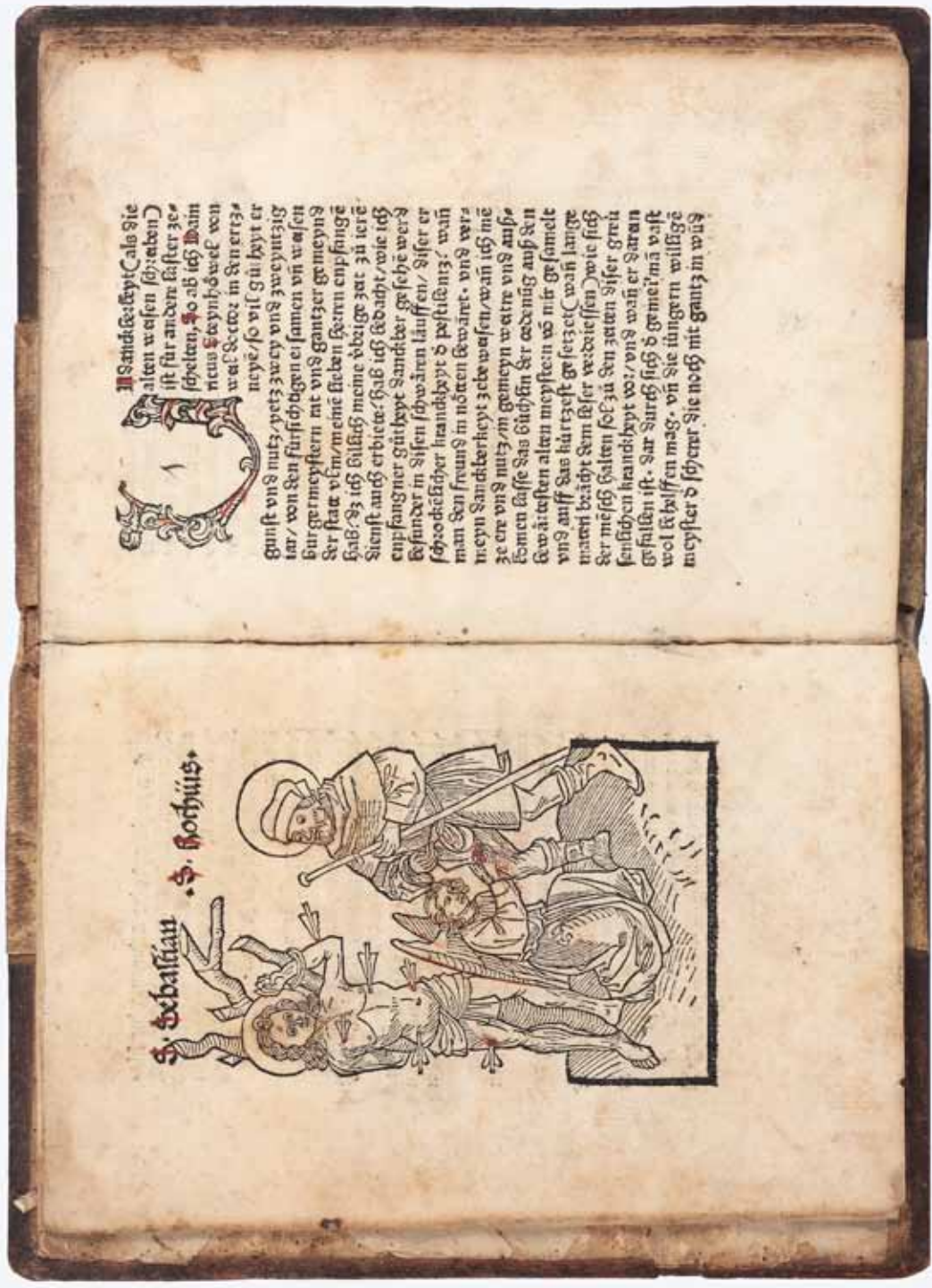


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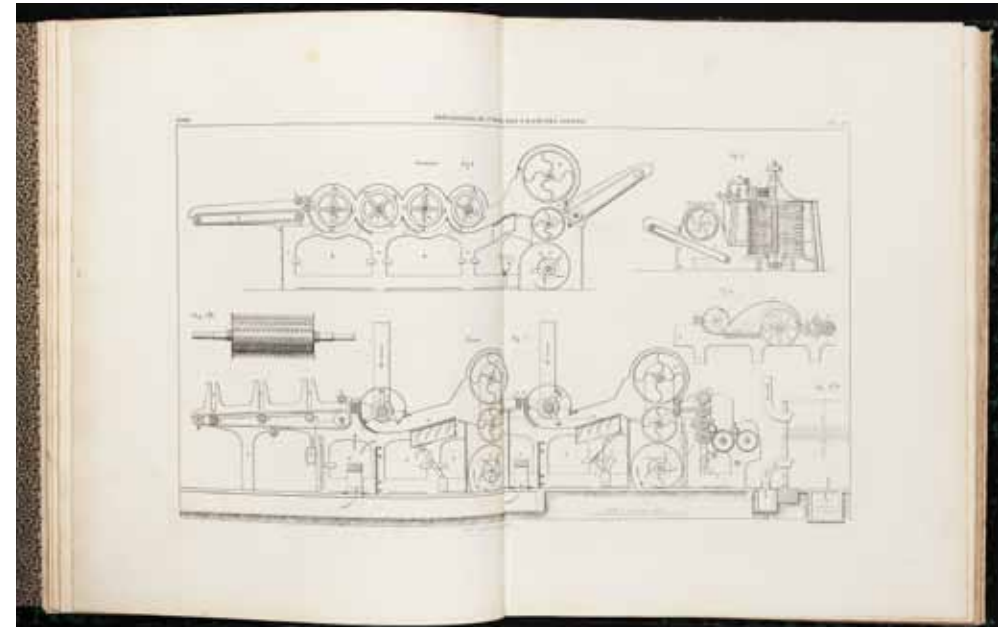
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### *The Most Important of Vegetable Fibers*

- 1 **ALCAN, MICHEL.** *Fabrication des Étoffes. Traité de la Filature du Coton. Origines – Production – Caractères – Propriétés – Classifications – Transformations – Développement commercial – Succédanés – Progrès techniques – Filature – Apprêts des Fils – Détermination des Assortiments – Installation et Organisation des Filatures . . .* One vol. of TEXT: xv, 672 pp., one folding leaf (“224bis”), & one large folding printed table (“66obis”). 8vo, cont. green morocco-backed marbled boards, spine gilt. ATLAS: One leaf of title, one leaf of index of plates, & 42 double-page photolithographed plates. Large 4to, binding as above. Paris: J. Baudry, 1875. \$2500.00

Second edition, “entièrement revue et corrigée.” Alcan (1811-77), was professor of textiles at the Conservatoire national des Arts et Métiers in Paris. He wrote a series of books on various technical aspects of the textile industry.

This is his main work on cotton and the cotton industry, which became a standard work on the subject. He provides a detailed history of cotton cultivation throughout the world; all the steps in making cotton fabric: ginning,

baling, spinning, manufacture; the varieties of looms and cotton fabrics; the cotton trade, etc. The first edition was published in 1865.

Fine and handsome set. The fine photolithographed plates depict cotton fibers and textile machinery used in preparing and manufacturing cotton.

*Five Uncommon Works by Angeli*

- 2 **ANGELI, STEFANO DEGLI.** *Considerationi sopra la Forza di alcune Ragioni Fisicomatematiche, addotte dal M.R.P. Gio. Battista Riccioli ... nel suo Almagesto Nuovo & Astronomia Riformata contro il Sistema Copernicano. Espresse in Due Dialoghi ...* Woodcut diagrams in the text. 4 p.l. (final leaf a blank), 134 pp. Small 4to, cont. vellum over boards. Venice: B. Bruni, 1667.

[BOUND WITH]:

- *Seconde Considerationi sopra la Forza dell'Argomento Fisicomatematico ... contra il Moto Diurno della Terra ...* Woodcut diagrams in the text. 4 p.l., 111 pp. Small 4to. Padua: M. Bolzetta de Cadorini, 1668.

[BOUND WITH]:

- *Terze considerationi sopra Una Lettera del ... Gio: Alfonso Borelli ... scritta da Questi in replica di alcune Dottrine incidentemente tocche ...* Woodcut diagrams in the text. 4 p.l., 46 pp. Small 4to. Venice: Heirs of Leni, 1668.

[BOUND WITH]:

- *Quarte Considerationi sopra la Confermatione d'Una sentenza del Sig. Gio. Alfonso Borelli ... prodotta da Diego Zerilli contro le Terze Considerationi.* Woodcut diagrams in the text. 4 p.l., 87 pp. Small 4to. Padua: M. Cadorin detto Bozetta, 1669.

[BOUND WITH]:

- *Della Gravità dell' Aria e Fluidi, esercitata Principalmente nelli loro homogenei. Dialogi Primo, e Secondo Fisico-Matematici.* Woodcut diagrams in the text. 2 p.l., 79 pp. Small 4to (a few leaves browned). Padua: M. Cadorin, 1671. \$12,500.00

An attractive collection of five of Angeli's scientific writings, all first editions, and including his most important writings on fluids. Angeli (1623-97), studied mathematics under Cavalieri at Bologna and edited his teacher's *Ex-*





*ercitationes Geometricae Sex* (1647). In 1663, Angeli was offered the prestigious professorship of mathematics at the University of Padua, a post that had been held by Galileo, and which Angeli filled until his death.

I-IV. These four works, a complete set, written in the style “of dialogues that reflect Galileo’s style, form a lively but cautious polemic on the problems of the Ptolemaic and Copernican cosmological systems. G.B. Riccioli, in his *Almagestum novum*, had formulated some arguments against the Copernican system. Angeli asserted that ‘the earth is motionless, but Riccioli’s reasons do not prove the point,’ and he devoted the first of these studies (1667) to demonstrating that Riccioli’s anti-Copernican arguments were without foundation. Angeli replied to Riccioli’s arguments with another work in 1668. G.A. Borelli, who later participated in the polemic, rejected Riccioli’s arguments, and pointed out that if Angeli’s views were correct, falling bodies should follow a vertical trajectory in the hypothesis of the earth’s motion as well.” –*D.S.B.*, I, pp. 164-65.

V. Angeli’s *Della gravità dell’aria e fluidi* “is largely experimental in character. In it he examines the fluid statics, based on Archimedes’s principle and on Torricelli’s experiments. It also contains theories of capillary attraction.” –*ibid.*, p. 165. In Angeli’s works on physics, there are many references to Galileo’s mechanics, as well as his acceptance of the experimental method.

Fine copies. Bookplate of Cassamini-Mussi.

☞ Carli & Favaro 301, 309, 310, 321, & 331. Riccardi, I, 11-15. I. Maffioli, *Out of Galileo. The Science of Waters 1628-1718*, pp. 102, 103-04, & 115n.

