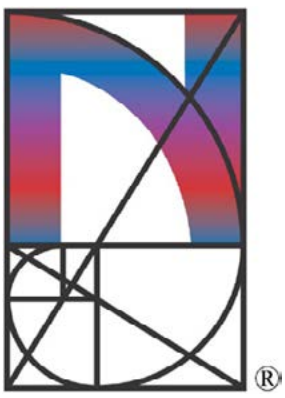
Catalogue 62:
Mostly Recent Acquisitions on a Variety of Subjects



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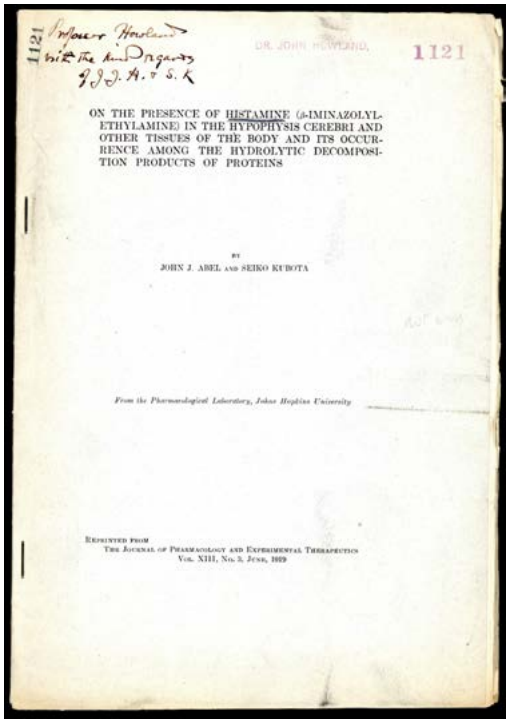

1121 Professor Howland with the kind regards of J.J.A. & S.K.

DR. JOHN HOWLAND. 1121

ON THE PRESENCE OF HISTAMINE (β-IMINAZOLYL-ETHYLAMINE) IN THE HYPOPHYSIS CEREBRI AND OTHER TISSUES OF THE BODY AND ITS OCCURRENCE AMONG THE HYDROLYTIC DECOMPOSITION PRODUCTS OF PROTEINS

BY

JOHN J. ABEL AND SEIKO KUBOTA

From the Pharmacological Laboratory, Johns Hopkins University

REPRINTED FROM THE JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS VOL. XIII, NO. 3, JUNE, 1919

Inscribed Presentation Copy

1. Abel, John J. (1857-1938) & **Seiko Kubota.** On the presence of histamine (beta-iminazolyl-ethylamine) in the hypophysis cerebri and other tissues of the body and its occurrence among the hydrolytic decomposition products of proteins. Offprint from *The Journal of Pharmacology and Experimental Therapeutics* 13 (1919). 243-300pp. Original printed wrappers. Front wrapper inscribed: "Professor [John] Howland with the kind regards of J. J. A. & S. K."; Howland's stamp on front wrapper. Very good. $950

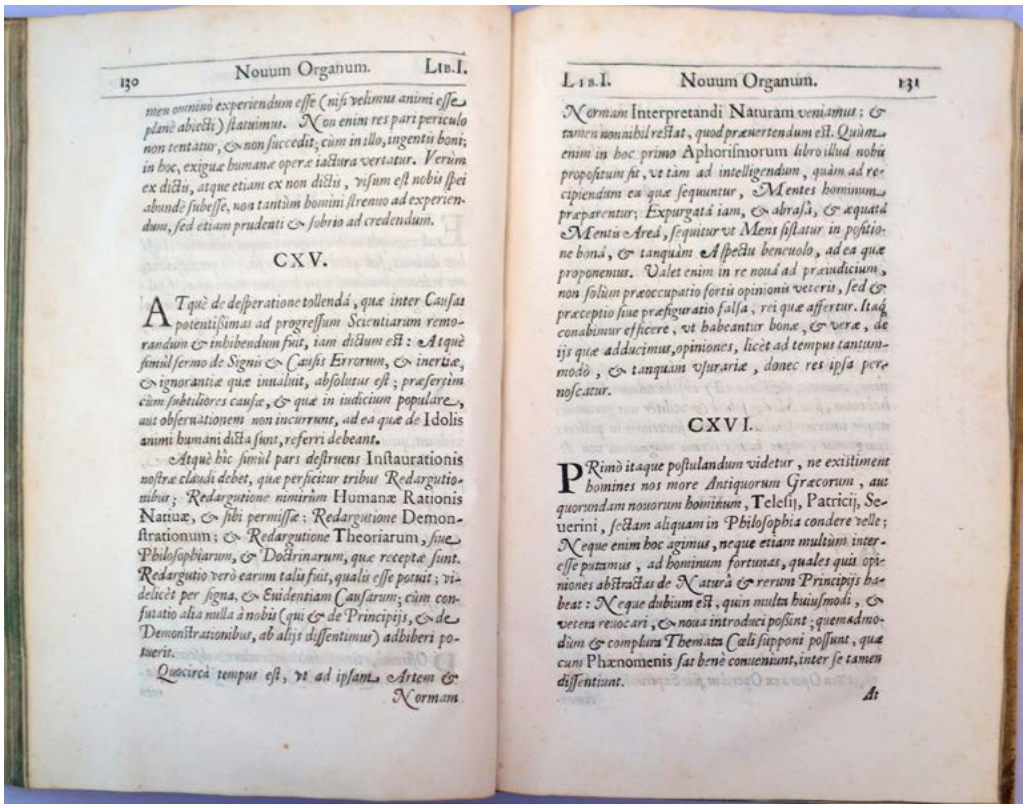
First Edition, Offprint Issue. Abel isolated histamine from the pituitary extract of animals and demonstrated its role in digestion. In the present paper, read before the American Society for Pharmacology and Therapeutics on 25 April 1919, Abel stated that "he had become convinced that all the 'motilines,' 'peristaltic hormones,' 'vaso-dilantins,' and 'histamine-like substances in tissues' described by European investigators were one and the same substance: histamine . . . Abel succeeded in isolating and identifying histamine as the pictrate in extracts of the pituitary gland. Furthermore, he isolated histamine from extracts of the gastric and intestinal mucosa . . . He summarized by saying 'It is our belief that this substance [histamine] makes its appearance wherever living protoplasm exists, or at least, wherever protoplasm is killed; in other words, that it arises wherever a tissue protein is even partially disrupted by enzumes, acids, or other hydrolytic agents'" (Davenport, *A History of Gastric Secretion and Digestion*, p. 170). John Howland (1873-1926), the recipient of this copy, was a director of pediatrics at Johns Hopkins and a prominent researcher into pediatric diseases and disorders; the American Pediatric Society's John Howland Award is named for him. 44704

The Scientific Method

2. Bacon, Francis (1561-1620). Instauratio magna. [Novum organum sive indicia vera de interpretatione naturae.] Small folio. [12, including blank leaf conjugate with engraved title], 172, 181-360, 36, [2]pp. Beautiful engraved title-page by Simon de Passe (1595-1647). London: John Bill, 1620. 292 x 192 mm. Vellum ca. 1620, leather spine labels, a bit soiled. Remnants of blue paper on front and back pastedowns, first leaves a bit soiled but a fine copy. Leather bookplate of Frederick Spiegelberg. $30,000

First Edition, second issue. (Only a handful of copies of the first issue exist.) The philosophical exposition of the experimental method in science, which greatly influenced the creation and development of the first scientific academies—the "Invisible College," the Royal Society, and the Académie Royale des Sciences, with inestimable effect on the development of scientific thought.

At a time when scholars still relied on classical authority and metaphysical speculation to learn about the world they lived in, Bacon conceived a new means of acquiring true knowledge of



130 Nouum Organum. Lib. I.

men omninò experiendum esse (nisi velimus animi esse planè abiecti) statuimus. Non enim res pari periculo non tentatur, & non succedit; cùm in illo, ingentis boni; in hoc, exiguæ humanæ operæ iactura vertatur. Verùm ex dictis, atque etiam ex non dictis, visum est nobis spei abundè subesse, non tantùm homini strenuo ad experiendum, sed etiam prudenti & sobrio ad credendum.

CXV.

ATquè de desperatione tollendâ, quæ inter Causas potentissimas ad progressum Scientiarum remorandum & inhibendum fuit, tam dictum est: Atquè simùl sermo de Signis & Causis Errorum, & inertiæ, & ignorantiæ quæ inualuit, absolutus est; præsertim cùm subtiliores causæ, & quæ in iudicium populare, aut obseruationem non incurrunt, ad ea quæ de Idolis animi humani dicta sunt, referri debeant.

Atquè hic simùl pars destruens Instaurationis nostræ claudi debet, quæ perficitur tribus Redargutionibus; Redargutione nimirùm Humanæ Rationis Natiuæ, & sibi permissæ: Redargutione Demonstrationum; & Redargutione Theoriarum, siue Philosophiarum, & Doctrinarum, quæ receptæ sunt. Redargutio verò earum talis fuit, qualis esse potuit; videlicèt per signa, & Euidentiam Causarum; cùm confutatio alia nulla à nobis (qui & de Principijs, & de Demonstrationibus, ab alijs dissentimus) adhiberi potuerit.

Quocirca tempus est, vt ad ipsam Artem & Normam

Lib. I. Nouum Organum. 131

Normam Interpretandi Naturam veniamus; & tamen nonnihil restat, quod præuertendum est. Quùm enim in hoc primo Aphorismorum libro illud nobis propositum sit, vt tàm ad intelligendum, quàm ad recipiendum ea quæ sequuntur, Mentes hominum præparentur; Expurgatâ iam, & abrasâ, & æquatâ Mentis Aream, sequitur vt Mens sistatur in positione bonâ, & tanquàm Aspectu benculo, ad ea quæ proponemus. Valet enim in re nouâ ad præiudicium, non solùm præoccupatio sortis opinionis veteris, sed & præceptio siue præfiguratio falsa, rei quæ affertur. Itaq; conabimur efficere, vt habeantur bonæ, & veræ, de ijs quæ adducimus, opiniones, licèt ad tempus tantùmmodò, & tanquàm vsurariæ, donec res ipsa pernoscatur.

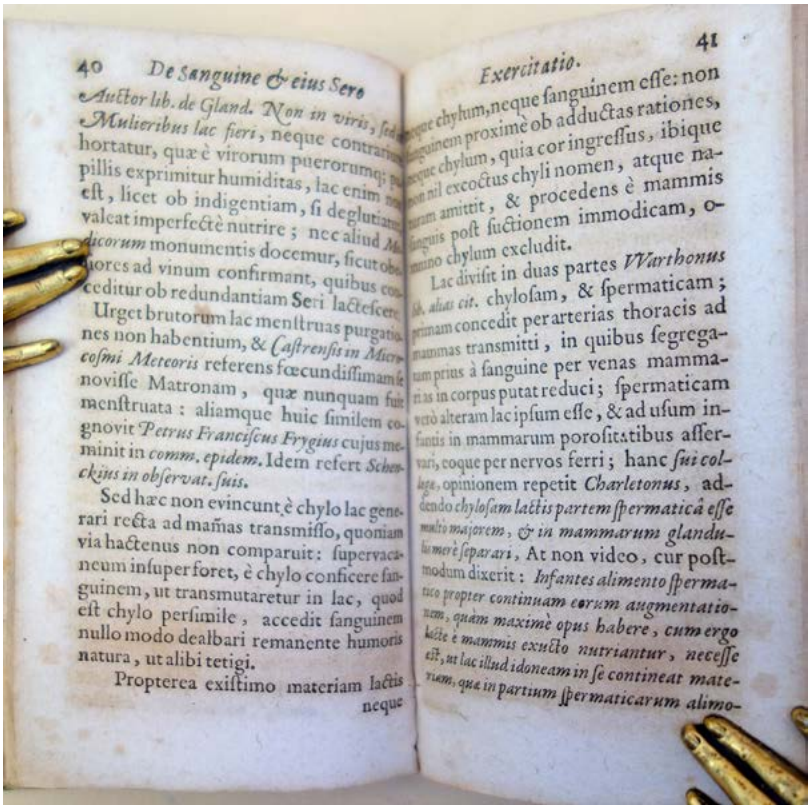
CXVI.

PRimò itaque postulandum videtur, ne existiment homines nos more Antiquorum Græcorum, aut quorundam nouorum hominum, Telesij, Patricij, Seuerini, sectam aliquam in Philosophia condere velle; Neque enim hoc agimus, neque etiam multùm interesse putamus, ad hominum fortunas, quales quis opiniones abstractas de Naturâ & rerum Principijs habeat: Neque dubium est, quin multa huiusmodi, & vetera reuocari, & noua introduci possint; quemadmodùm & complura Themata Cœli supponi possunt, quæ cum Phænomenis sat benè conueniunt, inter se tamen dissentiunt.

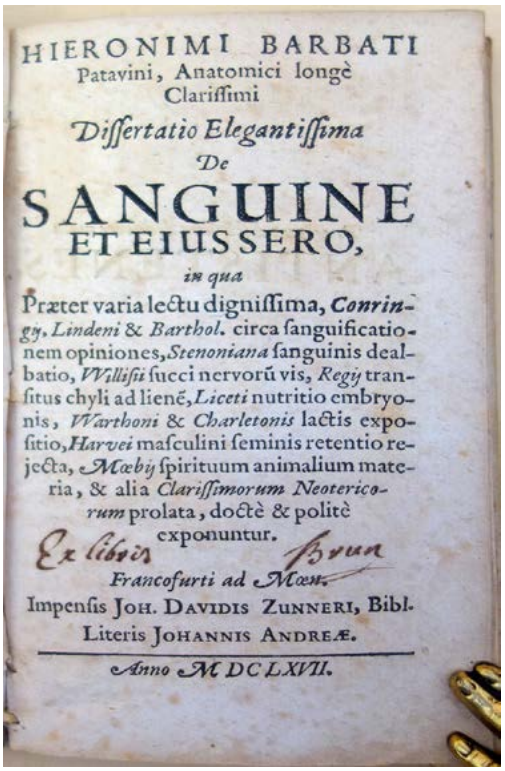
At

the world via observation, experiment and inductive reasoning, the type of logical thinking that ascends from specific facts to the establishment of general laws and principles. Bacon saw this novum organum, or "new instrument" as the means of bringing about a "great revolution" (instauratio magna) in thought. Once taught the new experimental method, everyone would be capable of engaging in scientific investigation, unlocking the secrets of nature and applying the results (ideally) for the betterment of humankind. Bacon's vision of science inspired the subsequent foundation of the first scientific academies, and also opened up the question of science's relationship with government and society.

Bacon originally envisioned the *Instauratio magna* in six parts, of which only two were completed: *De augmentis scientiarum* (1623), and *Novum organum*, which, along with the introduction to the third part (*Parasceve ad historiam naturalem et experimentalem*), and two sets of *Aphorisms*, makes up the present work. The second issue has the errata leaf and colophon reading "Londini/ Apud Joannem Billium/Typographum Regium/M.DX.XX." STC 1163. Horblit 8b. Dibner 80. *Printing and the Mind of Man* 119. Gibson, *Bacon* (1950), 103b. Eiseley, "Francis Bacon," *Makers of Modern Thought* (1972). Norman 98. 43494



Discovery of Blood Serum



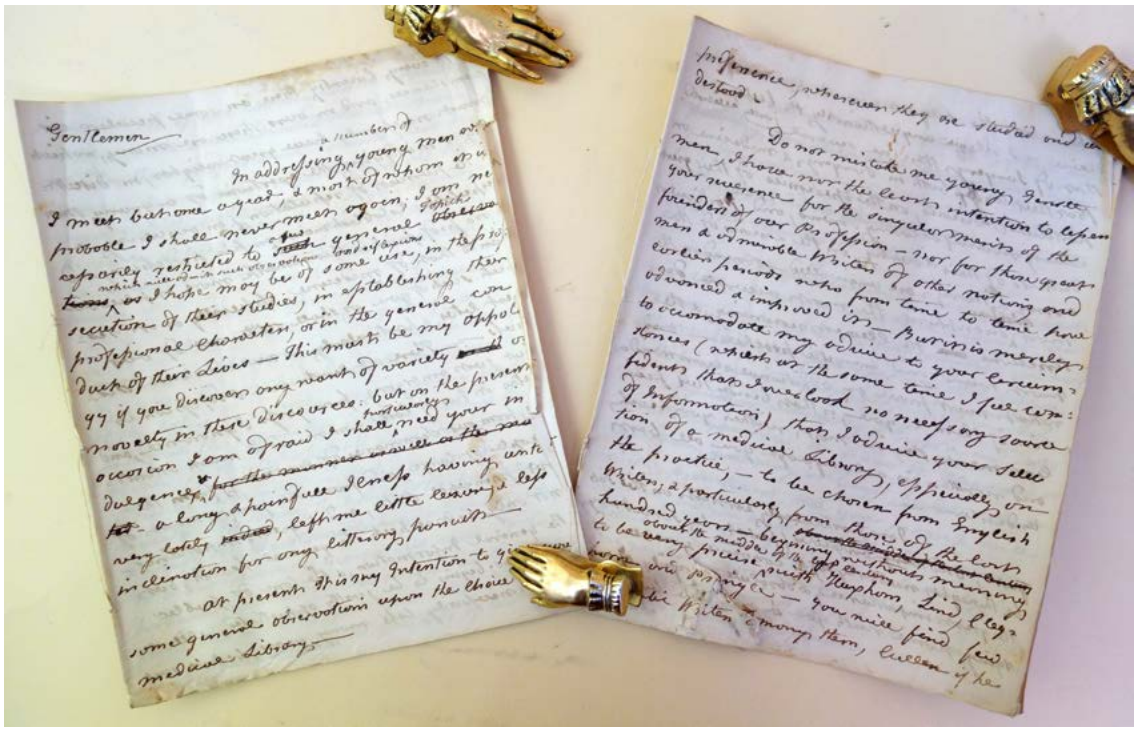
3. Barbato, Girolamo (fl. 2nd half of the 17th century). Dissertatio elegantissima de sanguine et eius sero . . . 12mo. [2], 82pp. Frankfurt am Main: Impensis Joh. Davidis Zunneri, Bibl. Literis Johannis Andreae, 1667. 137 x 81 mm. Vellum ca. 1667, a little warped, title in ink on spine. Some foxing and toning but very good. "Ex libris Brun" in an early hand on the title.

$8500

First Edition. Barbato discovered blood plasma and its clotting factors, and first published these discoveries in this extremely rare and little-known small volume. He discovered that the blood cells were suspended in the plasma, which he called "serum," and he pointed out the similarities between blood serum and egg white in clotting. Barbato used the term "serum" in its older sense, referring simply to the liquid portion of the blood. The term plasma was introduced in the mid-nineteenth century.

The discovery of blood serum was first attributed to Thomas Willis; however, Barbato's priority was established by Androili (?Michelangelo Androili [1672-1713]), who had assisted Barbato in his investigations (see *A New General Biographical Dictionary*, ed. Rose [1857], Vol. III, p. 139). Remarkably, Barbato's work is not discussed in any of the histories of hematology or physiology that we consulted, perhaps because of its rarity.

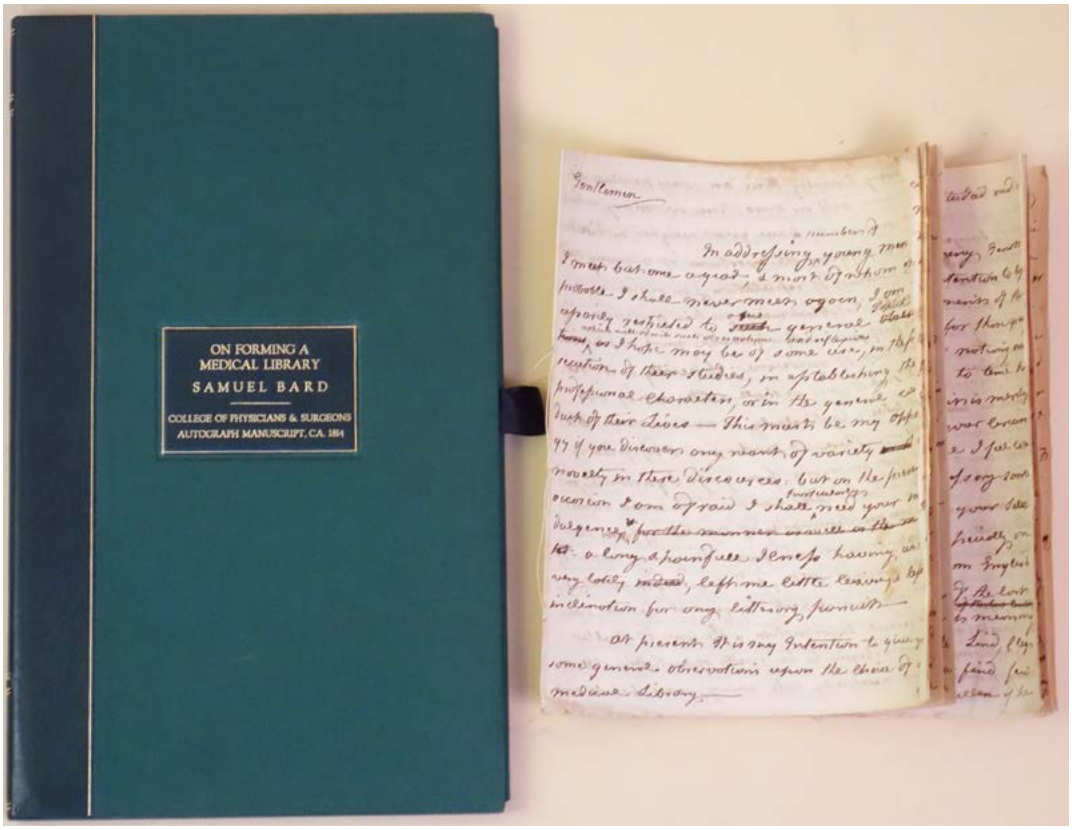
According to the title-page, Barbato's treatise includes discussions of the following: Hermann Conring, J. A. van der Linden and Bartholin on blood; Steno on "sanguinis dealbatio" (literally, "whitewashing of the blood"; i.e., lymphatics?); Willis on the "nerve juice"; Regius on the passage of chyle to the spleen; Liceti on the nutrition of the embryo; Wharton and Charleton on the lacteals; Harvey on semen; and Moebius on animal spirits. Very little is known about Barbato, except that he was the author of two other medical works: *De arthridite libri duo* (1665) and *Dissertatio anatomica de formatione, organisatione, conceptu et nutritione foetus in utero* (1676). Osler 1907. Partington, *History of Chemistry* II, p. 548. Krivatsy 642. Lilly Library, *Medicine: An Exhibition of Books* (1966), no. 83. Lindeboom, *Boerhaave and Great Britain*, p. 51. Garrison-Morton.com 10711, noting that a Paris edition of Barbato's work also appeared in 1667; the priority of the two editions is unknown. 44739



Possibly the First Essay on Building a Medical Library by a Famous Early American Physician

4. Bard, Samuel (1742-1821). Autograph manuscript address on forming a medical library, in a neat and legible hand, with deletions and additions in the same hand. 25pp. N.p., n.d. [New York, ca. 1814.] 261 x 207 mm. Unbound sheets sewn into two gatherings of eight and six leaves respectively; preserved in a quarter morocco slipcase. Edges a bit frayed, 2-inch tear in lower margin of last gathering affecting some text, but very good. $9500

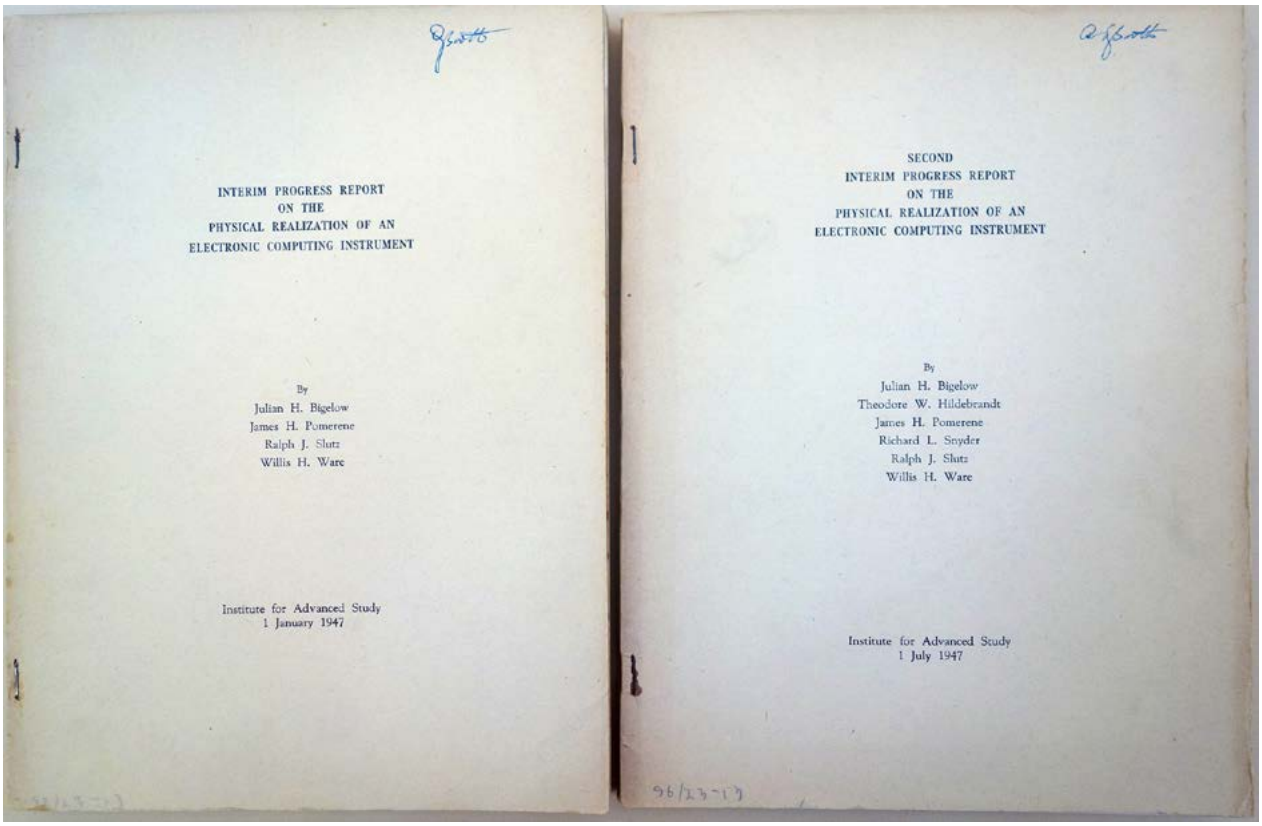
Remarkable unpublished speech, possibly a commencement address, on the topic of forming a medical library by Samuel Bard, co-founder of the King's College Medical School (now the Columbia University College of Physicians and Surgeons), the second medical school established in the United States. Bard's speech, addressed to students of the College, may well be **the first essay on building a medical library written by a famous early American physician**. One of the most eminent medical men of his day, Bard was George Washington's personal physician and the author of several notable medical works, including one of the earliest accurate descriptions of diphtheria (Garrison-Morton.com 5052), the first American treatise on medical ethics (Garrison-Morton.com 1763), and the first significant textbook on obstetrics written by an American (Garrison-Morton.com 6163.1).



In his address Bard announced to his listeners his "intention to give you some general observations upon the choice of a medical library," taking into account the "peculiar circumstances" facing early nineteenth-century American medical graduates, many of whom would be setting up practice in the country's remoter rural and frontier regions. Bard's advice was eminently practical: While recognizing the fundamental contributions of such medical luminaries as Hippocrates, Harvey, Boerhaave and Sydenham,

> whose works necessarily claim the attention & must adorn the library of a man of learning . . . In a practical point of view all they teach may be learned, at less expense and with greater facility from later writers, particularly from those of the British nation . . .
>
> Do not mistake me, young gentlemen, I have not the least intention to lessen your reverence for the singular merits of the founders of our profession, nor for those great men & admirable writers of other nations and earlier periods . . . But it is merely to accommodate my advice to your circumstances (whilst at the same time I feel confident that I overlook no necessary source of information) that I advise your selection of a medical library, especially on the practice, to be chosen from English writers, & particularly from those of the last hundred years—beginning without meaning to be very precise about the middle of the last century with Huxham, Lind, Cleghorn and Pringle—you will find few systematic writers among them, Cullen if he is not the only one on the practice of medicine is I believe unquestionably the best on that of surgery . . . and what must prove an additional recommendation of [these authors] to you, is that besides their peculiar merits, they are mostly within your reach, and written in a language you all best understand . . .

