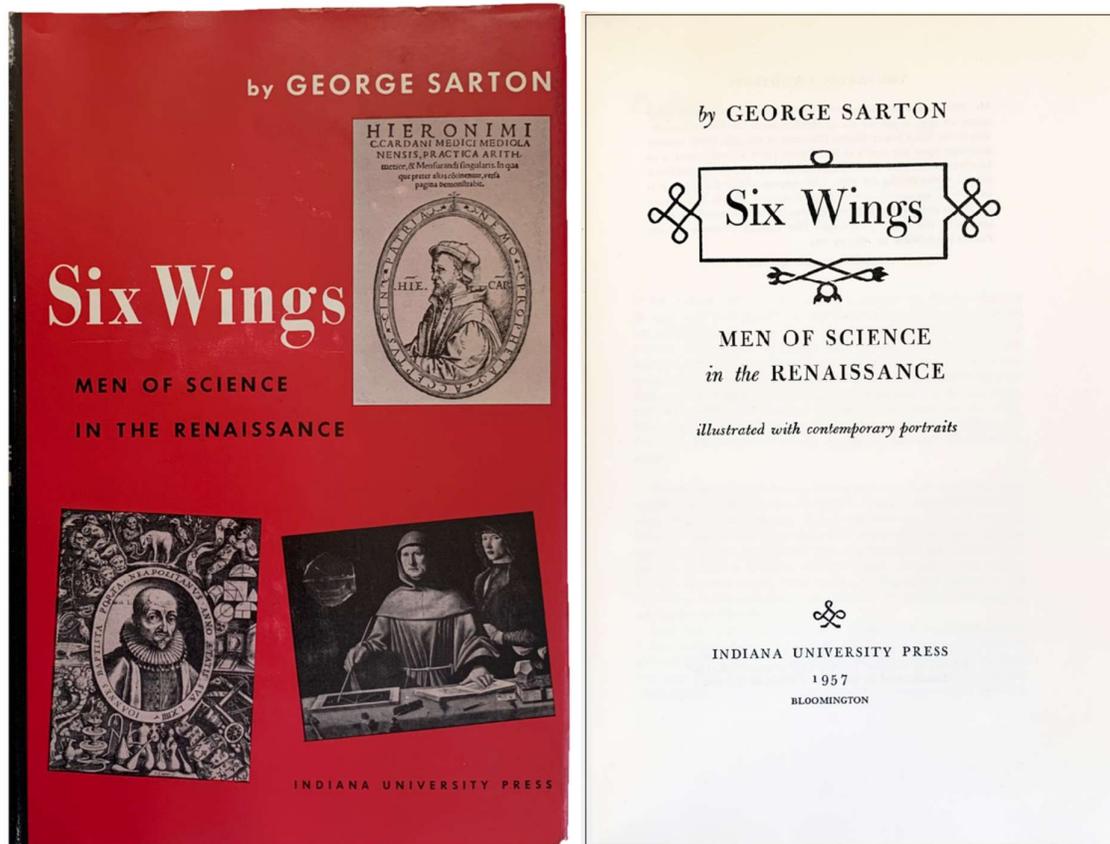
77. **SARTON, George** (1884-1956). *The Appreciation of Ancient and Medieval Science during the Renaissance (1450-1600)*. Philadelphia: University of Pennsylvania Press, 1955. ¶ Series: The A.S.W. Rosenbach Fellowship in Bibliography. 8vo. xvii, [1], 233, [1] pp. Decorative figs., index. Original decorative boards, tissue jacket; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 20

First printing (hardbound issue). An underappreciated work as in this text Sarton addresses the bibliographic history of early science, naming original sources with extensive commentary. Sarton writes: "Our problem is thus to consider more closely Renaissance awareness and knowledge of the old scientific classics as revealed by the incunabula and the sixteenth-century books." The book is divided into three major sections: Medicine; Natural History; Mathematics and Astronomy.



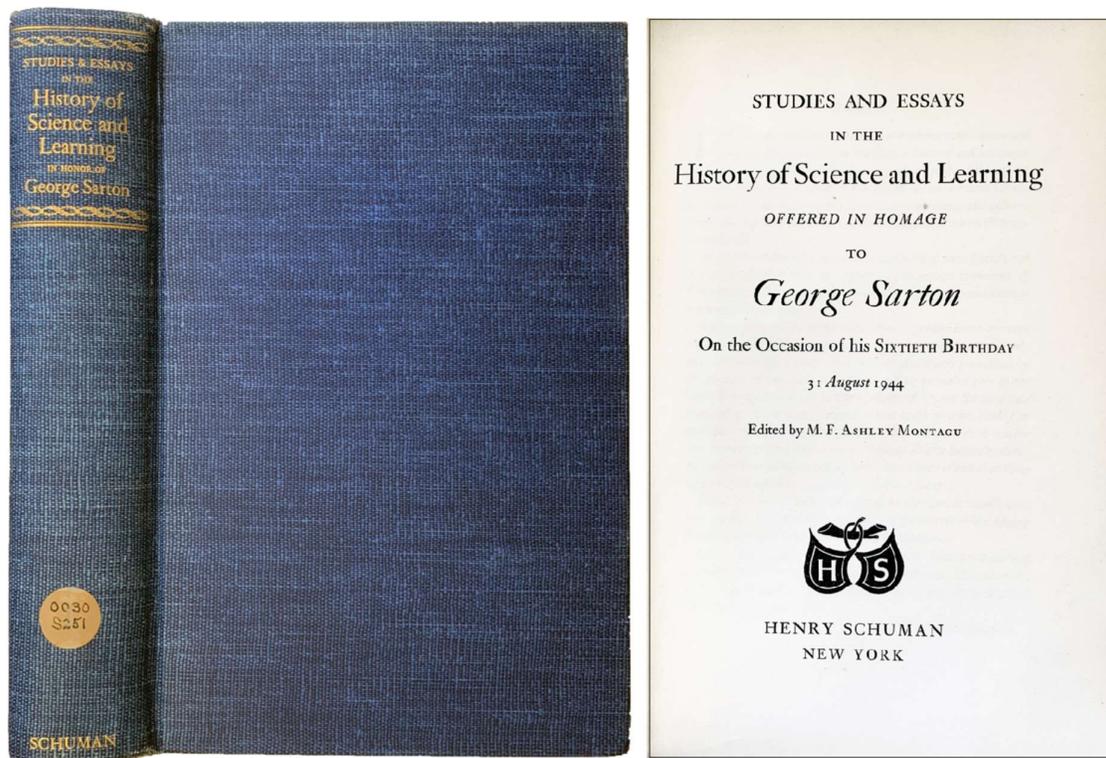
78. **SARTON, George** (1884-1956). *The History of Science and the New Humanism*. New York: Henry Holt, 1931. ¶ 8vo. 178 pp. Original quarter gilt-stamped black cloth, boards; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good. \$ 25



79. **SARTON, George** (1884-1956). *Six Wings: Men of Science in the Renaissance. Illustrated with contemporary portraits.* Bloomington: Indiana University Press, 1957. ¶ 8vo. xiv, [2], 318 pp. Illus., index. Cloth, dust-jacket; jacket with light wear, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 7.50

Posthumously published. A broadly reaching book, dealing with all the sciences (and medicine) during the Renaissance. Among those included: Tartaglia, Cardano, Bombelli, Stevin, Brahe, Gilbert, Paracelsus, the early Italian science academies, Biringuccio, Ercker, Agricola, Pare, Plantin, etc.

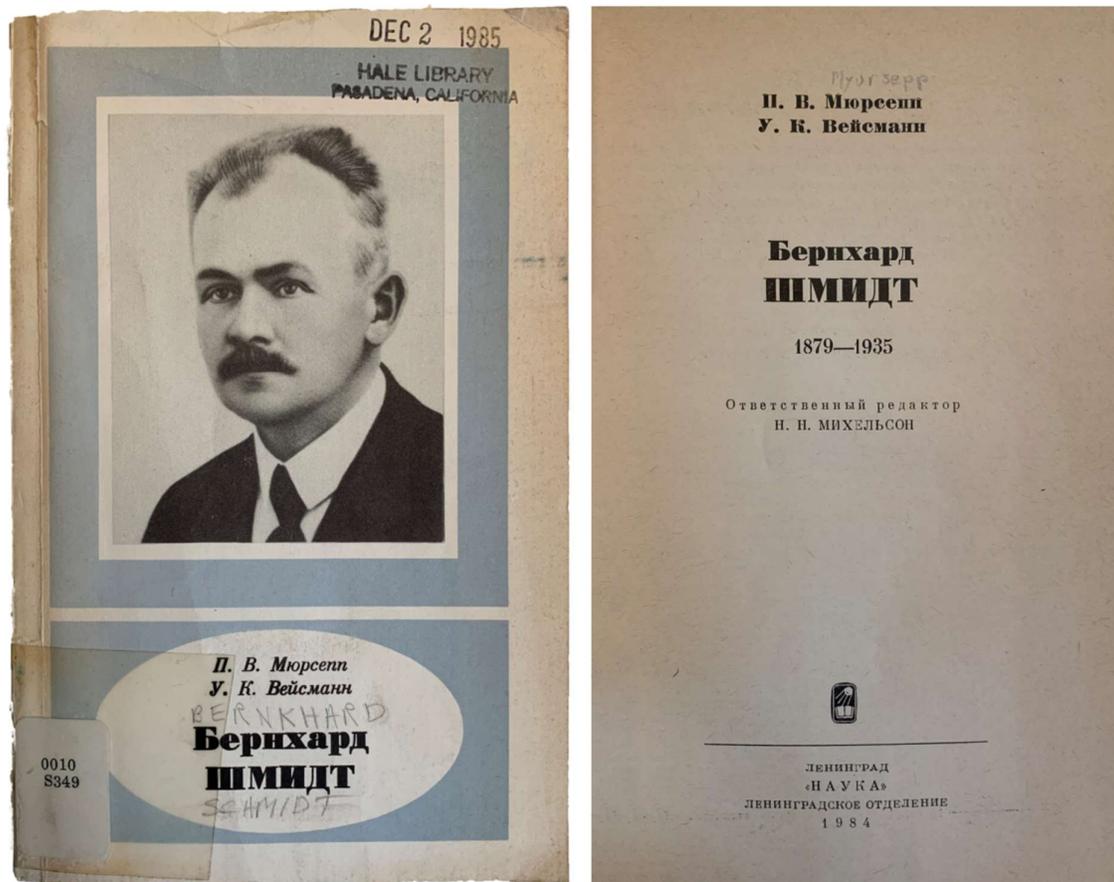


80. [SARTON, George (1884-1956)] MONTAGU, M. F. Ashley (editor) (1905-1999). *Studies and Essays in the History of Science and Learning; offered in homage to George Sarton on the Occasion of his 60th birthday, 31 August 1944*. New York: Henry Schuman, 1944, 1946 [1947]. ¶ 8vo. xiv, 594 pp. 16 plates. Original gilt-stamped blue cloth; some fading to spine, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 30

First edition. Contains 28 essays on the history of medicine and science by various prominent historians or authorities. With May Sarton's "Homage to my Father" that is dated 1946 (rear).