### “An Important Book” –Needham

- 3 **ARANZI, GIULIO CESARE.** *De Humano Foetu Libellus*. Woodcut printer’s device on title. 4 p.l. (last leaf a blank), 79 pp. Small 8vo, somewhat later vellum over boards. Bologna: J. Rubrius, 1564. \$35,000.00

First edition of an extremely rare book in which Aranzi (1530-89), professor of anatomy at Bologna, describes his discovery of “the *ductus venosus* of the fetus that runs to the umbilical cord.” –Castiglioni, *A History of Medicine*, p. 428. He was the first to state the maternal and foetal circulations were separate, and found the highly oxygenated blood supply was connected from the placenta through the *ductus venosus* to the foetal circulation.

“His *De Humano Foetu* was an important book . . . he was the first to maintain that the maternal and foetal circulations are separate, but he naturally did not, and could not, speak of circulations, since he lived before Harvey. Nor



could he have proved his point satisfactorily with the means then at his command, and, as we shall see, it was to take another century before the proof was given. Apart from this valuable contribution to embryology, Arantius gave some admirable anatomical descriptions of the foetal membranes.” –Garrison, *A History of Embryology*, p. 105.

Aranzi studied medicine under his famous uncle, Bartolomeo Maggi (1477-1552), lecturer in surgery at the University of Bologna. He was also one of the best students of Vesalius (who is mentioned on page 46). Aranzi was, along with Aldrovandi and Fabricius ab Aquapendente, one of the three greatest Italian embryologists of the period. “The excellent scientific and practical preparation Aranizio had received from his uncle immediately brought him fame. He discovered the *pedes hippocamp*; the cerebellum cistern; and the fourth ventricle, the arterial duct between the aorta and the pulmonary duct . . .

“In 1564 Aranizio published *De humano foetu opusculum*, and fifteen years later his *Observationes anatomicae* appeared. In these he presented the new direction of anatomy, based not merely on simple description of the organs of the body but also on experimental investigations of their functions.”—*D.S.B.*, I, p. 204.

Very good copy preserved in a morocco box. 13 leaves a little wormed in lower outer margin. Some contemporary annotations. This is a rare book; for example, there was no copy in the Norman collection.

☞ Dobson, *Anatomical Eponyms*, p. 14. Garrison-Morton 464—“Aranzi believed the maternal and foetal circulations to be separate. He described the ductus arteriosus and ductus venosus of the foetus, and the corpora Arantii in the heart valves. Incidentally, he was the first to record a pelvic deformity.”

### *The Heliocentric System First Stated*

- 4 **ARISTARCHUS OF SAMOS.** *De Magnitudinibus, et Distantiis Solis, et Lunae, Liber cum Pappi Alexandrini explicationibus quibusdam.* A Federico Commandino Urbinate in Latinum conversus, ac Commentariis illustratus. Woodcut printer’s device on title, a fine woodcut initial, & numerous woodcut diagrams (many full-page) in the text. 4 p.l. (the last a blank), 38 leaves. Small 4to, early vellum over boards (some light foxing), handwritten paper label on spine, traces of green silk ties. Pesaro: C. Francischini, 1572. \$37,500.00

First edition of Commandino’s translation of the first treatise to put forward the heliocentric hypothesis.

Aristarchus (ca. 310-230 B.C.), “taught the daily rotation of the earth about its axis. He was the first to put forward the heliocentric hypothesis. In order to reconcile the apparent immobility of the fixed stars with the revolution of the earth around the sun, he assumed that the sphere of the fixed stars was in-

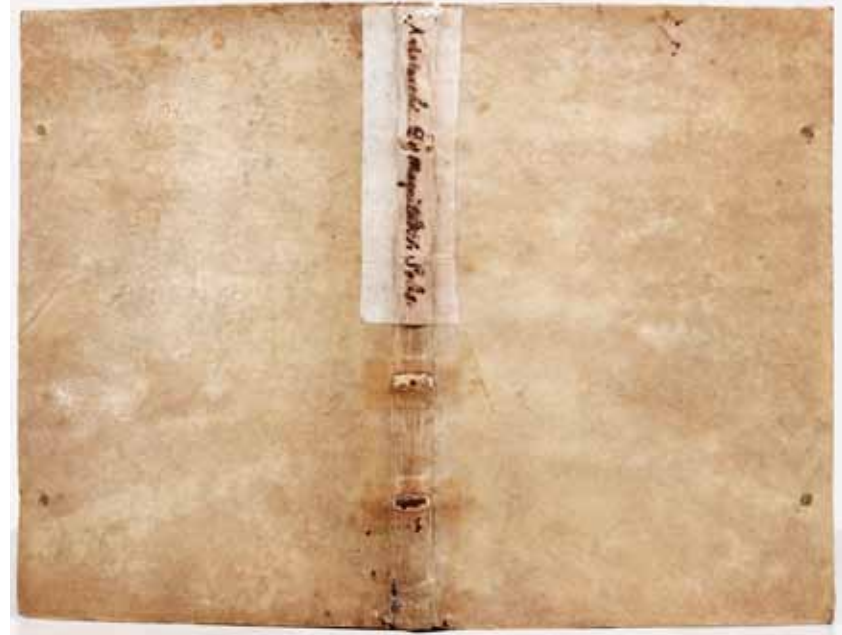
comparably greater than that containing the earth’s orbit. That is, the universe conceived by him was incomparably greater than that conceived by his predecessors. In his only extant treatise ‘On the sizes and distances of the sun and moon’ he gave a scientific method to make these measurements. His results were grossly inaccurate, but the method was sound . . .

“This treatise is of great mathematical interest because of its containing the calculation of ratios which are in fact trigonometrical ratios.”—Sarton, I, pp. 156-57.

“Aristarchus is celebrated as being the first man to have propounded a heliocentric theory, eighteen centuries before Copernicus . . . It is interesting to note in passing that Copernicus’ disappointment at being anticipated by Aristarchus has recently come to light. Copernicus deliberately suppressed a statement acknowledging his awareness of Aristarchus’ theory . . . *On Sizes and Distances* marks the first attempt to determine astronomical distances and dimensions by mathematical deductions based upon a set of assumptions.”—*D.S.B.*, I, pp. 246-48.

Nice unsophisticated copy. Old stamp on title.

☞ Sparrow, *Milestones of Science*, pp. 2-3 & plate 7.





### Important Advancements in Prostheses

- 5 **BALLIF, PIERRE.** *Description d'une Main et d'une Jambe artificielles inventées par ...* Three splendid double-page engraved mezzotint plates. Seven pages. Folio, orig. printed upper wrapper bound in cont. orange sheep *maroquiné*, covers with a gilt border, spine gilt. Berlin: se trouve chez l'Auteur, Rue de Jerusalem, No. 6, [from the upper wrapper: 1818]. \$5000.00

First edition of this rare and beautifully illustrated book, with three large and fine double-page mezzotint engraved plates depicting in great detail an artificial arm and leg invented by the author.

Ballif (1775-1831), court dentist to the Prussian king at Berlin, had a great interest in mechanical devices. He developed a series of mechanical prostheses — hands and legs — as well as a palatal obturator (for this dental invention, see Hoffmann-Axthelm, *History of Dentistry*, pp. 278-79).

In this work, Baliff describes and illustrates two highly complex mechanical hands and legs, which were, in many ways, breakthroughs in prostheses. The movable hand operated by an externally placed cable connected to the remaining muscles and was fixed to a chest strap. Bailiff appears to have been the

first to introduce the use of the trunk and shoulder girdle muscles as sources of power to flex or extend the fingers. He reversed the spring action of the Paré and Goetz hands by having the terminal device extend through action of the sound shoulder. The two weak points of this prosthesis were its weakness of grasp and the fact that it was designed only for a forearm amputation.

His mechanical leg, the first great advancement in artificial leg history, was fabricated of metal and leather and had knee, ankle, and toe motion.

A very fine copy of an extremely rare book.

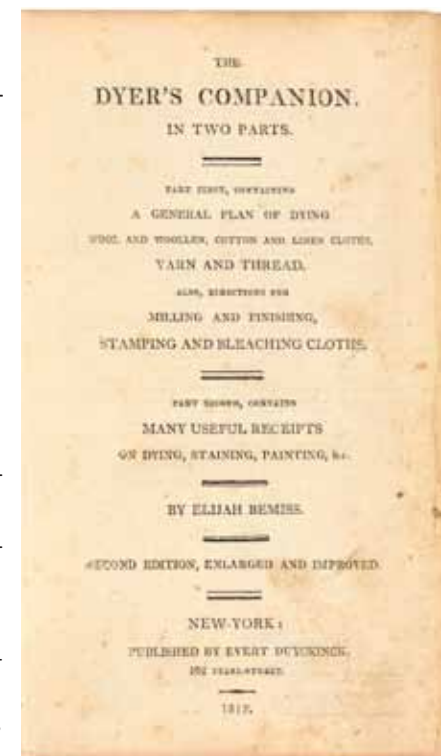
☞ Hirsch, I, pp. 306-07.

- 6 **BEMISS, ELIJAH.** *The Dyer's Companion. In Two Parts. Part First, containing a General Plan of Dying Wool and Woollen, Cotton and Linen Cloths, Yarn and Thread. Also, Directions for Milling and Finishing, Stamping and Bleaching Cloths. Part Second, contains Many useful Receipts on Dying, Staining, Painting, &c.* viii, [5]-307 pp. 8vo, cont. American mottled sheep (minor browning throughout), red morocco lettering piece on spine. New York: E. Duyckinck, 1815. \$2500.00

“Second edition, enlarged and improved.” The first edition appeared in 1806. Bemiss was a Connecticut dyer and claims in the Preface that this is the first book on the subject to appear in America. Actually, it is the third earliest and is a very comprehensive collection of dyeing recipes with information on dyeing techniques and equipment.

Very nice copy.