The writers Bard deemed essential to an American physician's library were John Huxham (1692-1768), best known for his *Essay on Fevers* (1750; Garrison-Morton.com 2201) and his important monograph on diphtheria (Garrison-Morton.com 1675); James Lind (1716-94), whose famous *A Treatise of the Scurvy* (1753; Garrison-Morton.com 3713) led to the elimination of scurvy in the British navy; George Cleghorn (1716-89), author of *Observations on the Epidemical Diseases in Minorca* (1751; Garrison-Morton.com 1674); John Pringle (1707-82), founder of modern military medicine and author of *Observations on the Diseases of the Army in Camp and Garrison* (1752; Garrison-Morton.com 2150); and William Cullen (1710-90), author of *Synopsis nosologiae methodicae* (1769; Garrison-Morton.com 2204) and the foremost British clinical teacher of his day. 44836



Rare First Reports on the IAS Computer, from the Library of Andrew D. Booth

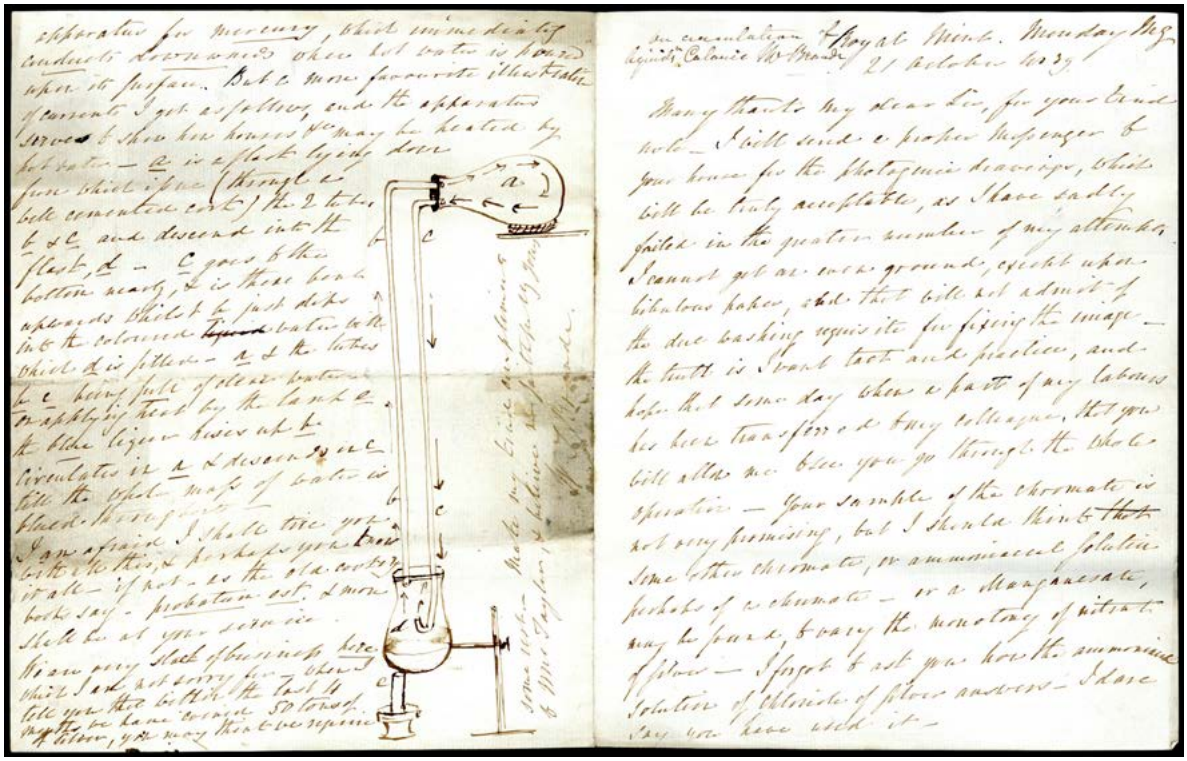
5. Bigelow, Julian Himely (1913-2003) *et al.* Interim progress report on the physical realization of an electronic computing instrument. 2 parts [the second titled "Second interim progress report . . ."]. Mimeograph typescript. Interim progress report: viii, 99, 99A–99G, 100ff.; Second interim progress report: [6], 1–3, 3A, 4–8, 8A–8C, 9, 9A–9C, 10, 10A–10B, 11–13, 13A, 14–15, 15A–15B, 16, 16A, 17–20, 20A, 21, 21A–21D, 22, 22A–22D, 23–24, 24A, 25, 25A, 26, 26A, 27, 27A–27D, 28, 28A–28B, 29, 29A, 30–31, 31A, 32, 32A, 33–34, 34A–34C, 35, 35A, 36–37, 37A, 38, 38A, 39–40, 40A–40B, 41–43, 43A–43B, 44–46, 46A–46B, 47–48, 48A–48C ff. 40 plates, text illustrations. [Princeton:] Institute for Advanced Study, 1 January 1947–1 July 1947. 280 x 215 mm. Original buff printed wrappers. Boxed. From the library of computer pioneer Andrew D. Booth (1918-2009), early developer of the magnetic drum memory, with his signature on the front wrappers of both parts. $9500

First Edition. The first two in a series of progress reports describing the design and construction of the IAS computer, written by the IAS electronic computer project engineering staff. *Extremely rare—OCLC cites only four copies of the first report (Smithsonian, Princeton/IAS Library, University of Pennsylvania and Brown) and none of the second.*

The IAS computer owed its existence to the efforts of John von Neumann, who obtained funding for the project from RCA, the Army Ordnance Department, and

the Navy Office of Research (the military support was supplanted later in the project by funding from the Atomic Energy Commission). The project was headed by von Neumann and Herman Goldstine, with Arthur Burks serving as a part-time consultant and Julian Bigelow as chief engineer. The logical basis for its design—known as the "von Neumann architecture"—became an industry standard.

The IAS computer was planned as a parallel machine—a reversal of von Neumann's earlier opinion, expressed in the *First Draft of a Report on the EDVAC*, that any first machine should be serial in nature. The IAS machine's hardware was completed in January 1951 and it began running programs in the middle of that year, beginning with a long series of calculations connected with the design of the hydrogen bomb that supposedly took sixty continuous days of computer time. The machine was officially dedicated on June 10, 1952 and remained in operation until 1960. *Origins of Cyberspace* 956. 44758



"Photogenic Drawing"

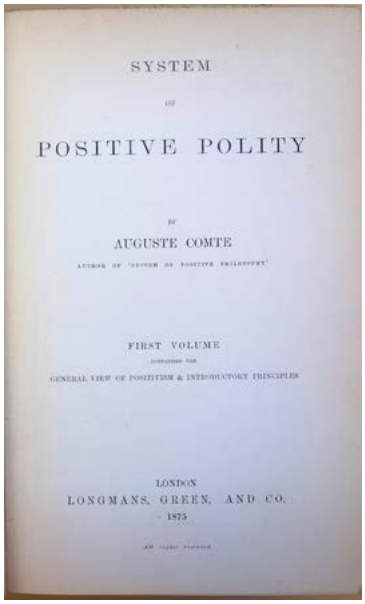
6. Brande, William Thomas (1788-1866). Autograph letter signed to Alfred Swaine Taylor (1806-80). 4pp. [London] The Royal Mint, 21 October 1839. 233 x 185 mm. Last page a bit dust-soiled, but fine otherwise. Docketed in Taylor's hand. $950

Early letter on "photogenic drawing" to Alfred Swaine Taylor, forensic toxicologist and photography pioneer, from chemist William Thomas Brande. Taylor began experimenting with photography in early 1839, shortly after Daguerre and Fox Talbot announced the discoveries of their respective photographic methods. Drawing on his knowledge of toxicology, Taylor invented a way to produce photographic paper by impregnating it with ammoniacal silver nitrate, one of the reagents used to test for arsenic. In 1840 Taylor published his findings in a pamphlet titled *On the Art of Photogenic Drawing*, which included instructions on how make photographs using his methods.

Brande was also interested in experimenting with the new "photogenic drawing," as can be seen in the first part of his letter, written in the fall of 1839:

> Many thanks my dear sir for your kind note. I will send a proper messenger to your house for the photogenic drawings, which will be truly acceptable, as I have sadly failed in the greater number of my attempts. I cannot get an even ground, except upon bibulous paper, and that will not admit of the due washing requisite for fixing the image—the truth is I want tact and practice, and hope that some day when a part of my labours has been transferred to my colleague, that you will allow me to see you go through the whole operation. Your sample of the chromate is not very promising, but I should think that some other chromate, or ammoniacal solution perhaps of a chromate—or a manganesate, may be found, to vary the monotony of nitrate of silver. I forgot to ask you how the ammoniacal solution of chloride of silver answers. I dare say you have used it.

The remainder of Brande's letter contains detailed descriptions, illustrated with drawings, of ways to demonstrate the circulation of heat in liquids. Brande succeeded Humphry Davy as professor of chemistry at the Royal Institution in 1813 and also held high-ranking posts at the Royal Mint; his *Manual of Chemistry* (1819; 6th ed. 1848) was the leading chemistry textbook of its day. He would later collaborate with Taylor on the textbook *Chemistry* (1863). Barrell, *Fatal Evidence: Professor Alfred Swaine Taylor & the Dawn of Forensic Science*, pp. 26-29. Taylor and Schaaf, *Impressed by Light: British Photographs from Paper Negatives, 1840-1860*, p. 378. 44795


SYSTEM

OF

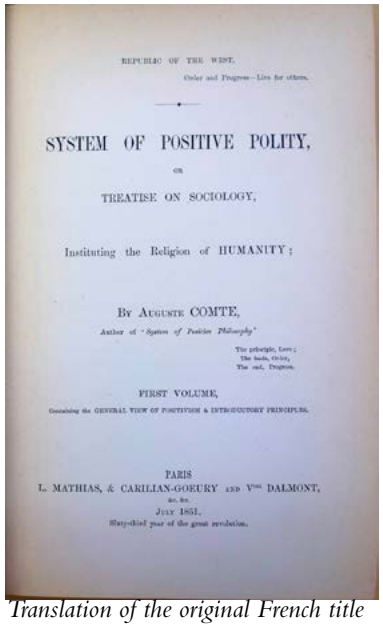
POSITIVE POLITY

BY

AUGUSTE COMTE

FIRST VOLUME

LONDON
LONGMANS, GREEN, AND CO.
1875


REPUBLIC OF THE WEST.

SYSTEM OF POSITIVE POLITY,

OR

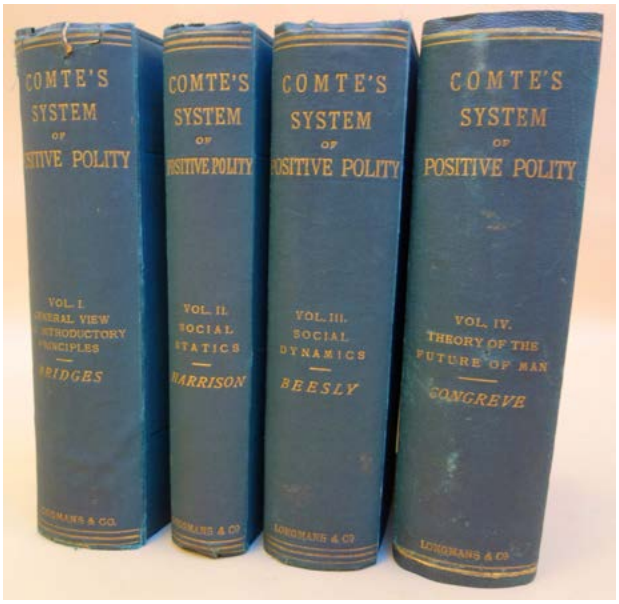
TREATISE ON SOCIOLOGY,

Instituting the Religion of HUMANITY;

BY AUGUSTE COMTE,

FIRST VOLUME,

PARIS
L. MATHIAS, & CARILIAN-GOEURY AND V^ve DALMONT,
JULY 1851.



Translation of the original French title

The Religion of Humanity

7. Comte, Auguste (1795-1857). System of positive polity. 4 vols. lx, 618; xxx, 387; lxxxii, 536; lxxx, 678pp., plus publisher's adverts. London: Longmans, Green, and Co., 1875-77. 223 x 145 mm. Original green cloth, Vol. I a bit shaken and with hinges cracked, Vol. IV rebacked, some wear to extremities, but on the whole very good. $950

First Edition in English of Comte's *Système de politique positive* (1851-54), his last major work. Comte, a French philosopher, originated the doctrine of positivism, a science-based secular philosophy intended to provide the foundation for a new society. His ideas had an enormous impact on 19th-century thought, influencing the work of such social thinkers as John Stuart Mill, Karl Marx and George Eliot.

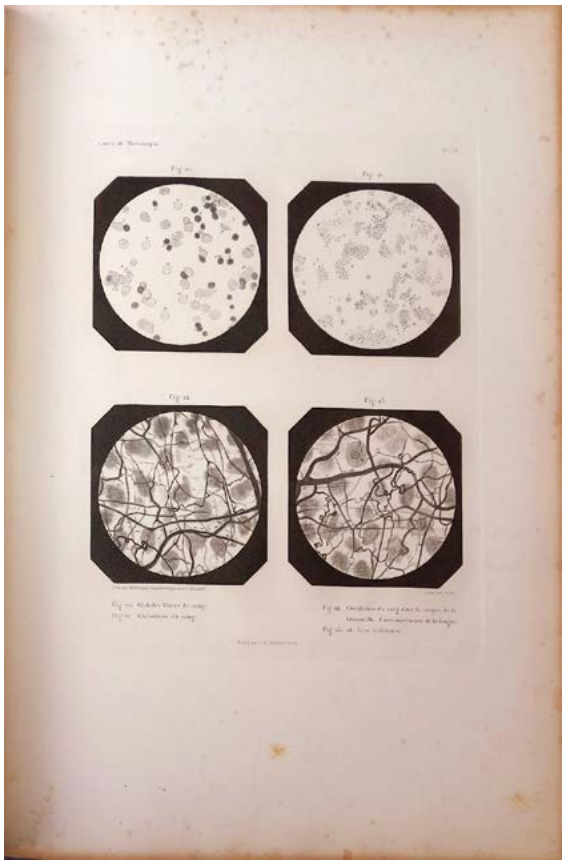
Comte's *System of Positive Polity*, second only in importance to his earlier *Cours de philosophie positive* (1830-42), calls for a system of ethics based on the worship of humanity rather than God; it posits a society in which temporal power is to be in the hands of businessmen and bankers, spiritual power in the hands of a secular priesthood of sociologists and social planners, and private morality in the hands of an idealized womanhood. The religious overtones in the *System* shocked Comte's rationalist admirers, and John Stuart Mill, long one of Comte's greatest supporters, compared his tyranny to that of Loyola. See *Printing and the Mind of Man* 295 (*Cours de philosophie positive*). 7966

Collecting, Describing and Growing Botanical Specimens in Penang, Malaysia

8. Curtis, Charles (1853-1928); **Walter Fox** (1858-1934). Archive of 21 autograph letters (18 by Curtis, 3 by Fox) signed to James Kortright Birch (1850-1927), plus a watercolor sketch of orchids and additional materials; click here for list. Penang Botanic Gardens (Malaysia), 12 December 1892 – 23 November 1904. Various sizes. Pin-holes in most of the letters, one letter with a small portion of the margin cut away not affecting legibility, a few edges frayed, but very good. $4500

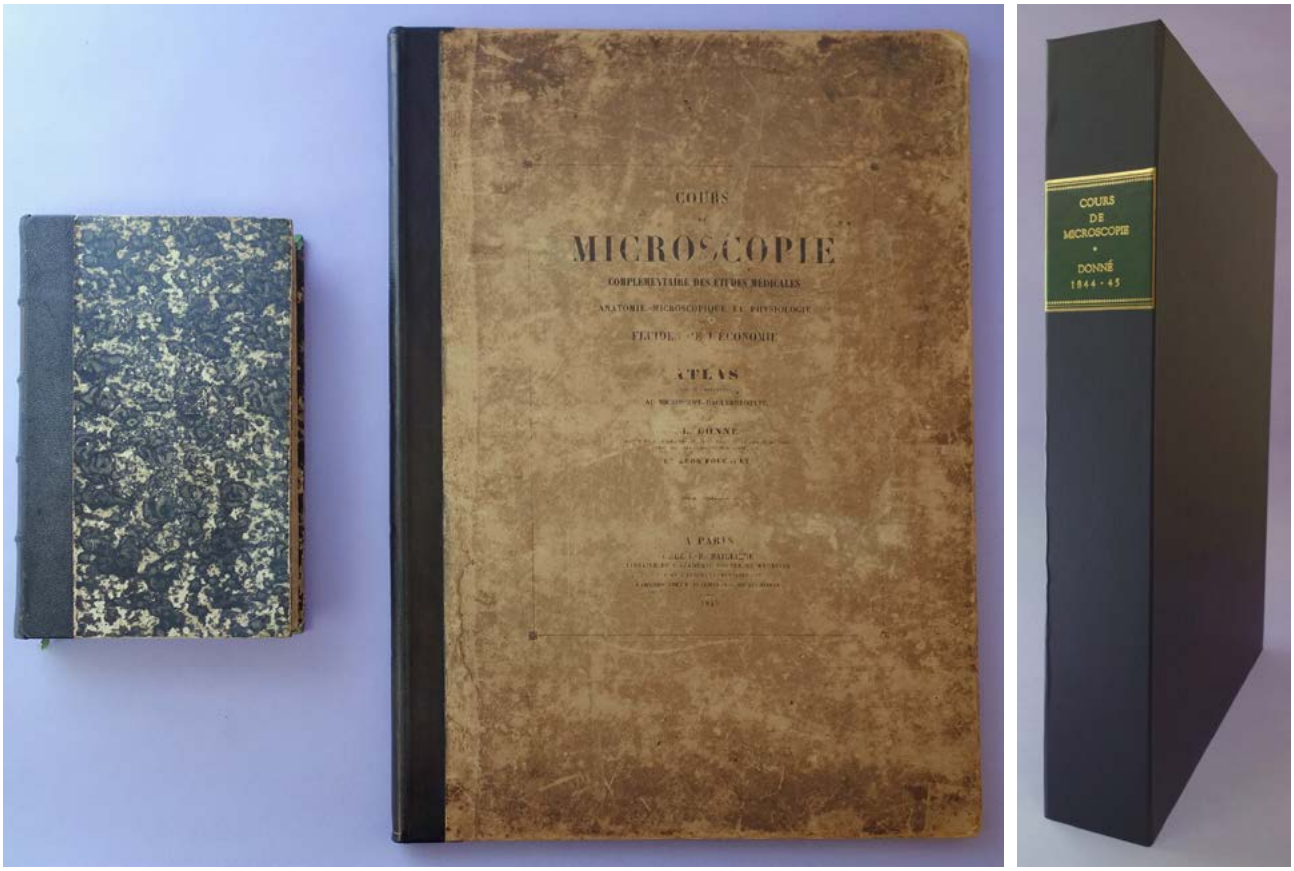
Remarkable scientific archive consisting primarily of letters from British botanist Charles Curtis, the first superintendent of the famous Penang Botanic Gardens in Malaysia and the one primarily responsible for the Gardens' beautiful design. All of the letters in this archive deal with the identification of tropical plant species, including orchids, ferns, flowering trees and shrubs, fruits, etc. They document Curtis's encyclopedic knowledge of both local and exotic species, as well as his collecting activities and his collegial relationship with Kew Gardens in London. The recipient of the letters was James Kortright Birch, a colonial governor of Penang and "a very keen gardener with considerable technical knowledge," who "did much to make the Penang Botanical Gardens the beauty spot that they are" (obituary from *The Singapore Free Press and Mercantile Advertiser*, 15 June 1927).

Curtis gained his knowledge of tropical plants as a plant hunter for the well-known nursery firm of James Veitch & Sons. He traveled to Madagascar, Borneo, Sumatra, Java and Mauritius to find new and rare botanical species, some of which are named for him. In 1884 Curtis was appointed assistant superintendent of the Forests and Gardens Department in Penang, and shortly afterwards was put in charge of the newly established Penang Botanic Gardens. During his 18 years as head of the Gardens Curtis worked tirelessly to transform the garden site, an abandoned granite quarry, into a beautiful park stocked with thousands of native and exotic plants, intended to serve as a recreation area, a botanical repository and a center for the cultivation of various species. In his spare time he put together his own collections of plants from Penang, Burma and neighboring coastal areas, sending samples to Kew Gardens in London and to Veitch & Sons. Curtis retired from the Penang Botanic Gardens in December 1903; he was succeeded by horticulturalist Walter Fox, another expert on tropical plants, who is also represented in this archive. 44763



Incunabulum of Photomicrography & Hematology

9. Donné, Alfred François (1801-78). Cours de microscopie complémentaire des études médicales . . . Text and atlas. [4], ii, [2, incl. errata], 550, pp. (text); 30pp. plus 20 plates engraved by Ouvret after micro-daguerreotypes taken by Léon Foucault (1819-68), original tissue guards present. Paris: J.-B. Baillière [etc.], 1844-45. 214 x 130 mm. (text); 436 x 300 mm. (atlas). Text in 19th century quarter morocco, mottled boards, light edgewear; atlas in original printed boards, new morocco spine, light rubbing and edgewear, a few minor stains; the two preserved in a cloth folding box. Minor foxing, text with library stamp on title and 3 or 4 other leaves, atlas with small library stamp on title and verso of each plate but very good overall. $15,000

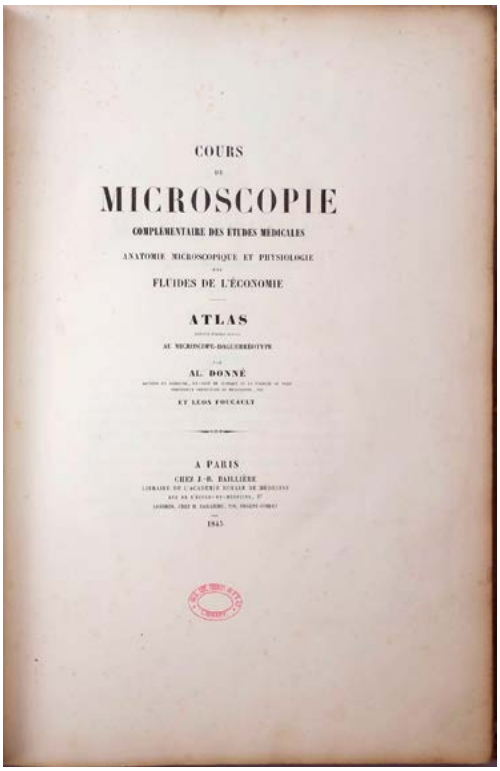


First Edition of a major landmark in the fields of hematology, oncology, bacteriology, medical microscopy and photomicrography. Donné, a French public health physician, began teaching his pioneering course on medical microscopy in 1837, a time when the medical establishment remained largely unconvinced of the microscope's usefulness as a diagnostic and investigative tool. In July 1839 Louis Daguerre, one of the inventors of photography, announced to the Académie des Sciences his "daguerreotype" process for creating finely detailed photographic images on specially prepared glass plates. Donné immediately embraced this new art and within a few months had created not only the first documented photographic portrait in Europe, but also the earliest method of preparing etched plates from daguerreotypes. Donné resolved to incorporate photography into his microscopy course, and in February 1840 he presented to the Académie his first photographic pictures of natural objects as seen through the microscope. "It was Alfred Donné who foresaw the helpful role that projections of microscopic pictures could play during lectures on micrography" (Dreyfus, p. 38).

Over the next few years Donné continued to refine his photomicrography methods with the help of his assistant, Léon Foucault (who would go on to have a distinguished career as a physicist). In 1844 Donné published his *Cours de microscopie complémentaire des études médicales* (Course of microscopy complementary to medical studies), following it a year later with an atlas illustrated with 86 engravings copied from micro-daguerreotypes taken by Foucault. This extraordinary work was the first biomedical textbook to be illustrated with images made from photomicrographs. Among its noteworthy images are the first microphotographs of human blood cells and platelets, and the first photographic illustration of *Trichomonas vaginalis*, the protozoon responsible for vaginal infections, which Donné had discovered in 1836. The text volume of the *Cours* contains the first description of the microscopic appearance of leukemia, which Donné had observed in blood taken from both an autopsy and a living patient. His observations mark the first time that leukemia was linked with abnormal blood pathology:

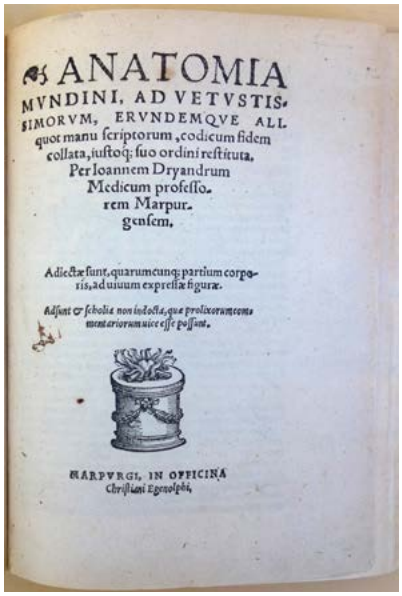
> There are conditions in which white cells seem to be in excess in the blood. I found this fact so many times, it is so evident in certain patients, that I cannot conceive the slightest doubt in this regard. One can find in some

patients such a great number of these cells that even the least experienced observer is greatly impressed. I had an opportunity of seeing these in a patient under Dr. Rayer at the Hôpital de la Charité. . . . The blood of this patient showed such a number of white cells that I thought his blood was mixed with pus, but in the end, I was able to observe a clear-cut difference between these cells, and the white cells . . . (p. 135; translation from Thorburn, pp. 379-80).


COURS
DE
MICROSCOPIE
COMPLÉMENTAIRE DES ÉTUDES MÉDICALES
ANATOMIE MICROSCOPIQUE ET PHYSIOLOGIE
DES
FLUIDES DE L'ÉCONOMIE
ATLAS
AU MICROSCOPE-DAGUERRÉOTYPE
PAR
AL. DONNÉ
ET LÉON FOUCAULT
A PARIS
CHEZ J.-B. BAILLIÈRE
1845

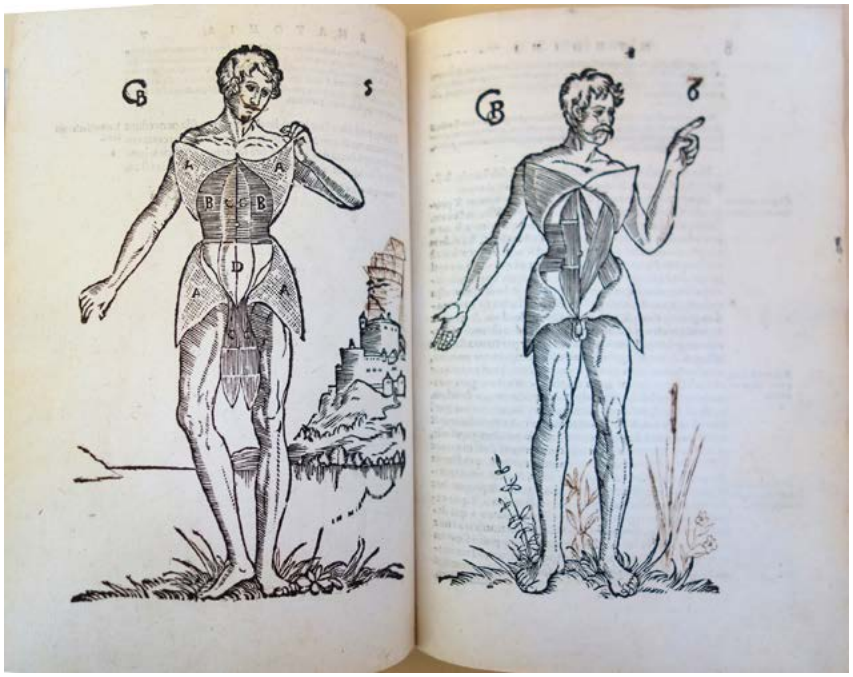
The following year this abnormal blood condition was recognized as a new disease by both John Hughes Bennett (a former student of Donné's) and Rudolph Virchow. Garrison-Morton.com 267.1, 3060.1. Dreyfus, *Some Milestones in the History of Hematology*, pp. 38-40, 54-56, 76-78. Frizot, *A New History of Photography*, p. 275. Gernsheim & Gernsheim, *The History of Photography 1685-1914*, pp. 116, 539. Hannavy, *Encyclopedia of Nineteenth-Century Photography*, Vol. 1, p. 1120. Wintrobe, *Hematology: The Blossoming of a Science*, p. 12. Bernard, *Histoire illustrée de l'hématologie*, passim. Thorburn, "Alfred François Donné, 1801-1878, discoverer of *Trichomonas vaginalis* and of leukaemia," *British Journal of Venereal Disease* 50 (1974): 377-380. 35134

Milestone in the History of Anatomical Illustration


ANATOMIA
MVNDINI, AD VETVSTIS-
SIMORVM, ERVNDEMQVE ALI
quot manu ſcriptorum, codicum fidem
collata, iuſtoq; ſuo ordini reſtituta,
Per Ioannem Dryandrum
Medicum profeſſo-
rem Marpur-
genſem.
Adiectæ ſunt, quarumcunq; partium corpo-
ris, ad uiuum expreſſæ figuræ.
Adſunt & ſcholia non indocta, quæ prolixorum com-
mentariorum uice eſſe poſſunt.
MARPVRGI, IN OFFICINA
Chriſtiani Egenolphi.