Authors: John B. deC. M. Saunders, Charles Donald O'Malley, Charles Singer, Bern Dibner, F.J. Cole, Harcourt Brown, Conway Zirkle, Richard Harrison Shryock, Raymond Clare Archibald, Agnes Arber, M. F. Ashley Montagu, Giorgio de Santillana, Cauncey D. Leake, Ernst Cassirer, Victor F. Lenzen, Grant McColley, Paul Schrecker, J. Delevsky, Lynn Thorndike, Dorothea Waley Singer, Jose MaMillas Vallicrosa, Otto Neugebauer, Solomon Gandz, Amanda K. Coomaraswamy, James R. Ware, Aubrey Diller, Robert K. Merton, H. Gwynedd Green, and May Sarton.

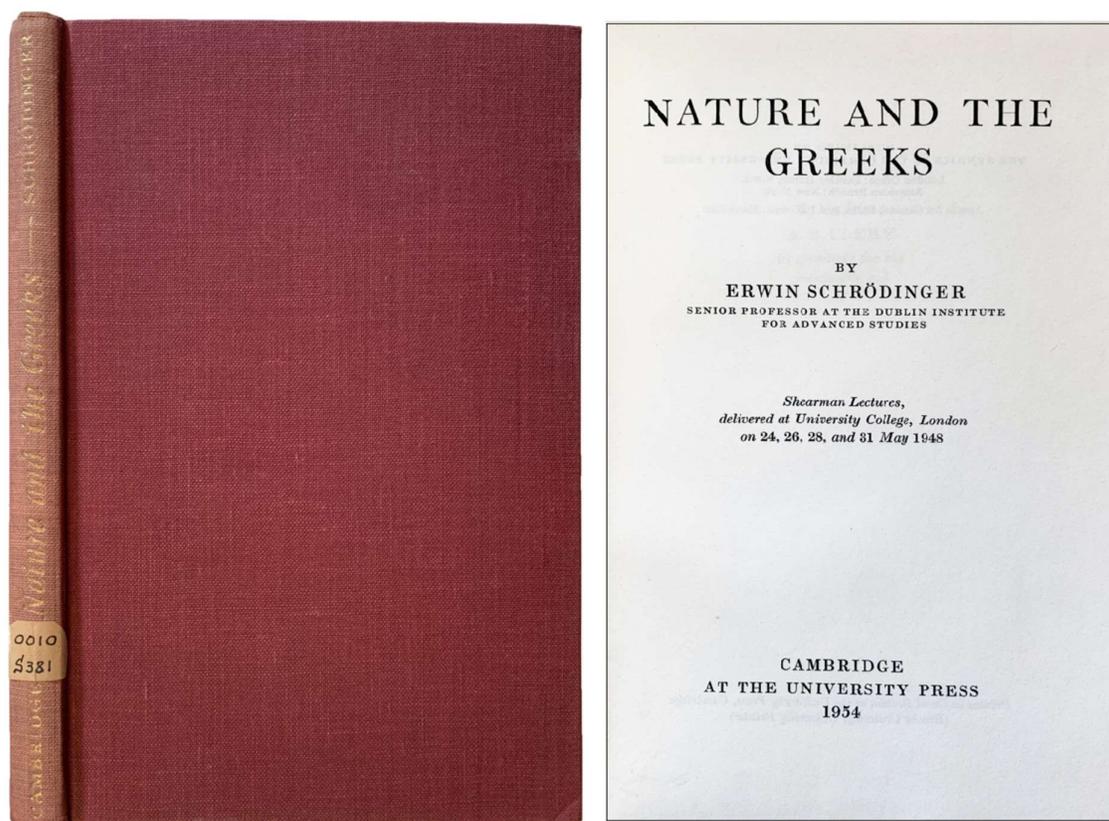


81. **SCHMIDT, Bernhard Woldemar** (1879-1935). П.В. Мюрсепп [P. W. Muirsepp], У.К. Вейсманн [W.K. Weismann]; ответственный редактор Н.Н. Михельсон., Р. V. Miürsepp, Uno Veismann, N. N. Mikhel'son. [*Bernhard Schmidt 1879-1935*] *Бернхард Шмидт*. Leningrad: "Наука", Ленинградское отд-ние, 1984. ¶ [Russian text] Small 8vo. 132, [4] pp. Figs., illus. Original printed wrappers with portrait of Schmidt on cover; cellophane tape applied to covers, with library call-no. Paper browned. Good.

\$ 10

In 1930 "Schmidt invented the Schmidt telescope which corrected for the optical errors of spherical aberration, coma, and astigmatism, making possible for the first time the construction of very large, wide-angled reflective cameras of short exposure time for astronomical research." "Soon after his death, through the advocacy of Walter Baade when he arrived at the Mount Wilson Observatory in the United States, the Schmidt telescope idea took off. An 18" Schmidt was produced in 1936 and then twelve years later, the famous 48" (122 cm) Samuel Oschin telescope Schmidt-telescope was built at Mount Palomar Observatory. This last telescope produced a flood of new observations and information. It proved the brilliance of the Schmidt concept beyond doubt." [Wikip.]. When he was fifteen,

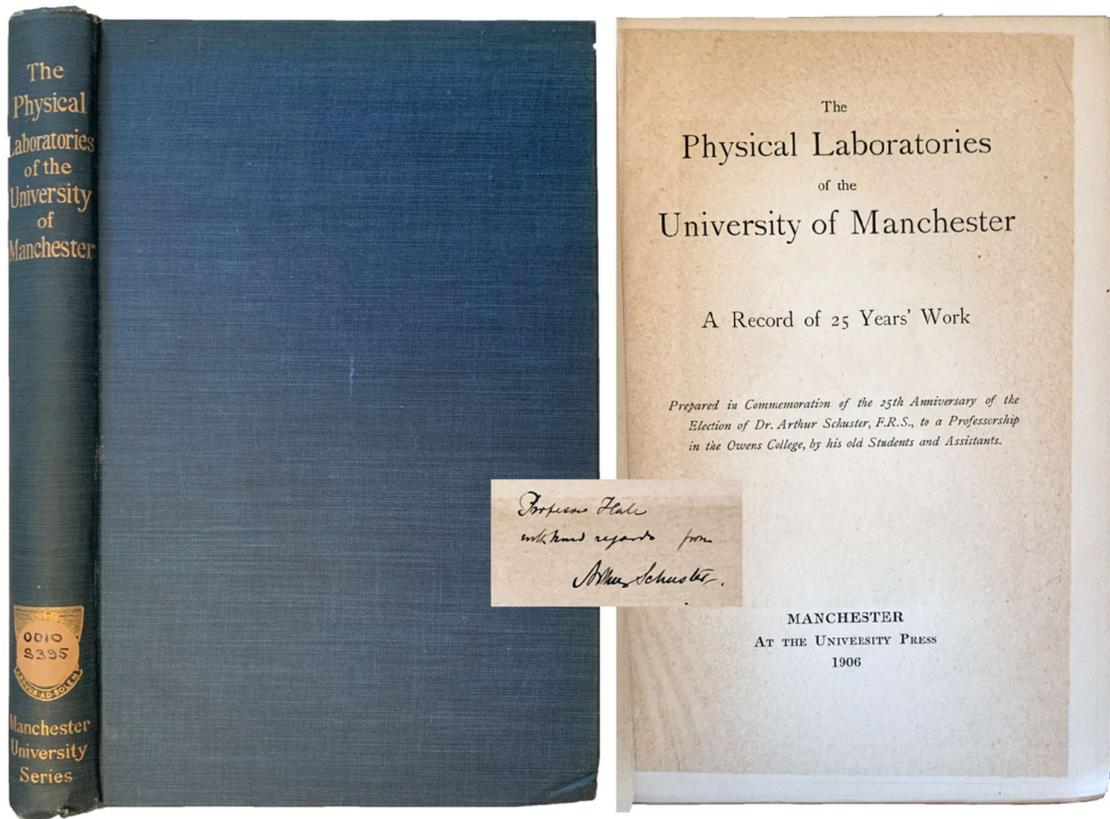
experimenting with gunpowder, he lost two digits of his right hand, yet the physicians who treated him, they amputated his entire right hand.



82. **SCHRÖDINGER, Erwin** (1887-1961). *Nature and the Greeks*. Sherman Lectures. Cambridge: University Press, 1954. ¶ Small 8vo. [viii], 97, [1] pp. Original gilt-stamped brick-red cloth; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 25

First edition. “Of all the physicists of his generation, Schrödinger stands out because of his extraordinary intellectual versatility. He was at home in the philosophy and literature of all the Western languages, and his popular scientific writing in English, which he had learned as a child, is among the best of its kind. His study of ancient Greek science and philosophy, summarized in his *Nature and the Greeks* (1954), gave him both an admiration for the Greek invention of the scientific view of the world and a skepticism toward the relevance of science as a unique tool with which to unravel the ultimate mysteries of human existence.” – *Britannica*.