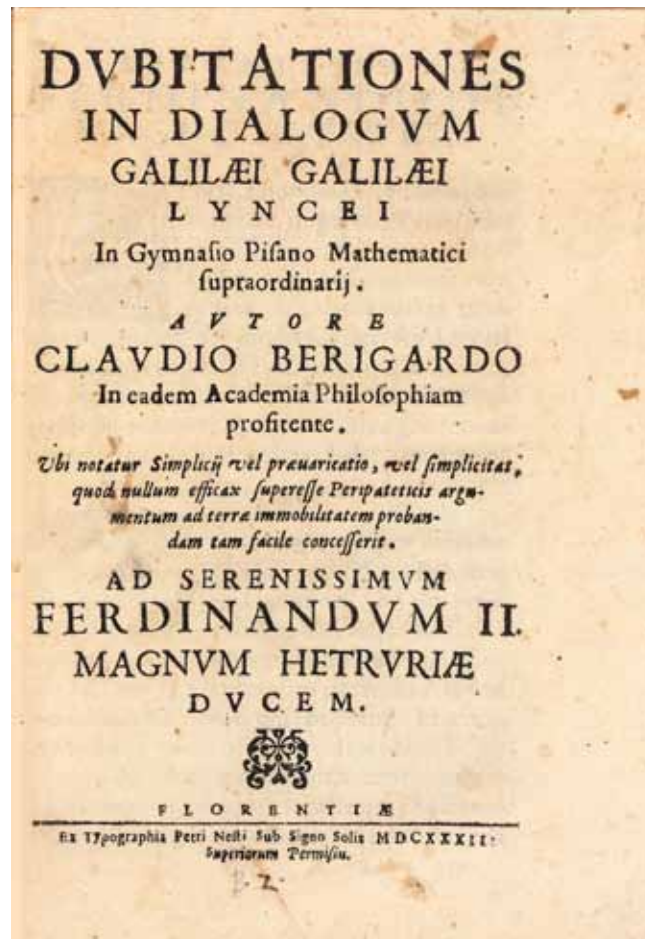
☞ Cole 75—“A book of detailed instructions presented in a form useful to practical dyers.” Rink, *Technical America*, 1852. Ron, *Bibliotheca Tinctoria*, 87.





*A Rare Work on Galileo's Dialogo*


- 7 **BÉRIGARD, CLAUDE GUILLERMET DE.** *Dubitaciones in Dialogum Galilaei Galilaei Lyncei . . . ubi notatur Simplicii vel praevaricatio, vel simplicitas, quod nullum efficax superesse Peripateticis argumentum ad terrae immobilitatem probandam tam facile concesserit.* 68 pp., one leaf of errata & printer's license, & one blank leaf. Small 4to, attractive antique vellum over boards (title a bit spotted), covers panelled in gilt with gilt fleurons in corners, triple gilt fillet round sides. Florence: P. Nestus, 1632. \$45,000.00



First edition and a fine copy of one of the great rarities in the Galileian literature. This is the first published criticism of Galileo's *Dialogo*, issued just a few months after the publication of Galileo's great book.

Bérigard (d. 1664), studied medicine and philosophy at Aix-en-Provence and was summoned to Tuscany in 1625 where he taught philosophy at Pisa. "In 1632 Bérigard published the *Dubitaciones*, concerning Galileo's *Dialogue Concerning the Two Chief World Systems* (condemned in 1633). Galileo himself is quoted as saying to Elie Diodati (25 July 1634) that it was more out of obligation than conviction. Bérigard, who must have known Galileo personally, always praised him, but remained firmly convinced of the earth's immobility." *-D.S.B.*, II, p. 13. The text contains many references to Copernicus, Tycho Brahe, and Kepler.

Bérigard moved to Padua in 1640 where he became well-known as a teacher and succeeded Liceti in 1653. In his remaining years, he followed Gassendi in reviving atomism. A great scholar, Bérigard remained deeply involved in preparing the future for a rational physics.

A fine and large copy of this rare book. Errata leaf and final blank present.  Cinti 90- (with an excellent account of the contents of the book).

*The Influential Edition*

- 8 **BERZELIUS, JÖNS JAKOB.** *Lehrbuch der Chemie . . . nach des Verfassers schwedischer Bearbeitung . . . übersetzt von F. Wöhler.* 13 folding engraved plates. Four vols. bound in six. 8vo, cont. half-sheep & marbled boards, flat spines gilt, contrasting vellum lettering pieces on spines. Dresden: Arnold, 1825-25-26-26-27-28-31-31. \$2950.00

First complete edition in German of Berzelius' *Läbok I Kemien* (1808-30), "the most authoritative chemistry textbook of the period." *-D.S.B.*, II, p. 92. The translation was made by Friedrich Wöhler (1800-82), the prominent German chemist who trained under Berzelius, became fast friends with the great Swedish chemist, and translated many of the writings of Berzelius into German (see *D.S.B.*, XIV, pp. 474-79). This was a very influential edition and formed the basis of the numerous translations into French, Dutch, and Italian.

Fine set.

 Partington, IV, pp. 142-77.



- 9 **BOLLETTI, GIUSEPPE GAETANO**. *Dell' Origine e de' Progressi dell' Istituto delle Scienze di Bologna e di tutte le Accademie ad esso unite, con la descrizione delle più notabili cose, che ad uso del Mondo letterario nello stesso Istituto si conservano*. Engraved vignette on title & four folding engraved plates. 111, [1] pp. 8vo, attractive antique speckled calf (some foxing), double gilt fillet round sides, spine gilt, red morocco lettering piece on spine. Bologna: Lelio dalla Volpe, 1769. \$650.00

Fourth edition (1st ed.: 1751) of the history of the origins and activities of the Academy of Sciences of the Institute of Bologna (founded in 1714), one of the leading scientific academies of the 18th century.

Very good copy.

✂ Riccardi, I, 145-“Abbiamo registrato questo libro . . . per l'importanza che esso presenta per la storia della scienza.”



*A Fine Uncut Copy*

- 10 **BORELLI, GIOVANNI ALFONSO**. *De Motionibus Naturalibus a Gravitate Pendentibus . . .* Numerous woodcut diagrams in the text. 4 p.l., 566, [5] pp. Thickish 4to, cont. semi-stiff boards (a little soiled), uncut. Reggio di Calabria: D. Ferri, 1670. \$14,500.00

First edition and scarce. “Borelli’s second book on mechanics is important as the first treatise on capillarity. It contains the important investigations from

which the author formulated the law that the height of the ascent of liquids in capillary tubes is inversely proportional to their diameters. His investigations also led him to the conclusion that the phenomenon of capillarity is independent of the pressure of air.”—Roberts & Trent, *Bibliotheca Mechanica*, p. 42.

Borelli saw this book not only as a work exploring aspects of mechanics but also as a necessary introduction to what he would later consider to be his most important work, the *De Motu Animalium*.

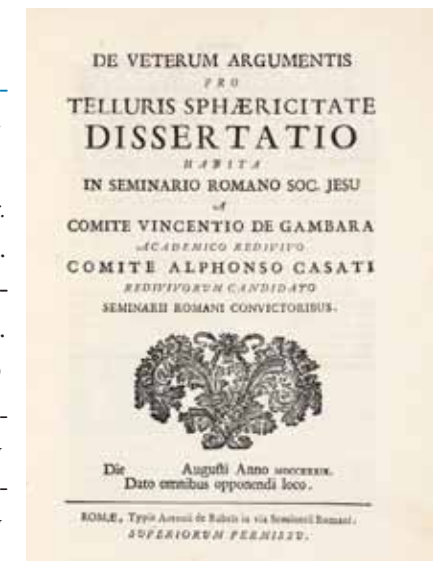
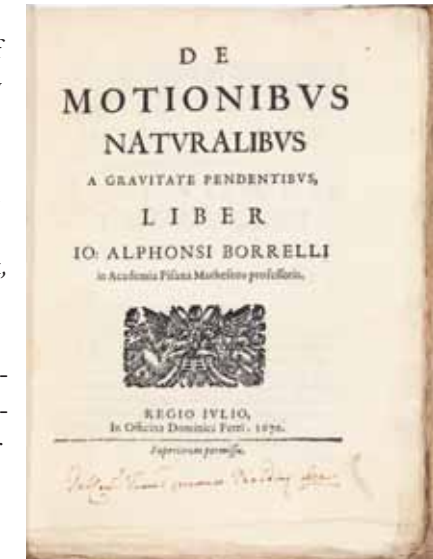
A fine copy in original state.

✂ *D.S.B.*, II, p. 311—In this book “he argues against positive levity, discusses the Torricellian experiment, takes up siphons, pumps, and the nature of fluidity, tries to understand the expansion of water while freezing, and deals with fermentation and other chemical processes.” Riccardi, I, 159.

#### *One of His Earliest Publications*

- 11 **[BOSCOVICH, RUGGERO GIUSEPPE]**. *De veterum Argumentis pro Telluris Sphaeritate Dissertatio habita in Seminario Romano Soc. Jesu*. One folding engraved plate. xvi pp. Large 4to, attractive modern patterned boards. Rome: A. de Rubeis, [1739]. \$4950.00

First edition of one of the author’s earliest publications; it is very rare: WorldCat locates just two copies in North America. “Contemporary readers read a plea for removing the



works of Copernicus from the Index.”–Hill, “Roger Boscovich. A Biographical Essay” in Whyte, ed., *Roger Joseph Boscovich* (1961), p. 32.

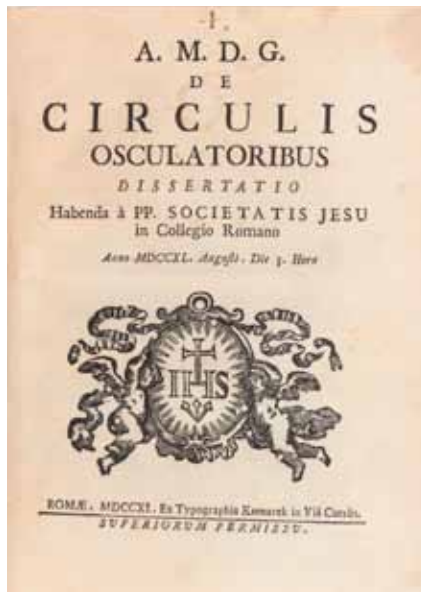
“Early in his career his interest was drawn to the problem of the size and shape of the earth, an issue intensively discussed in the first half of the eighteenth century, since its resolution was thought to be crucial in an eventual choice between a Cartesian cosmology of vortices, which predicted an earth slightly elongated at the poles, and a Newtonian one of inertial motion under attractive forces, in which case the globe should be slightly flattened.”– *D.S.B.*, II, p. 329.

Fine copy.

### *The Power of Geometry*

- 12 [BOSCOVICH, RUGGERO GIUSEPPE]. *De Circulis Osculatoribus Dissertatio*. One folding engraved plate. xii pp. Large 4to, modern patterned wrappers (minor browning). Rome: Komarek, [1740]. \$4750.00

First edition of this early work by the author; WorldCat locates only two



copies in North America. “Science in general took its lead in physics from Newton and in mathematical analysis from Leibniz, and it was at the root of Boskovic’s idiosyncrasy that, whether deliberately or not, he took the opposite tack in both respects. Mathematics had always attracted him. Instead of the calculus as developed by the great analysts among his great contemporaries – d’Alembert, the Bernoullis, and Euler – he preferred the geometric method of infinitely small magnitudes ‘which Newton almost always used,’ as he said, and which embodied the ‘power of geometry.’

He particularly applied it to problems of differential geometry, terrestrial and celestial mechanics, and practical astronomy.”– *D.S.B.*, II, p. 330.

Fine copy.