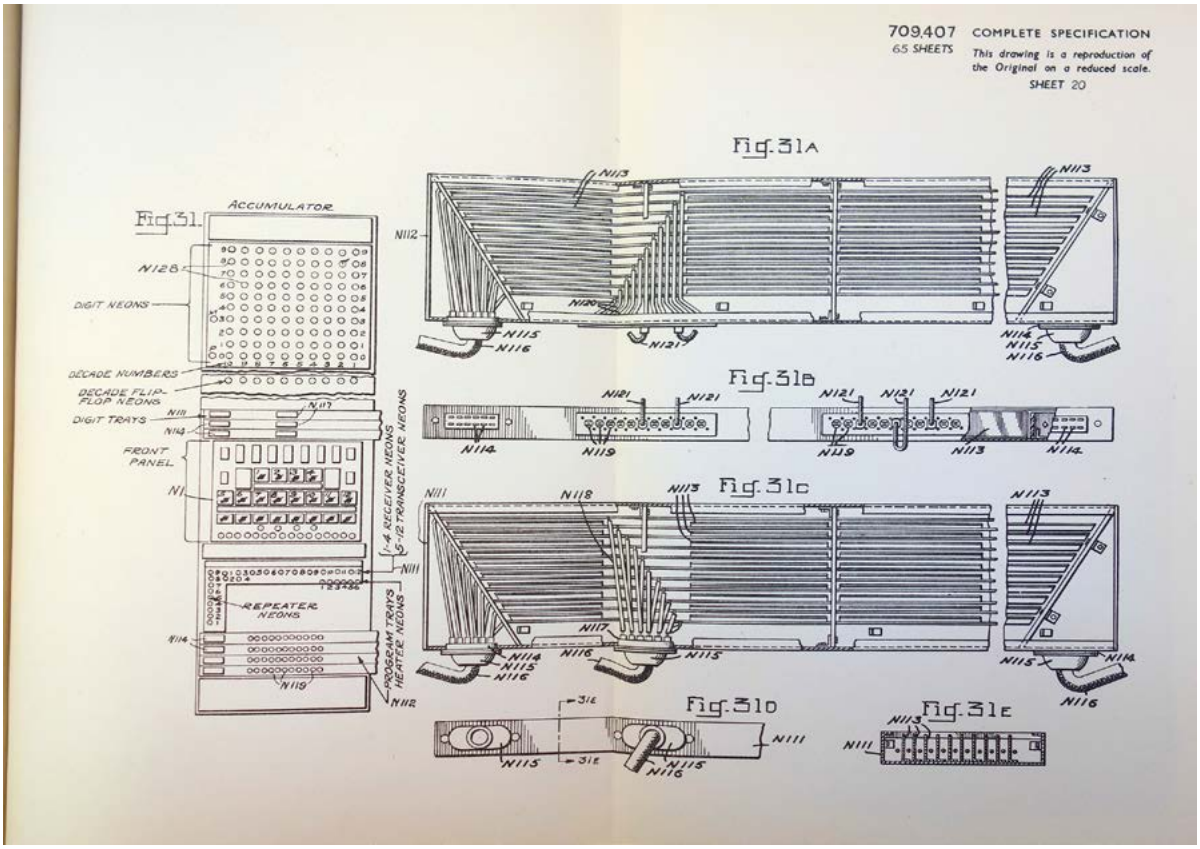
10. Dryander, Johannes (Johannes Eichmann) (1500–60). Anatomia Mundini, ad vetustissimorum, erundemque aliquot manu scriptorium, codicum fidem collata . . . 4to. [4], 67ff., plus integral blank leaf S4. 46 woodcuts (including one repeat), some signed "GB" or GVB," woodcut historiated initials and printer's mark. Marburg: Christian Egenolph, 1541. 190 x 143 mm. Recently bound in old antiphonal leaf, new endpapers. Small repairs to margins of leaves N3 and N4, light toning, but very good. Early pen-and-ink additions to three of the woodcuts. Sold.

First Edition. "Dryander's illustrated anatomical works marked an important milestone in the history of anatomical illustrations" (Persaud, *Early History of Human Anatomy*, p. 129). A professor of medicine at the University of Marburg, Dryander conducted some of the first public dissections in Germany and was one of the first anatomists to make illustrations from his own dissections. Twenty-six of Dryander's anatomical illustrations appear for the first time in his *Anatomia Mundini*, an updated version of Mondino de Luzzi's *Anathomia* (1316; first printed 1478); the new cuts include images of the stomach, the gastrointestinal tract, the liver, the spleen, the kidneys, the genitals and two skeletons. The image of the gastrointestinal tract, on f. 15, is considered to be the earliest printed figure to show the vermiform appendix. 18 other woodcuts are Dryander's beautiful adaptations, with changes, of cuts in Berengario da Carpi's *Commentaria cum amplissimis addidionibus super Anatomia Mundini* (1521), a work which was probably hard to obtain by the time Dryander published. The remaining woodcuts are reprinted from Dryander's *Anatomiae, hoc est, corporis humani dissectionis pars prior* (1537); these include his famous woodcuts of the anatomy of the head, which rank among the most significant pre-Vesalian anatomical illustrations.

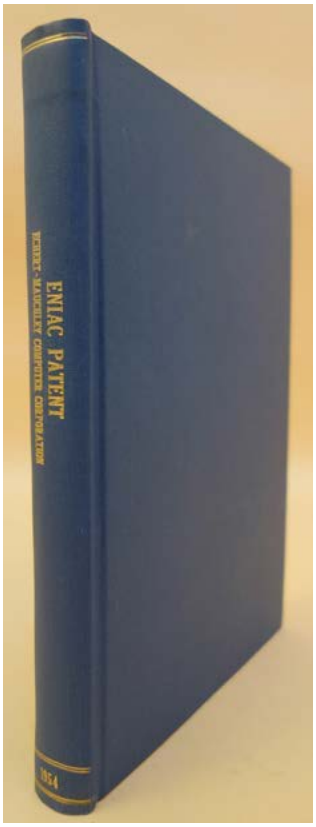


Several of the woodcuts are signed with a monogram consisting of an open pair of compasses (the emblem of the Apostle Thomas) above the letter "G", frequently with the initials "GVB" or "VB" above. This monogram has been linked to the Basel woodcutter Georg Thomas (see Herrlinger, p. 83n), and also to the German artist Hans Brosamer (see Choulant, p. 148). An early owner of this copy added his own pen-and-ink embellishments to three of the cuts, adding architectural and botanical details to the backgrounds of the illustrations.

Cushing, in his *Bio-Bibliography of Andreas Vesalius*, points out that some of Dryander's new cuts, including the spleen, male and female genitalia, and skeletons, were plagiarized from the first, fourth and sixth plates of Vesalius's *Tabulae anatomica sex* (1538). This annoyed Vesalius greatly: In a letter dated 24 August 1542 to his publisher Oporinus, accompanying the woodblock illustrations for the *Fabrica*, Vesalius complained about a publisher in Marburg and Frankfurt (i.e., Egenolph) who "without any discrimination has stolen illustrations from the books of others and is still publishing works of this sort" (quoted in O'Malley, p. 326). Vesalius apparently did not immediately associate Dryander with the plagiarisms, as in Book V of the *Fabrica* he referred to Dryander approvingly as a "diligent man" who had sent him "a long and erudite letter" asking his opinion of the Hippocratic aphorism that abnormally obese women cannot conceive. Choulant, *History and Bibliography of Anatomic Illustration*, pp. 148-149. Cushing, *Bio-Bibliography of Andreas Vesalius*, II.-19; pp. 28-32. O'Malley, *Andreas Vesalius of Brussels*, pp. 88-89, 171-72; 324-26. 44768



Patent for the Electronic Computer

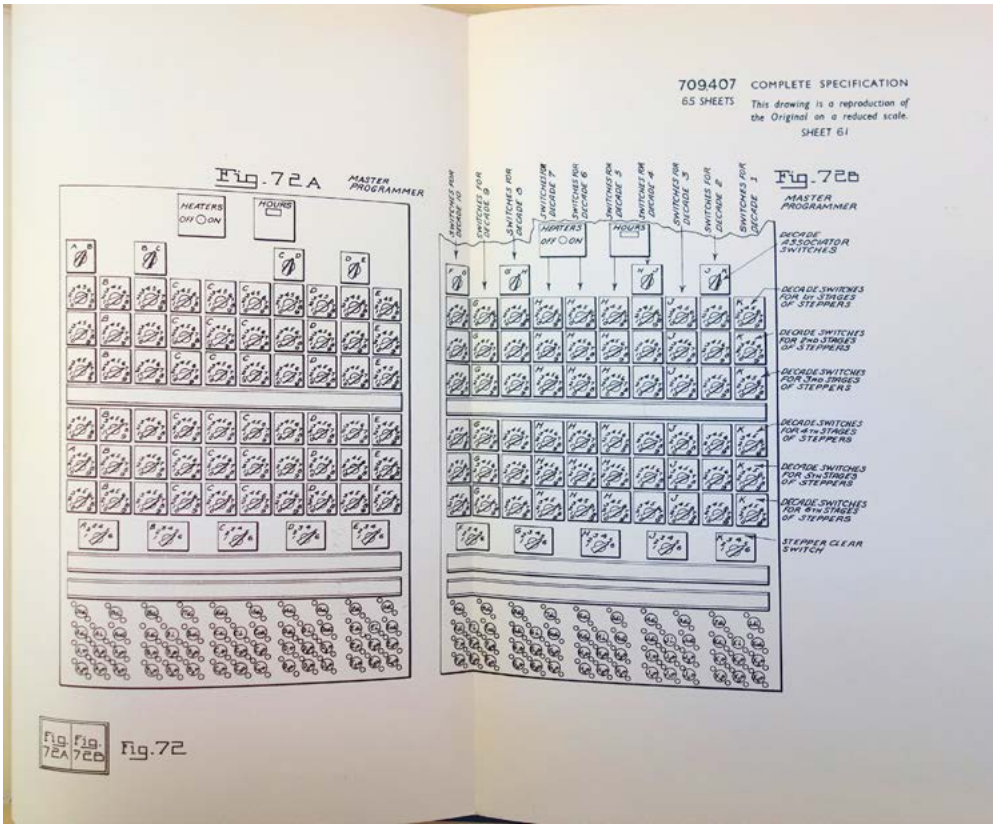


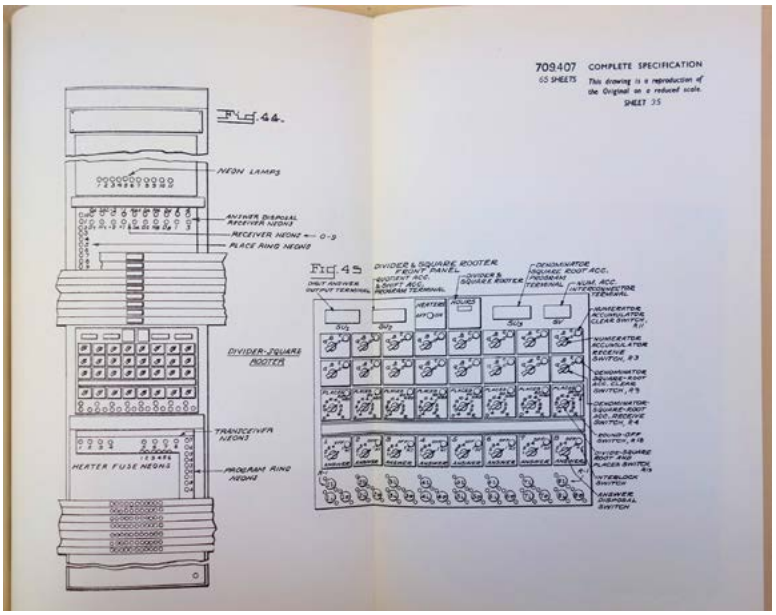
11. ENIAC. Patent specification 709,407 . . . Electronic numerical integrator and computer. 188pp. 65 diagrams (all but 1 folding). London: The Patent Office, 26 May 1954. 275 x 191 mm. Library buckram. First edition.

$15,000

First Printed Edition of the Patent for the Electronic Digital Computer, and the First Comprehensive Description of the First General Purpose Electronic Computer, the ENIAC. The U.S. version of the ENIAC patent was not granted until 1964; the English version of the patent, with text and illustrations virtually identical to the U.S. patent, predates the U.S. patent by nearly ten years. Since no prior patent on an electronic computer existed, the ENIAC patent was a general patent, which included the first description in legal language of the design and operation of an electronic computer. The description is extremely thorough, and illustrated with 65 remarkable diagrams, many of which have multiple images. *Extremely Rare*—this is the first copy we have handled in our five-plus decades in the trade, despite our strong interest in the history of computing.

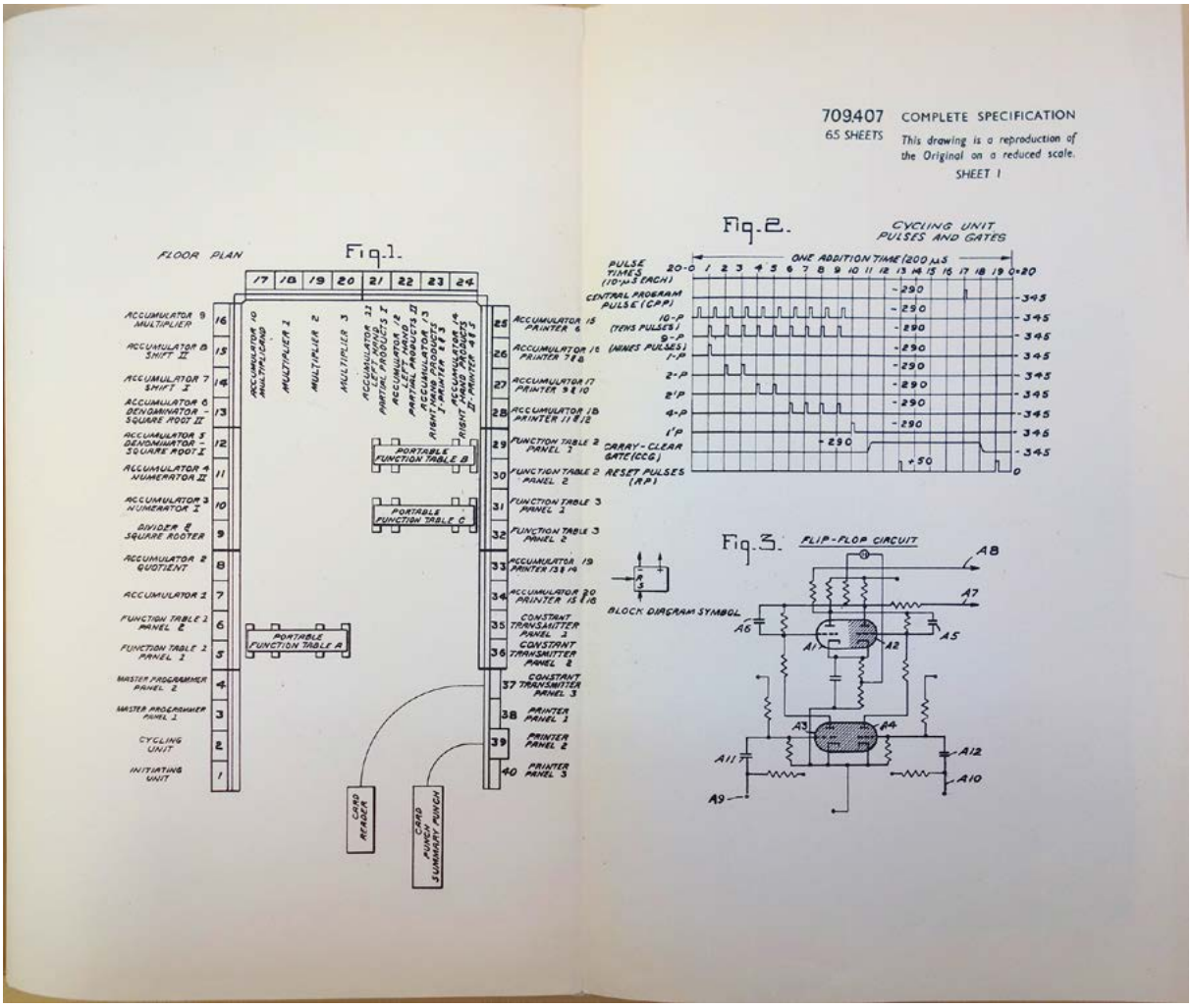
The ENIAC (Electronic Numerical Integrator and Computer), commissioned by the U. S. Army's Ballistics Research Laboratory, was designed by Pres Eckert and John Mauchly and constructed at the University of Pennsylvania's Moore School of Engineering during World War II. The ENIAC came on line in the spring of 1945, just as the war was ending, and for the next three years it remained the only opera-



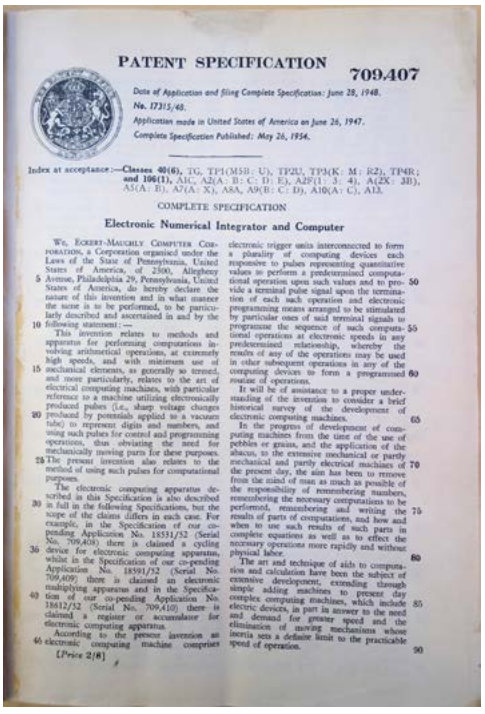


tional electronic digital computer in the world. Eckert and Mauchly, the machine's creators, would go on to found the Electronic Control Company, the world's first electronic computer manufacturing firm, which produced the first electronic digital computers sold commercially in the United States.

The ENIAC was not a stored-program machine, but in January 1944 Eckert came up with what he later called his "big idea": "the idea of the stored instruction sequence or program, using a single fast memory for both data and instruction, with no distinction between registers used for many purposes" (quoted in *Origins of Cyberspace*, p. 535). In August 1944, while still working on the ENIAC, Eckert and Mauchly proposed the construction of a stored-program machine, the EDVAC, based on Eckert's new design. In March 1946, just before construction began on the EDVAC, Eckert and Mauchly parted ways with the Moore School over a dispute about intellectual property claims, retaining patent rights to the ENIAC. The next year Eckert and Mauchly filed for a U.S. patent on the ENIAC that included the stored-program concept; this essentially represented "a general patent on the stored-program electronic digital computer" (*Origins of Cyberspace*, p. 55). The British patent application was made the following year.



The British patent on the ENIAC was granted on 26 May 1954, nearly a decade before the American patent, issued on 4 February 1964. On 19 October 1973, after a six-year legal battle, Judge Earl R. Lawson invalidated the ENIAC patent on the grounds that Eckert and Mauchly had derived their ideas from an earlier computer pioneer, John Atanasoff, who invented a special-purpose electronic computer in the 1930s. This landmark decision placed the concept of the electronic stored-program computer into the public domain, with enormous positive consequences for the computer industry. 44702



PATENT SPECIFICATION

709,407

Date of Application and filing Complete Specification: June 28, 1948.

No. 17315/48.

Application made in United States of America on June 26, 1947.

Complete Specification Published: May 26, 1954.

Index at acceptance:—Classes 40(6), TG, TP1(M5B: U), TP2U, TP3(K: M: R2), TP4R; and 106(1), A1C, A2(A: B: C: D: E), A2F(1: 3: 4), A(2X: 3B), A5(A: E), A7(A: X), A8A, A9(B: C: D), A10(A: C), A13.

COMPLETE SPECIFICATION

Electronic Numerical Integrator and Computer

We, ECKERT-MAUCHLY COMPUTER CORPORATION, a Corporation organised under the Laws of the State of Pennsylvania, United States of America, of 2300, Allegheny Avenue, Philadelphia 29, Pennsylvania, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to methods and apparatus for performing computations involving arithmetical operations, at extremely high speeds, and with minimum use of mechanical elements, as generally so termed, and more particularly, relates to the art of electrical computing machines, with particular reference to a machine utilizing electronically produced pulses (i.e., sharp voltage changes produced by potentials applied to a vacuum tube) to represent digits and numbers, and using such pulses for control and programming operations, thus obviating the need for mechanically moving parts for these purposes. The present invention also relates to the method of using such pulses for computational purposes.

The electronic computing apparatus described in this Specification is also described in full in the following Specifications, but the scope of the claims differs in each case. For example, in the Specification of our co-pending Application No. 18551/52 (Serial No. 709,408) there is claimed a cycling device for electronic computing apparatus, whilst in the Specification of our co-pending Application No. 18591/52 (Serial No. 709,409) there is claimed an electronic multiplying apparatus and in the Specification of our co-pending Application No. 18612/52 (Serial No. 709,410) there is claimed a register or accumulator for electronic computing apparatus.

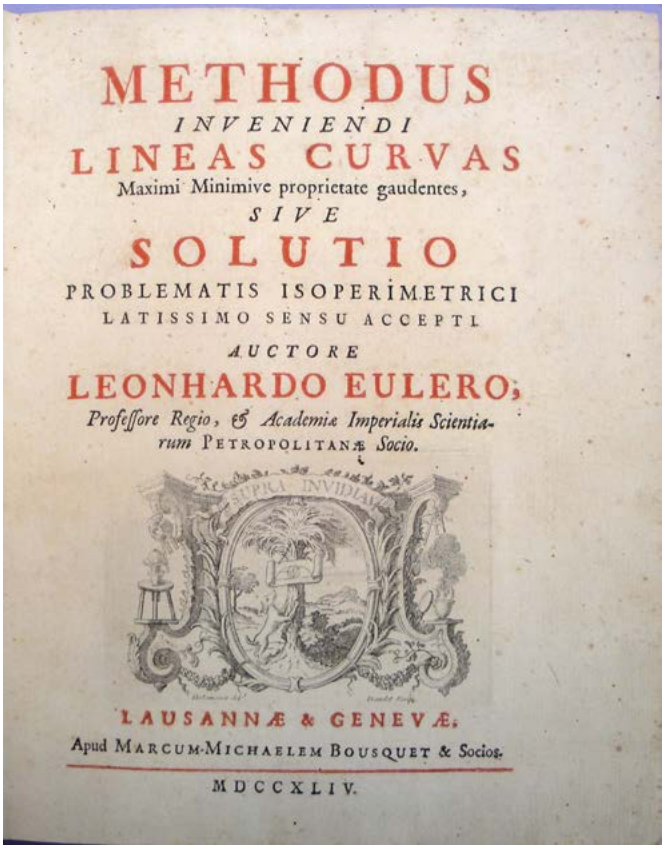
According to the present invention an electronic computing machine comprises electronic trigger units interconnected to form a plurality of computing devices each responsive to pulses representing quantitative values to perform a predetermined computational operation upon such values and to provide a terminal pulse signal upon the termination of each such operation and electronic programming means arranged to be stimulated by particular ones of said terminal signals to programme the sequence of such computational operations at electronic speeds in any predetermined relationship, whereby the results of any of the operations may be used in other subsequent operations in any of the computing devices to form a programmed routine of operations.

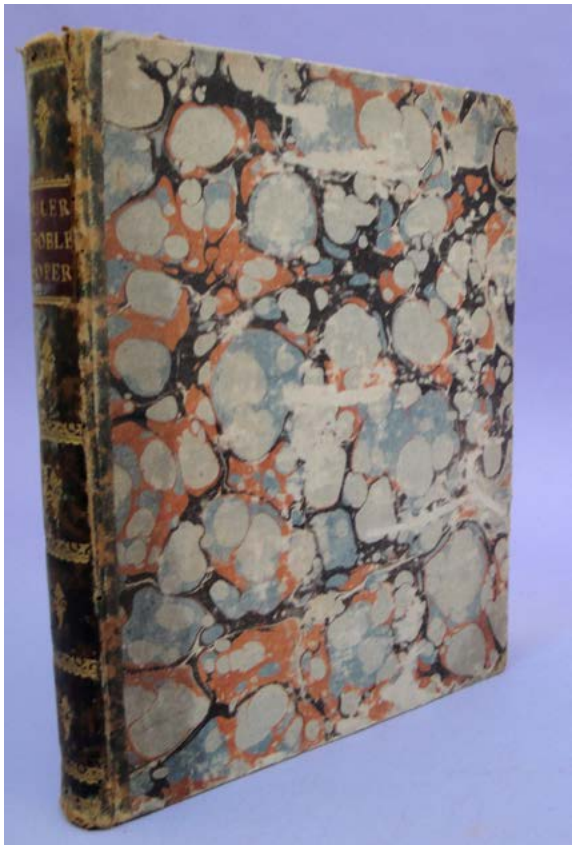
It will be of assistance to a proper understanding of the invention to consider a brief historical survey of the development of electronic computing machines.

In the progress of development of computing machines from the time of the use of pebbles or grains, and the application of the abacus, to the extensive mechanical or partly mechanical and partly electrical machines of the present day, the aim has been to remove from the mind of man as much as possible of the responsibility of remembering numbers, remembering the necessary computations to be performed, remembering and writing the results of parts of computations, and how and when to use such results of such parts in complete equations as well as to effect the necessary operations more rapidly and without physical labor.

The art and technique of aids to computation and calculation have been the subject of extensive development, extending through simple adding machines to present day complex computing machines, which include electric devices, in part in answer to the need and demand for greater speed and the elimination of moving mechanisms whose inertia sets a definite limit to the practicable speed of operation.

[Price 2/8]


METHODUS
INVENIENDI
LINEAS CURVAS
Maximi Minimive proprietate gaudentes,
SIVE
SOLUTIO
PROBLEMATIS ISOPERIMETRICI
LATISSIMO SENSU ACCEPTI
AUCTORE
LEONHARDO EULERO,
Professore Regio, & Academiæ Imperialis Scientiarum Petropolitanæ Socio.
LAUSANNÆ & GENEVÆ,
Apud Marcum-Michaelem Bousquet & Socios.
MDCCXLIV.