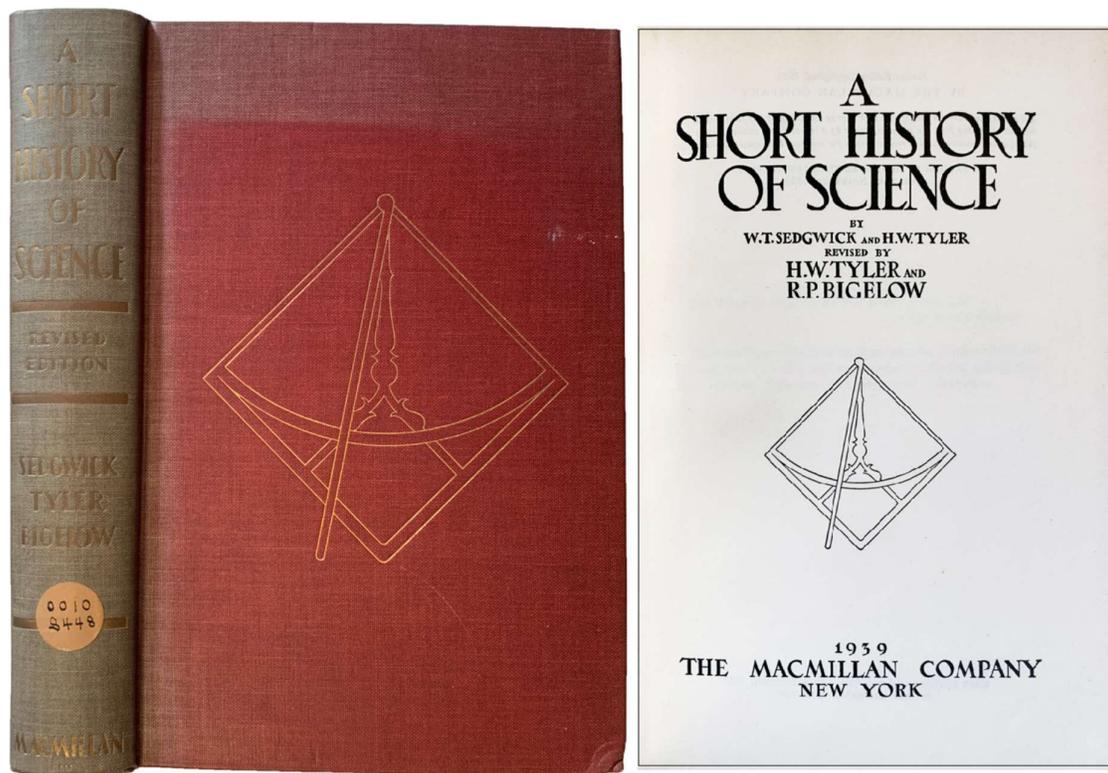


Inscribed to George E. Hale

83. **SCHUSTER, Arthur** (1851-1934); **University of Manchester**. *The Physical Laboratories of the University of Manchester. A record of 25 years' work*. Manchester: At the University Press, 1906. ¶ Series: Publications of the University of Manchester Physical Series, no. 1. 8vo. [viii], [2], 142 pp. Photographic frontispiece portrait, 9 figs., 4 folded plans, offsetting to endsheets. Original dark blue gilt-stamped cloth, t.e.g.; a bit rubbed, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. INSCRIBED BY SCHUSTER TO GEORGE E. HALE "with kind regards". Very good. Scarce.

\$ 75

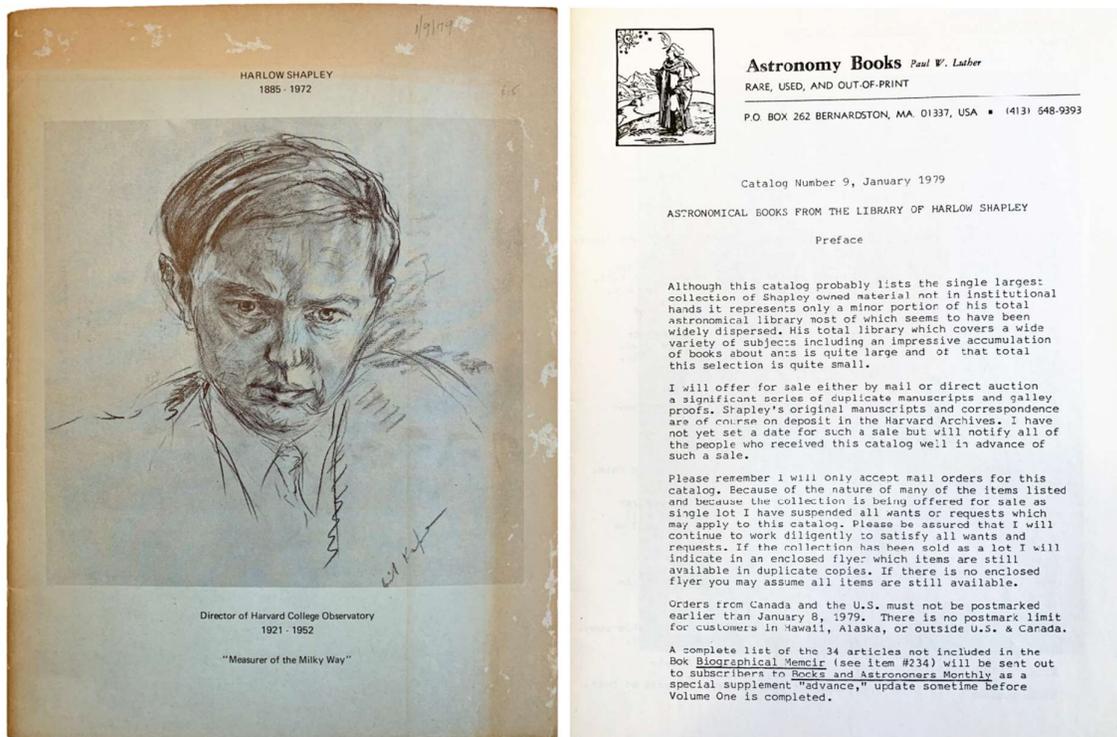
Sir Franz Arthur Friedrich Schuster Kt FRS FRSE was a German-born British physicist known for his work in spectroscopy, electrochemistry, optics, X-radiography and the application of harmonic analysis to physics. Schuster's integral is named after him. He contributed to making the University of Manchester a centre for the study of physics. On his return to Manchester in 1875, he began research on electricity and then went on to spend five years at the Cavendish Laboratory of the University of Cambridge. His status there was quite unofficial; he was neither a student nor a fellow. He worked with both James Clerk Maxwell and Rayleigh. [Wikip.].



84. **SEDGWICK, W.T. [William Thompson]** (1855-1921); **H. W. [Harry Walter] TYLER** (1863-1938). *A Short History of Science. Revised by H. W. Tyler and R.P. Bigelow.* New York: Macmillan, 1939. ¶ 8vo. xxi, [1] 512 pp. Illustrations, index. Original gilt-stamped red cloth; extremities faded, small paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good copy.

\$ 10

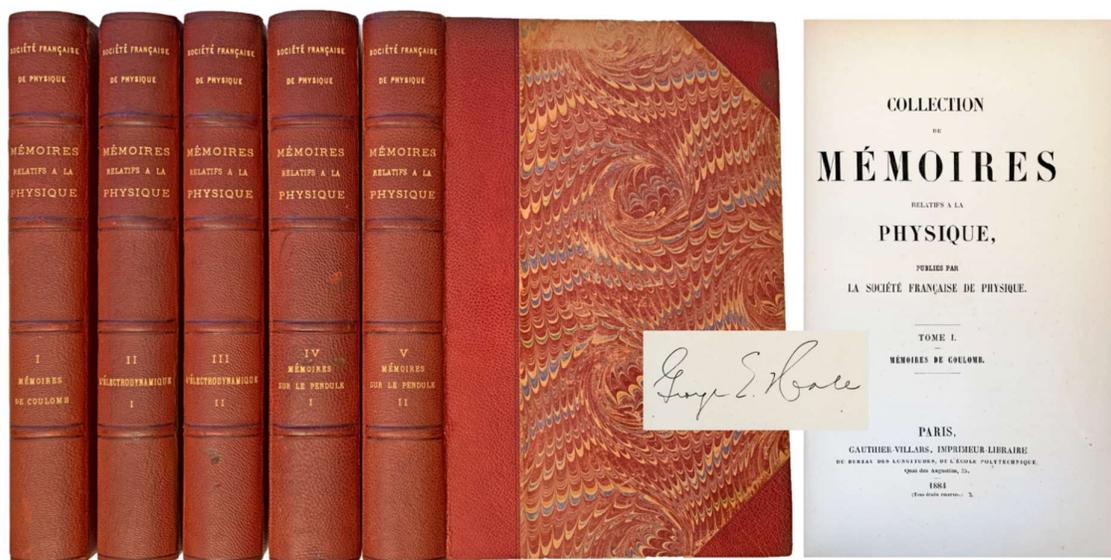
REVISED EDITION. William Thompson Sedgwick was a teacher, epidemiologist, bacteriologist, and a key figure in shaping public health in the United States. He taught biology at MIT. He was president of many scientific and professional organizations during his lifetime, including president of the American Public Health Association in 1915. He was one of three founders of the joint MIT-Harvard School of Public Health in 1913. That being said, he was against women's suffrage and was steadfastly against equality of the sexes, stating, "... would mean a degeneration and degradation of human fibre which would turn back the hands of time a thousand years." – MacAdam, George. "Feminist Revolutionary Principle is Biological Bosh." *The New York Times*. January 18, 1914.



85. [SHAPLEY, Harlow (1885-1972)] LUTHER, Paul. *Harlow Shapley 1885-1972. Director of the Harvard College Observatory 1921-1952. "Measurer of the Milky Way"*. *Astronomy Books catalogue 9*. Bernardston, Mass., Astronomy Books, 1979. ¶ 4to. [ii], 19, [2] pp. Figs. Original pale green-blue printed wrappers with a sketch of Shapley on the cover; silver fish markings along edges of covers. Good. Rare. [nh]

\$ 15

A bookseller's catalogue, in this case, Paul Luther, the noted authority on astronomy books. Here is his catalogue devoted to Shapley's library.



Signed Five Times by George Ellery Hale

86. **La Société Française de Physique.** *Collection de Mémoires relatifs à la Physique, publiés par La Société Française de Physique.* Paris : Gauthier-Villars, 1884-91. ¶ 5 volumes [complete]. 8vo. XVI, 413, [1] ; VII, [1], 412 ; [IV], 403, [1] ; XLII, [2], B-216, 226 ; [IV], 429, [1] pp. Vol. I: 8 plates; II: 1 folding plate, figures; III: Figs.; IV: 7 folding plates, figs.; V: 1 folding plate. Later gilt-stamped half red morocco, raised bands, marbled boards; a few corners are showing, but in good-looking condition. EACH VOLUME IS SIGNED BY GEORGE E. HALE. Very good.