### *One of the Rarest of All Mineralogical Books*

- 13 BREMBATO, OTTAVIO. *Mineralogia ... divisa in quattro Libri, nella quale vien descritto l'uso di cavar le Miniere, purificarle, & separarle per ridurle in perfetto Metallo*. Engraved frontis. & one engraved plate. 136, [6] pp. (final leaf a blank). 8vo, cont. limp boards (a little soiled, a few leaves with minor stains mostly in the margins), entirely uncut. Bergamo: Sons of M.A. Rossi, 1663. \$15,000.00

First edition of this extremely rare work on mineralogy and metallurgy; WorldCat locates only two copies in North America. There were no copies in the Hoover, Honeyman, or Freilich collections.

“Very rare. In this mineralogical work, the author divides the subject into four books, that provide in-depth discussions of locating mineralized veins in caves and mines, how to extract the mineralized ore, and reduce the ore to a perfect metal.”–Schuh, *Mineralogy & Crystallography: A Bibliography, 1469 to 1920*, 841.

Brembato (1602-75), an Italian aristocrat, was an amateur naturalist who studied botany and mineralogy. The book is dedicated to the King of Spain, Phillip IV.

The attractive frontispiece depicts a metal worker making a metal crown, with miners in the background working on a hillside with picks and shovels.

Over the years, I thought I had had all of the rarest books in the field of mineralogy but this is the first time I have encountered this book.

Very nice copy in original state.





*Cardano's Second Great Encyclopedia of Natural Science*

- 14 **CARDANO, GIROLAMO.** *De Rerum Varietate Libri XVII. Adiectus est captim, rerum & sententiarum notatu dignissimarum Index.* Fine medallion woodcut port. of the author on verso of title, numerous woodcut illus. in the text, one folding woodcut plate (pp. 769-70) with the woodcut volvelle unassembled on a separate slip bound-in, & one folding printed table (pp. 790-91). 16 p.l. (the last a blank), 1194 (i.e. 1204), [64] pp. Thick 8vo, cont. blind-stamped panelled pigskin over wooden boards (some light dampstaining) by Hans Bopp of Nuremberg, orig. clasps & catches. Basel: [H. Petri], 1557. \$8500.00

Second edition (the first edition was published earlier in the same year) of Cardano's second great encyclopedia of natural science; it is a continuation of and supplement to his *De Rerum Subtilitate* (1st ed.: 1550). These two works contain his important ideas on physics and metaphysics. In this book, Cardano made notable contributions to mechanics, hydrodynamics, and geology and there are interesting chapters on astronomy, botany, zoology, chemistry, metallurgy, etc.

"Of special chemical interest is Book X, comprising one chapter on fire . . . a chapter on distillation with woodcuts of apparatus, and a chapter on chemistry. It finishes by a chapter on glass."—Duveen, p. 117.

A very good copy. Somewhat later ownership inscription of Paulus Mem-

mingier (1599-1663), Bürgermeister of Regensburg on front paste-down endpaper. This edition is the first to contain the invaluable index.

✂ *D.S.B.*, III, pp. 64-67. Partington, II, pp. 9-15. Thorndike, V, pp. 563-79. For the binding, see Haebler, I, 43, 3.

"A Storehouse of Information . . . A Valuable Source"

- 15 **[DÉZALLIER D'ARGENVILLE, ANTOINE JOSEPH].** *L'Histoire Naturelle éclaircie dans deux de ses Parties principales, la Lithologie et la Conchyliologie, dont l'une traite des Pierres et l'autre des Coquillages, Ouvrage dans lequel on trouve une nouvelle Méthode & une Notice critique des principaux Auteurs qui ont écrit sur ces Matières.* Finely engraved allegorical frontis. after Boucher (a bit foxed) & 33 finely engraved plates. Title printed in red & black. 4 p.l., 491, [1] pp. Large thick 4to, cont. polished calf (a few minor abrasions to upper cover, one small chip to headcap), spine richly gilt, red morocco lettering piece on spine, a.e.g. Paris: De Bure l'Aîné, 1742. \$2950.00

First edition and a very handsome, large copy. Dézallier (1680-1765), counselor to the King, was one of the leading popularizers of natural history in France during the 18th century. He published descriptions of many notable natural history collections in Paris and the provinces.

This work was written for the collector in order to facilitate the identification of shells for the cabinet. It "was very popular with collectors and even Linnaeus utilized it to arrange his shells."—Dance, *Shell Collecting. An Illustrated History*, pp. 58-59. There is an extensive list



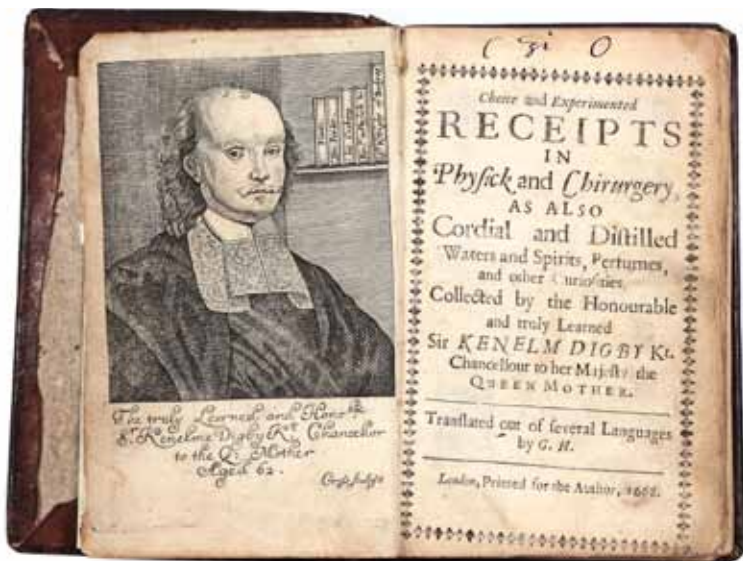


of shells, with remarks on rarity and desirability, followed by a discussion of private natural history collections in Paris and Holland, with remarks on the outstanding features of each collection.

“A storehouse of information on stones and shells. It remains today a valuable source because it describes many of the famous eighteenth-century natural history collections of Europe.”—Kafker, *The Encyclopedists as Individuals: A Biographical Dictionary of the Authors of the Encyclopédie*, p. 13.

Fine copy. The plates are especially well-engraved. 19th-century bookplate of G. De Visme.

➤ Schuh, *Mineralogy & Crystallography: A Bibliography, 1469 to 1920*, 1337—“The 33 engraved plates show mineralogical and conchological subjects . . . Scarce. An important work on lithology and conchology, including discussions of the contributions of the chief authors on these subjects, and a method of classification for shells, as well as tables in Latin and French.”



“One of the Most Remarkable Thinkers and Scientific Enquirers of his Day”—ODNB

- 16 **DIGBY, SIR KENELM.** *Choice and Experimented Receipts in Physick and Chirurgery, as also Cordial and Distilled Waters and Spirits, Perfumes, and other Curiosities.* Collected by the Honourable and truly learned Sir Kenelm

Digby Kt. Chancelour to her Majesty the Queen Mother. Translated out of several Languages by G.H. Engraved frontis. port. of Digby by Thomas Cross. Title within typographical border. 4 p.l., 308, [12] pp. Small 8vo, cont. sheep (a few abrasions, margins of half-title a bit frayed & chipped, minor browning), panelled in blind. London: Printed for the Author, 1668. \$4000.00

First edition and a lovely copy in its first binding; with the longitudinal half-title and the portrait. This posthumously published work records the chemical experiments made by Digby (1603-55), in 1633-35 at Gresham College in the large laboratory which he established. Translated by one of Digby's assistants, George Hartmann, the book “deals mainly with receipts . . . for different common ailments, but incidentally there is a little practical chemistry in the preparation of the compounds employed.”—Ferguson, *Book of Secrets*, VI, 20.

Fine copy. Dr. K. Garth Huston, in his checklist of Digby's publications, lists this as the first state “(A)” of three. Contemporary inscription on front turn-in “W.C. His Book”; signature of William Reynolds, Southam, 1854, on recto of frontispiece; bookplate and signature of Dr. Page Robertson, Glasgow; sold Sotheby's London, 14 December 1954, lot 141.

➤ *D.S.B.*, IV, pp. 95-96. Partington, II, p. 426.

*Four Works on Forestry by Duhamel du Monceau from Ovesholm Castle*

- 17 **DUHAMEL DU MONCEAU, HENRI LOUIS.** *Traité des Arbres et Arbustes qui se cultivent en France en pleine Terre.* 250 woodcut plates, four folding engraved plates, & 193 finely engraved head-pieces. 2 p.l., lxii, 368 pp.; 2 p.l., 387 pp. Two vols. Large 4to, cont. mottled calf (a little scuffed), spines nicely gilt, red & green morocco lettering pieces on spines. Paris: H.L. Guerin & L.F. Delatour, 1755. \$3750.00

First edition of the author's first work on trees. Duhamel (1700-82), French polymath, made notable contributions in agronomy, chemistry, botany, and naval technology. His major interest and contribution to technology and society was in agriculture. Duhamel “adapted Tull's system to France based on his own wide reading in French agronomy and on original experiments.”—*D.S.B.*, IV, p. 224.

What is so remarkable about this edition are the 250 full-page woodcuts. "Of the 250 woodcut plates, 154 are printed from the blocks made by Giorgio Liberale and Wolfgang Meyerpeck for the large illustrations to Mattioli's herbal, first used in a Czech edition and a German version, *New Kreütterbuch*, both printed in Prague in 1562 and 1563, and thereafter in several other editions, most beautifully in the 1565 Latin one printed in Venice by Valgrisi . . . These designs by Liberale and Meyerpeck, delicately cut, are among the most outstanding examples of woodcut botanical illustration . . . The folding, engraved plates, showing charcoal burning, olive presses, soap boiling, and furnaces used to



make pitch, are also unsigned . . . The exquisite engraved vignettes, all but one with detailed dissections of flowers or fruits, were made by N. Ozanne (1728-1811) and form attractive beginnings of the plant descriptions."—Raphael, *An Oak Spring Sylva*, pp. 8-9.

Fine and handsome set. Blind-stamp of "Ovesholm" on half-titles. This was the castle in southern Sweden built in 1792-1804 by Carl Adam Wrangel (1748-1829), who filled the building with a fine library, paintings, and sculpture.