Calculus of Variations—Riccardi's Copy

12. Euler, Leonhard (1707-1783). Methodus inveniendi lineas curvas maximi minimive proprietate gaudentes, sive solutio problematis isoperimetrici latissimo sensu accepti. 4to. [2], 322, [2]pp. 5 folding engraved plates. Lausanne & Geneva: Marc-Michel Bousquet & Compagnie, 1744. 248 x 199 mm. Half morocco, gilt spine, marbled boards c. 1744, rubbed, some wear at extremities and corners, bookplate removed from inside front cover. Minor foxing and toning, but very good. From the library of Pietro Riccardi (1828-98), historian and bibliographer of mathematics, with his bookplate on the front endpaper. $12,500


BIBLIOTECA RICCARDI
in Modena
S. VI F. 17 N. 3

First Edition. With the publication of this work, the calculus of variations came into being as a new branch of mathematics. Euler was the first to formulate the principal problems of the calculus of variations and to create general methods for their solution. His work in the *Methodus* was cumbersome by modern standards (the calculus of variations as we know it is the work of Lagrange), but it yielded simple and elegant formulae applicable to a large variety of problems. He introduced (using different terminology) the concepts of function and variation, distinguished between problems of absolute and relative extrema, and deduced the differential equation that now bears his name. This copy is from the library of Pietro Riccardi, author of *Biblioteca matematica italiana* (1870-93). Horblit, *One Hundred Books Famous in Science*, 28. Dibner, *Heralds of Science*, 111. Norman 731. Kline, *Mathematical Thought*, pp. 377-79. Struik, *Source Book in Mathematics*, pp. 399-406. 42452

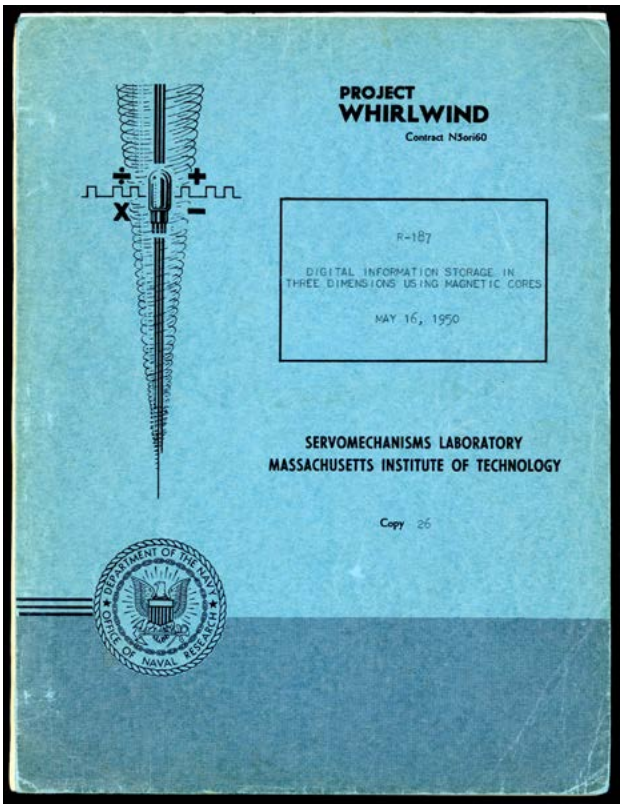
Remarkable Unpublished Photographs

13. Faraday, Michael (1791-1867). Photographic portraits of Faraday and his wife, Sarah Faraday (1800-1879), in an album containing 49 portrait photographs in total. N.p., ca. 1864. Album leaves measure 145 x 120; visible portions of images measure 86 x 51 mm. Album bound in quarter morocco, front and back covers overlaid with mother-of-pearl onlays in diamond pattern, brass clasp, all edges gilt. Light wear to head and foot of spine, otherwise very good. Tipped to the album's first leaf is a slip with gift inscription dated 16 January 1864 from Edith Taylor, daughter of forensic toxicologist Alfred Swaine Taylor (1806-80), to her mother, Caroline Taylor. Subjects of photographs identified in pencil beneath each image. $2250

Remarkable and almost certainly unpublished photographs of Faraday, discoverer of electromagnetic induction and inventor of the electric motor, and his wife, Sarah. Faraday's portrait shows him dressed in a frock coat and standing in front of a pillar; Sarah's shows her seated, wearing bonnet and shawl, with a drape and small table to her right.

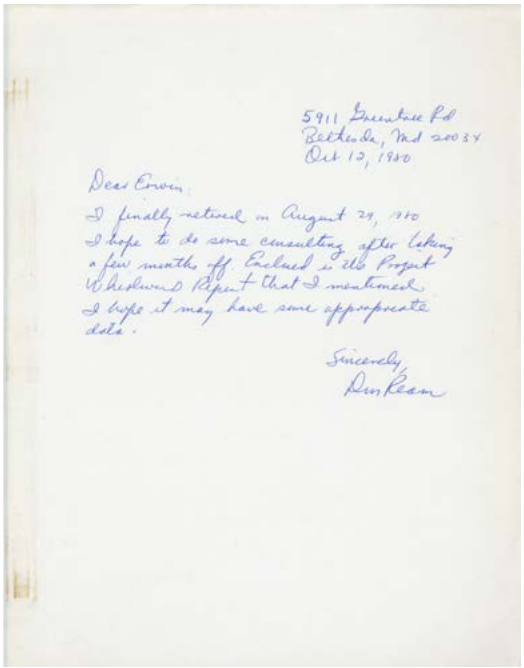
The photographs are in a small but elegant photograph album once owned by Caroline Taylor, wife of the noted forensic toxicologist Alfred Swaine Taylor. The album was a gift from the couple's daughter, Edith, and contains photographs of what appear to be family and friends. Taylor made significant contributions to photography in the late 1830s and early 1840s, and it is quite possible that he took some of the photographs contained in the album. Also included in the album are two photographs of Taylor together with chemist William Thomas Brande (1788-1866); a portrait of Brande alone; and a portrait of labor activist Canon Edward Girdlestone (1805-84). 44797

Magnetic Core Memory



14. Forrester, Jay Wright (1918-2016). Project Whirlwind. Report R-187. Digital information storage in three dimensions using magnetic cores. Dittoed typescript. 12pp. 8 full-page figures. Cambridge: Servomechanisms Laboratory, Massachusetts Institute of Technology, May 16, 1950. Original blue printed wrappers, title and copy number (26) in typescript on front wrapper, minor edgewear. Laid in is an autograph letter signed dated Oct. 12, 1980 to Erwin Tomash (1921-2012) from computing pioneer Donald L. Ream (1922-2014), presenting this report to him. $2750

First Printing of a key early report on the development of magnetic core memory, a fundamental advance in memory technology for stored-program electronic computers. **Extremely Rare**, with only one copy (MIT) cited in OCLC.


5911 Greentree Rd
Bethesda, Md 20034
Oct 12, 1980

Dear Erwin,

I finally retired in August 29, 1980
I hope to do some consulting after taking
a few months off. Enclosed is the Project
Whirlwind Report that I mentioned.
I hope it may have some appropriate
data.

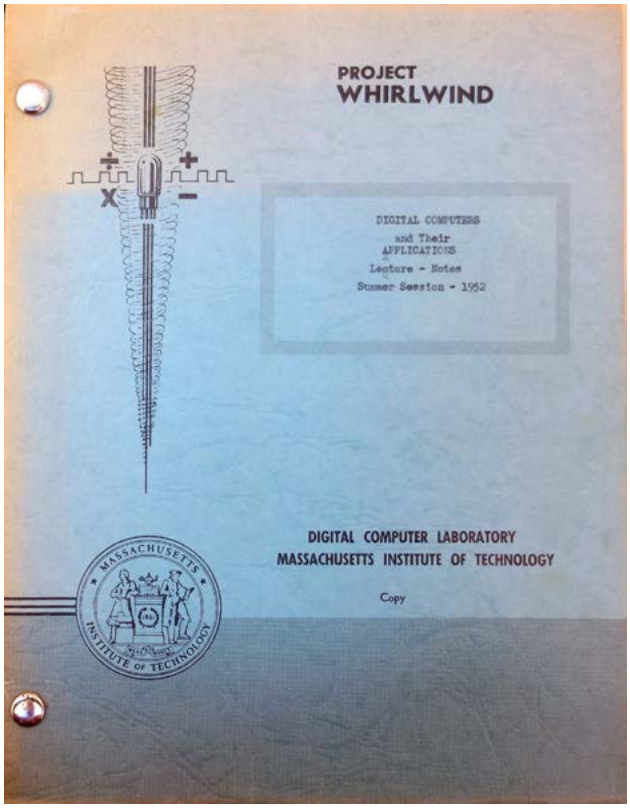
Sincerely,
Don Ream

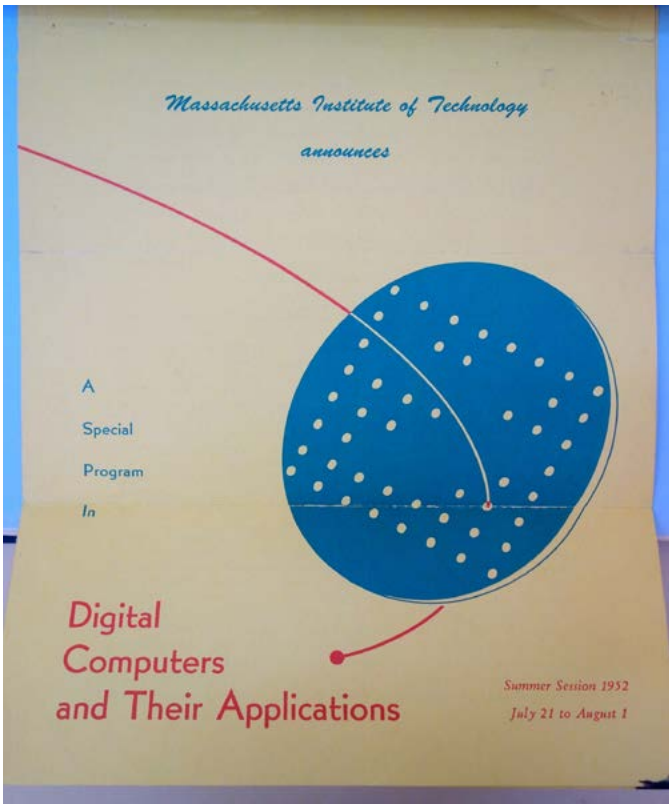
The Whirlwind I computer, developed by Forrester and his team at MIT between 1944 and 1953, is a landmark in the history of electronic digital computing. Designed with a revolutionary bit-parallel architecture—the ancestor of our modern computer architecture—the Whirlwind I was the fastest machine of its day, and the first machine capable of real-time computations. The Whirlwind I originally used an electron-tube memory, but the limitations of this system spurred Forrester to develop the first three-dimensional random-access magnetic core memory, which replaced the Whirlwind I's CRT memory in 1953.

Forrester's magnetic-core memory represents "a fundamental turning point in the development of computer architectures. With the replacement of the electrostatic memory by Forrester's magnetic cores in 1952 [sic], the reliability of the machine reached such a high standard that it was possible to consider using it for actual air traffic control, and the basic speed of the machine had increased to reach its original design of 50,000 operations per second" (Williams, *History of Computing Technology*, p. 386).

The present report, issued in a small number of dittoed copies, documents Forrester's progress to date on the magnetic core memory. "Three-dimensional arrays with efficient high-speed selection appear possible after continued development of rectangular-hysteresis magnetic materials . . . Tests show that most existing materials are too slow . . . Non-metallic magnetic materials show promise" (p. 3).

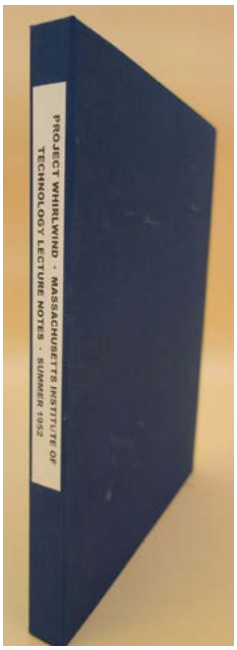
This copy was presented to computing pioneer Erwin Tomash, co-founder of the Dataproducts Corporation and founder of the Charles Babbage Institute, by Don Ream, one of the first computer engineers employed by the U. S. government. Ream was responsible for much of the computer development pertaining to the Naval Department of Defense in the 1950s and 1960s. 44772





Early Courses on Digital Computing

15. [**Forrester, Jay Wright** (1918-2016) and **Charles W. Adams.**] Digital computers and their applications. Lecture-notes summer session 1952. Mimeographed typescript. [123]ff., variously numbered. Text diagrams. Cambridge: Digital Computer Laboratory, Massachusetts Institute of Technology, 1952. 286 x 220 mm. Original printed wrappers, a bit faded, in later cloth binder with printed spine label. Very good. Printed brochure, titled "Massachusetts Institute of Technology announces a special program in digital computers and their applications" (3pp.), bound in. Bookplate of Erwin Tomash (1921-2012). $1750



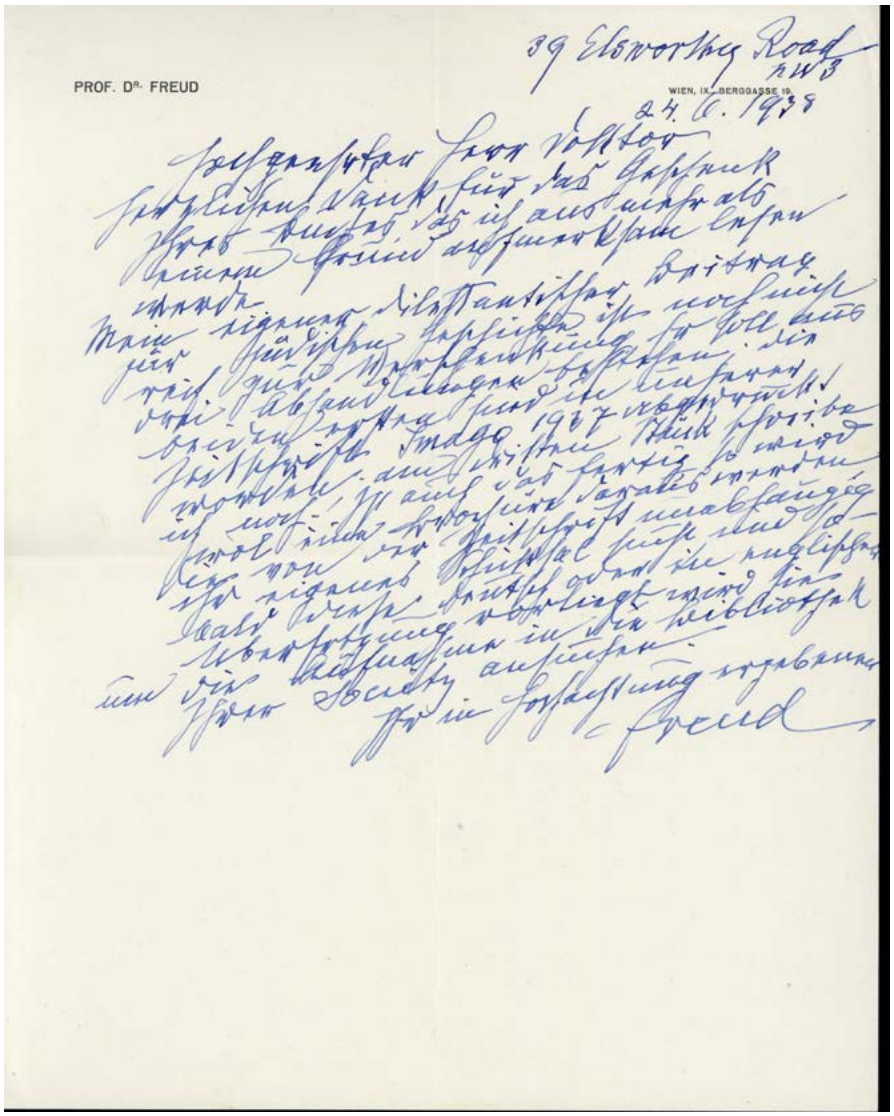
First Printing. MIT was the second American educational institution after the Moore School to offer courses on electronic digital computing. In the summer of 1952 MIT gave the first of what would be a series of summer sessions on "Digital computers and their applications," designed to provide scientists, engineers, and business people with a better understanding of the potentialities and limitations of electronic information-processing systems. Among the instructors were Forrester, the head of the team designing the Whirlwind I, and D. J. Wheeler, co-author of *The Preparation of Programs for an Electronic Digital Computer* (1951), the first textbook on computer programming. This copy, from the library of computing pioneer Erwin Tomash, includes a copy of the brochure advertising the MIT course. See *Origins of Cyberspace* 617. 44776

16. Fraser, James (1740 – 1807 or later). James Fraser, aged 67. Engraved portrait by William Poole after Robert Dighton. N.p., 1807. 430 x 348 mm. (image measures 373 x 307 mm.). Light foxing, traces of mount on verso corners, a few small creases, but very good. $750

Rare engraved portrait of James Fraser, a well-known London bookbinder, alluding to his role as one of "The Prosecuting Masters" in a late eighteenth-century labor dispute between bookbinding masters and journeymen. **It may be the only print relating to social conditions in the English bookbinding industry published during this period**.

In 1786 the journeymen bookbinders in London banded together to strike for a reduction of their regular work schedule from thirteen hours per day to twelve. It was illegal at this time in England for workers to form "combinations" or trade unions, and five of the striking journeymen were tried and sentenced to two years in prison. Despite this setback, the bookbinders' strike was ultimately successful, and the masters ended up accepting the journeymen's demands.

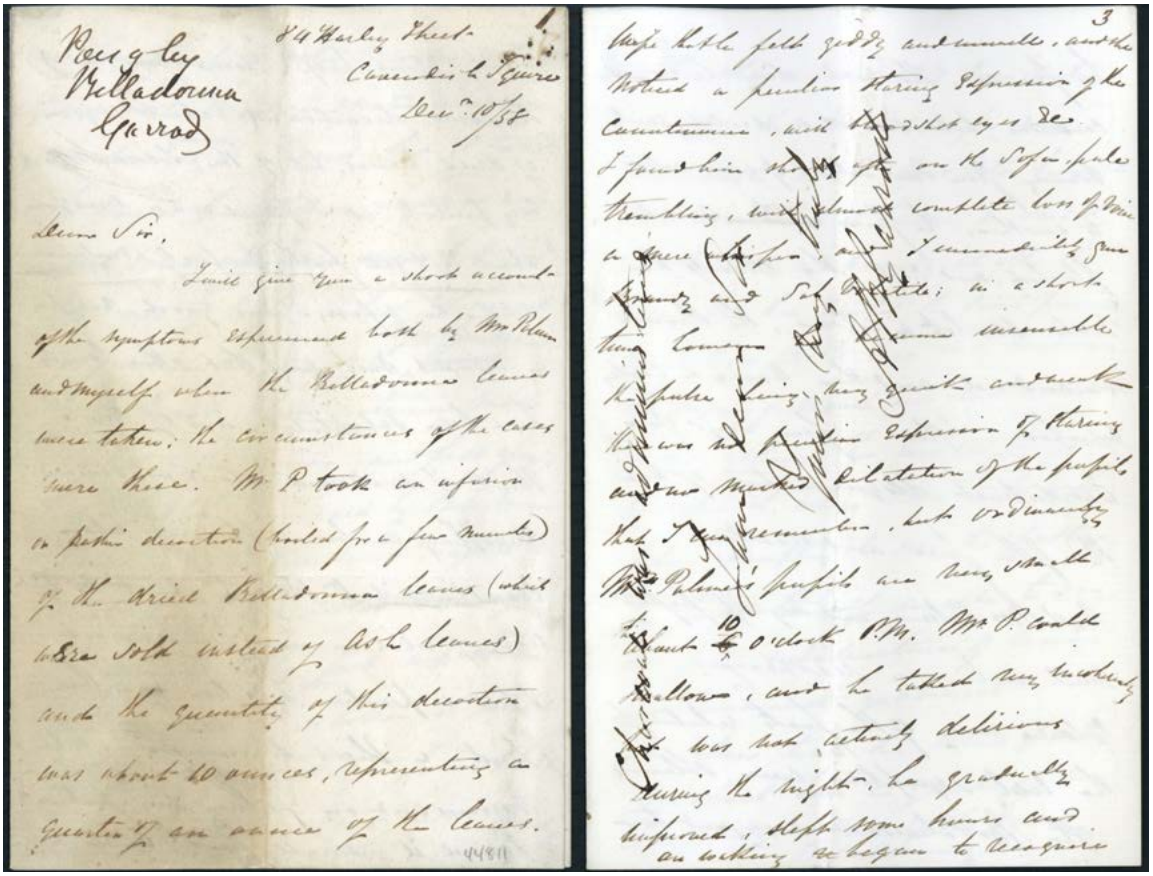
Fraser's experience of the strike led him afterwards to draw up a "Plan for reconciling the differences between the masters and journeymen bookbinders," a copy of which he is holding in the present portrait (see detail at left). On the table next to Fraser are books titled "Estimates in Bookbinding," "Memoirs of Mr. Pitt" and "Anecdotes of Lord Nelson"; a letter headed "Mr. James Fraser, Book Binder"; and a copy of "The Oracle" newspaper dated 28 May 1802. *The British Bookmaker* 5 (1892): 119-121. 44794



Discussing "Moses and Monotheism"

17. Freud, Sigmund (1856-1939). Autograph letter signed in German to an unidentified correspondent ("Herr Doktor"). 1 page. 287 x 230 mm. Fine. English translation included. $9500

Freud's letter discusses his work on his final book, *Moses and Monotheism* (1939): ". . . My own amateurish contribution to Jewish history is not yet in a presentable state. It will be composed from the treatises. The first two were printed in our journal *Imago* in 1937. I am still writing on the third piece. When that is finished, a brochure will probably be made of it, which will search out its own destiny independent of the journal . . ." In *Moses and Monotheism* Freud put forth the hypothesis, based on psychoanalytic theory, that Moses was not Jewish but Egyptian, possibly a follower of the monotheist pharaoh Akhenaten. He also conjectured that Moses had been murdered by his people, leading to a lasting unconscious sense of guilt among the Jews and to their hope for redemption through a Messiah. 40594



First and last pages of Garrod's letter

"Felt Assured that I Had Been Poisoned with Belladonna"

18. Garrod, Alfred Baring (1819-1907). Autograph letter signed to Alfred Swaine Taylor (1806-80). 12pp. [London] Harley Street, Cavendish Square, 10 December 1858. 178 x 105 mm. Minor soiling to first and last pages, creased along previous folds, but very good. Docketed in Taylor's hand. $2250

Excellent and unusually long letter on belladonna poisoning from Alfred Baring Garrod, the foremost authority of his time on gout and rheumatoid arthritis, to Alfred Swaine Taylor, who founded the field of forensic toxicology. Garrod is best known for discovering that gout is linked to an excess of uric acid in the blood, and for giving rheumatoid arthritis its present name (see Garrison-Morton.com 4497). Taylor, the leading medical jurist in England in the mid-nineteenth century, held the professorship of medical jurisprudence at Guy's Hospital from 1831 until 1877 and was the author of several books on forensic medicine, including *Elements of Medical Jurisprudence* (1836; Garrison-Morton.com 1738) and *On Poisons in Relation to Medical Jurisprudence and Medicine* (1858).

Belladonna, a highly toxic member of the nightshade family, has been used in medicine since ancient times as a pain reliever, either on its own or combined with opium. Alkaloids distilled from belladonna, including atropine, scopolamine and hyoscyamine, are used in anesthesia today to mitigate cardiac and gastric symptoms caused by the buildup of acetylcholine in anesthetized patients.

Garrod's letter describes in detail the symptoms both he and his patient Mr. Palmer suffered three years previously after accidentally ingesting a decoction of belladonna leaves that they believed to be ash-leaf tea.

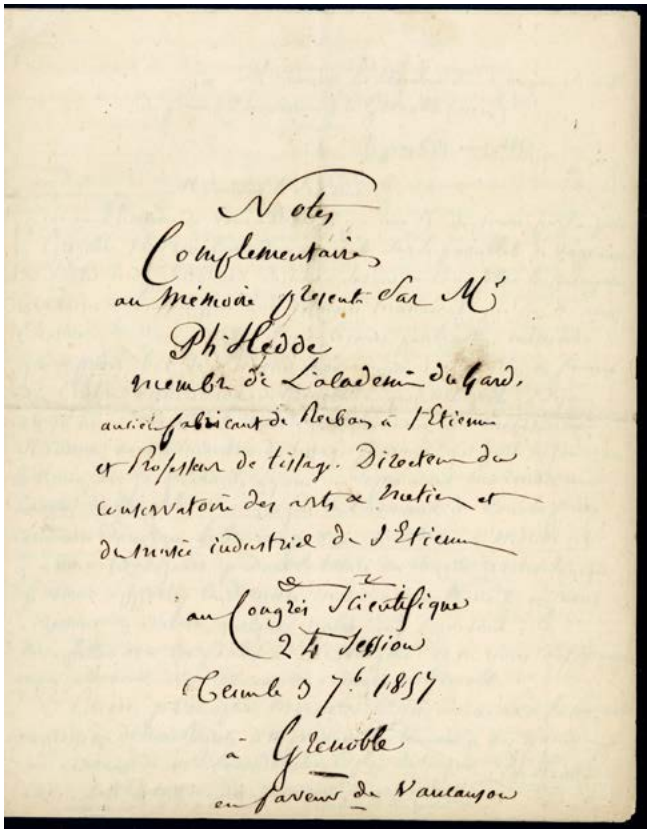
> Mr. P took an infusion or rather decoction (boiled for a few minutes) of the dried belladonna leaves (which were sold instead of ash leaves) and the quantity of this decoction was about 10 ounces, representing a quarter of an ounce of the leaves. I took about half a wine glassful of the same decoction . . . Half an hour afterwards . . . I

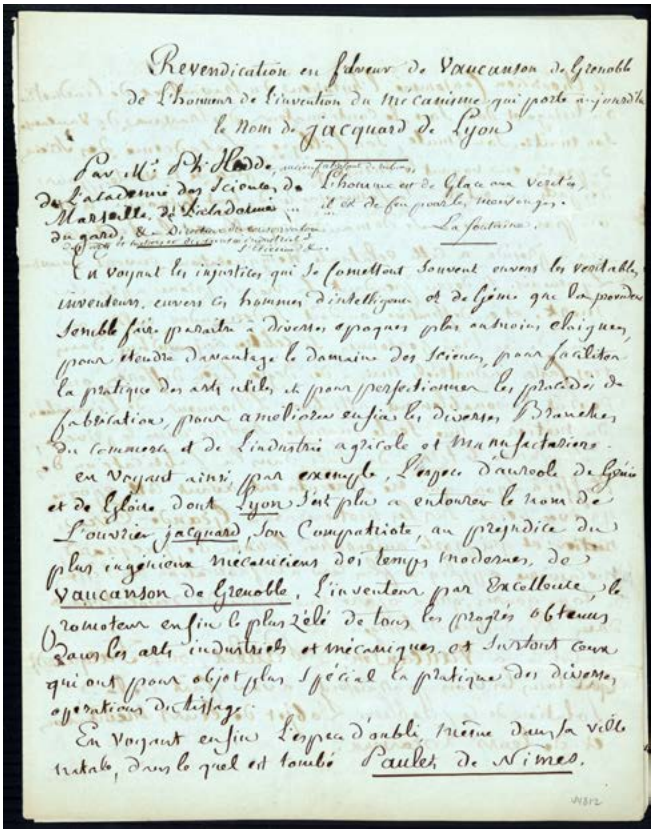
felt a peculiar sensation in the head, a slight swimming, intensely nervous and on feeling my pulse found it small and rapid . . . I then experienced a peculiar dryness of the mouth, extending to the throat, but certainly most marked in the former, and felt assured that I had been poisoned with belladonna, stramonium or henbane. After a short time I requested some of the infusion to be put into an eye to ascertain whether it dilated the pupil, and it was found to do so powerfully in about 15 or 20 minutes. My vision had become indistinct . . .

My symptoms may be thus summed up:

Swimming sensation
Intense feeling of nervousness and palpitation of heart
Rapid pulse
Dryness of mouth & perversion of taste
Indistinctness of vision
Dilatation of pupils
Very rapid occurrence of ideas and slight difficulty of articulation . . .