\$ 375

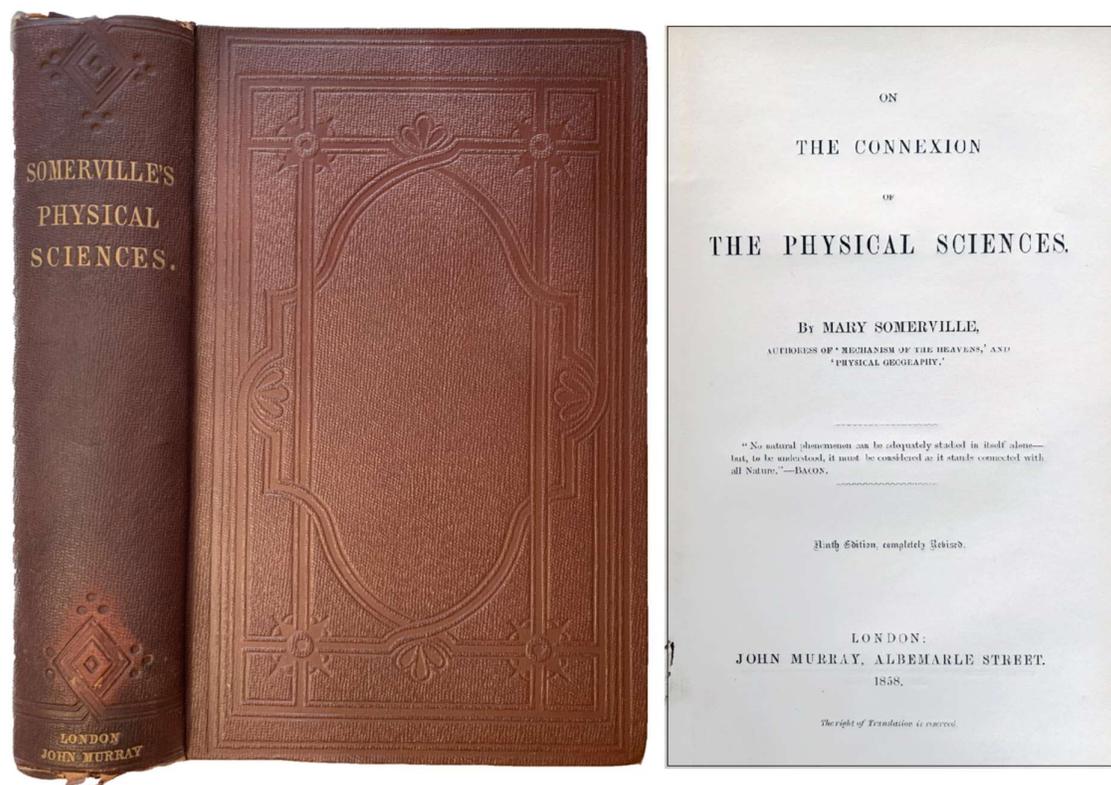
COLLECTED EDITION. This is a gathering made by La Société Française de Physique, of important papers written by the following persons: André-Marie Ampère (1775–1836), François Jean Arago (1776–1853), Peter Barlow (1776–1862), Jean-Baptiste Biot (1774–1862) & Félix Savart (1791–1841) [the Biot–Savart law of electromagnetism], Charles-Augustin de Coulomb (1736–1806), Sir Humphry Davy (1778–1829), Charles-Gaspard de la Rive (1770–1834), Michael Faraday (1791–1867), Augustin-Jean Fresnel (1788–1827), Hans Christian Ørsted (1777–1851), and Wilhelm Eduard Weber (1804–1891).

The society was created in 1873 and this 5-volume series was their first publication on physics and offering to its membership this collection of treatises. The first volume incorporates what was written by Coulomb on electricity and magnetism. Volumes II & III are subject-specific to electrodynamics, with 36 memoirs by leading figures (named above). Ampère is covered with nearly an entire volume. Volumes IV & V are devoted to the pendulum and its history, including a massive chronological bibliography on the pendulum.

I : COULOMB, Charles-Augustin de (1736-1806). *Mémoires de Coulomb*. [14 works]. These are 14 of his memoirs, edited by Alfred Potier (1840-1905).

II-III : *Mémoires sur Electrodynamique*. With 36 memoirs by different persons (largely named above, and particularly Ampère).

IV-V : *Mémoires sur le Pendule*. Includes a lengthy chronological bibliography on the pendulum, from its beginnings (1629 Galileo) to the time of publication (1885-86). The essays contained in this part are written by Charles Marie de La Condamine (1701-1774), Jean-Charles de Borda (1733-1799) & Jean-Dominique Cassini (1625-1712), Gaspard de Prony (1755-1839), Henry Kater (1777-1835), Friedrich Wilhelm Bessel (1784-1846), Edward Sabine (1788-1883), Francis Baily (1774-1844), Sir George Gabriel Stokes (1819-1903).



87. **SOMERVILLE, Mary** (1780-1772). *On the Connexion of the Physical Sciences. Ninth edition, completely revised.* London: John Murray, 1858. ¶ 12mo. xvi, 523, [1], 32 pp. 10 plates, index, ads. Original full blind- and gilt-stamped brown cloth, by Edmonds & Remnant's, London (with their ticket at rear); spine ends frayed. Small booklabel of Napper & Wright Stationers & Booksellers, Birmingham; ownership signature (pencil) of George Hunt[?]; embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 250

First issued in 1834 (that edition is scarce). The book describes the major fields of science as understood during the time: astronomy, physics, chemistry, geography, meteorology and electromagnetism.

“Less than two centuries ago, popular science barely existed. In 1830, astronomer John Herschel wrote to natural philosopher William Whewell about the urgent need for “digests of what is actually known in each particular branch of science ... to give a connected view of what has been done, and what remains to be accomplished”.

“The remarkable writer who first achieved that “connected view” and arguably launched popular science writing was a self-taught Scottish mathematician, Mary Fairfax Somerville (1780–1872). Her book, *On the Connexion of the Physical Sciences*, published by John Murray in 1834 alongside works by Walter Scott, Lord Byron and Jane Austen, contains no equations, few diagrams and little

mathematics. But it is a masterpiece of descriptive explanation and analogy that unveils a complete scientific world view, covering everything from stars to insects. It was Murray's best-selling scientific publication until Charles Darwin's *On the Origin of Species* in 1859; it eventually ran to ten editions in Britain, and was published in France, Italy, Germany and the United States.

“Somerville began writing *On the Connexion of the Physical Sciences* in 1832, during a long visit to Paris. She effectively became an expert reporter on the latest developments in European science. Taking full advantage of social networking, she contacted Laplace's influential widow and dined with the physicists François Arago, Jean-Baptiste Biot and Joseph-Louis Gay-Lussac. She had privileged status at sites from the Paris Observatory to the National Museum of Natural History, and in the laboratories of electrical-theory pioneers André-Marie Ampère and Antoine César Becquerel.

“In contrast to the vague speculations of eighteenth-century natural philosophy, her 500-page book covers a tight field of hard sciences — astronomy, physics, chemistry, geography, meteorology and electromagnetism. Its ground-breaking style, clear and logical, occasionally opens out into passages of sublime perspective, such as the description of universal gravity as a force equally present “in the descent of a rain drop as in the falls of Niagara; in the weight of the air, as in the periods of the moon”. Somerville ranges over subjects from stellar parallax to terrestrial magnetism, from comets to giant seaweed.

“Her handling of acoustics is characteristically brilliant, based on the observations of John Herschel, Arago and naturalist Alexander von Humboldt. Comparing the propagation of sound to “a field of corn agitated by a gust of wind”, she goes on to describe phenomena from birdsong to thunder. She also suggests a connection between waves propagated in water, the atmosphere and sunlight, writing: “Any one who has observed the reflection of the waves from a wall on the side of a river ... after the passage of a steam-boat, will have a perfect idea of the reflection of sound and of light.”

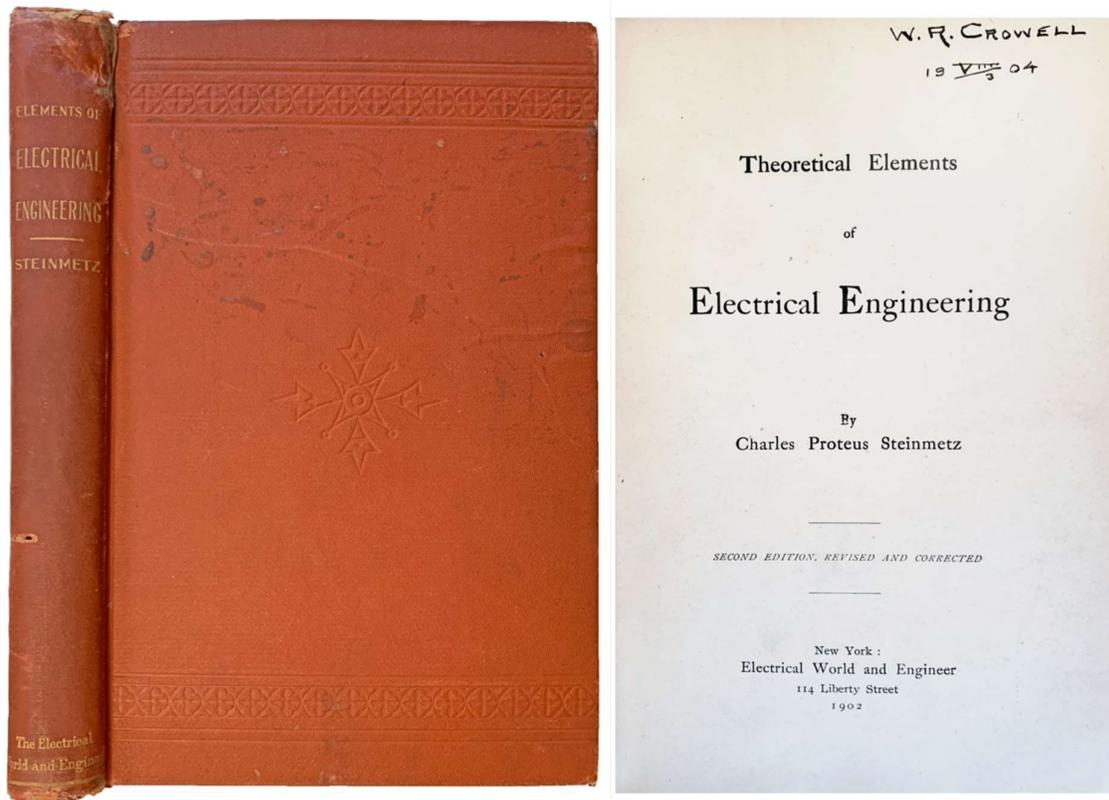
“Her exploration of the solar spectrum contains one of the earliest descriptions (derived from work by William Herschel, chemist William Hyde Wollaston and physicist Johann Wilhelm Ritter) of infrared and ultraviolet rays at the extreme ends of the known light spectrum, “too extensive in their undulations to affect our optic nerves”. She speculates that such rays might have many possible functions in the animal kingdom: “We are altogether ignorant of the perceptions which direct the carrier-pigeon to his home ... or of those in the antennae of insects which warn them of the approach of danger”. She also mused about climate change, the cause of earthquakes and the existence of planets beyond Uranus.

“The most original sections deal with electricity and the new science of electromagnetism. Somerville thrillingly describes Faraday's latest work with the horseshoe magnetic generator, establishing that magnetism and electricity must have complex links in what he was beginning to define as 'fields'. These sections clearly predict the connection between all electromagnetic phenomena, established in four equations a generation later by physicist James Clerk Maxwell.

“Somerville's work contextualized the sciences as an ongoing global project. The book emphasized, in a wholly new way, the communal nature of science as shared discovery, referring to John Franklin's Arctic expeditions, the high-altitude balloon flights of Biot and Gay-Lussac (pictured), the geographical explorations of Lyell and Humboldt, and the teams of European astronomers who observed the return of Halley's comet, among other feats.