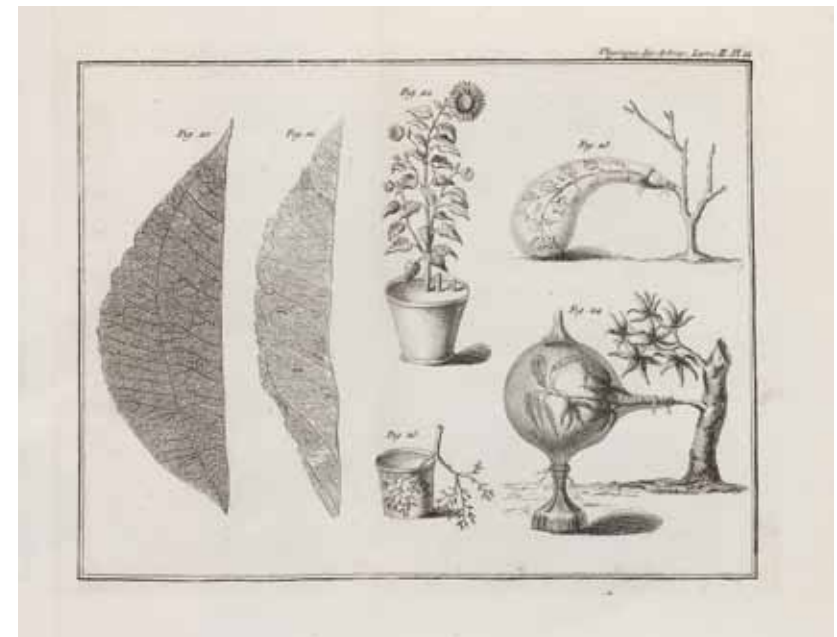
☞ Hunt, II, no. 552.

- 18 **DUHAMEL DU MONCEAU, HENRI LOUIS.** *La Physique des Arbres; où il est traité de l'Anatomie des Plantes et de l'Économie Végétale: pour servir d'Introduction au Traité complet des Bois & des Forests . . .* 50 folding engraved plates. 3 p.l., lxxviii, 307 pp.; 2 p.l., iii, [1], 432 pp. Two vols. Large 4to, cont. mottled calf, spines nicely gilt, red & black morocco lettering pieces on spines. Paris: H.L. Guerin & L.F. Delatour, 1758. \$3500.00

First edition. This is the second in Duhamel's series of books describing all



ITEMS 17-20



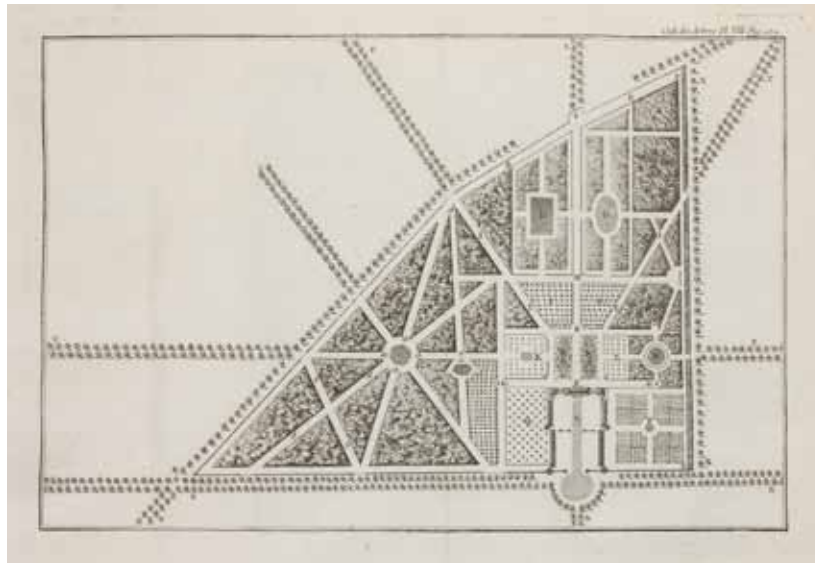
ITEM 18



aspects of trees and their cultivation. It is one of the most complete treatises on trees, the anatomy and structural properties of wood, and the management of tree stands of the 18th century. In his "Dissertation" (pp. xxix-lxv of Vol. I), Duhamel gives an interesting account of the then-current botanical systems including those of Morison, Ray, Tournefort, Magnol, and Linnaeus. The text of Vol. I is largely concerned with the anatomy of trees. Vol. II is devoted to the most up-to-date methods of tree propagation.

Fine and handsome set. Blindstamp of "Ovesholm" on half-titles.

☞ Pritzel 2468.



- 19 **DUHAMEL DU MONCEAU, HENRI LOUIS.** *Des Semis et Plantations des Arbres, et de leur Culture; ou Méthodes pour multiplier et élever les Arbres, les planter en Massifs & en Avenues; former les Forêts & les Bois; les entretenir, & rétablir ceux qui sont dégradés: faisant partie du Traité complet des Bois & des Forêts.* 17 folding engraved plates & engraved vignettes. 2 p.l., lxxx, 383, 27, 10 pp. Large 4to, cont. mottled calf, spine nicely gilt, red morocco lettering piece on spine. Paris: H.L. Guerin & L.F. Delatour, 1760. \$3250.00

First edition and an attractive copy, complete with the two *Additions*. One of Duhamel's main interests was the cultivation and use of timber; this is one

of his chief books on the subject. "The sections of the book discuss the soil, the climate, and the choice of trees; their propagation; nursery gardens; planting; forests; and maintenance and re-afforestation, with all instructions based firmly on the author's long experience of forestry."—Raphael, *An Oak Spring Sylva*, 34.

The attractive plates depict methods of grafting, agricultural implements, etc.

Fine and handsome copy. Blindstamp of "Ovesholm" on half-title.

☞ Stafleu & Cowan 1545.

- 20 **DUHAMEL DU MONCEAU, HENRI LOUIS.** *De l'Exploitation des Bois, ou Moyens de tirer un Parti avantageux des Taillis, Demi-Futaies et Hautes-Futaies, et d'en faire une juste Estimation: Avec la Description des Arts qui se pratiquent dans les Forêts.* 36 folding engraved plates. xvi, 430 pp.; [iii]-xiv, [431]-708 pp. Two vols. Large 4to, cont. mottled polished calf (bindings a bit warped, lower joint of Vol. II a little cracked at foot), spines gilt, red & black lettering pieces on spines. Paris: H.L. Guerin & L.F. Delatour, 1764.

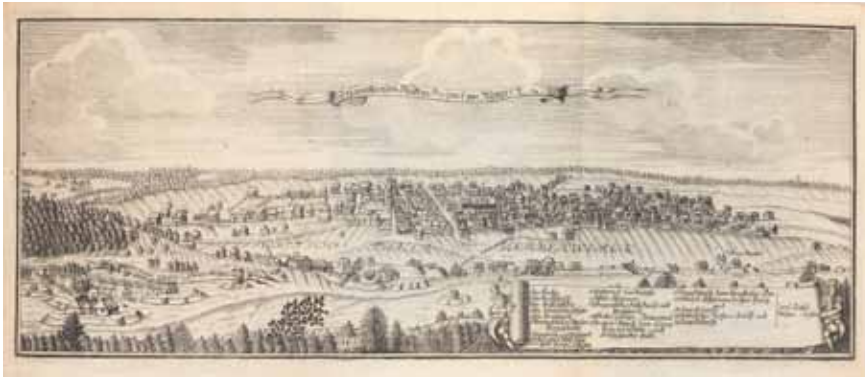
\$2750.00

First edition. This is the penultimate work in Duhamel's series of books describing all aspects of trees and their cultivation. Duhamel's tree-planting on both his own estates and his brother's provided the practical experience behind his books.

A fine and handsome set. Minor dampstaining to first leaves of Vol. I. Blindstamp of "Ovesholm" on half-titles. Half-title of Vol. II with name clipped away.







*The Mining City of Johanngeorgenstadt*

- 21 **ENGELSCHALL, JOHANN CHRISTIAN.** *Beschreibung Der Exulanten- und Bergstadt Johann Georgen Stadt, in vier Theilen vorstellende, I. Der Exulanten Zustand . . . II. Der Stadt Anbau, Wachsthum . . . III. Den dasigen Bergbau . . . IV. Das eingepfarrte Hammerwerck Wittichsthal, wie auch die Obere- und Untere-Jugel.* One folding engraved view of the city, one folding engraved map of the city and its environs, & one folding printed table. Title printed in red & black. 6 p.l., 304, [12] pp. Small 4to, cont. half-vellum & paste-paper boards (minor browning). Leipzig: Heirs of F. Lanckisch, 1723. \$3500.00

First edition of what appears to be the first description of the great mining city of Johanngeorgenstadt in the heart of Saxony's *Erzgebirgkreis*, on the border with the Czech Republic. This is an uncommon book; WorldCat locates no copy in North America and this is the first time I have owned a copy.

Mining began in Johanngeorgenstadt in the 17th century and by 1680 there were about 100 silver, iron, and tin mines in the town and surrounding area. It should be mentioned that in 1789, the chemist M.H. Klaproth first discovered uranium from the Georg Wagsfort mine in the city (see Weeks, *Discovery of the Elements*, pp. 266-67).

The book describes the city, its buildings, its phenomenal growth in the 17th and early 18th centuries (today it has lost 90% of its population), the mines and their production (very detailed), and metal works (again, very detailed).

The engraved plates depict the city, its buildings, and mine locations.

Fine copy. Stamp of the "I.F.H. Schlosser Bibl." (a private library) on verso of title. From the library of Carl Sahlin (1861-1943), industrialist and a writer on the science of mining and metallurgy.

*One of His Rarer Books*

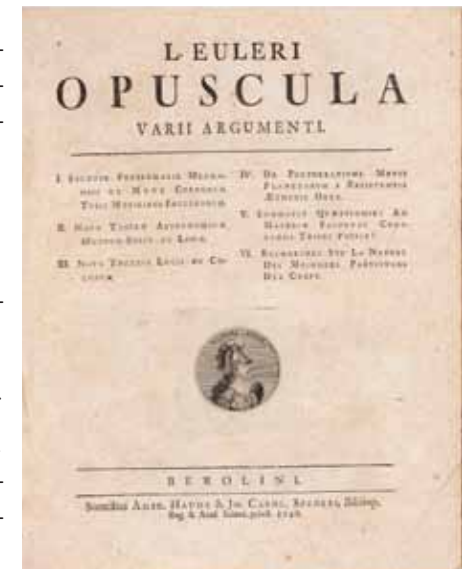
- 22 **EULER, LEONHARD.** *Opuscula Varii Argumenti.* Twelve folding engraved plates. 1 p.l., 300 pp.; 1 p.l., 166 pp.; 1 p.l., 165 pp. Three vols. in one. 4to, cont. sheep-backed mottled boards (minor rubbing, some foxing as is usual with this book). Berlin: A. Haude & J.C. Spener, 1746-50-51. \$7500.00

First edition of one of Euler's scarcer works; this collection contains separate monographs on astronomy, optics, magnetism, electricity, mathematics, and physics and includes several of Euler's most important and fundamental works.