Both Garrod and his patient recovered completely. Garrod published brief accounts of the case in the London medical press in 1856 and 1857 (see, for example, *The Medical Times and Gazette*, n.s. 12 [1856], p. 92), and Taylor wrote about it in his classic *Principles and Practice of Medical Jurisprudence* (1865 and later eds.). 44811


Notes
Complementaire
au Mémoire présenté par Mr
Ph. Hedde
membre de l'Académie du Gard,
ancien fabricant de Rubans à St Etienne
et Professeur de tissage. Directeur du
Conservatoire des arts & Metiers et
de Musée industriel de St Etienne
au Congrès Scientifique
24e Session
Ouvert le 7e 1857
à Grenoble
en faveur de Vaucanson


Revendication en faveur de Vaucanson de Grenoble
de l'honneur de l'invention du Mécanisme qui porte aujourd'hui
le nom de Jacquard de Lyon
Par Mr Ph. Hedde,
de l'académie des Sciences, de l'honneur et de Glace au Verd à
Marseille, de Bellaudamus
du gard, &
En voyant les injustices qui se commettent souvent envers les véritables
inventeurs, envers ces hommes d'intelligence et de Génie que la providence
semble faire naître à diverses époques pour entr'eux, chacun,
pour étendre davantage le domaine des Sciences, pour faciliter
la pratique des arts utiles, et pour perfectionner les procédés de
fabrication, pour améliorer enfin les diverses Branches
du commerce et de l'industrie agricole et manufacturières.
en voyant ainsi, par exemple, l'Orgueil d'auréole de Génie
et de Gloire dont Lyon s'est plus à entourer le nom de
l'ouvrier Jacquard, son compatriote, au préjudice des
plus ingénieux mécaniciens des temps modernes, de
Vaucanson de Grenoble, l'inventeur par excellence, le
promoteur enfin le plus zélé de tous les progrès obtenus
dans les arts industriels et mécaniques et surtout ceux
qui ont pour objet plus spécial la pratique des diverses
opérations du tissage.
En voyant enfin l'oubli même dans la ville
natale, dans le quel est tombé Paulet de Nimes.

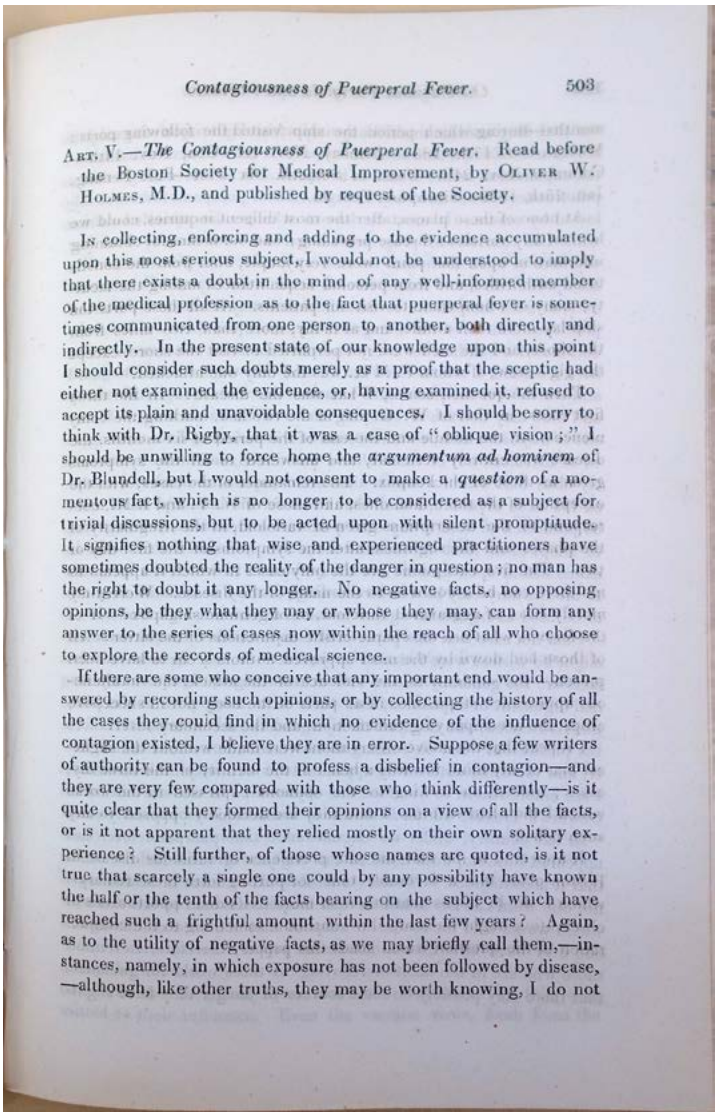
19. Hedde, Philippe (1801-80). (1) Revendication en faveur de Vaucanson de Grenoble de l'honneur de l'invention du mécanique qui porte aujourd'hui le nom de Jacquard de Lyon. Autograph manuscript signed ("par Mr. Ph. Hedde"). 10pp., on blue paper. N.p., n.d. 1857]. 266 x 208 mm. (2) Notes complementaires au mémoire présenté par Mr. Ph. Hedde . . . au Congrès Scientifique (24e session) 3 Septembre 1857 à Grenoble en faveur de Vaucanson. Autograph manuscript signed, prefaced by a covering letter signed from Hedde, dated 31 August 1857, to the president of the Congrès scientifique de France à Grenoble. 7pp. 31 August – 3 September 1857. 270 x 215 mm. Together 2 items, totaling 17 pages. Creased where previously folded, small marginal tears in no. (2), but very good. $750

Hedde was a textile manufacturer and director of the Industrial Museum of St.-Etienne. In an address delivered before the 24th session of the Congrès scientifique de France (no. [1] above), Hedde argued that it was Jacques Vaucanson (1709-82), rather than Joseph-Marie Jacquard (1752-1834), who should be recognized as the true inventor of the automatic weaving loom. Vaucanson, a famous designer of automata, designed and built the first fully automated loom in 1745, using a system of punched cards to create intricate designs. Vaucanson's automated loom was not successful, but half a century later Jacquard came across an example in the Musée des Arts et Métiers and was inspired to improve upon Vaucanson's design, inventing the automated loom that now bears his name. Both Vaucanson's and Jacquard's punched-card looms are now recognized as ancestors of computing technology. Hedde's second manuscript (no. [2] above) contains additions to his 1857 address as well as an explanatory letter addressed to the president of the Congrès scientifique de France. 44812

One of the Rarest and Greatest American Contributions to Medicine

20. Holmes, Oliver Wendell (1809-94). The contagiousness of puerperal fever. In *New England Quarterly Journal of Medicine and Surgery* 1, no. 4 (April 1843): 503-30. Whole number. [2], iii, 449-595p. Frontispiece portrait. 220 x 143 mm. Quarter morocco in period style. Some offsetting of frontispiece onto title, but very good.

$12,500



Contagiousness of Puerperal Fever. 503

ART. V.—*The Contagiousness of Puerperal Fever.* Read before the Boston Society for Medical Improvement, by OLIVER W. HOLMES, M.D., and published by request of the Society.

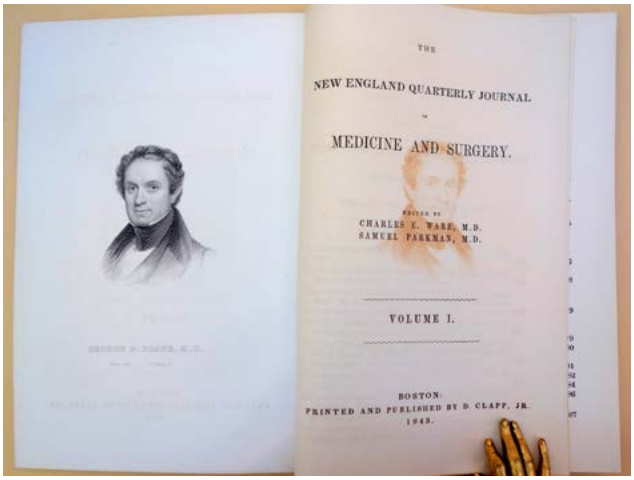
IN collecting, enforcing and adding to the evidence accumulated upon this most serious subject, I would not be understood to imply that there exists a doubt in the mind of any well-informed member of the medical profession as to the fact that puerperal fever is sometimes communicated from one person to another, both directly and indirectly. In the present state of our knowledge upon this point I should consider such doubts merely as a proof that the sceptic had either not examined the evidence, or, having examined it, refused to accept its plain and unavoidable consequences. I should be sorry to think with Dr. Rigby, that it was a case of "oblique vision;" I should be unwilling to force home the *argumentum ad hominem* of Dr. Blundell, but I would not consent to make a *question* of a momentous fact, which is no longer to be considered as a subject for trivial discussions, but to be acted upon with silent promptitude. It signifies nothing that wise and experienced practitioners have sometimes doubted the reality of the danger in question; no man has the right to doubt it any longer. No negative facts, no opposing opinions, be they what they may or whose they may, can form any answer to the series of cases now within the reach of all who choose to explore the records of medical science.

If there are some who conceive that any important end would be answered by recording such opinions, or by collecting the history of all the cases they could find in which no evidence of the influence of contagion existed, I believe they are in error. Suppose a few writers of authority can be found to profess a disbelief in contagion—and they are very few compared with those who think differently—is it quite clear that they formed their opinions on a view of all the facts, or is it not apparent that they relied mostly on their own solitary experience? Still further, of those whose names are quoted, is it not true that scarcely a single one could by any possibility have known the half or the tenth of the facts bearing on the subject which have reached such a frightful amount within the last few years? Again, as to the utility of negative facts, as we may briefly call them,—instances, namely, in which exposure has not been followed by disease, —although, like other truths, they may be worth knowing, I do not

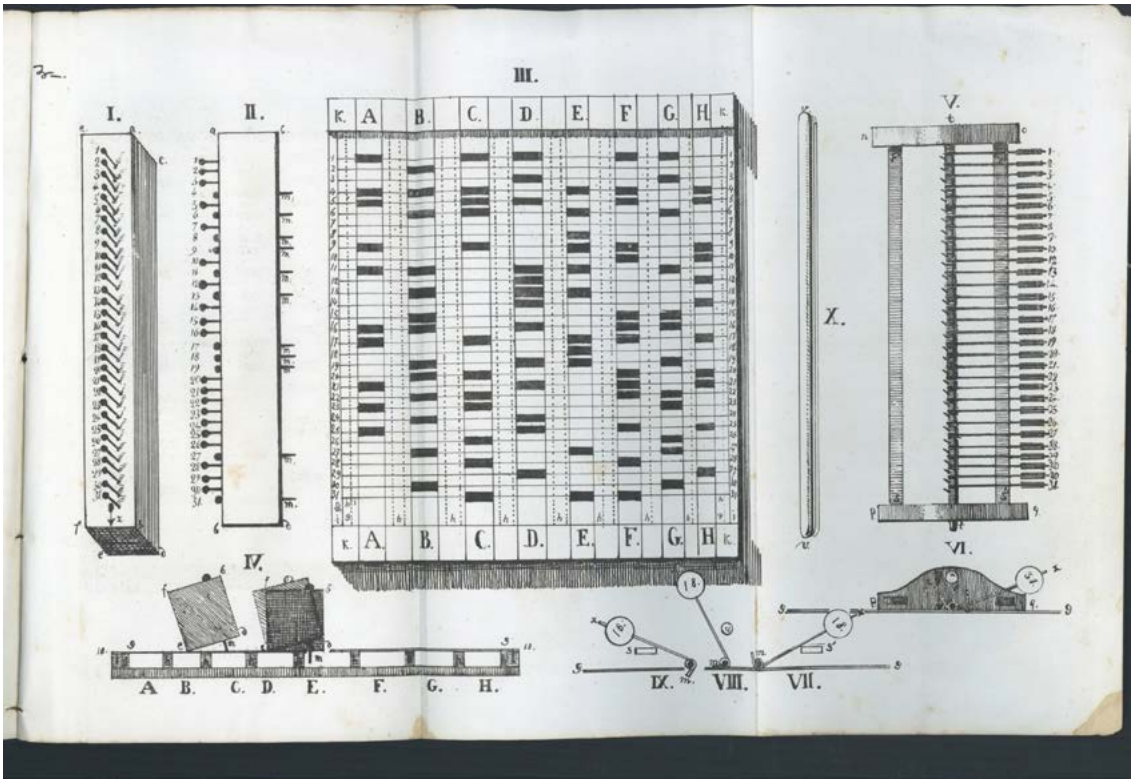
First Edition of one of the rarest and greatest American contributions to medicine. Holmes was the first to establish without doubt the contagious nature of puerperal fever, and to prove that the infection was carried and transmitted by birth attendants. He argued that before attending women in childbed, doctors who had been performing post-mortem dissections or treating cases of puerperal fever should wash their hands in calcium chloride and change their clothes. The paper provoked violent opposition from obstetricians, including many who were unable to read Holmes' paper in this new and obscure journal, and who therefore received the information second hand. However, Holmes' views eventually prevailed, and "no American publication in the nineteenth century saved more lives than this unassuming paper, founded solely on the evidence of observed cases" (Grolier Club, *100 Influential American Books* [1947], 50.)

Because the paper appeared "in a periodical which died after one year's life," and therefore escaped wide notice, Holmes undertook a revised and enlarged edition in 1855. He explained in his preface to that work that few people had ever had the opportunity to read his original article when first published. By 1860 he was able to

write in *The Professor at the Breakfast-Table*: "The sneers of those whose position I had assailed. . . I . . . have at last demolished, so that nothing but the ghosts of dead women stir among its ruins." Currier and Tilton, *Oliver Wendell Holmes*, 33-34. Garrison-Morton.com 6274. Grolier, *100 Books Famous in Medicine*, 72b. Norman 1088. *Printing and the Mind of Man* 316a.



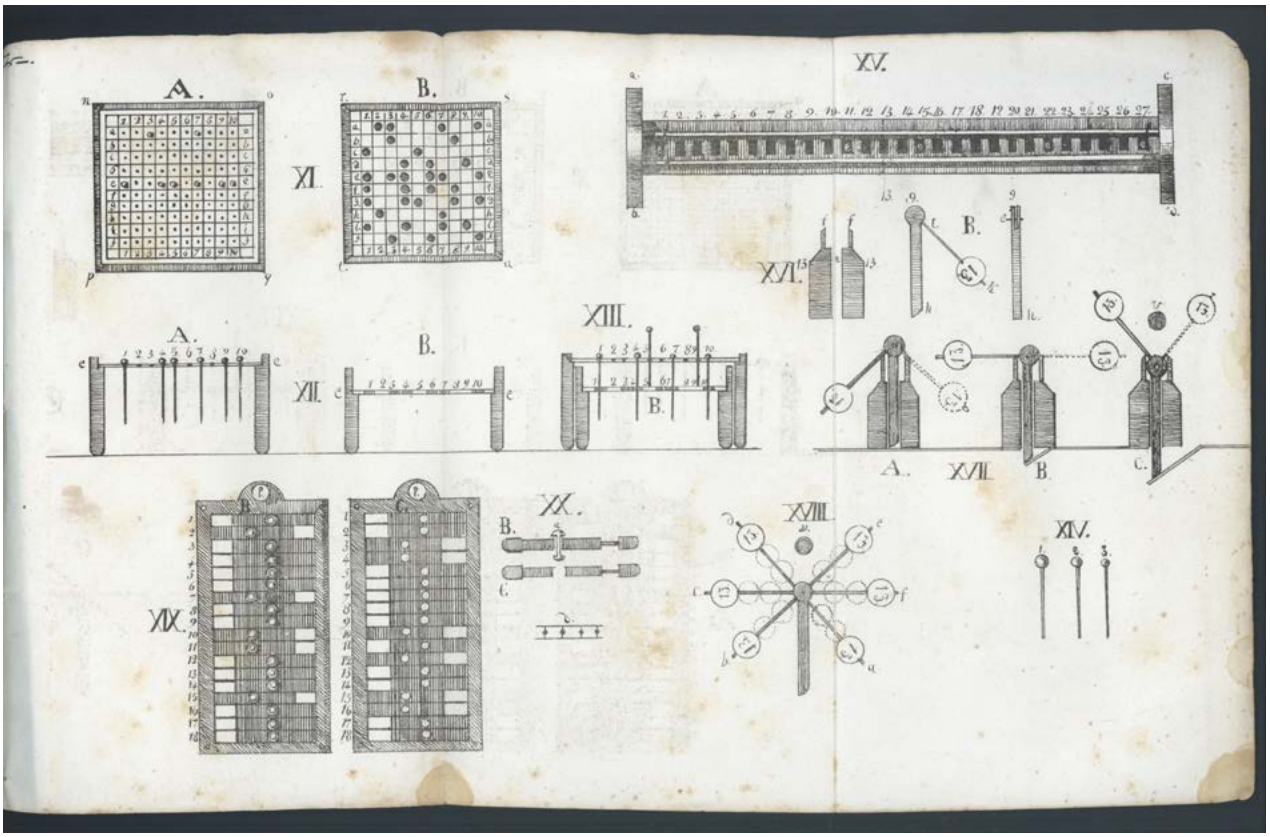
This rare number of the *New England Quarterly Journal of Medicine and Surgery* also contains Jonathan Mason Warren's "Operations for fissure of the hard and soft palate" (pp. 538-47; Garrison-Morton.com 5745). Warren devised the first successful operation for completely closing the fissure of the hard and soft palate. 44699

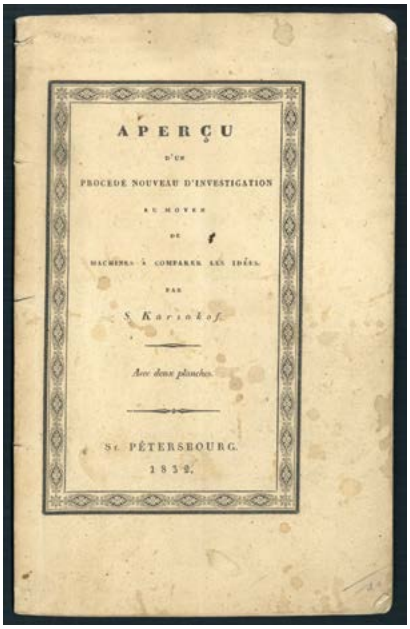


First Step Toward Artificial Intelligence; First Use of Punched-Card Technology to Store Information

21. Korsakov, Semyon Nikolaievich (1787-1853). Aperçu d'un procédé nouveau d'investigation au moyen de machines à comparer les idées. [2], 22pp. 2 folding plates. St. Petersburg: De l'imprimerie de la III-me section de la chancellerie privée de Sa Majesté Impériale, 1832. 213 x 135 mm. Original printed wrappers, vertically creased, some spotting. Minor foxing and dampstaining, but very good.

$9500



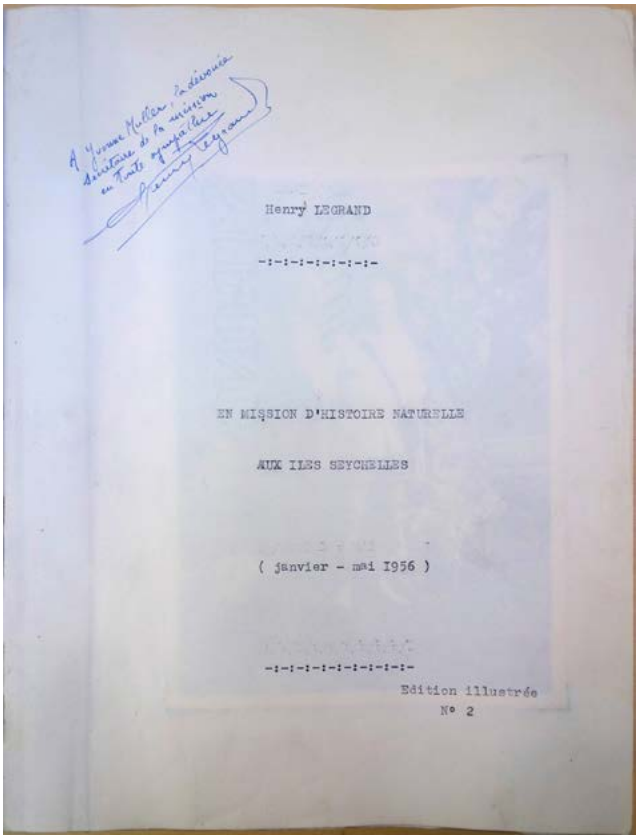


First Edition, Extremely Rare, with no copies cited in either OCLC or Rare Book Hub. Korsakov, a statistician with the Russian Police Ministry in St. Petersburg, was a pioneer in the concept of "mechanized thought," or artificial intelligence. His "machines for comparing ideas," described and illustrated in the present pamphlet, can "be considered as the very first attempt to design a mechanical device capable to perform such intellectual operations as data analysis, comparison, and selection" (Shilov and Silantiev, p. 71).

While working in the statistics department of the Police Ministry, Korsakov became intrigued with the possibility of using machinery to 'enhance natural intelligence.' To this end, he devised several devices which he called 'machines for the comparison of ideas.' These included the 'linear homeoscope with movable parts,' the 'linear homeoscope without movable parts,' the 'flat homeoscope,' the 'ideoscope,' and the 'simple comparator.' The purpose of the devices was primarily to facilitate the search for information, stored in the form of punched cards or similar media (for example, wooden boards with perforations). Korsakov announced his new method in September 1832, and rather than seeking patents offered the machines for public use.

The punch card had been introduced in 1805, but until that time had been used solely in the textile industry to control looms. Korsakov was reputedly the first to use the cards for information storage ("Semyon Korsakov." *Revolvy*, www.revolvy.com/page/Semyon-Korsakov [accessed 1/2/19]).

Korsakov's "machines à comparer les idées" anticipated by nearly two decades the logic machines of Alfred Smee, whose *The Process of Thought Adapted to Words and Language* was published in 1851, but his pioneering contributions to mechanized thought remained obscure and largely unstudied until only recently. Shilov and Silantiev, "'Machines à comparer les idées' of Semen Korsakov: First step towards AI," in Tatnall and Leslie, eds., *International Communities of Invention and Innovation* (Cham: Springer-Verlag, 2016), pp. 71-86). 44771

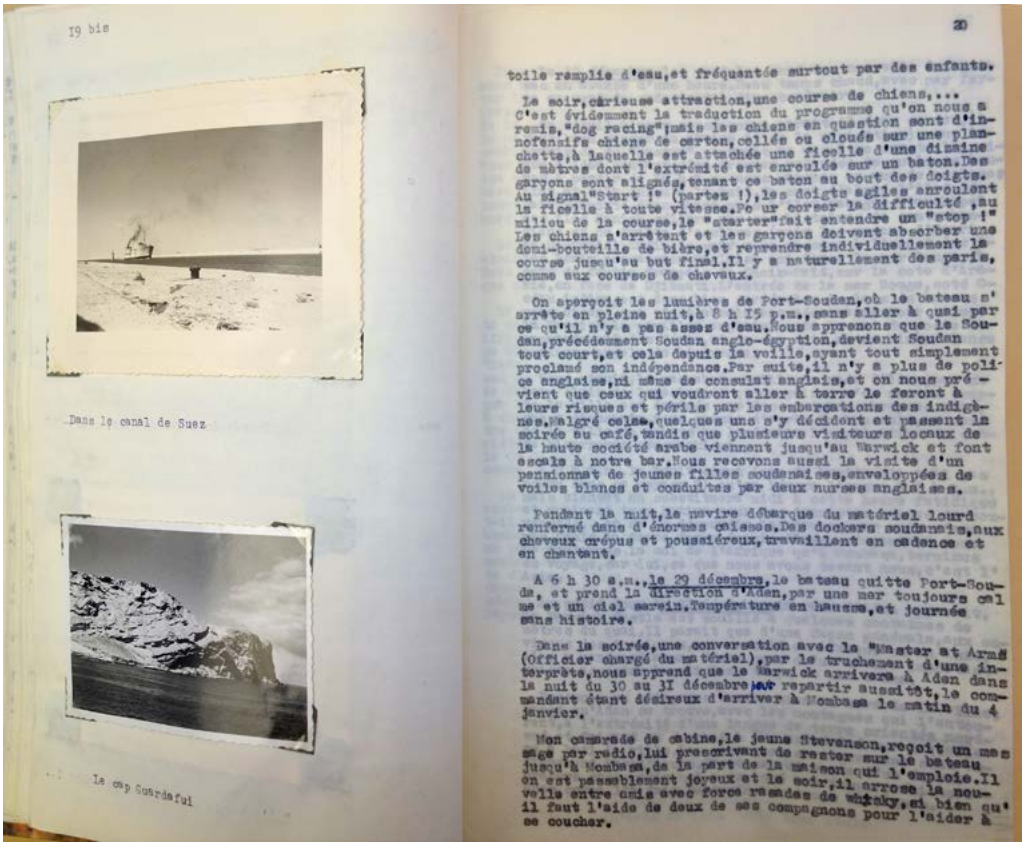


Lepidoptera of the Seychelles—Unpublished Manuscript

22. Legrand, Henry. En mission d'histoire naturelle aux Îles Seychelles (janvier – mai 1956). Edition illustrée no. 2. Carbon and original typescript, illustrated with original photographs and hand-drawn maps, plus additional materials laid in (list available on request). [2], 275ff. (somewhat irregularly numbered), including ca. 81ff. of tipped-in photographs (usually 2 per leaf) and 9ff. with hand-drawn maps. N.p., 1959 (date from f. 218). 270 x 210 mm. Quarter cloth, boards, printed labels on front cover and spine, slight wear. Very good. Legrand's presentation inscription to his secretary and traveling companion, Yvonne Muller, on the title-leaf: "A Yvonne Muller, la dévouée secrétaire de la mission en toute sympathie Henry Legrand." $2750

Extraordinarily Detailed Unpublished Narrative, illustrated with over 100 photographs, of Legrand's scientific expedition to the Seychelles, undertaken to study the butterflies and moths of the islands that make up that country. It was through this expedition that Legrand became a leading expert on Seychelles Lepidoptera; his *Lepidoptères des îles Seychelles et d'Aldabra* (1966) remains a standard work on the subject. Legrand discovered and named at least 22 new moth species from the Seychelles, and a species of moth, Scopula legrandi Herbulot, is named for him.

In 1956 Legrand and his secretary, Yvonne Muller, spent nearly five months in the Seychelles on a private mission from Paris's Muséum d'Histoire Naturelle, traveling to several of the country's islands to observe native lepidopteran species in their natural habitats and obtain specimens for later study. During the expedition Legrand kept a diary in which he recorded details of his collecting and wrote lively and entertaining



19 bis

Dans le canal de Suez

Le cap Gourdafui

20

toile remplie d'eau,et fréquentée surtout par des enfants.

Le soir,curieuse attraction,une course de chiens,... C'est évidemment la traduction du programme qu'on nous a remis,"dog racing"mais les chiens en question sont d'inoffensifs chiens de carton,collés ou cloués sur une planchette,à laquelle est attachée une ficelle d'une dizaine de mètres dont l'extrémité est enroulée sur un baton.Des garçons sont alignés,tenant ce baton au bout des doigts. Au signal"Start !" (partez !),les doigts agiles enroulent la ficelle à toute vitesse.Pour corser la difficulté ,au milieu de la course,le "starter"fait entendre un "stop !" Les chiens s'arrêtent et les garçons doivent absorber une demi-bouteille de bière,et reprendre individuellement la course jusqu'au but final.Il y a naturellement des paris, comme aux courses de chevaux.

On aperçoit les lumières de Port-Soudan,où le bateau s' arrête en pleine nuit,à 8 h 15 p.m., sans aller à quai par ce qu'il n'y a pas assez d'eau.Nous apprenons que le Soudan,précédemment Soudan anglo-égyptien,devient Soudan tout court,et cela depuis la veille,ayant tout simplement proclamé son indépendance.Par suite,il n'y a plus de police anglaise,ni même de consulat anglais,et on nous prévient que ceux qui voudront aller à terre le feront à leurs risques et périls par les embarcations des indigènes.Malgré cela,quelques uns s'y décident et passent la soirée au café,tandis que plusieurs visiteurs locaux de la haute société arabe viennent jusqu'au Warwick et font escale à notre bar.Nous recevons aussi la visite d'un pensionnat de jeunes filles soudanaises,enveloppées de voiles blancs et conduites par deux nurses anglaises.