“On the Connexion of the Physical Sciences was widely praised by journalists and scientists in Britain and abroad; both Arago and Humboldt deeply admired it. The popular, large-circulation journal *Mechanics' Magazine* urged its audience: “read it! read it!” Somerville dined at the male stronghold of the University of Cambridge, invited by its science professors; received honorary membership of the Royal Astronomical Society among others; and, although barred from the Royal Society, is commemorated there in a formidable marble bust.”

Richard Holmes, “In retrospect: On the Connexion of the Physical Sciences,” *Nature*, volume 514, pages 432–433 (2014).



88. **STEINMETZ, Charles Proteus** (1865-1923). *Theoretical Elements of Electrical Engineering. Second edition, revised and corrected.* New York: Electrical World and Engineer, 1902. ¶ 8vo. vii, [1], 330 pp. 144 figs., index. Original blind- and gilt-stamped brick-red cloth; head of spine damaged, with spine ends frayed, corners showing, some soiling. Ownership name inked on title of W.R. Crowell, 1904; rubber-stamp of John B. Florance. Good. [nh]

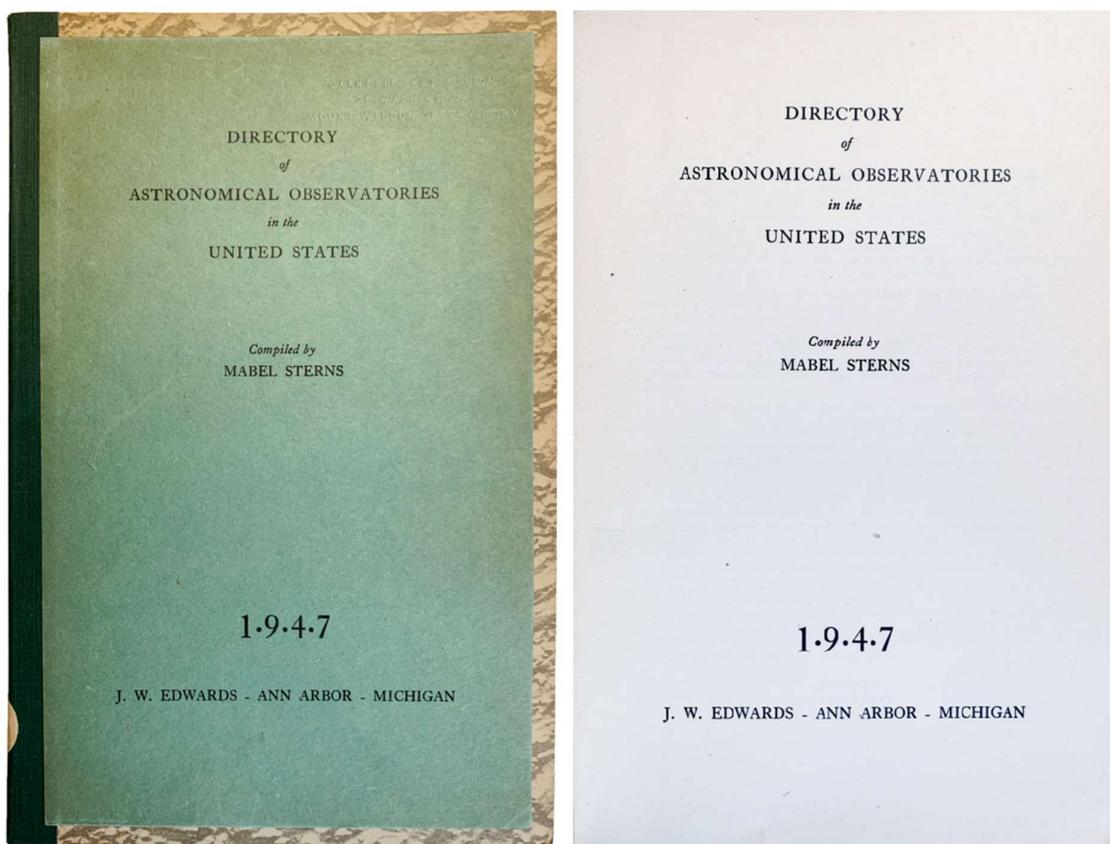
\$ 35

“The first part of the following volume originated from a series of University lectures which I once promised to deliver. This part can, to a certain extent, be considered as an introduction to ray work on 'Theory and Calculation of Alternating Current Phenomena,' leading up very gradually from the ordinary sine wave representation of the alternating current to the graphical representation by polar coordinates, from there to rectangular components of polar vectors, and ultimately to the symbolic representation by the complex quantity. The present work is, however, broader in its scope, in so far as it comprises the fundamental principles not only of alternating, but also of direct currents.

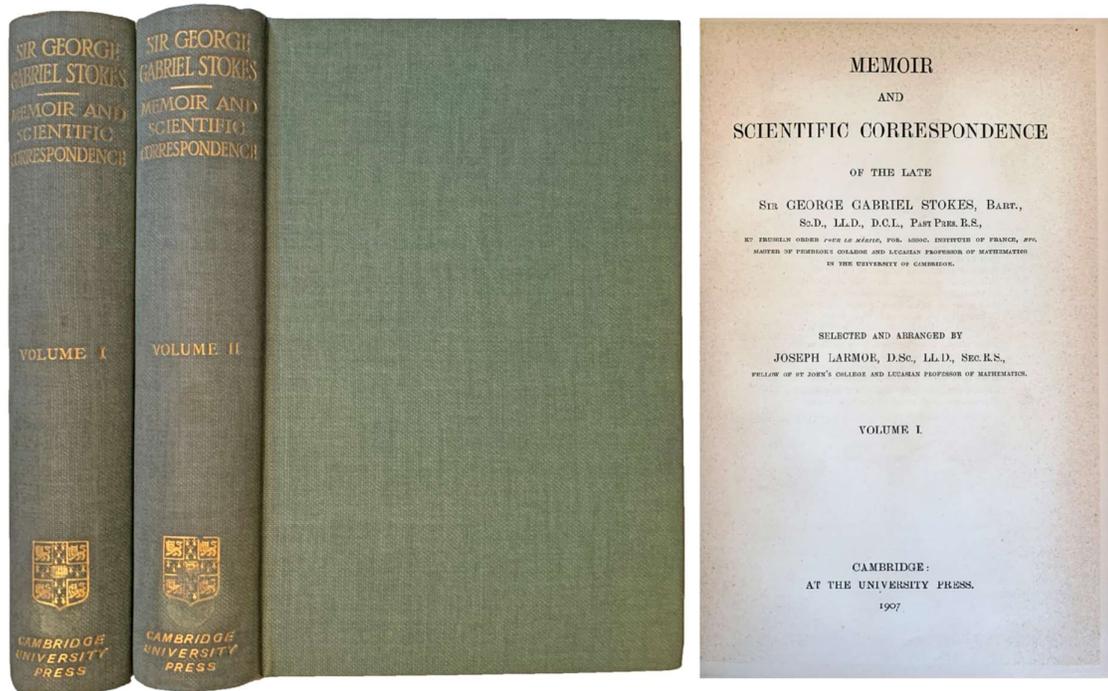
The second part is a series of monographs of the more important electrical apparatus, alternating as well as direct current. It is, in a certain respect, supplementary to 'Alternating Current Phenomena.' While in the latter work I have presented the general principles of alternating current phenomena, in the present volume I intended to give a specific discussion of the particular features of individual apparatus. In consequence thereof, this part of the book is somewhat

less theoretical, and more descriptive, my intention being to present the most important electrical apparatus in all their characteristic features as regard to external and internal structure, action under normal and abnormal conditions, individually and in connection with other apparatus, etc.” – Preface.

Charles Proteus Steinmetz (born: Karl August Rudolph Steinmetz), called "The Wizard of Schenectady", was a German-born American mathematician and electrical engineer and professor at Union College. He fostered the development of alternating current that made possible the expansion of the electric power industry in the United States, formulating mathematical theories for engineers. He made ground-breaking discoveries in the understanding of hysteresis that enabled engineers to design better electromagnetic apparatus equipment, especially electric motors for use in industry. – Wikip.



89. **STERNS, Mabel.** *Directory of Astronomical Observatories.* Ann Arbor: J. W. Edwards, 1947. ¶ 8vo. x, [2], 162 pp. 79 figs., large folding map of the US showing locations of the observatories. Card covers with original green wrappers mounted; paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good. \$ 25

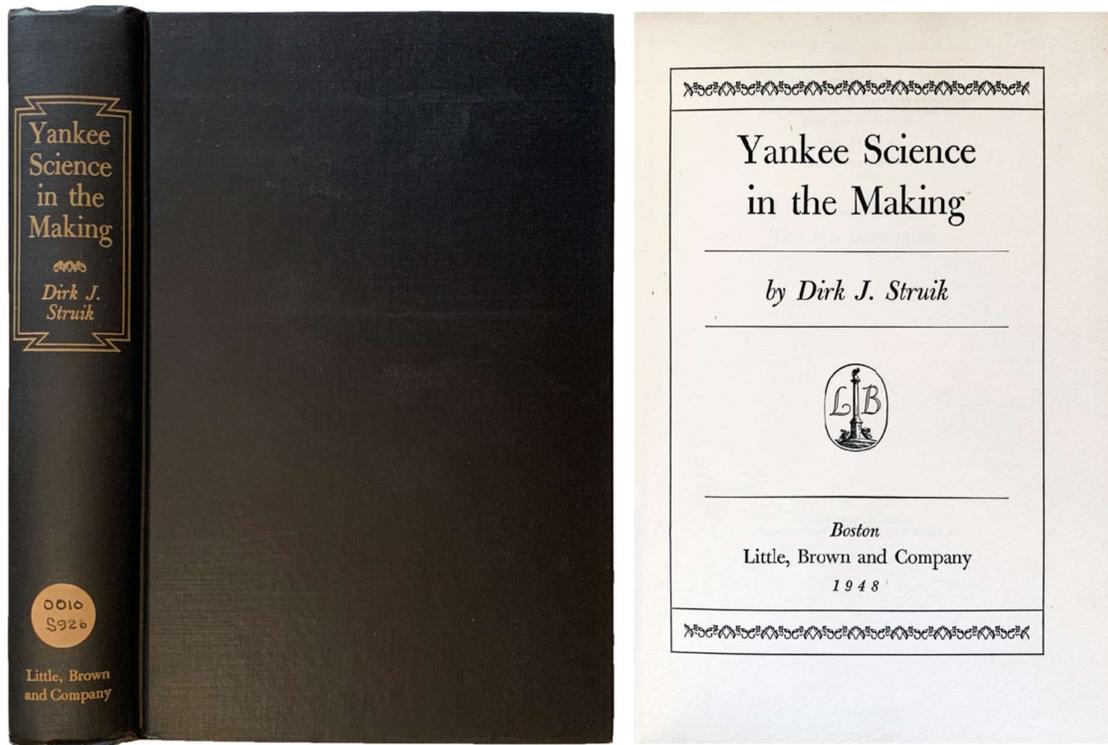


90. **STOKES, Sir George Gabriel** (1819-1903). *Memoir and Scientific Correspondence of the late Sir George Gabriel Stokes. Selected and arranged by Joseph Larmor*. Cambridge: University Press, 1907. ¶ Two volumes. 8vo. xii, 475, [1]; vi, 507, [1] pp. 2 frontispiece portraits, 2 plates, indexes; offsetting from tissue guards at both title-pages (browning). Original gilt-stamped green cloth, t.e.g. Embossed stamp of Carnegie Institution [HALE]. Very good +. Quite scarce.