Vol. I deals mostly with astronomy and optics. It is valuable for Euler's tables of the sun and moon and for his discussion of the problem of perturbations. Euler's studies in astronomy embraced a great variety of problems: determination of the orbits of comets and planets, calculation of the parallax of the sun, the physical nature of comets, celestial mechanics, etc. With regard to optics, Euler herein rejected the dominant corpuscular theory of light and constructed his own theory in which he attributed the cause of light to peculiar oscillations of ether.

Vol. II is concerned with physics and mathematics. Topics examined here are the propagation of sound and light, analysis, the theory of differential equations, and ellipses.

In Vol. III, "Euler adopts the Cartesian doctrine of pores and magnetic

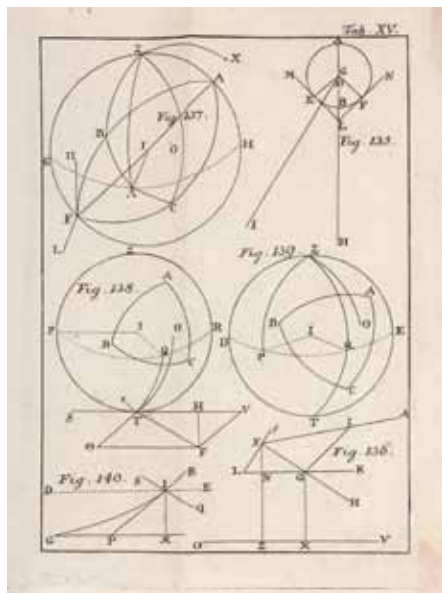


particles, magnetic matter is more subtle than the ether itself and is propagated through a magnet in one direction only, p. 10; declination and dip explained, p. 30."—Wheeler Gift Cat. 366.

A very good set. Engraved bookplate of Canterzani.

☞ *D.S.B.*, IV, pp. 467-84. Houzeau & Lancaster 3482. Sotheran, Supp., 2242—"Rare."

- 23 **EULER, LEONHARD.** *Theoria Motus Corporum Solidorum seu Rigidorum ex Primis Nostrae Cognitionis Principiis Stabilita et ad Omnes Motus, qui in huiusmodi Corpora cadere possunt, accommodata.* Fifteen engraved plates (on 8 sheets). 16 p.l., 520 pp. 4to, cont. sheep-backed paste-paper boards (head of spine a bit chipped), spine gilt, contrasting leather lettering piece on spine. Rostock & Greifswald: A.F. Röse, 1765. \$9500.00



First edition. "The *Theoria motus corporum solidorum* ... is related to the *Mechanica*. In the introduction to this work, Euler gave a new exposition of punctual mechanics and followed Maclaurin's example (1742) in projecting the forces onto the axes of a fixed orthogonal rectilinear system. Establishing that the instantaneous motion of a solid body might be regarded as composed of rectilinear translation and instant rotation, Euler devoted special attention to the study of rotatory motion ... Euler thus laid the mathematical foundation of the

numerous studies on variational principles of mechanics and physics which are still being carried out."—*D.S.B.*, IV, p. 480.

Nice copy preserved in a very strong morocco-backed box. Early signature of N.P. Morville (?) on blank portion of title. Ex Bibliotheca Mechanica.

☞ Roberts & Trent, *Bibliotheca Mechanica*, pp. 105-06.

*His Third & Final Contribution to Analytical Mathematics; An Uncut Set*

- 24 **EULER, LEONHARD.** *Institutionum Calculi Integralis.* One folding engraved plate. 2 p.l., 542 pp.; 2 p.l., 526, [8] pp.; 4 p.l., 639 pp. Three vols. in two. Large 4to, cont. speckled boards (neatly rebacked & recornered in antique mottled calf by Aquarius), entirely uncut, spines gilt. St. Petersburg: Impensis Academia Imperialis Scientiarum, 1768-69-70. \$11,500.00

First edition of the third and final classic contribution by Euler to analytical mathematics. "This series of works was completed by the publication in three volumes in 1768 to 1770 of the *Institutiones Calculi Integralis*, in which the results of several of Euler's earlier memoirs on the same subject and on differential equations are included. This, like the similar treatise on the differential calculus, summed up what was then known on the subject, but many of the theorems were recast and the proofs improved. The Beta and Gamma functions were invented by Euler and are discussed here ..."—Ball, *A Short Account of the History of Mathematics*, p. 396.



This work "exhibits Euler's numerous discoveries in the theory of both ordinary and partial differential equations, which were especially useful in mechanics."—*D.S.B.*, IV, p. 478.

The second edition of this work appeared posthumously between 1792 and 1794 with a fourth volume of unpublished material. This fourth volume is sometimes mistakenly described as belonging to the first edition.

Some unimportant worming to first leaves of Vol. I but a fine and large set. C.W. Turner (University of Keele) bookplate.



*A Fine Thick Paper Set in Contemporary Green Straight-Grain Morocco*

- 25 **EVELYN, JOHN.** *Silva: or, a Discourse of Forest-Trees, and the Propagation of Timber in his Majesty's Dominions: as it was delivered in the Royal Society on the 15th Day of October, 1662 . . . together with an Historical Account of the Sacredness and Use of Standing Groves.* With Notes by A. Hunter, M.D. F.R.S. *A New Edition. To which is added the Terra: A Philosophical Discourse of Earth.* Finely engraved frontis. port. of Evelyn by Bartolozzi, 42 engraved plates, & three folding printed tables. 23 p.l., 311, [9] pp.; 1 p.l., 343, [9], 74, [4], pp. Two vols. Large 4to, cont. straight-grained green morocco, covers with a Greek key gilt border round sides, flat spines finely gilt, a.e.g. York: A. Ward for J. Dodsley et al., 1786. \$3500.00

A wonderful large and thick paper set in contemporary straight-grained green morocco of the best 18th-century edition of this highly influential book, the first important book published in England on forest trees; "it contains an enormous amount of information concerning the cultivation of the various kinds of forest trees, and the uses of their timber, together with facts and anecdotes obtained from books, both classical and contemporary. The work was a success from the start. Its publication gave a great stimulus to planting in Britain . . . No other work on arboriculture exerted a greater influence on forestry in this country than Evelyn's *Silva* . . .

"Hunter's edition of *Silva* [is] a handsome quarto volume with extensive notes to bring it up to date and illustrated with a number of whole-page engravings. The numerous whole-page illustrations depicting the foliage, flower, and fruit of the trees described are drawn and engraved by John Miller, otherwise Johann Sebastian Mueller, the noted eighteenth-century botanical draughtsman and engraver. The excellence of these figures resulted in their being used to illustrate later works on silviculture, even up to the present day."—Henrey, I, pp. 107-11.

This edition is the first to contain Evelyn's *Terra* (originally published as *A Philosophical Discourse of Earth*, 1676). It is Evelyn's notable contribution to horticulture.

Hunter (1729-1809), a physician at York, issued this edition to draw attention to the vast quantities of timber being felled for the Navy and for civilian needs.

Fine and handsome thick paper copy. This edition of *Silva* was typically bound in one volume; thick paper copies are easily identifiable because they were issued in two volumes, each with its own title-page. Occasional minor foxing. Armorial bookplate of H.B. Pyne.

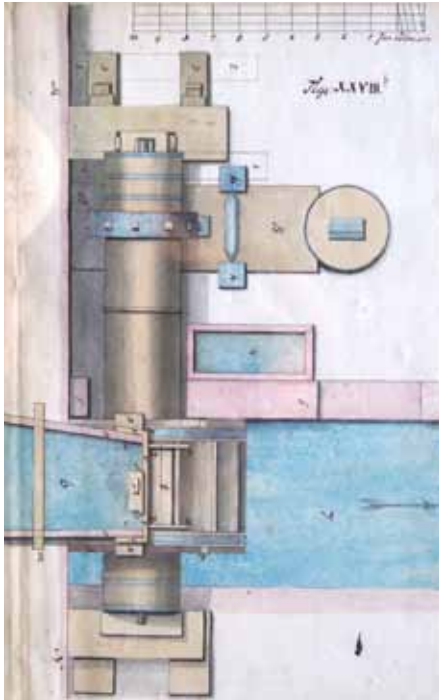
✂ Henrey, *Bibliography*, 138. Raphael, *An Oak Spring Silva*, 33—"Hunter's [1786] version of *Silva* added extensive notes, and virtually doubled the size of Evelyn's text."

#### *A "Technological Journey" to Russia*

- 26 **EVERSMANN, FRIEDRICH AUGUST ALEXANDER.** Autograph manuscript on paper entitled "Reise vom Niederrhein nach Siberien 1. Band" and "Reise vom Rhein zum Tobol 2. Theil" ("Journey from the Lower Rhine Region to Siberia" and "Journey from the Rhine to Tobol"). Written in German, black & brown ink on different papers, with additional notes and emendations by Eversmann. Two vols. of text in large 4to (350 x 240 mm.) & one volume of illustrations in oblong folio (320 x 520) with approximately 150 fine hand-colored drawings. [Zlatoust, Russia and other places: ca. 1811-13]. \$125,000.00

A remarkable discovery: the unpublished manuscript by Friedrich August Alexander Eversmann (1759-1837), the famous Prussian technologist, describing his journey from Germany to Russia in 1810 during which he studied the na-





scent industries (mining and iron, steel, copper, glass production, metal working, textiles, chemicals, paper, etc.) of both countries. Eversmann describes this journal as a “technological journey” and provides extensive details and accounts of the mining and iron industries at the beginning of the Industrial Revolution. The manuscript was obviously intended to be published, which was never realized. Eversmann has added a few notes and additions to the manuscript at a slightly later date. Essentially unstudied, the manuscript has remained in private ownership, with access restricted to a few academics. The greater part of the manuscript has been

recently transcribed (the transcription accompanies the manuscript). In fine condition.