Pendant la nuit,le navire débarque du matériel lourd renfermé dans d'énormes caisses.Des dockers soudanais,aux cheveux crépus et poussiéreux,travaillent en cadence et en chantant.

A 6 h 30 a.m.,le 29 décembre,le bateau quitte Port-Soudan, et prend la direction d'Aden,par une mer toujours calme et un ciel serein.Température en hausse,et journée sans histoire.

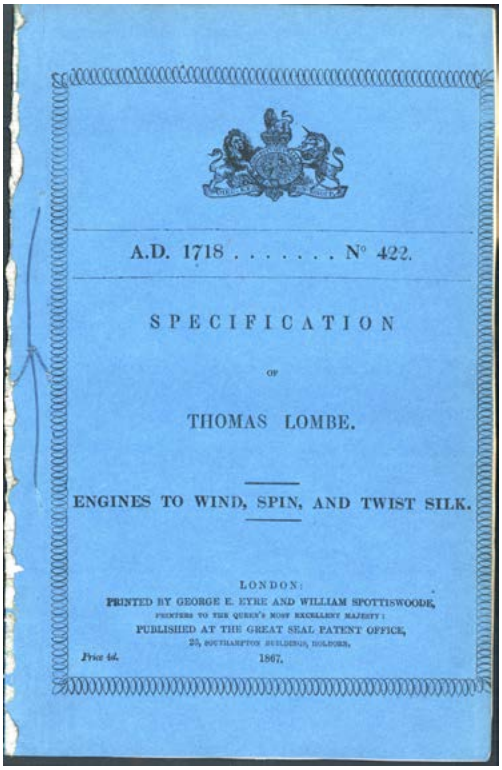
Dans la soirée,une conversation avec le "Master at Arms" (Officier chargé du matériel),par le truchement d'une interprète,nous apprend que le Warwick arrivera à Aden dans la nuit du 30 au 31 décembre pour repartir aussitôt,le commandant étant désireux d'arriver à Mombasa le matin du 4 janvier.

Mon camarade de cabine,le jeune Stevenson,reçoit un message par radio,lui prescrivant de rester sur le bateau jusqu'à Mombasa,de la part de la maison qui l'emploie.Il on est passablement joyeux et le soir,il arrose la nouvelle entre amis avec force rasades de whisky,et bien qu' il faut l'aide de deux de ses compagnons pour l'aider à se coucher.

descriptions of the people, animals and places he and Muller encountered throughout their stay. A few years later, possibly after returning from his second trip to the Seychelles in 1959, Legrand had at least two typed copies of the diary prepared. Our copy, described on the title as "Edition illustrée no. 2," consists primarily of carbon typescript apart from the typed captions to its more than 100 photos. It is likely that another copy is preserved in the Seychelles, as it is quoted on a page of the Seychelles Nation website.

The last 49 leaves of Legrand's typescript contain a detailed list of the butterfly and moth species he collected during the Seychelles expedition, organized by family and illustrated with two large black and white photographs. The remaining photographs in the typescript include images of Legrand (in particular a cabinet-size portrait on the second leaf), Muller, scenes of everyday life in the Seychelles, native animals such as the Aldabra giant tortoise, shipboard scenes and other visual records of the expedition. Also included in the typescript are several hand-drawn maps depicting the routes Legrand and Muller traveled during their mission. Matyot, Pat, "Island Conservation—Moths and Memories." Nation Home, 10 Aug. 2009. Retrieved 12/12/18. "List of Moths of Seychelles." Wikipedia, Wikimedia Foundation, 21 Mar. 2018. Retrieved 12/12/18. 44760

Origins of the Industrial Revolution—The First Powered Continuous Production Textile Mill


A.D. 1718 . . . . . N° 422.

SPECIFICATION

OF

THOMAS LOMBE.

ENGINES TO WIND, SPIN, AND TWIST SILK.

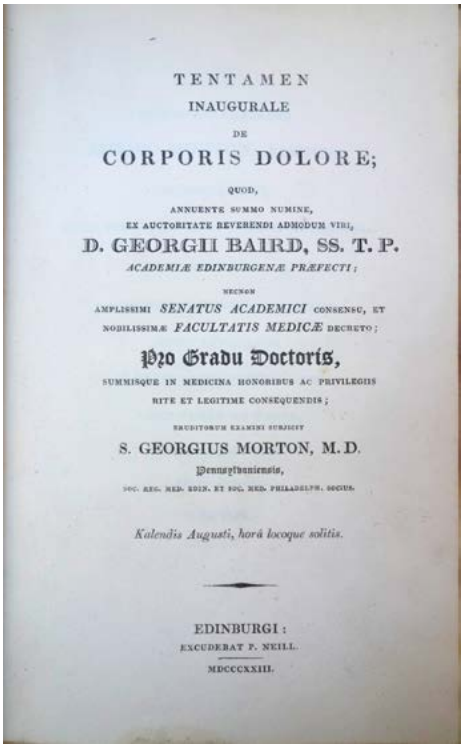
LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY;
PUBLISHED AT THE GREAT SEAL PATENT OFFICE,
25, SOUTHAMPTON BUILDINGS, HOLBORN.
Price 4d. 1867.

23. Lombe, Thomas (1685-1739). A.D. 1718. No. 422. Specification of Thomas Lombe. Engines to wind, spin, and twist silk. 5pp. London: George E. Eyre and William Spottiswoode, 1867. 266 x 173 mm. Original printed wrappers, stitched. Fore-margin a bit trimmed, marginal tear on front wrapper, traces of glue from having been previously bound in a book, but very good. $750

First Printing of the specification for Lombe's patent on his "New Invention of Three Sorts of Engines never before made or used in Great Britaine, One to Wind the Finest Raw Silk, Another to Spin, and the Other to Twist the Finest Italian Raw Silk into Organzine in great Perfection, which was never before done in this Kingdom" (p. 1). Lombe's machines, copied from Italian examples, were designed for "silk throwing," an industrial process in which silk is cleaned, spun and wound onto bobbins in preparation for weaving. Lombe obtained the patent on his machines in 1718, but his patent, like all English patents issued before October 1852, was not numbered or printed until after that date.

In 1719, the year after his patent was granted, Lombe and his brother John established Lombe's Mill in Derby, England's first successful silk throwing mill and the first successful powered continuous production unit in the world. Lombe's Mill provided the model for the factory concept later developed by Richard Arkwright and others. 42709

Presentation Copy, Corrected by the Author


TENTAMEN
INAUGURALE
DE
CORPORIS DOLORE;
QUOD,
ANNUENTE SUMMO NUMINE,
EX AUCTORITATE REVERENDI ADMODUM VIRI,
D. GEORGII BAIRD, SS. T. P.
ACADEMIÆ EDINBURGENÆ PRÆFECTI;
NECNON
AMPLISSIMI *SENATUS ACADEMICI* CONSENSU, ET
NOBILISSIMÆ *FACULTATIS MEDICÆ* DECRETO;
Pro Gradu Doctoris,
SUMMISQUE IN MEDICINA HONORIBUS AC PRIVILEGIIS
RITE ET LEGITIME CONSEQUENDIS;
ERUDITORUM EXAMINI SUBJICIT
S. GEORGIUS MORTON, M.D.
Pennsylvaniensis,
SOC. REG. MED. EDIN. ET SOC. MED. PHILADELPH. SOCIUS.

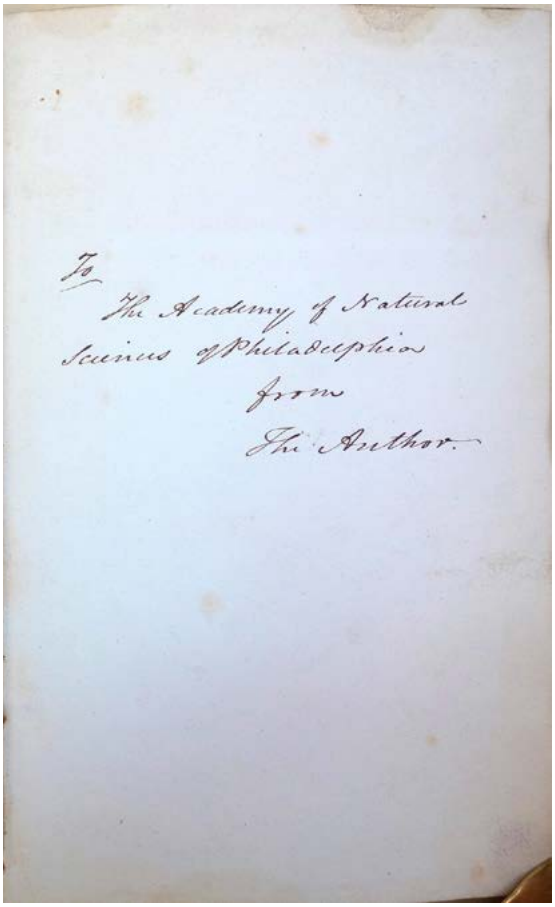
Kalendis Augusti, horâ locoque solitis.

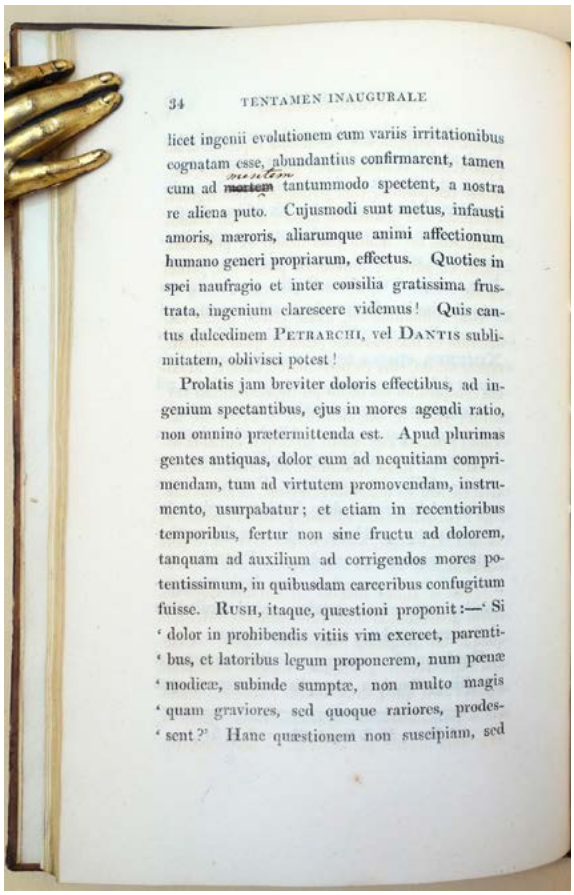
EDINBURGI:
EXCUDEBAT P. NEILL.
MDCCCXXIII.

24. Morton, Samuel George (1799-1851). Tentamen inaugurale de corporis dolore . . . [8], 37pp. Edinburgh: P. Neill, 1823. 203 x 128 mm. Tree calf ca. 1823, some light wear at spine, hinges and corners. Very good. *Presentation Copy*, inscribed by Morton to the Academy of Natural Sciences of Philadelphia on the front free endpaper, and with Morton's autograph corrections on several pages. Bookplate of the Academy. $1750

First Edition of Morton's medical thesis on pain, one of the earliest works by an American on this subject. This is a particularly interesting copy, as it bears Morton's presentation inscription to the Academy of Natural Sciences of Philadelphia, an organization that he served in various administrative capacities from 1827 up to his death in 1851. Pages 18, 34, 35 and 36 contain Morton's autograph corrections to the Latin text.

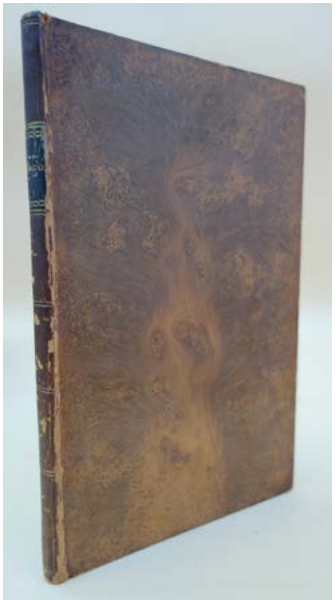
After graduating from the University of Pennsylvania's medical school in 1820, Morton traveled to Europe and spent the next three years studying medicine at Edinburgh University and in Paris, obtaining his second medical degree from Edinburgh University in 1823. "During Morton's stay in Europe he was twice (circa 1820 and 1821) struck by




34 TENTAMEN INAUGURALE

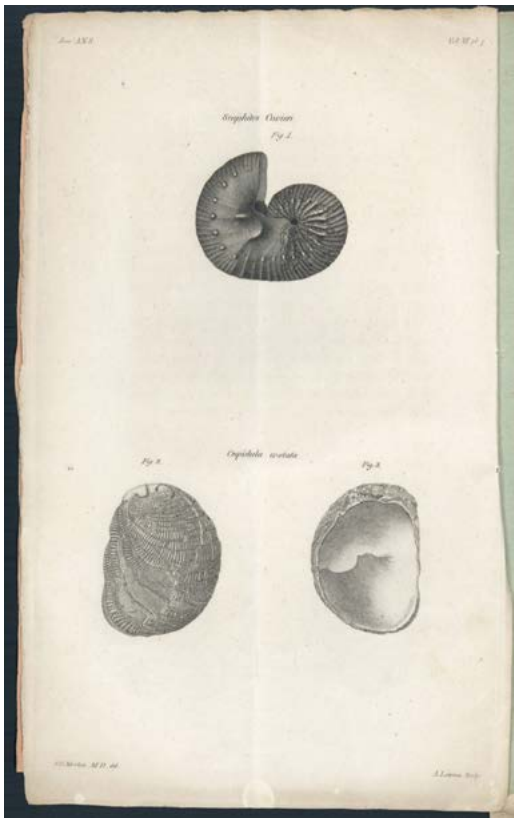
licet ingenii evolutionem cum variis irritationibus cognatam esse, abundantius confirmarent, tamen cum ad mortem tantummodo spectent, a nostra re aliena puto. Cujusmodi sunt metus, infausti amoris, mæroris, aliarumque animi affectionum humano generi propriarum, effectus. Quoties in spei naufragio et inter consilia gratissima frustrata, ingenium clarescere videmus! Quis cantus dulcedinem PETRARCHI, vel DANTIS sublimitatem, oblivisci potest!

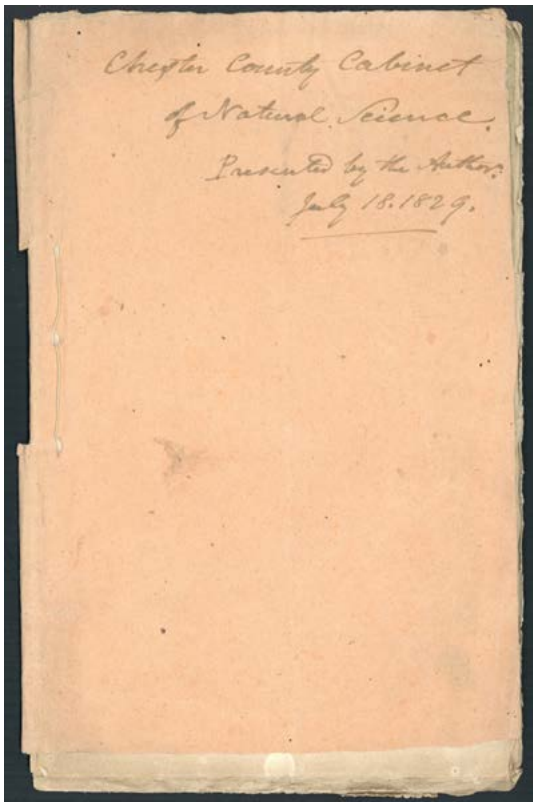
Prolatis jam breviter doloris effectibus, ad ingenium spectantibus, ejus in mores agendi ratio, non omnino prætermittenda est. Apud plurimas gentes antiquas, dolor cum ad æquitiam comprimendam, tum ad virtutem promovendam, instrumento, usurpabatur; et etiam in recentioribus temporibus, fertur non sine fructu ad dolorem, tanquam ad auxilium ad corrigendos mores potentissimum, in quibusdam carceribus confugitum fuisse. RUSH, itaque, quæstioni proponit:—'Si 'dolor in prohibendis vitiis vim exercet, parenti- 'bus, et latoribus legum proponerem, num pœnæ 'modicæ, subinde sumptæ, non multo magis 'quam graviores, sed quoque rariores, prodes- 'sent?' Hanc quæstionem non suscipiam, sed



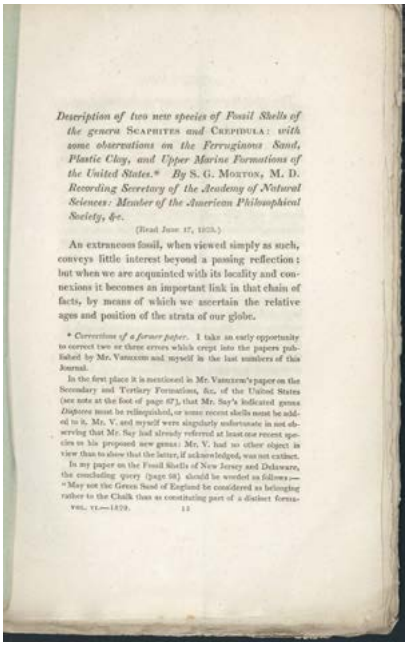
attacks of a nearly fatal illness, possibly liver disease, which left him weak and sickly for the rest of his life. Wood [one of Morton's biographers] stated that from then on, Morton suffered from 'excruciating attacks of sick headache' so severe they would 'confine him for a time to his bed.' This experience may have influenced his doctoral thesis, which was a review of the existing medical literature on the nature of pain" (Penn Museum).

Morton later became famous for his work in anthropology. He amassed a large collection of human crania, which he described in his *Crania Americana* (1839; Garrison-Morton.com 201) and other works; he also studied the relationship between cranial capacity and intelligence with respect to the various human races, ranking them in descending order from Caucasian to African. Morton believed that each of the races had descended from a separate ancestor—a view known as polygenism—and that each race had its own immutable characteristics. His writings on race helped to establish the polygenist "American School" of ethnography and provided a "scientific" justification for slavery. "Morton's Life: Biography." Penn Museum. University of Pennsylvania Museum of Archaeology and Anthropology. Accessed 1/23/2019. 44497





Presentation Copy

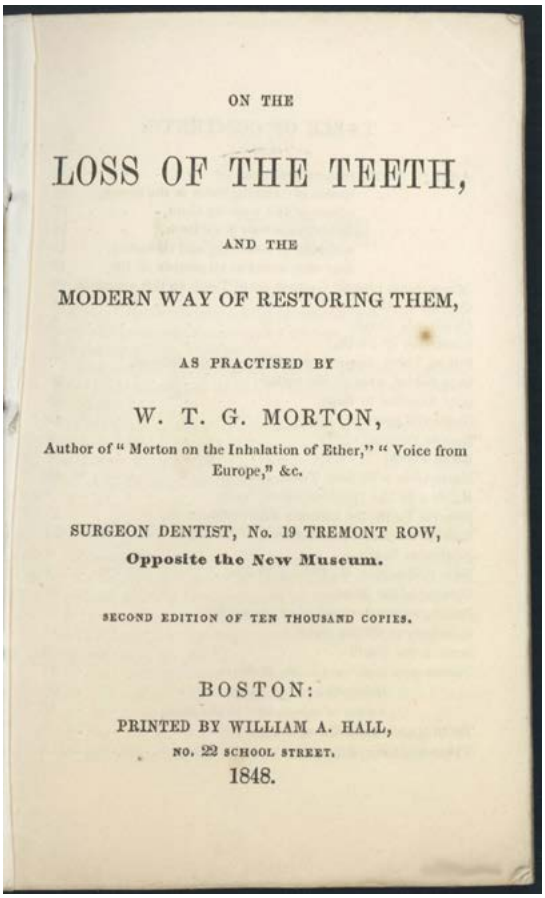

Description of two new species of Fossil Shells of the genera Scaphites and Crepidula: with some observations on the Ferruginous Sand, Plastic Clay, and Upper Marine Formations of the United States.* By S. G. Morton, M. D. Recording Secretary of the Academy of Natural Sciences: Member of the American Philosophical Society, &c.

An extraneous fossil, when viewed simply as such, conveys little interest beyond a passing reflection: but when we are acquainted with its locality and connexions it becomes an important link in that chain of facts, by means of which we ascertain the relative ages and position of the strata of our globe.

25. Morton, Samuel George (1799-1851). Description of two new species of fossil shells of the genera Scaphites and Crepidula: With some observations on the ferruginous sand, plastic clay, and Upper Marine formations of the United States. Offprint from *Journal of the Academy of Natural Sciences of Philadelphia* 6 (1829). 16, 61-67pp. Engraved frontispiece by A. Lawson after Morton's drawings. 235 x 150 mm. (uncut). Original plain wrappers, creased vertically, a few minor tears. Margins a bit frayed, but very good. *Presentation Copy*, inscribed by Morton on the front wrapper: "Chester County Cabinet of Natural Science. Presented by the Author July 18, 1829."

$500

First Edition, Offprint Issue. Morton made significant contributions to paleontology at a time when natural history research in the United States was still in its infancy. An active member and officer of the Academy of Natural Sciences of Philadelphia, Morton took good advantage of his access to the Academy's extensive collections, studying fossil specimens delivered to Philadelphia from overseas ports or the American frontier. "Morton cemented his reputation as a paleontologist after describing fossils unearthed in the digging of the Chesapeake and Delaware Canal. Later, he was selected to describe the fossils that Lewis and Clark brought back with them from the American West. Morton's studies of fossils in Cretaceous sand and marl layers in New Jersey showed their relation to chalk regions of Europe. A century later, such research would be used to document continental drift." (Penn Museum). Morton had some skill as an artist: His paper on new fossil species of Scaphites (ammonites) and Crepidula (slipper shells) is illustrated with an engraving made from his drawings. "Morton's Life: Biography." Penn Museum. University of Pennsylvania Museum of Archaeology and Anthropology. Accessed 1/23/2019. 44499



ON THE

LOSS OF THE TEETH,

AND THE

MODERN WAY OF RESTORING THEM,

AS PRACTISED BY

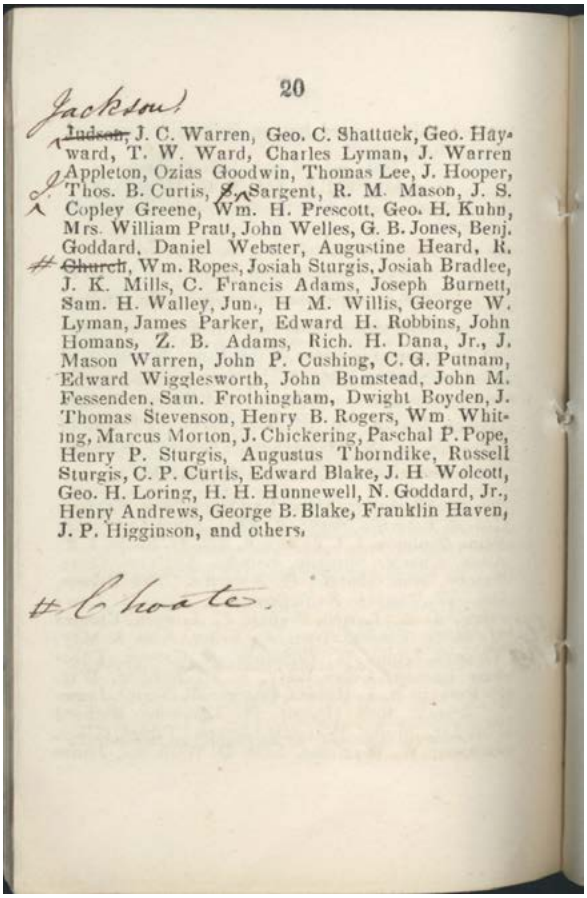
W. T. G. MORTON,

Author of "Morton on the Inhalation of Ether," "Voice from Europe," &c.

SURGEON DENTIST, No. 19 TREMONT ROW,
Opposite the New Museum.

SECOND EDITION OF TEN THOUSAND COPIES.

BOSTON:
PRINTED BY WILLIAM A. HALL,
NO. 22 SCHOOL STREET.
1848.

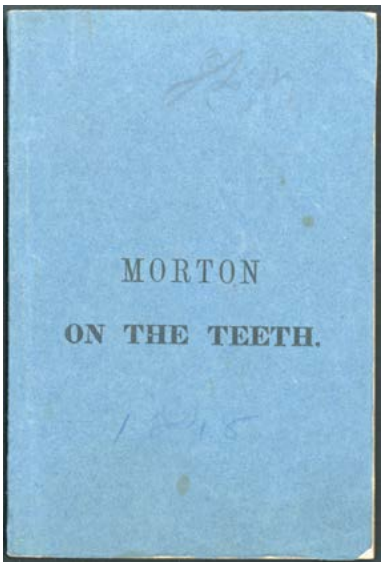


20

Jackson

~~Judson~~, J. C. Warren, Geo. C. Shattuck, Geo. Hayward, T. W. Ward, Charles Lyman, J. Warren Appleton, Ozias Goodwin, Thomas Lee, J. Hooper, Thos. B. Curtis, ~~S.~~ Sargent, R. M. Mason, J. S. Copley Greene, Wm. H. Prescott, Geo. H. Kuhn, Mrs. William Prau, John Welles, G. B. Jones, Benj. Goddard, Daniel Webster, Augustine Heard, R. ~~Church~~, Wm. Ropes, Josiah Sturgis, Josiah Bradlee, J. K. Mills, C. Francis Adams, Joseph Burnett, Sam. H. Walley, Jun., H M. Willis, George W. Lyman, James Parker, Edward H. Robbins, John Homans, Z. B. Adams, Rich. H. Dana, Jr., J. Mason Warren, John P. Cushing, C. G. Putnam, Edward Wigglesworth, John Bumstead, John M. Fessenden, Sam. Frothingham, Dwight Boyden, J. Thomas Stevenson, Henry B. Rogers, Wm Whiting, Marcus Morton, J. Chickering, Paschal P. Pope, Henry P. Sturgis, Augustus Thorndike, Russell Sturgis, C. P. Curtis, Edward Blake, J. H. Wolcott, Geo. H. Loring, H. H. Hunnewell, N. Goddard, Jr., Henry Andrews, George B. Blake, Franklin Haven, J. P. Higginson, and others.

& Choate.



MORTON

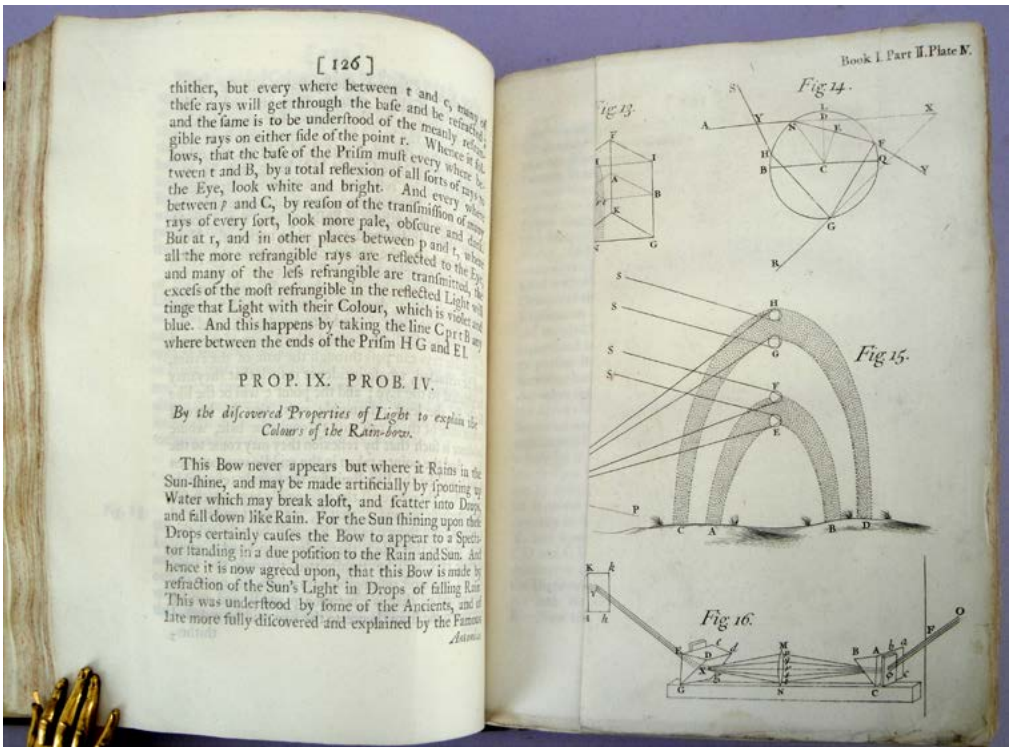
ON THE TEETH.