\$ 400

First edition of these collected letters. Stokes was corresponding with many of the leading persona of British science, including Charles Darwin, Faraday, Babbage, Huxley, Airy, Becquerel, Romney Robinson, Prof. Arthur Cayley, Sir J. Norman Lockyer, James Clerk Maxwell, James Prescott Joule, Wilhelm v. Haidinger, Julius Robert Plücker, Thomas Graham, Lord Avebury, Sir Henry E. Roscoe, Lord Rayleigh, Peter Guthrie Tait, and others.

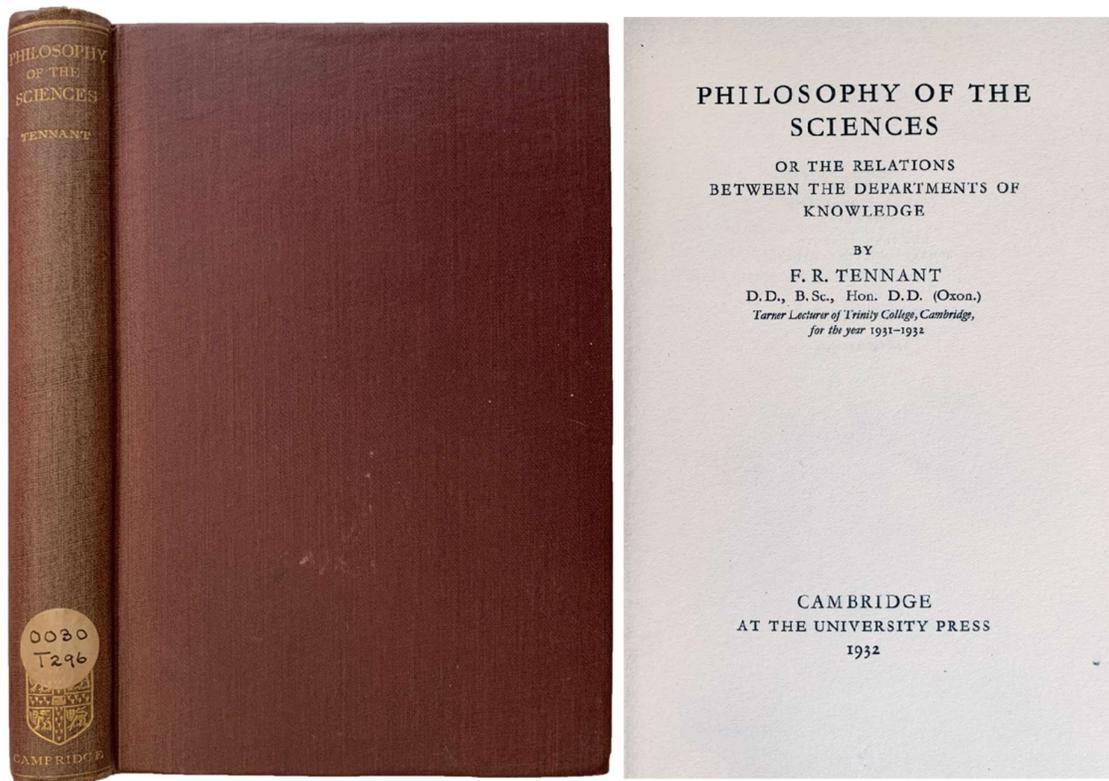
“Born in County Sligo, Ireland, Stokes spent all of his career at the University of Cambridge, where he was the Lucasian Professor of Mathematics from 1849 until his death in 1903. As a physicist, Stokes made seminal contributions to fluid mechanics, including the Navier–Stokes equations; and to physical optics, with notable works on polarization and fluorescence. As a mathematician, he popularized "Stokes' theorem" in vector calculus and contributed to the theory of asymptotic expansions. Stokes, along with Felix Hoppe-Seyler, first demonstrated the oxygen transport function of hemoglobin and showed color changes produced by aeration of hemoglobin solutions.” [Wikip.].



91. **STRUIK, Dirk Jan** (1894-2000). *Yankee Science in the Making*. Boston: Little, Brown, 1948. ¶ 8vo. xiii, [1], 430 pp. Index. Original maroon cloth; some fading to spine, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 6

“Struik was a steadfast Marxist. Having joined the Communist Party of the Netherlands in 1919, he remained a Party member his entire life. During the mid-1950s McCarthy era, Struik's Marxist opinions led to accusations he was a of being a spy for the Soviet Union. He was also cited as an instance of "subversive influence" in a 1952 Senate committee publication. He denied the allegations and was called before the House Un-American Activities Committee. Struik refused to answer any of the over 200 questions asked of him, repeatedly invoking the First and Fifth Amendments of the U.S. Constitution. Struik was later indicted on charges and bail set at \$1000 which was put up by friends who supported him. He was suspended from teaching for five years (with full salary) by MIT in the 1950s. Struik was re-instated in 1956. He retired from MIT in 1960.” – Wikip.



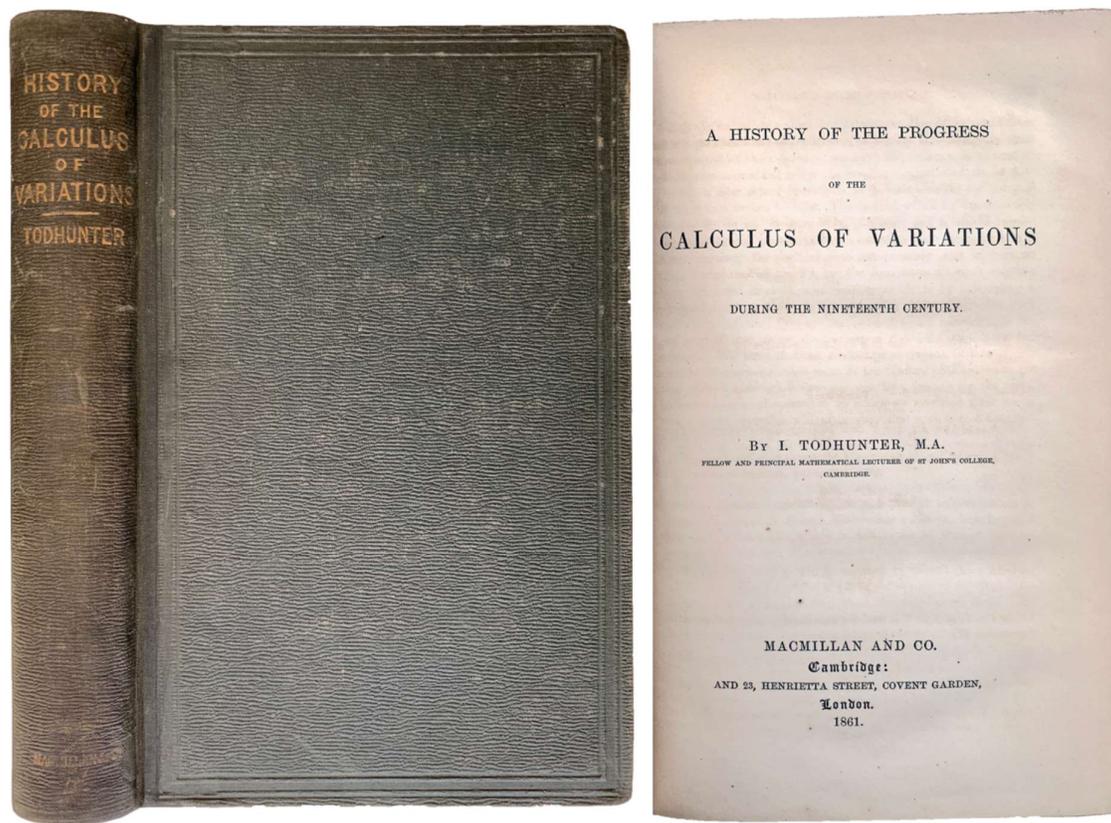
92. **TENNANT, F. R. [Frederick Robert]** (1866-1957). *Philosophy of the Sciences; or the relations between the departments of knowledge*. Cambridge: University Press, 1932. ¶ Small 8vo. ix, [1], 191, [1] pp. Original maroon cloth; some fading to spine, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 15

First edition.

Containing six lectures: 1) Philosophy of the Sciences; 2) The Relation of the Psychology of Knowledge to Philosophy of the Sciences; 3) The Sciences as human interpretations of 'historical' data; 4) The Relations of History and Dogmatic Theology to each other and to the Sciences; 5) The Relations of the Natural and the Pure Sciences to each other, and to Philosophy and Metaphysics; 6) The Relation of Theology to other Departments of Knowledge.

Tennant studied mathematics, physics, biology, and chemistry at Caius College, Cambridge (1885–89) prior to becoming a theologian.