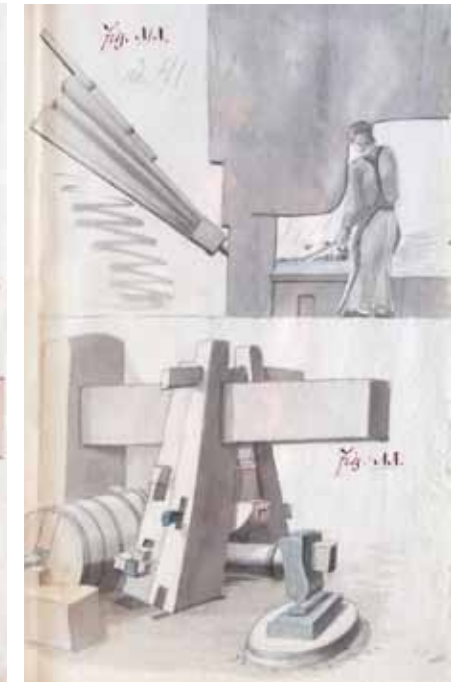
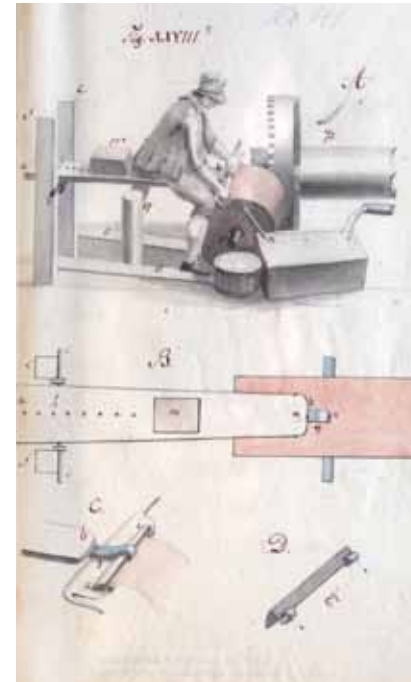
**THE AUTHOR:** Eversmann was an important Prussian government adviser, technologist, and specialist in mining and metallurgy. As an economist, he was active in the promotion of mining and trade, especially in Westphalia and Silesia. He was the protégé of the influential Prussian minister and economist Friedrich Anton von Heynitz (1725-1802), the great reformer of Prussian industry and mining and the founder of the oldest university of mining and metallurgy, the Bergakademie at Freiberg. Eversmann accompanied von Heynitz on his inspection trips to manufacturers, factories, and mining works in various regions of Prussia and gained first-hand knowledge of technical and mechanical problems. He also developed his ability to draw and learned how to capture the results of his observations in sketches and drawings (Breil, 13). In 1781, Eversmann was appointed Bergkommissar.

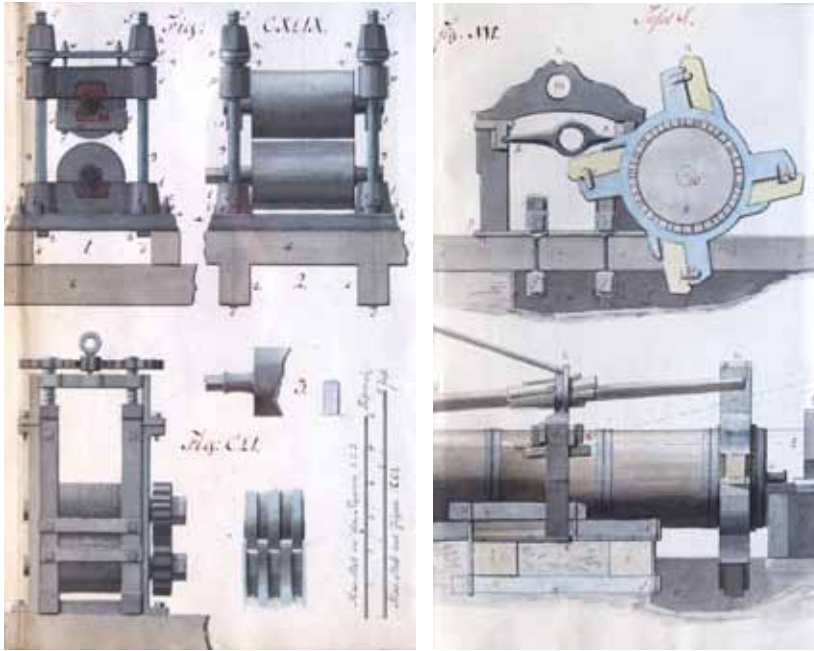
At the recommendation of von Heynitz, Eversmann traveled in 1783-84 through the industrial areas of Britain (London, Cornwall, Anglesea, Dublin,

Donaghadee, Liverpool, York, Northumberland, Edinburgh, Glasgow, Newcastle, Durham, Birmingham, Derby) to study the mining industry, iron and steel factories, and, especially, the newly invented steam engine and its uses in mining. Eversmann was later accused by Matthew Boulton of industrial spying (for which he was certainly guilty!).

Following his return, he was sent to Silesia to improve the iron industry there following the English models. In 1786 Eversmann was responsible for obtaining a steam engine from England built by Homfrey for the coal mine in Tarnowitz, Silesia. This machine, based on the design of James Watt, was the first steam engine in Prussia.

Life changed for Eversmann during the Napoleonic wars in Germany: in 1809, he was dismissed from his posts as politically unreliable. He emigrated to Russia, where he first directed mining and metallurgical companies in the Ural region and in 1812 oversaw the design and construction of a gun factory for the Tsar. In 1818 he retired and in 1819 returned to Prussia. Eversmann wrote several noteworthy books on technology and frequently published articles in German mining journals.





EVERSMANN IN RUSSIA: As mentioned above, Eversmann was dismissed from his posts in Prussia and sought his fortune in Russia, arriving there in 1810. A German entrepreneur, Hans Peter Andreas Knauf, known in Russia as Andrey Andreevich Knauf (1765-1835), had offered Eversmann the position of a director of his industrial enterprises in the Ural region. Knauf had played a significant role in the development of the mining and iron foundry industries in the Urals, introducing new technologies, including the steam engine.

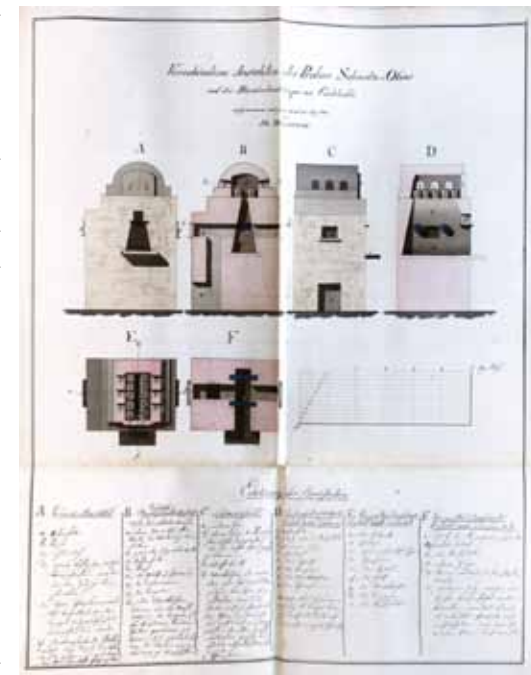
En route to Russia, Eversmann made a scientific tour visiting the mining area of the Harz region which is described in the first manuscript volume: technical companies and mining methods are described in the Oberharz region, Lauterberg, Clausthal-Zellerfeld, Oker (Goslar), and many other mining towns. The greater part of Vol. I of the manuscript contains observations which Eversmann made while visiting metalwork companies in Iserlohn and Altena, silver mines and vitriol companies in Siegen and Marburg, and glass factories in Schornborn and Grünplan. He describes the mining and foundry industries and the steel industry in Salzgitter, Braunschweig and Goslar; the brass ware plants in Uslar; and the copper producing companies in Altenau. Very detailed descriptions of the products and their prices are given, along

with details of the production process often in comparison to other companies and countries. The machines and blast furnaces are described in detail and their advantages over machines in other regions or countries are also outlined. All the major companies working with metal, steel or copper are visited and described on his route.

There are also 92 leaves loosely inserted, all in the hand of Eversmann, copying texts from journals or scientists like the German mineralogist Johann Friedrich Ludwig Hausmann (1782-1859) who was then general inspector of mines for Westphalia and professor of technology and mining at Göttingen University. Three essays on roasting ores are by him and two on similar mining procedures are by Augustin Gottfried Ludwig Lentin (1764-1823) who was a lecturer at the University of Göttingen and subsequently inspector of saltworks. He is known to have made experiments on the roasting and smelting of ores at Rammelsberg in a large furnace, which is also described.

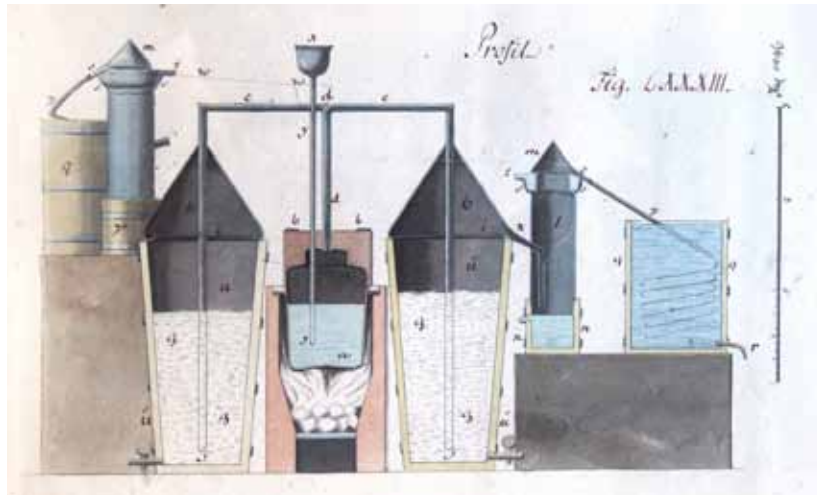
Traveling on to Halle & Berlin, where he visited steel companies, porcelain and brass ware manufacturers, Eversmann describes the trades and architecture of the capital. Proceeding on to Neustadt-Eberswalde, he visited brass ware companies and brick factories. He then travels to Danzig, Königsberg, and from page 300 describes the agriculture and factories in Russia, including steel and copper manufacturers in Riga, other companies and factories in Dorpat, and then finally St. Petersburg and Moscow.

In the late autumn of 1810 he reached Zlatoust, the famous ironworks town founded in 1754. Eversmann soon learned that Knauf had gone bankrupt and the state had taken over the com-



pany. Eversmann was commissioned by the Russian government to visit the state's factories in the Ural region to explore the location of a proposed sword factory. In 1813 he became employed by the Russian state and supervised the design and construction of the famous "factory for cold weapons" (the above-mentioned gun factory) in Zlatoust. In 1813 and 1814, he recruited specialists in Wuppertal and Solingen and brought 115 workmen with him to Russia for the planned factory, which began operations under his direction in 1816.

The second volume of the manuscript is a vividly-detailed description of the earliest stages of Russia's industrialization, written by one deeply involved in that transformation. The first 44 pages describe his trip from Moscow to Zlatoust. In addition to the factories in and around Zlatoust, a number of others are described, such as in Troitsk, in and around Ekaterinburg, Ishevsk, the vicinity of St. Petersburg, etc. Eversmann describes in the journal chiefly the iron and copper manufactures, including the blast furnaces, wind furnaces, the cupola furnace, the raw steel smithy, the tin plate manufacture, special iron fixtures, cannon and ammunition foundries, steam engines, etc. He also provides many observations about all aspects of Russian life. He describes the city of Moscow and a factory for the production of vitriol and ammonia, as well as a textile house, a gun-powder firm, and a paper factory (adding a list of the varieties and prices of the paper). Outside of Moscow, he visited a hat producing company, inspected and described the blast furnaces, and recommended the "Windofen-Betrieb," a special open furnace.