Corrected in Morton's Hand

26. Morton, William T. G. (1819-68). On the loss of the teeth, and the modern way of restoring them, as practised by W. T. G. Morton, author of "Morton on the inhalation of ether," "Voice from Europe," &c. 32pp. *Lacking frontispiece.* Boston: William A. Hall, 1848. 126 x 83 mm. Original printed wrappers, all edges gilt, wrapper corners a bit creased. Very good. *Manuscript corrections in Morton's hand* on pages 19 and 20. $1500

Second edition of this tiny pamphlet, expanded by eight pages from the first edition of 1847. Both editions are very scarce—OCLC lists three copies of the 1847 edition and thirteen copies of the 1848 edition. Our copy bears corrections in Morton's hand on pages 19 and 20 to the list of "distinguished individuals" who presented Morton with a "Testimonial in honor of the ether discovery."

As is well known, Morton, a Boston dentist, gave the first public demonstration of ether anesthesia on October 16, 1846, during a surgical operation performed by John C. Warren at Massachusetts General Hospital. In the fall of 1847, after some unsuccessful attempts to capitalize on the ether discovery, Morton and his brother-in-law Francis Whitman issued *On the Loss of the Teeth* to advertise their shared dental practice; the last six pages contain an account of Morton's "Great Discovery" and testimonials and abstracts from the medical press. After Whitman's death in November 1847, Morton reissued the *On the Loss of the Teeth* under his own name, adding eight further pages of testimonials and "Opinions of the Press" on the ether discovery. The second edition's title-page states that ten thousand copies were printed, but this number is undoubtedly an exaggeration. Fulton & Stanton, *Centennial of Surgical Anesthesia*, IV.28. Wolfe, *Tarnished Idol*, pp. 162-163. 44798


[126]

thither, but every where between t and G, many of these rays will get through the base and be refracted, and the same is to be understood of the meanly refrangible rays on either side of the point r. Whence it follows, that the base of the Prism must every where between t and B, by a total reflexion of all sorts of rays, to the Eye, look white and bright. And every where between r and G, by reason of the transmission of more rays of every sort, look more pale, obscure and dark. But at r, and in other places between p and r, where all the more refrangible rays are reflected to the Eye, and many of the less refrangible are transmitted, the excess of the most refrangible in the reflected Light will tinge that Light with their Colour, which is violet and blue. And this happens by taking the line G p r B any where between the ends of the Prism H G and E I.

PROP. IX. PROB. IV.

By the discovered Properties of Light to explain the Colours of the Rain-bow.

This Bow never appears but where it Rains in the Sun-shine, and may be made artificially by spouting up Water which may break aloft, and scatter into Drops, and fall down like Rain. For the Sun shining upon these Drops certainly causes the Bow to appear to a Spectator standing in a due position to the Rain and Sun. And hence it is now agreed upon, that this Bow is made by refraction of the Sun's Light in Drops of falling Rain. This was understood by some of the Ancients, and of late more fully discovered and explained by the Famous

Book I. Part II. Plate V.

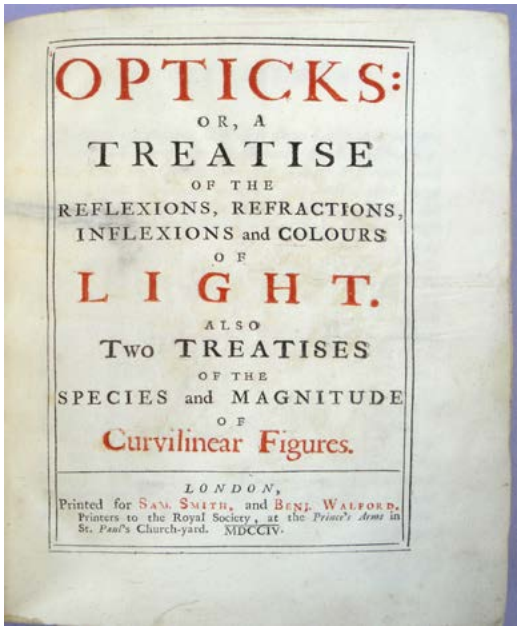
Fig 13.

Fig 14.

Fig 15.

Fig 16.

Optics and Color Theory

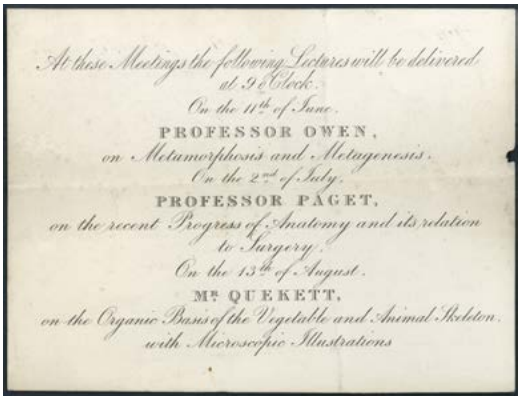

OPTICKS:
OR, A
TREATISE
OF THE
REFLEXIONS, REFRACTIONS,
INFLEXIONS and COLOURS
OF
LIGHT.
ALSO
Two TREATISES
OF THE
SPECIES and MAGNITUDE
OF
Curvilinear Figures.
LONDON,
Printed for SAM. SMITH, and BENJ. WALFORD,
Printers to the Royal Society, at the *Prince's Arms* in
St. *Paul's* Church-yard. MDCCIV.

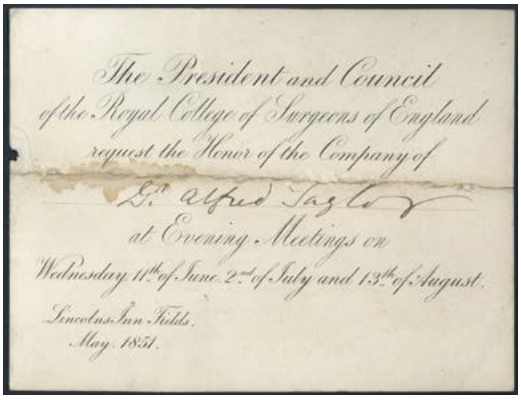
27. Newton, Sir Isaac (1642-1727). Opticks. . . . 4to. [4], 144, 211, [1]pp. 19 engraved plates. London: printed for Sam. Smith, and Benjamin Walford, 1704. 247 x 191 mm. Paneled calf, gilt spine c. 1704, spine repaired, endpapers renewed (endpaper sheets watermarked with date 1802). Insignificant worming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

$60,000

First Edition of the most famous book on optics ever written in the English language; First Issue, without Newton's name on the title and with the two additional mathematical treatises. The *Opticks* expounds the corpuscular theory of light developed by Newton, which was the dominant theory until modern times when it was combined with the wave theory developed by Newton's contemporary Huygens. The *Opticks* also contains a full explanation for the rainbow, an explanation of "Newton's rings," and consideration of double refraction in Iceland spar. In color theory, the *Opticks* provides the starting point for modern concepts. Newton proved experimentally that all colors are contained in white light and devised the first organized color circle to show his concept of seven primary colors. The color circle, illustrated in fig. 11, pl. 3, Bk. 1, pt. 2, has been made use of in virtually all later treatises on color theory.

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





28. Owen, Richard (1804-92). The President and Council of the Royal College of Surgeons of England request the honor of the company of Dr. Alfred Taylor at evening meetings on Wednesday 11th of June, 2nd of July and 13th of August. Lithographed invitation printed on card stock; Taylor's name added in ink. [London] Lincoln's Inn Fields, May 1851. 115 x 157 mm. Creased horizontally with some cracking, some soiling, minor edgewear, but good overall. $150

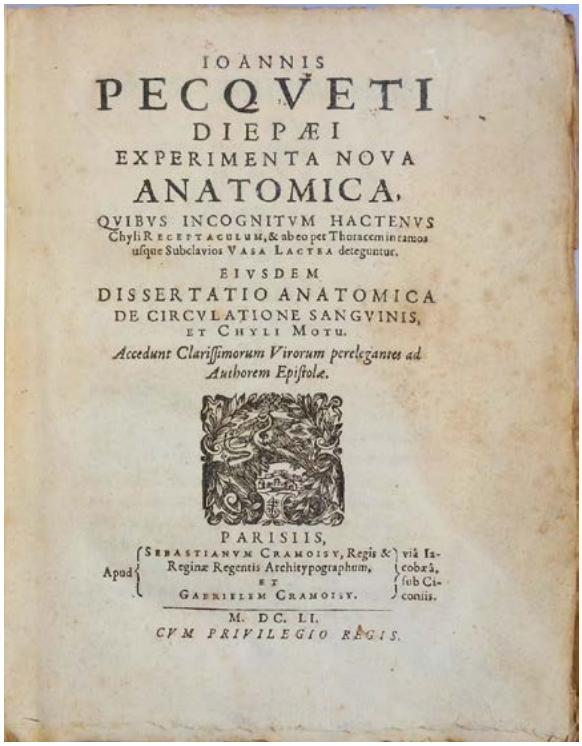
An invitation to three evening lectures at the Royal College of Surgeons: comparative anatomist and paleontologist Richard Owen (1804-92) on metamorphosis and metagenesis; pathologist James Paget (1814-99) on recent progress in anatomy and its relation to surgery, and microscopist John Thomas Quekett (1815-61) on the organic basis of the vegetable and animal skeleton. Alfred Swaine Taylor, recipient of the invitation, was a prominent specialist in forensic medicine who invented the field of forensic toxicology; see Garrison-Morton. com 1738. 44813

Discovery of the Thoracic Duct

29. Pecquet, Jean (1622-1674). Experimenta nova anatomica, quibus incognitum hactenus chyli receptaculum, & ab eo per thoracem in ramos usque subclavios vasa lactea deteguntur. 4to. [12], 108pp. Text engravings, including full-page engraving on p. 21. Paris: Sebastian Cramoisy and Gabriel Cramoisy, 1651. 222 x 170 mm. (uncut). Limp boards ca. 1651, title in ink on spine, worm traces inside

both covers, light wear and soiling. Portion of front free endpaper torn away, evidence of stamp removal on final leaf, minor foxing and toning, but very good.

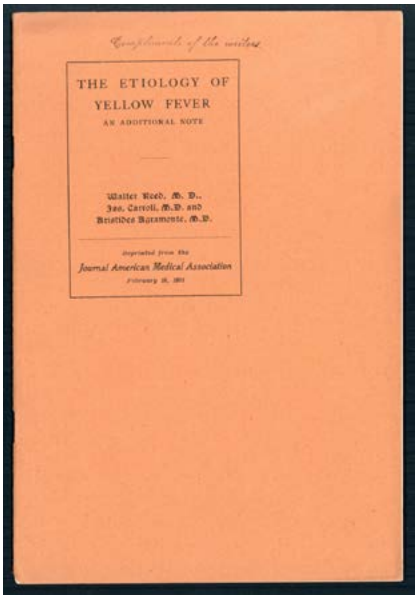
$17,500

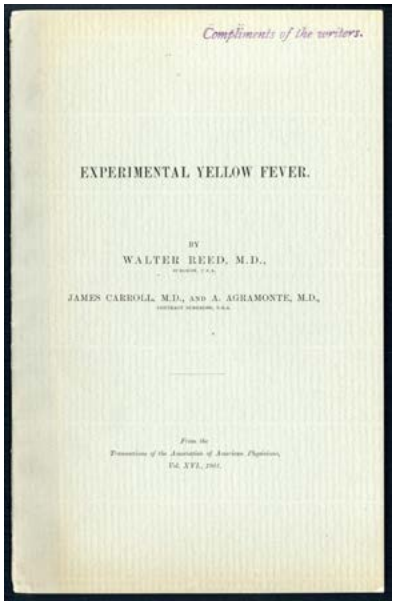

IOANNIS
PECQVETI
DIEPÆI
EXPERIMENTA NOVA
ANATOMICA,
QVIBVS INCOGNITVM HACTENVS
Chyli Receptaculum, & abeo per Thoracem in ramos
usque Subclavios Vasa Lactea deteguntur.
EIVSDEM
DISSERTATIO ANATOMICA
DE CIRCVLATIONE SANGVINIS,
ET CHYLI MOTU.
Accedunt Clarissimorum Virorum perelegantes ad Authorem Epistolæ.
PARISIIS,
Apud Sebastianvm Cramoisy, Regis & Reginæ Regentis Architypographum, & Gabrielem Cramoisy. via Iacobæâ, sub Ciconiis.
M. DC. LI.
CVM PRIVILEGIO REGIS.

First Edition. In his experiments with live dogs Pecquet discovered the thoracic duct and chyle reservoir (receptaculum chylii), which had been sought after since Aselli's discovery of the chyliferous vessels (lacteals) in dogs in 1627. Pecquet correctly described the termination of the chyliferous vessels (Aselli's "lacteal veins") in the chyle reservoir, refuting the erroneous notion that the vessels ended in the liver; he also described the junction of the thoracic duct at the union of the jugular and subclavical veins. Pecquet's discovery clarified for the first time the process of absorption in digestion. Garrison-Morton (online) 1094. Norman 1676. 43485

Reed on Yellow Fever—Presentation Copies

30. Reed, Walter (1851-1902) et al. (1) The etiology of yellow fever: An additional note. Offprint from *Journal of the American Medical Association* (1901). 24pp. 206 x 141 mm. Original printed wrappers. *Presentation Copy*, with "Compliments of the writers" stamped on the front wrapper. (2) Experimental yellow fever. Offprint from *Transactions of the Association of American Physicians* 16 (1901). 26pp. 231 x 150 mm. Original printed wrappers, slightly faded. *Presentation Copy*, with "Compliments of the writers" stamped on the front wrapper. Together two items. Fine.


Compliments of the writers
THE ETIOLOGY OF YELLOW FEVER
AN ADDITIONAL NOTE
Walter Reed, M. D.,
Jno. Carroll, M.D. and
Aristides Agramonte, M.D.
Reprinted from the
Journal American Medical Association


Compliments of the writers.
EXPERIMENTAL YELLOW FEVER.
BY
WALTER REED, M.D.,
JAMES CARROLL, M.D., AND A. AGRAMONTE, M.D.,

$600

First Editions, Offprint Issues. The first paper listed above is the second of Reed's three papers on the etiology of yellow fever, published the year after his first announcement that the disease is transmitted to humans by the female *Aëdes aegypti* mosquito (see Garrison-Morton 5457). No. (2) above describes the results of Reed's successful attempts to produce yellow fever in human subjects by inoculating them with blood from infected patients. Both offprints bear the authors' presentation stamp.

"Reed and his colleagues discovered that the female *Aëdes aegypti* mosquito can become infected by biting a victim of yellow fever only during the first three days of the course of the illness; she does not become infec-

tious for two weeks thereafter, but may then remain infectious for up to two months . . . Through experimentation Reed and his group established that whole blood taken from a patient early in the course of the disease will, upon injection into a susceptible person, cause yellow fever. They also determined that blood from an infected person could be passed through a Pasteur filter and still remain infectious; this was the first known filterable virus causing a human infection" (*Dictionary of Scientific Biography*). 43041

Victorian Photoshop?

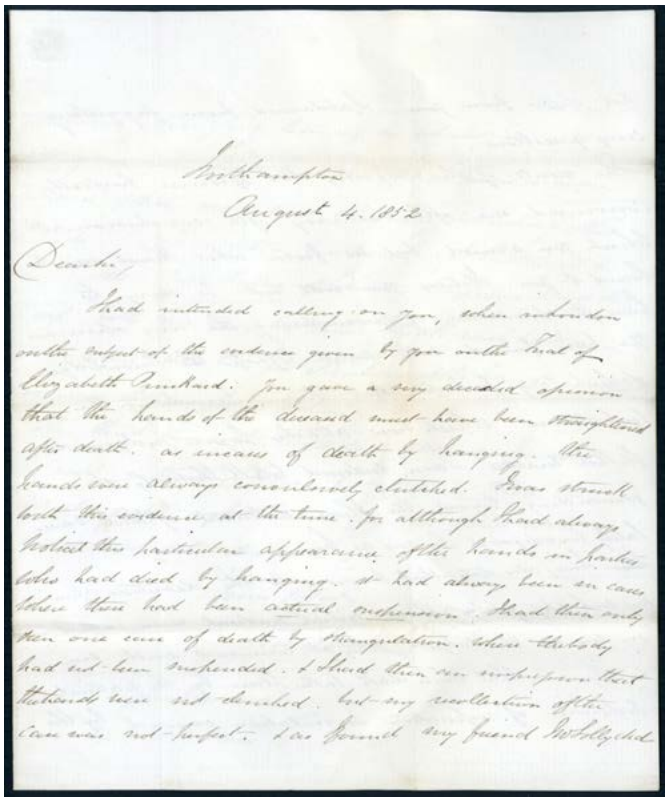
31. Royal Society. Fellows of the Royal Society. Autotype (carbon-process) composite photographic print by Herbert R. Barraud (1845-96), mounted on heavy paper. London, ca. 1875-80. Image measures 304 x 522 mm.; mount measures 405 x 600 mm. Minor dust-soiling, mount with a few marginal tears and a small crease in the lower margin. Very good. From the archive of Alfred Swaine Taylor (1806-80), founder of forensic toxicology and a Fellow of the Royal Society. $750

Unusual composite photographic print of the Fellows of the Royal Society, created by placing individual photographs against a painted background, then printing the resulting image—a remote ancestor of Photoshop! The print was made with the autotype process, a fade-resistant method that uses pigmented gelatin. Barraud, a noted Victorian portrait photographer with studios in London and Liverpool, produced a number of images using this method, including a similar photographic print of the Royal Society dated 1 July 1878. This copy is from the archive of Alfred Swaine Taylor, founder of forensic toxicology and a Fellow of the Royal Society since 1845. 44837

"An Absence of that Convulsive Struggling & Clenching of the Hands"

32. [**Taylor, Alfred Swaine** (1806-80).] **Blake, John.** Autograph letter signed to Taylor on the trial of Elizabeth Pinckard, the last woman publicly hanged in Northampton. 3pp. Northampton, 4 August 1852. 224 x 186 mm. Some dust-soiling to blank last page, creased where previously folded, but very good. Docketed in Taylor's hand.

$950



Remarkable letter from Blake, who identified himself in his letter as a coroner, to Alfred Swaine Taylor, founder of forensic toxicology and the leading medical jurist in England in the mid-nineteenth century. Taylor held the professorship post of medical jurisprudence at Guy's Hospital from 1831 until 1877 and was the author of several books on forensic medicine, including *Elements of Medical Jurisprudence* (1836; Garrison-Morton.com 1738) and *On Poisons in Relation to Medical Jurisprudence and Medicine* (1858). He appeared as an expert witness in several famous criminal trials—including that of William Palmer, the notorious "Rugeley Poisoner"—and served as the model for R. Austin Freeman's fictional detective, Dr. Thorndyke.

Blake's letter was prompted by Taylor's testimony in the trial of Elizabeth Pinckard, who had strangled her mother-in-law in October 1851 so that she and her husband could inherit the old woman's £1000 fortune. Pinckard tried to make her victim's death look like suicide by hanging, but Taylor, an expert in strangulation deaths, argued that the deceased's wounds and general post-mortem appearance were inconsistent with self-destruction. Taylor's testimony helped to convict Pinckard, who was executed for her crime on 16 May 1852—the last woman to be publicly hanged in the city of Northampton. Taylor referred to the Pinckard case in later editions of his *Manual of Medical Jurisprudence* (1844).

One of Taylor's points of evidence was that the deceased's hands showed no sign of the spasmodic clenching normally seen in deaths by hanging, which he took to indicate that her hands had been rearranged later by her killer. In his letter to Taylor, Blake noted that "I was struck by this evidence at the time, for although I had always noticed this particular appearance of the hands in parties who had died by hanging, it had always been in cases where there had been actual suspension." Based on his experience as a coroner, Blake was of the opinion that "when death takes place by the gradual suspension of respiration & circulation caused by the deceased strangling himself whilst in a sitting or recumbent position there would be an absence of that convulsive struggling & clenching of the hands." However, Blake was "perfectly convinced" of "the accuracy of the conclusion" at which Taylor arrived in the Pinckard case. Barrell, *Fatal Evidence: Professor Alfred Swaine Taylor & the Dawn of Forensic Science.* Pinckard, Derek. "The Trial." Elizabeth Pinckard--The Last Woman to Be Publicly Handed in Northampton. Web site. Accessed 1/24/19. 44832

Poison Wallpaper

33. Taylor, Alfred Swaine (1806-80); **Henry Carr** (1817-88). Archive relating to poisoning caused by wallpaper printed with arsenic-based pigments. 29 items, including wallpaper samples (sealed), galley proofs of a pamphlet by Carr, and 24 autograph letters signed to Taylor from Carr. 1857-1880. Several items with rodent damage affecting some text; one item mended with clear tape; minor soiling. Overall good to very good. Click here for list. $1500

Taylor, the founder of forensic toxicology, was one of the first medical experts to point out the toxicity of the popular "Scheele's green" and other arsenic-based pigments used to color mid-nineteenth century wallpapers and other home goods. Beginning in 1858, before the danger of these pigments was well understood, Taylor testified to their noxious effects both in person and in print, fighting an uphill battle against wallpaper manufacturers, furniture makers, cloth dyers and other interested parties. Our archive contains evidence of Taylor's early interest in wallpaper poisoning, including a handwritten extract from the *Lancet* of 21 February 1857 and two 1858 newspaper clippings, annotated by Taylor, from the *Times* of London.

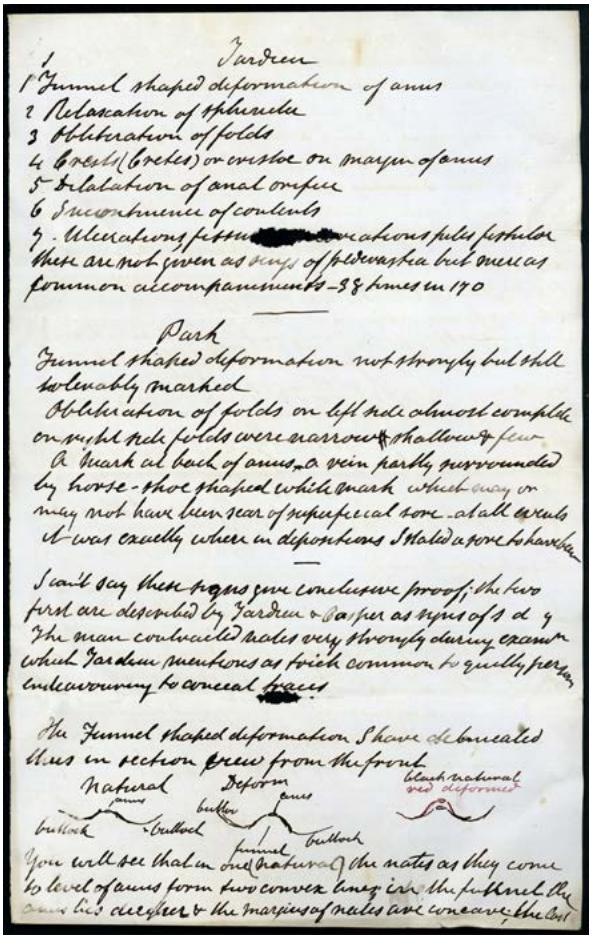
Taylor's work helped increase public awareness of the arsenic problem and he gained many supporters, one of whom was Henry Carr, a retired civil engineer who devoted the last decade of his life to campaigning against arsenical dyes. Carr was the author of the pamphlets *Our Domestic Poisons* (1879) and *Poisons in Domestic Fabrics in Relation to Trade and Art* (1880); galley proofs of the latter are included in this archive. Most of the archive consists of letters to Taylor from Carr written in 1879 and 1880, discussing arsenic in wallpaper, testing for arsenic and related subjects. Also contained in the archive are three small samples of arsenical wallpaper (sealed), labeled in Carr's hand. Barrell, *Fatal Evidence: Professor Alfred Swaine Taylor & the Dawn of Forensic Science*, pp. 152-154. Whorton, *The Arsenic Century: How Victorian Britain Was Poisoned at Home, Work & Play,* ch. 8. "Henry Carr." *Grace's Guide to British Industrial History*, 30 Aug. 2017. Accessed 1/9/19. 44789

Portrait by Herbert Watkins

34. Taylor, Alfred Swaine (1806-80). Portrait photograph of Taylor by Herbert Watkins (1828-1916). London, n.d. (dated "March 1860" in pencil on the verso). Oval image measuring 195 x 149 mm., mounted on card measuring 367 x 273 mm. Some dust-soiling to mount, a few spots, but very good. Watkins's blind-stamp in the lower right corner. $750

Portrait of Taylor circa age 54, most likely unpublished, showing him seated in three-quarter profile. Herbert Watkins, the photographer, was known for his portraits of Victorian celebrities, some of which he published under the title *National Gallery of Photographic Portraits.* His portrait of Taylor was not included in this collection, and we have found no record of it on line. 44825

"Signs of S_d__y"—Forensic Analysis Used in Boulton & Park Sodomy Trial



Jardeen

1 Funnel shaped deformation of anus
2 Relaxation of sphincter
3 Obliteration of folds
4 Cracks (Crokes) or excoriations on margin of anus
5 Dilatation of anal orifice
6 Incontinence of contents
7. Ulcerations pettu[illegible]nations pubis pectinis
these are not given as signs of pederastia but occur as
common accompaniments-38 times in 170

Park

Funnel shaped deformation not strongly but still
tolerably marked
Obliteration of folds on left side almost complete
on right side folds were narrower & shallower & few
A mark at back of anus, a vein partly surrounded
by horse-shoe shaped white mark which may or
may not have been scar of superficial sore - at all events
it was exactly where in depositions I should expect to have been

I can't say these signs give conclusive proof, the two
first are described by Jardeen & Casper as signs of S d y
The man contracted rectus very strongly during exam^n
which Jardeen mentions as trick common to guilty persons
endeavouring to conceal traces

The Funnel shaped deformation I have delineated
thus in section seen from the front

Natural Deform Black natural red deformed
anus anus
bullock bullock bullock
funnel

You will see that in one (natural) the rectus as they come
to level of anus form two convex lines in the fullness the
anus lies over & the margins of rectus are concave, the out

35. Taylor, Alfred Swaine (1806-80). Autograph medical report relating to the notorious Boulton and Park sodomy trial in Victorian London. 2 pages on one sheet. N.p., n.d. [London, 1870 or 1871]. 319 x 202pp. 2 lacunae along folds, affecting a few words, otherwise very good. $2500

Remarkable forensic report recording Taylor's detailed medical examination of Thomas Ernest Boulton (1847-1904) and Frederick William Park (1846-81), two cross-dressers and suspected homosexuals who had been arrested in the spring of 1870 for conspiring and inciting others to commit "unnatural offenses." Boulton and Park, who went by the nicknames "Stella" and "Fanny," were well known in London as drag performers and habitués of the West End, where they would attend theaters and other public places in both male and female dress. After their arrest Taylor, a distinguished forensics expert, was asked by the court to determine whether there was sufficient physical evidence to convict the two men of sodomy, a crime punishable by life imprisonment. His written account of the examination, which we are offering here, is **certainly one of the earliest surviving autograph forensic reports associated with a criminal trial for homosexuality.**

Taylor's report begins with a list of physical characteristics supposedly associated with male homosexuality—including