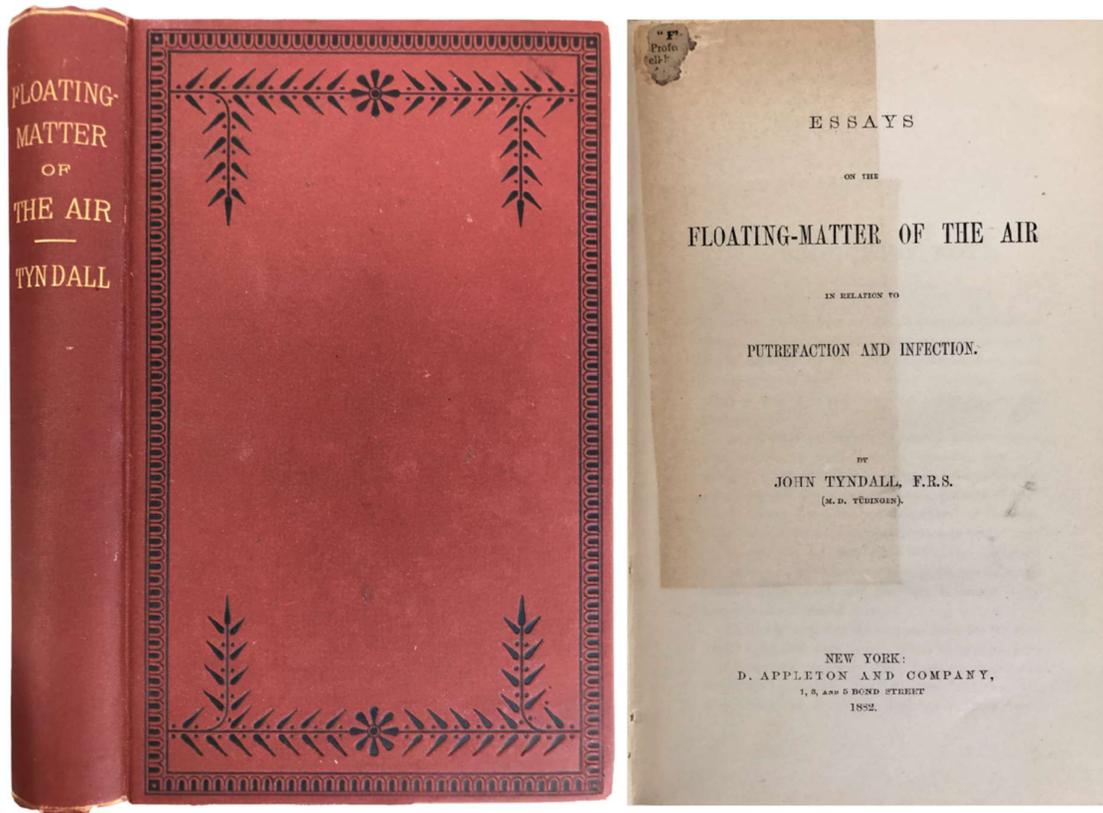


93. **TODHUNTER, Isaac** (1820-1884). *A history of the progress of the calculus of variations during the nineteenth century*. Cambridge and London: Macmillan, 1861. ¶ 8vo. xii, 532, ads. 28 pp. Folding plate containing 12 geometric diagrams, index. Original green blind-stamped cloth, gilt spine; beautifully rebacked preserving original spine. Choice copy. Scarce. [nh] [SS3608]

\$ 400

First edition of Todhunter's important historical work including his own research. Todhunter (1820-1884), English mathematician, was one of the most influential figures in mathematical education of the 19th century. – *DNB*. Zeitlinger (Sotheran I, p. 249: "Very scarce").

☼ Cajori, *History of mathematics*, p. 370.

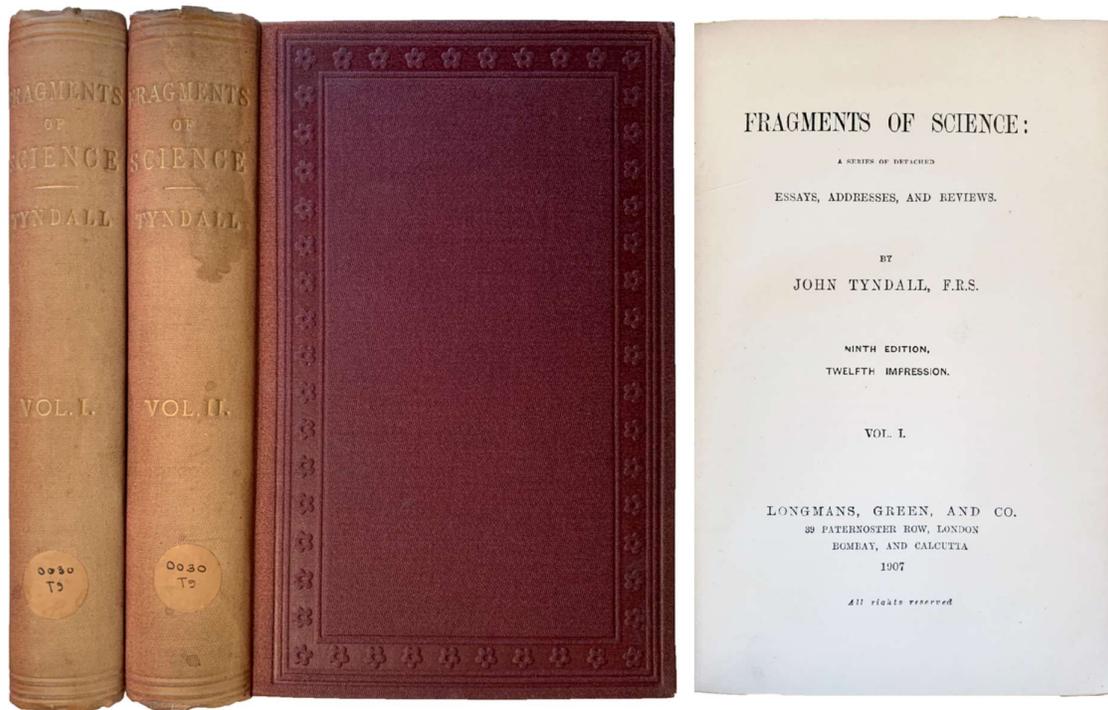


94. **TYNDALL, John** (1820-1893). *Essays on the floating-matter of the air in relation to putrefaction and infection*. New York: D. Appleton, 1882. ¶ Small 8vo. xix, [1 blank], 338, [ads 4] pp. 24 figs.; offsetting with fragment of old newsprint remaining on title. Original black- and blind-stamped brick red cloth, gilt spine. Ownership signature of O. Harvey. Near fine. [nh] [S]13671

\$ 65

FIRST AMERICAN EDITION. Tyndall's great work on putrefaction and sterilization. "Tyndall interested himself in atmospheric germs and dust. His experiments on sterilization by heat led him to the discovery in 1877 of fractional sterilization (Tyndallization). His work on the subject is included in the above book, in which he also described the bactericidal effects of moulds. The researches of Tyndall, even more than those of Pasteur, dealt the final blow to the doctrine of spontaneous generation; they were fundamental for the progress of bacteriology." — Garrison and Morton.

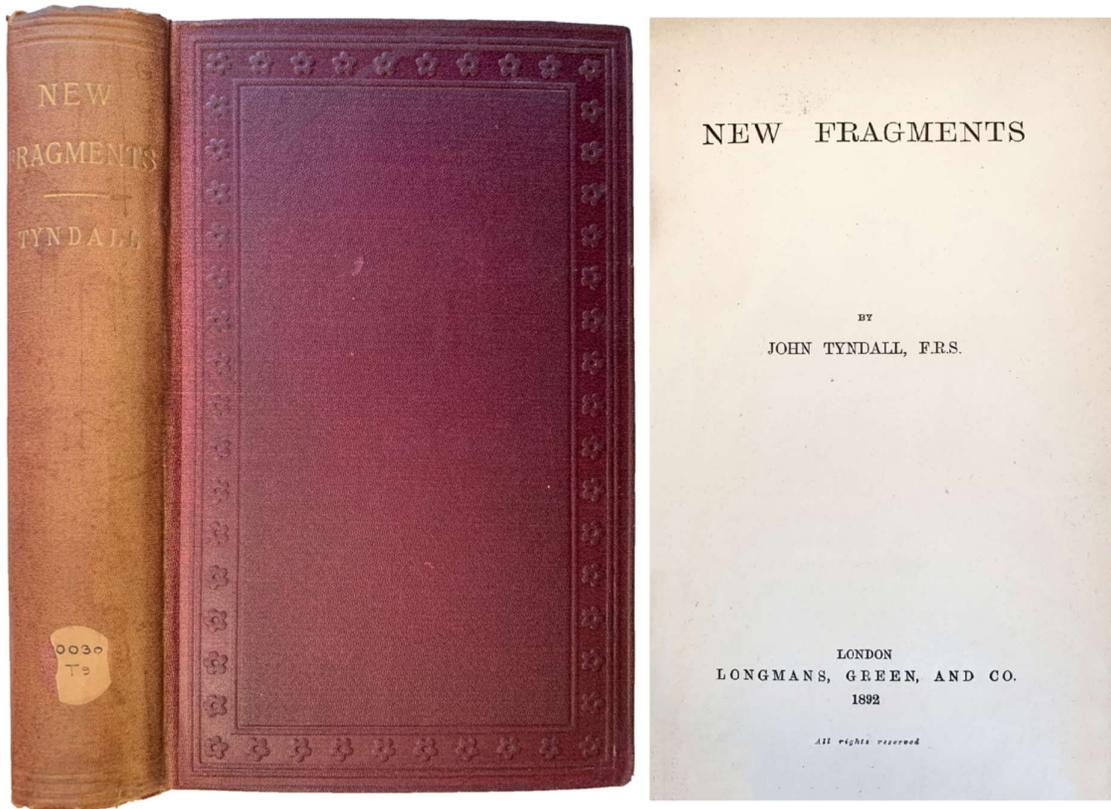
☼ Gascoigne 15199.1; Bulloch, *History of bacteriology*, pp. 109-117. Barchas Collection 2055 (1st ed., London, 1881); BM (Nat. Hist.), V, p. 2158 (wanting, 1st ed., London, 1881); Cushing T200 (2nd ed., 1883); Garrison and Morton 2495 (1st ed., London, 1881); Haskell Norman Library 2119 (1st ed., London, 1881); *Heirs of Hippocrates* 1881 (1st ed., London, 1881).



95. **TYNDALL, John** (1820-1893). *Fragments of Science: a series of detached essays, addresses, and reviews*. London: Longmans, Green, 1907. ¶ Two volumes. 8vo. viii, 452; [viii], 490 pp. Map, 2 figs. Original blind- and gilt-stamped maroon cloth; spine faded, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 50