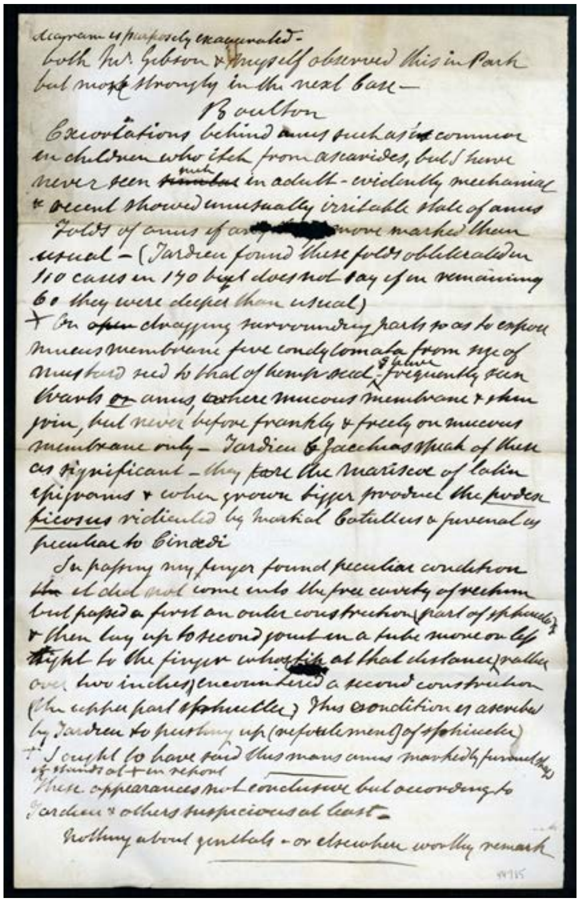


diagram is purposely exaggerated –
both Mr. Gibson & myself observed this in Park
but most strongly in the next case –
Boulton
Excoriations behind anus such as is common
in children who itch from ascarides, but I have
never seen ~~similar~~ such in adult – evidently mechanical
& recent showed unusually irritable state of anus
Folds of anus if any[illegible] more marked than
usual – (Tardieu found these folds obliterated in
110 cases in 170 but does not say if in remaining
60 they were deeper than usual)
+ On ~~open~~ dragging surrounding parts so as to expose
mucous membrane five condylomata from size of
mustard seed to that of hemp seed – I have frequently seen
warts on anus where mucous membrane & skin
join, but never before frankly & freely on mucous
membrane only – Tardieu & Zacchias speak of these
as significant – they form the mariscae of latin
epigrams & when grown bigger produce the podex
ficosus ridiculed by Martial Catullus & Juvenal as
peculiar to Cinaedi
In passing my finger found peculiar condition
~~the~~ it did not come into the free cavity of rectum
but passed a first an outer constriction (part of sphincter)
& then lay up to second joint in a tube more or less
tight to the finger which fit at that distance (rather
over two inches) encountered a second construction
(the upper part of sphincter) This condition is ascribed
by Tardieu to pushing up (refoulement) of sphincter)
+ I ought to have said this man's anus markedly [illegible]
[illegible] in report
These appearances not conclusive but according to
Tardieu & others suspicious at least –
Nothing about genitals – or elsewhere worthy remark

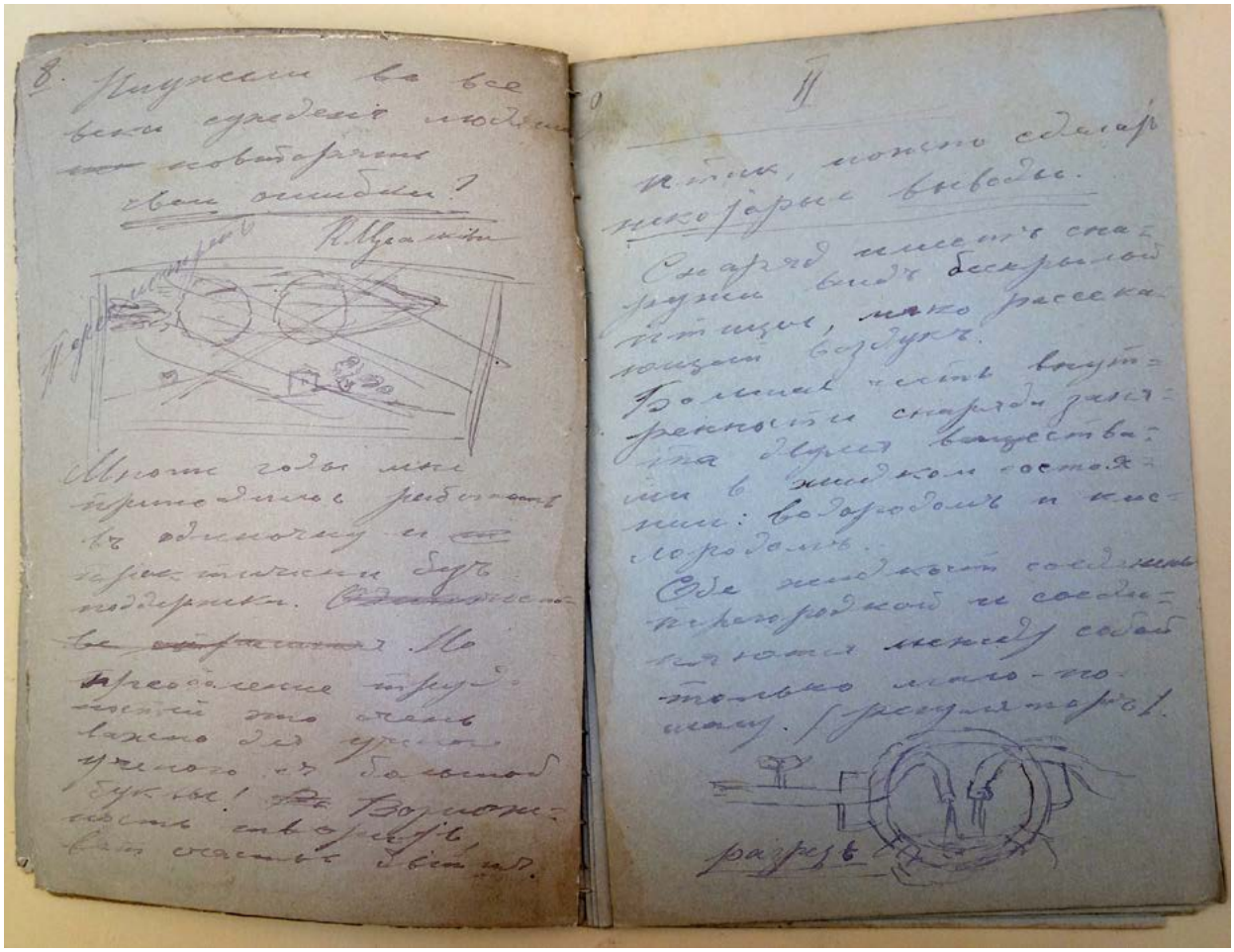
"funnel shaped deformation of anus," "relaxation of sphincter," "obliteration of [anal] folds" and "dilatation of anal orifice"— taken from Ambroise Tardieu's *Étude médico-légale sur les attentats aux moeurs* (1857), one of the most influential and widely read 19th-century treatises on the subject of sexual "deviancy." It continues with Taylor's detailed observations of the characteristics exhibited by the two defendants. Taylor noted Park's

> funnel shaped deformation not strongly but still tolerably marked; obliteration of folds on left side almost complete . . . a mark at back of anus, a vein partly surrounded by horse-shoe shaped white mark which may or may not have been scar of superficial sore . . . the two first are described by Tardieu & Casper [Johann Ludwig Casper, another writer on homosexuality] as signs of s_d__y. The man contracted nates [buttocks] very strongly during exam^{n} which Tardieu mentions as trick common to guilty persons endeavouring to conceal traces.

Boulton's examination revealed

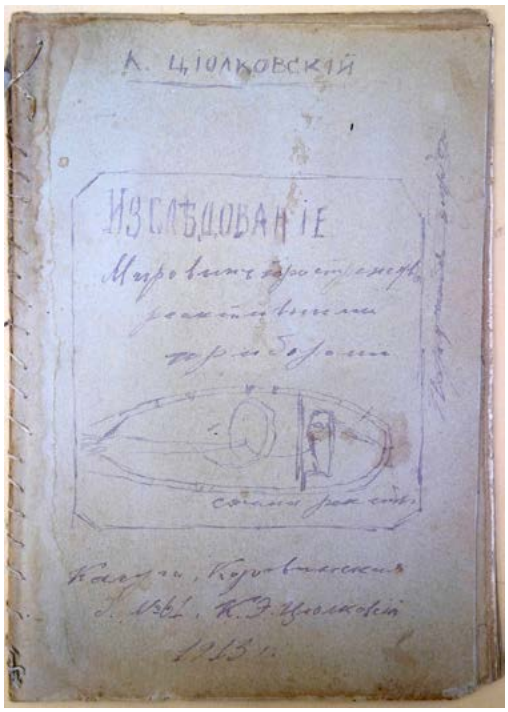
> Excavations behind anus such as is common in children who itch . . . Folds of anus if [anything] more marked than usual . . . On dragging surrounding parts so as to expose mucous membrane five condylomata [anal warts] from size of mustard seed to that of hemp seed . . . In passing my finger found peculiar condition it did not come into the free cavity of rectum but passed first an outer constriction (part of sphincter) & then lay up to second joint in a tube more or less tight to the finger . . . These appearances not conclusive but according to Tardieu & others suspicious at least.

Taylor illustrated his report with outline sketches of "funnel shaped deformation" compared to the "natural state" of the anus and buttocks. After completing his examination, Taylor concluded that there wasn't enough medical evidence present to convict Boulton and Park of sodomy. Other experts agreed, and when the case came to trial in May 1871 the prosecution failed to prove its argument against the two men. Boulton and Park were acquitted after a jury deliberation of only 53 minutes. Barrell, *Fatal Evidence: Professor Alfred Swaine Taylor & the Dawn of Forensic Science*, pp. 188–189. "Ernest Boulton (1849–?) and Frederick William Park (1848–1881) Performers." A Gender Variance Who's Who, 20 July 2008. Accessed 7 January 2019. 44785

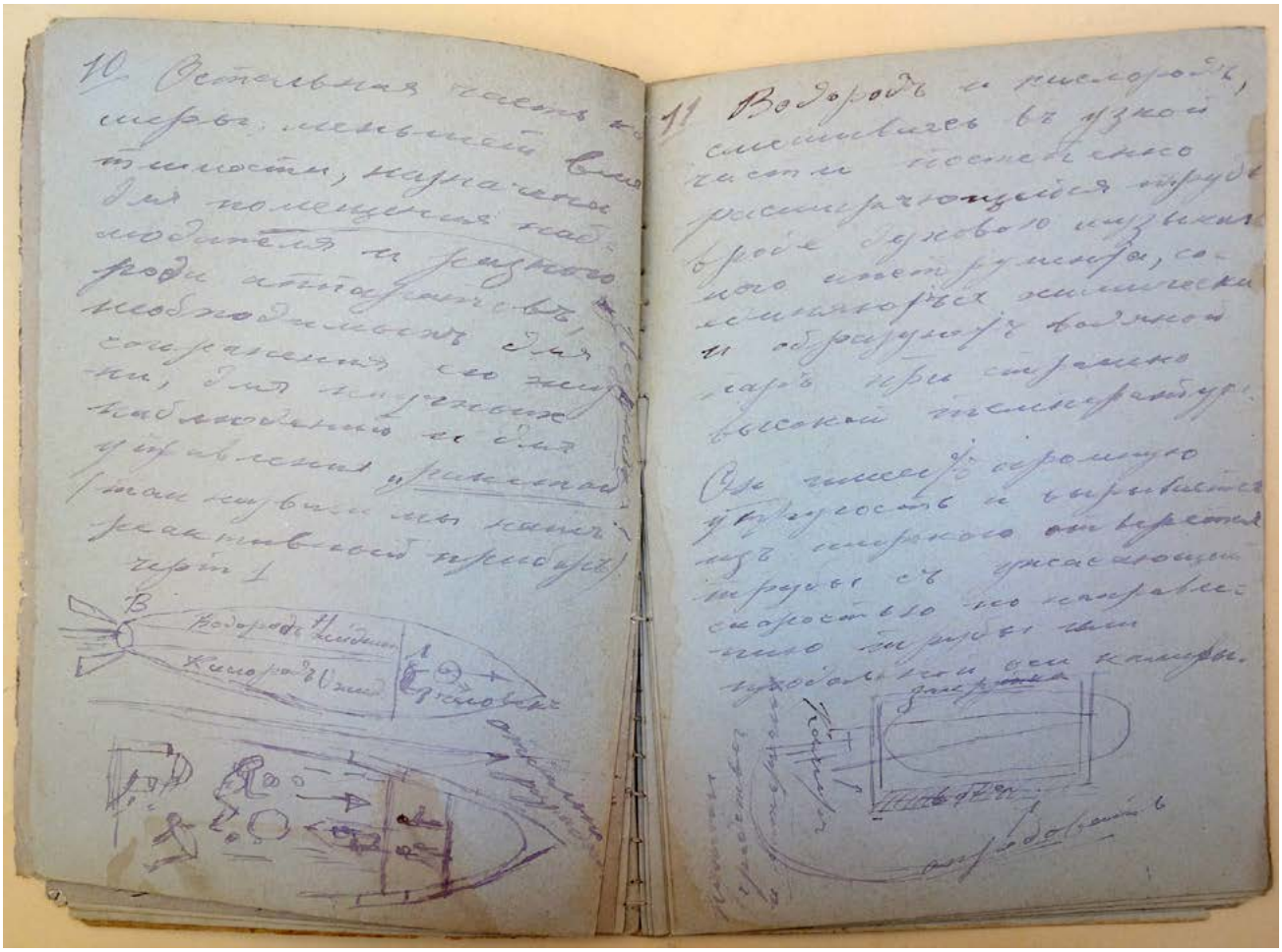


Rare Manuscript Notebook on Rocketry by the Founder of Spaceflight Theory

36. Tsiolkovsky, Konstantin Eduardovich (1857-1935). [In Cyrillic:] Issledovanie mirovykh prostrantsv' reaktivnymi priborami. Autograph manuscript notebook, signed four times in the document. 13 leaves ([2], 24pp.), illustrated with 7 technical drawings. Kaluga, 1913. 210 x 148 mm. Crudely side-stitched with some leaves partly loose, top portion of last leaf torn away with loss of several lines of text, scattered stains, light edgewear, otherwise in good condition. $20,000



Extremely Rare Signed Autograph Document on rocketry by Konstantin Tsiolkovsky, author of the first separately published work on space rockets, whose early 20th-century work on "reaction devices" marks the start of spaceflight theory. "Tsiolkovsky not only solved theoretically such age-old questions as how to escape from the Earth's atmosphere and gravitational field, but he also described several rockets. The first, conceived in 1903, was to be powered by liquid oxygen and liquid hydrogen—a very modern propellant combination . . . [Tsiolkovsky] made another discovery—the multistage rocket, which he called the 'rocket train' . . . Tsiolkovsky was the first to analyze [this] idea in a sophisticated



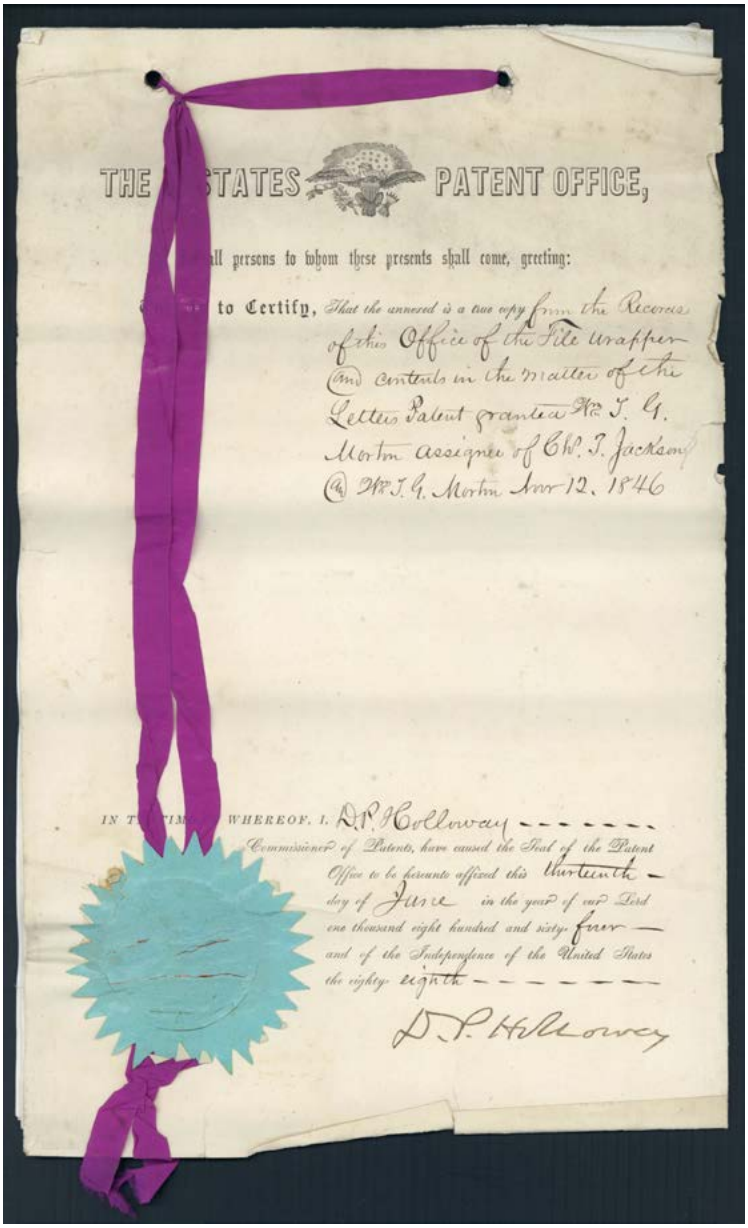
manner. The multistage technique, he concluded, was the only feasible means by which a space vehicle could attain the velocity necessary to escape from the Earth's gravitational hold" (Von Braun & Ordway, p. 42).

Between 1903 and 1914 Tsiolkovsky published his most important work, the three-part I*ssledovanie mirovykh prostrantsv' reaktivnymi priborami* (Exploration of space using reactive devices), which was the first separately-printed scientific work on space rockets. In this work he "set forth his theory of the motion of rockets, established the possibility of space travel by means of rockets, and adduced the fundamental flight formulas" (*Dictionary of Scientific Biography*). The first two parts (1903 and 1911-12) appeared as journal articles, while the final part (1914) was self-published by Tsiolkovsky using funds from his meager teacher's salary. The first page of our manuscript gives a fascinating glimpse into this publication process, as it consists of a mock-up of the third part's front wrapper, complete with illustration. There is an important difference, however: Our manuscript's "imprint" date is 1913, a year earlier than the published work, suggesting that Tsiolkovsky had finished his design for the front wrapper's layout by that time.

The manuscript we are offering has the same title as Tsiolkovsky's publication, but its contents bear little resemblance to the published text and it is likely that the document is a scientific notebook used by Tsiolkovsky to work out some of his ideas on rocketry rather than a draft of the third part of *Issledovanie mirovykh prostrantsv' reaktivnymi priborami*. Our manuscript is similar to an autograph Tsiolkovsky notebook dated 1912 that sold for $14,640 at Bonhams on 5 May 2011: The two are roughly the same size and made of similar paper, both are stitched together in the left margin, and both contain several Tsiolkovsky signatures. Our notebook compares favorably to the Bonhams example, as it is three times longer (24 pages versus 8 pages) and contains seven drawings compared to the other's single diagram. Von Braun & Ordway, *History of Rocketry and Space Travel* (1975), pp. 40-43. Winter, "Planning for spaceflight: 1880s to 1930s," in *Blueprint for Space*, ed. Ordway and Liebermann (1992), pp. 104-105. 44793

Ether Anesthesia—First Truly Significant Medical Patent

37. U. S. Patent Office. To all persons to whom these presents shall come, greeting: This is to certify, that the annexed is a true copy from the records of this office of the file wrapper and contents in the matter of the letters patent granted Wm. T. G. Morton assignee of C. W. Jackson and Wm. T. G. Morton Nov. 12, 1846 . . . Manuscript document, plus printed cover completed in manuscript and signed by David P. Holloway, U. S. Commissioner of Patents. 10 sheets including cover, tied together with silk ribbon; paper seal of the U. S. Patent Office on the first sheet. Washington, D.C., 13 June 1864. 329 x 206 mm. Minor creasing, cover sheet a bit soiled and with a few small marginal tears and fraying, but very good. $9500


THE [illegible]STATES PATENT OFFICE,

[illegible]ll persons to whom these presents shall come, greeting:

[illegible] to Certify, That the annexed is a true copy from the Records of this Office of the File Wrapper and contents in the matter of the Letters Patent granted Wm. T. G. Morton assignee of Chs. T. Jackson & Wm. T. G. Morton Nov. 12, 1846

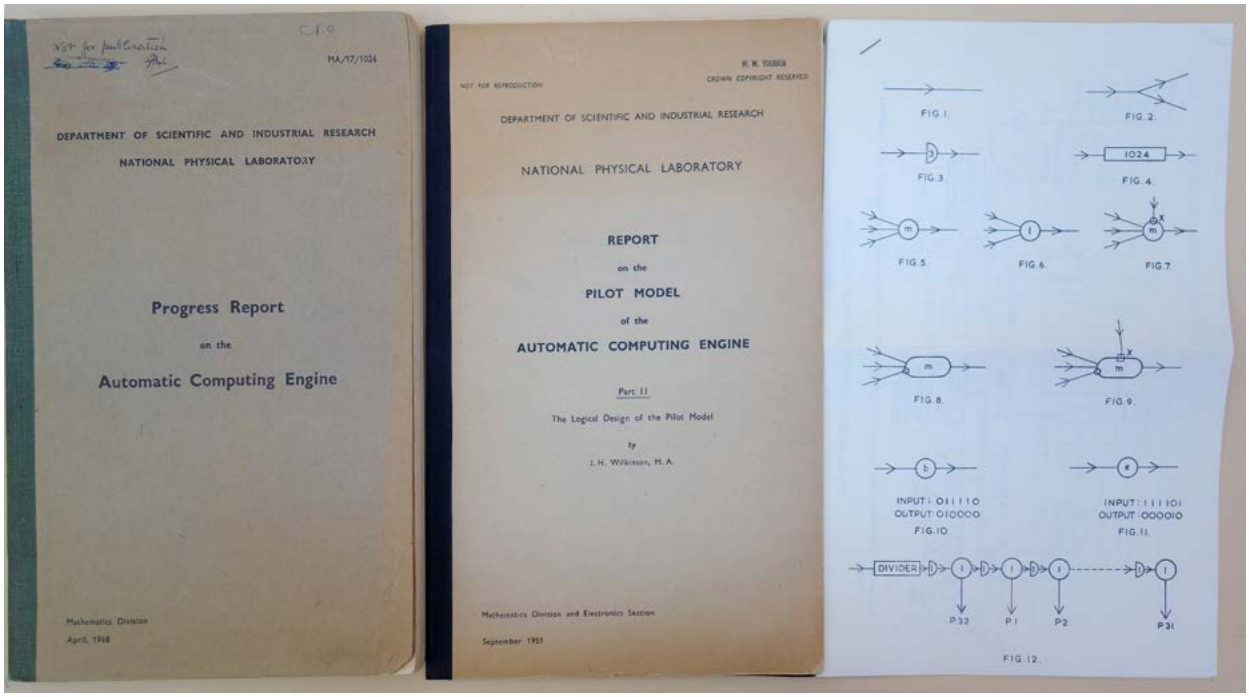
IN T[illegible]TIM[illegible] WHEREOF, I, D. P. Holloway Commissioner of Patents, have caused the Seal of the Patent Office to be hereunto affixed this thirteenth day of June in the year of our Lord one thousand eight hundred and sixty four and of the Independence of the United States the eighty eighth

D. P. Holloway

Official manuscript transcription from the U. S. Patent Office of Patent No. 4848 for ether inhalation anesthesia. This was the *first truly significant medical patent*, and a legal record of the *first great American contribution to medicine and surgery.* The printed version of the patent is *extraordinarily rare*, with only two copies known; manuscript fair copies from the Patent Office, which were prepared only by request, are also extremely uncommon.

For many years after the introduction of surgical anesthesia, it was believed that William T. G. Morton, a Boston dentist, was responsible for discovering ether's effectiveness as an anesthetic. Recent research has shown that Morton owed his knowledge of ether to Charles Jackson, a well-known physician, chemist and geologist, who had discovered the anesthetic properties of sulfuric ether in the winter of 1841-42. Jackson first told Morton about ether on September 30, 1846; on October 16, at Jackson's urging, Morton became the first person to successfully use ether to anesthetize a surgical patient. This famous operation, in which a tumor was removed from the patient's jaw, was performed by the eminent surgeon John Collins Warren at the Massachusetts General Hospital, in a building now referred to as the "ether dome."

Seeking to profit from the discovery, Morton persuaded Jackson to take out a joint patent on ether anesthesia. The two men executed the papers on October 27, 1846 and on November 12, 1846 the U. S. Patent Office issued Patent No. 4848 to Jackson and Morton. Jackson, who had no interest in making money from ether anesthesia, was philosophically opposed to the patent and agreed to it only as a means of establishing his claim to the discovery. The ether patent turned out to be unenforceable, and ether anesthesia soon came into free and general use. Garrison-Morton.com 7310 for the printed version of the patent. Wolfe, *Tarnished Idol*. 44799



Rare Early Report on Alan Turing's ACE Computer

38. Wilkinson, James Hardy. (1) Confidential. Progress report on the Automatic Computing Engine. Mimeograph typescript. [1], 127ff. 12 plates. N.p.: National Physical Laboratory, April 1948. 324 x 202 mm. Original tan printed wrappers, green cloth spine, small tear in upper portion of backstrip, corners a bit worn, back wrapper a bit creased. "Confidential" crossed out on both front wrapper and title, "Not for publication" and illegible initials inscribed on front wrapper. (2) Report on the pilot model of the Automatic Computing Engine. Part II. The logical design of the pilot model. Mimeograph typescript. [4], 18pp. 6 diagrams (stapled together) in pocket of back wrapper. N.p.: National Physical Laboratory, September 1951. 331 x 203 mm. Original printed wrappers, cloth backstrip. Very good. Ownership stamp of William Wallace Youden (1925-68), bibliographer of computer literature, on front wrapper. Together two items. Bookplate of computer pioneer Erwin Tomash (1921-2012) in each part. $30,000

First Editions of Both Parts, and **Extremely Rare**, with OCLC recording only six copies of no. (1) and one of no. (2). The National Physical Laboratory's ACE (Automatic Computing Engine) was designed by Alan Turing, who began working on the project a few months before he joined the NPL's mathematics division on October 1, 1945. After Turing's departure from the NPL in September 1947, the project was taken over by his assistants, James H. Wilkinson and Michael Woodger. Wilkinson's 1948 report (no. [1]) is one of the earliest documents on the ACE and contains probably the most detailed description of the work done to date in building the test assembly. The numerous programs published in this report include some of the earliest surviving examples of Turing's programming for the machine.

In 1949 the NPL issued a second report on the ACE written by Stanley Gill, titled *Automatic Computing Engine: Progress Report No. 2, Description of Hollerith Input and Output for the Pilot Model* (not included here). In the same year the original ACE test assembly was abandoned and a redesigned simpler version began construction; this simplified version, described in Wilkinson's 1951 report (no. [2]), came to be known as the Pilot ACE. Wilkinson's introduction to the 1951 report noted this change in the design process:

> In an earlier Progress Report [i.e., no. (1) above] the logical designs of two machines were described, the first a small machine referred to as a Pilot model, the second a large scale machine referred to as the Automatic Comput-

> ing Engine (A.C.E.). The machine which is the subject of this [1951] report is roughly equivalent to the pilot model described in [the 1948 report], but it differs sufficiently in detail to make it more convenient to give a self-contained description of its logical design rather than summarise its points of difference (p. 1).

The 1951 report is subtitled "Part II" but we have found no evidence of a "Part I," and it seems clear from Wilkinson's introduction that the 1951 report was meant to serve as the second part of the 1948 report. OCLC records only one copy of the 1951 report, at the University of Illinois; the catalogue description incorrectly gives the pagination as 127 leaves, perhaps confusing it with the 1948 report.

Despite its prototype status the Pilot ACE was immediately pressed into service on its completion, as it was then the only computer in a British government department. It remained in operation until 1956. *Origins of Cyberspace* 933. Yates, *Turing's Legacy: A History of Computing at the National Physical Laboratory 1945–1995,* 337, no. 138.

44770