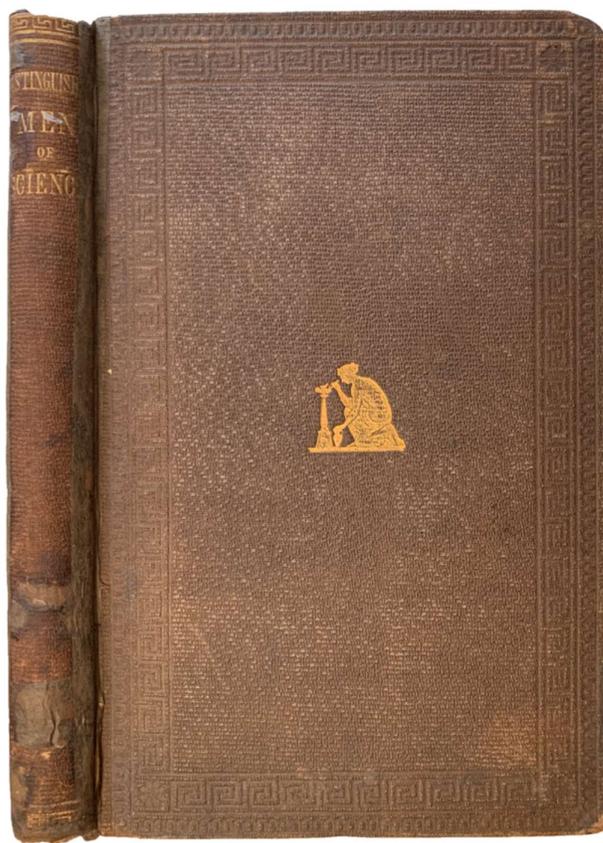
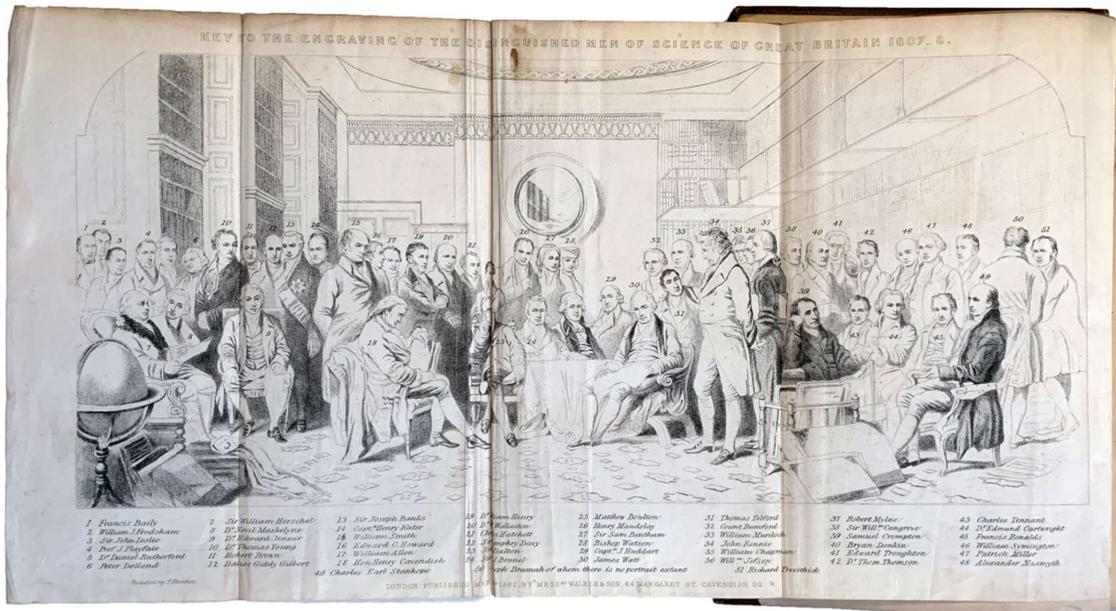
Ninth edition, twelfth impression. Contains 38 essays, including his thoughts on prayer and natural law – The Constitution of Matter—Radiation – The Sky – Niagara – Alpine Structure – On the Study of Physics – On Crystalline and Slaty Cleavage – Elementary Magnetism – Death by Lightning – Miracles – Matter and Force – Scientific Use of Imagination – Fermentation – Spontaneous Generation – Virchow – The Electric Light – Our invisible Friends and Foes – [and many others].



96. **TYNDALL, John** (1820-1893). *New Fragments*. London: Longmans, Green, 1892. ¶ 8vo. [vi], 500, [2], 12 pp. Ads. Original blind- and gilt-stamped maroon cloth; some light fraying to spine ends, spine fading, paper label affixed to spine. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 75

First edition of this second collection of Tyndall's essays (the first issued in 1871): The sabbath – Goethe's 'Farbenlehre' – Atoms, molecules, and ether waves – Count Rumford – Louis Pasteur – The Rainbow and its congeners – Address delivered at the Birkbeck Institution – Thomas Young – Life in the Alps – About common water – Personal recollections of Thomas Carlyle—On unveiling the statue of Carlyle – On the origin, propagation, and prevention of phthisis – Old Alpine jottings – A morning on Alp Lusgen.



MEMOIRS
OF THE
DISTINGUISHED MEN OF SCIENCE
OF GREAT BRITAIN
LIVING IN THE YEARS 1807-8.

WITH AN INTRODUCTION BY
ROBERT HUNT, F.R.S., F.S.S.,
Keeper of the Mining Records.

COMPILED AND ARRANGED BY
WILLIAM WALKER JUNIOR.

"The evil, that men do lives after them;
The good is oft interred with their bones."
SHAKESPEARE.

LONDON:
W. WALKER & SON, 64, MARGARET STREET, CAVENDISH SQUARE, W.
1862.

97. **WALKER, William, Jr.** *Memoirs of the Distinguished Men of Science of Great Britain living in the years 1807-8. With an introduction by Robert Hunt, FRS, FSS.* London: W. Walker & Son, 1862. ¶ 8vo. xii, 228, [4] pp. Large folding frontispiece showing all but one of the persons in the volume; small hole to frontis., title & following couple of leaves. Original full blind- and gilt-stamped brown cloth with gilt-stamped vignette on upper cover; joints reinforced with kozo. Embossed stamp of Carnegie Institution [HALE]. Very good.

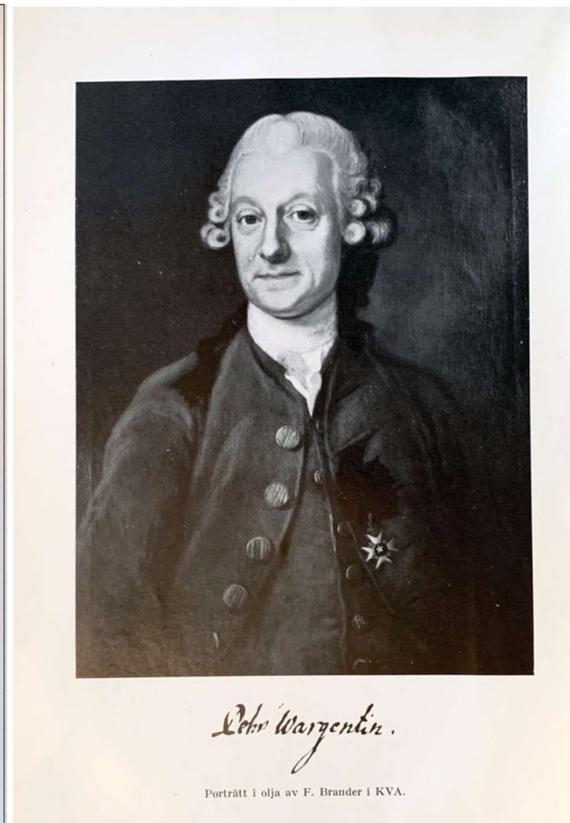
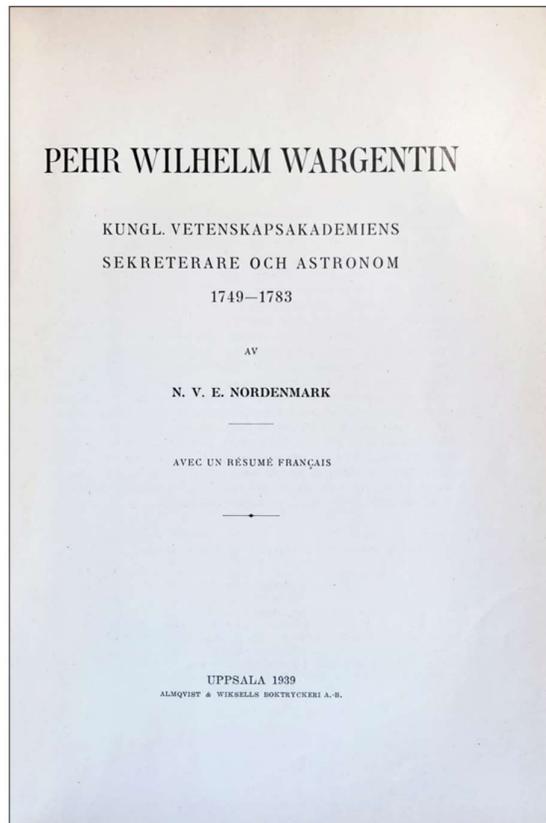
\$ 40

The frontispiece “drawing of the "Distinguished Men of Science living in 1808" was the last work my Father was engaged on. Sir John Gilbert designed the grouping & general effect. J. F. Skill then worked on the drawing & my Father finished it, the greatest care was taken in getting the likenesses correct & every available means employed so that the likenesses remained almost standards. My Father then engraved the plate with the assistance of George Zobel. The idea of the work was his own conception & altogether occupied six years in carrying out.”

(Letter from William Walker to Lionel Cust 12 November 1896, MS in NPG archive.)

51 biographies, including: William Allen, Francis Baily, Sir Joseph Banks, Sir Samuel Bentham, Matthew Boulton, Joseph Bramah, Robert Brown, Sir Mark Brunel, Edmund Cartwright, Henry Cavendish, John Dalton, Sir William Herschel, Edward Jenner, Nevil Maskelyne, Francis Ronalds, Count Rumford, James Watt, Thomas Young, and others.

See: Archibald Clow, 'A Re-Examination of William Walker's "Distinguished Men of Science"' in *Annals of Science*, II-3, September 1956, pp 183-93 and 5 plates.



98. [WARGENTIN, Pehr Wilhelm (1717-1783)] N.V.E. [Nils Viktor Emanuel] NORDENMARK (1867-1962). *Pehr Wilhelm Wargentin, Kungl. vetenskapsakademiens sekreterare och astronom, 1749-1783*. Uppsala: Almqvist & Wiksells boktryckeri a.-b., 1939. ¶ Tall 8vo. 464 pp. Figs., index. Later red gilt-stamped buckram; spine call number. Embossed stamp of Carnegie Institution [HALE]. Very good.

\$ 10

“The basic biography.” [DSB]. Contains a ‘résumé français’.

Pehr Wilhelm Wargentin was a Swedish astronomer and statistician, known as the father of Swedish population statistics. Knowledgeable, conscientious and tireless as a scientist, Wargentin contributed in many ways to increasing the prestige of Swedish research and the Academy of Sciences of which he was secretary for many years. Through his own works - the Proceedings of the Swedish Academy of Sciences contain no less than 60 essays by him, including on mercury transits, the misdirection of the magnetic needle, the aurora borealis, the climate and the weather - as well as through careful examination of submitted theses, he gave the academy's messages an inner value that was matched by the increased attention they received in and out of the country. Wargentin was the main driving force behind the construction of Stockholm's old observatory.

Nils Viktor Emanuel Nordenmark, born April 15, 1867 in Hammerdal, Jämtland, died February 2, 1962 in Stockholm, was a Swedish astronomer, academic historian.

[nh] = not from Hale/Mount Wilson

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- 264: The Paul Luther Collection on the Bio-Bibliographical History of Astronomy with Rare Bookseller Catalogues, Serials
- 263:** Books Selected from the Library of George Kaplan, MD: Urology & History of Medicine
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