Eversmann also gives descriptions of the other stages of his journey to Zlatoust. Eversmann describes the steel making factory at Simsk in detail, the wire factory in Wiksunsk, the scythe fabricator in Bataschow, a lead company in Wixa, and from pages 45 on, of course, the industrial activities at Zlatoust (the "Schwarzblech-Fabrikation" for the use of metal roofers; fabrication of iron rail, a canon foundry, gold mining, other sorts of mining and refining, rifle fabrication, etc.). He also describes the geology of Zlatoust in a very detailed way, and the organization of the iron plant and all its different companies and production spaces, many kinds of furnaces and metallurgical machinery (described are "Hohen-Offen" (furnace), "Kupfer-Ofen" (copper furnace), "Frisch-Feuer," "Walzen für Bleche und Bändern," "Kanonenbohrmühle," "Eisen-Drehsehl-Anstalt," and "Stahl-Reckhammer" (sledges). He also describes his travels north to Perm and south to Orenburg to study the steel industry on behalf of the tsar.

The main power source is water: from a dam with a sluice, which has three openings, the water is forced onto the wheels at high pressure. For a variety of water wheels, he gives details of construction and uses of the power (illustrated). He also describes the Ural mountains, especially between Polikowsky and Ekaterinburg. Eversmann offers much information about what the workers eat, drink, how they store things, their working day, and how they (mis)spend their leisure time.

Zlatoust was mainly an iron manufacturing town, but copper was beginning to be produced as well. In a copper pit, a steam engine, which a Russian had designed, was used to pump the water. Zlatoust consisted of the following production facilities: two blast furnaces, two reverberation furnaces, four copper furnaces of various designs, various steel furnaces, a drill mill, a steel fire engine, a Breithammer, vices, winches, tongs, nails, iron crates, utensils, a sawmill, and a grinding mill. Eversmann describes the individual steps of production methods in great detail and has provided drawings.

This journal contains an abundance of observations and experiences, especially in conjunction with the finely drawn illustrations, and is an invaluable source for the history of industry, especially Russia. The volume of drawings provides descriptions of the country and its inhabitants as well as the situation of foreign specialists and reflections on the development of industry in Russia. The drawings range from simple drawings of small format (from approx. 130 x 210 mm.) to finely executed pencil drawings with wash watercolor, mostly of





technical procedures and details. Particularly noteworthy are some maps, such a map of the Urals labelled in Russian and German “in relation to the Sawoden of the Lord Andreas Knauff” (approx. 640 x 810 mm.), a map of the “Uralische Sawoden” (the steel factories of the Sawoden, about 1080 x 920 mm.). There is as well a Russian map of the city of Troizk with a map of the surrounding area.

Eversmann obviously intended to publish a book about his experiences in Russia and the industrial areas he had visited. The present manuscript offered here has never been edited or published and has always been in private hands, restricted to a very few academic researchers (and they had limited access as well).

PHYSICAL DESCRIPTION: Vol. I: “Reise vom Niederrhein nach Siberien 1. Band” (title on spine). 239 leaves (erratically numbered) leaves and 92 leaves, loosely inserted, with 12 separately titled essays by Hausmann, Lentin and others, and 71 partly hand-colored drawings (apparently a few drawings removed). Large 4to (345 x 220 mm. & some leaves smaller), cont. calf (spine restored).

Vol. II: “Reise vom Rhein zum Tobol 2. Theil” (title on spine). 340 leaves & 16 leaves loosely inserted. Large 4to (350 x 230 mm. & some leaves smaller), cont. half-calf (spine restored).

Atlas: this contains the drawings to Vol. II. There are 89 fine drawings & maps, etc. ranging from 130 x 210 mm. to 1090 x 750 mm. Large oblong folio (310 x 480 mm.), cont. half-calf (some repairs to binding).

PROVENANCE: Rudolf Wilhelm Eversmann (Freifrau von Eyb; 1977).

LITERATURE: H. Breil, *Friedrich August Eversmann und die industriell-technologische Entwicklung vornehmlich in Preußen von 1780 bis zum Ausgang der napoleonischen Ära. Dissertation . . .* (Hamburg: 1977), pp. 424-38. *N.D.B.*, IV, pp. 692ff. (Eversmann). *N.D.B.*, XII, pp. 161 (Knauff). Andreas Keller in: *Quaestio Rossica* (2013), pp. 144-59 und (2014), 206-18 (on Knauff).

### *The General Properties of the Lemniscate Discovered*

- 27 **FAGNANO, GIULIO CARLO, CONTE DI, MARCHESE DE'TOSCHI.** *Produzioni Matematiche.* Engraved vignettes on titles depicting the lemniscate & 16 folding engraved plates. xxiv, 528 pp.; xii, 536 pp. Two vols. Large 4to, mid-19th cent. half-vellum & marbled boards (occasional minor stains), entirely uncut. Pesaro: Stamperia Gavelliana, 1750. \$9500.00

First edition of a rare work, containing the important collected writings of Fagnano (1682-1766), Italian nobleman and mathematician. Many of the texts printed here appear for the first time. Fagnano's advances in algebra and geometry were very far-reaching and his work on the rectification of the lemniscate made him, according to Legendre, the true founder of the theory of elliptic functions. This breakthrough was of great importance and was employed in the recent proof of Fermat's last theorem.

“In algebra Fagnano suggested new methods for the solution of equations of the second, third and fourth degrees. He also organized in a rational manner the knowledge that scientists had of imaginary numbers, establishing for them a special algorithm that was far better than Bombelli's primitive one . . .

“In geometry Fagnano formulated a general theory of geometric proportions that is more noteworthy than the countless writings, published previously, that were intended to illustrate book V of Euclid's *Elements*. Much more important, however, is his work on the triangle, for which he may well be considered the founder of the geometry of the triangle . . .

“The most important results achieved by Fagnano, however, were in analytical geometry and in integral calculus.”—*D.S.B.*, IV, pp. 515-16.

“In his study of the rectification of the lemniscate, Fagnano introduced ingenious analytic transformations that laid the foundation for the theory of elliptic integrals and his work was to lead to elliptic functions. Fagnano collected many of his published works, and a few unpublished ones, and produced the two volume treatise *Produzioni matematiche* in 1750. In 1751 Euler was asked to examine *Produzioni matematiche* and he found in this treatise relations between special types of elliptic integrals, that express the length of an arc of a lem-





niscate, which were quite unexpected to him. Generalising Fagnano's results, Euler went on to create a general theory of these integrals, in particular giving the famous addition formula for elliptic integrals. Fagnano had proved the duplication formula, a particular case of the addition formula, for the integrals...

"In fact Fagnano had proved remarkable properties of the lemniscate, including the fact that its arcs may be divided in equal parts using a ruler and compass construction..."

"Fagnano made many other major contributions but his mathematical work was not without controversy. He was involved in priority disputes with Nicolaus (I) Bernoulli and, not surprisingly, the big dispute of the day which was between the supporters of Newton and those of Leibniz." -*The MacTutor History of Mathematics Archive* (on-line).

### The Famous Comet of 1618

- 28 **FHEYENS, THOMAS & FROIDMONT, LIBERT.** *De Cometa Anni MD-CXVIII. Dissertationes . . . in quibus tum istius motus, tum aliorum omnium essentia, effectus, & praesagiendi facultas declarantur. Eiusdem Thomase Fieni Epistolica quaestio. An verum fit, Coelum moveri, & Terram quiescere.* 153, [1], 1 leaf. Small 8vo, attractive antique calf-backed paste-paper boards (some light browning as is usual with this book), spine gilt, red morocco lettering piece on spine. Antwerp: W. à Tongris, 1619. \$2500.00

First edition of this rare work containing two dissertations on the famous comet of 1618-19 which attracted so much attention from the leading astronomers of the time, including Galileo and Scheiner. Feyens (1567-1631), professor of medicine at the University of Louvain, was physician to Archduke Albert of Austria. Feyens had studied at the University of Bologna in 1590-93 where he witnessed Tagliacozzi's operations.

Froidmont (or Fromond) (1587-1653), a professor of philosophy and theology at Louvain, engaged in a series of astronomical controversies, including an attack on Lansberge's *Commentationes* (1630). He objected to the theory of a moving earth and attempted to disprove Galileo on scientific and philosophical grounds.

Both treatises are careful descriptions of the comet, with accounts of its nature, origins, appearance, size, and path. Referring to Tycho Brahe's observations, Feyens stresses the singularity of comets amongst astronomical phenom-

ena: they are definitely not stars and have to be dealt with in an appropriate way. An impressive amount of data on the sighting of the comet from distant sites and from contemporary astronomical publications are gathered here.

A very good copy of a rare book.

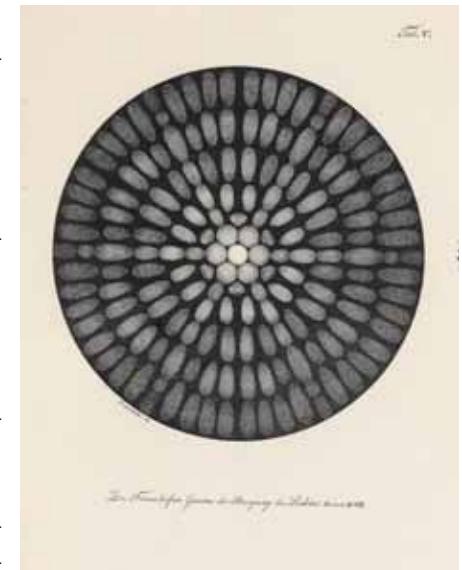
☞ Carli & Favaro 77. Lalande, p. 174. Poggendorff, I, 746 & 811-12.

### The First Quantitative Study of Diffraction Phenomena

- 29 **FRAUNHOFER, JOSEPH.** "Neue Modifikation des Lichtes durch gegenseitige Einwirkung und Beugung der Strahlen, und Gesetze derselben" in *Denkschriften der Königlichen Akademie der Wissenschaften zu München für die Jahre 1821 und 1822*, Vol. VIII, pp. 1-76. [For the Fraunhofer article]: two engraved plates (two double-page & one folding) & four lithographed plates (one folding). [12 plates for the entire volume]. Large thick 4to, orig. orange boards, printed paper label on spine, uncut. [Munich: 1821]. \$3500.00

The entire journal volume, with the first appearance of Fraunhofer's paper "Neue Modifikation des Lichtes . . .," the first quantitative study of diffraction phenomena.

"In 1821 and 1823, shortly after Fresnel's studies of interference phenomena had received general attention, Fraunhofer published two papers in which he observed and analyzed certain diffraction phenomena and interpreted them in terms of a wave theory of light. In the 1821 paper he discussed his examination of the spectra resulting from light diffracted through a single narrow slit and quantitatively related the width of the slit to the angles of dispersion of the different orders of spectra. Extending his ob-





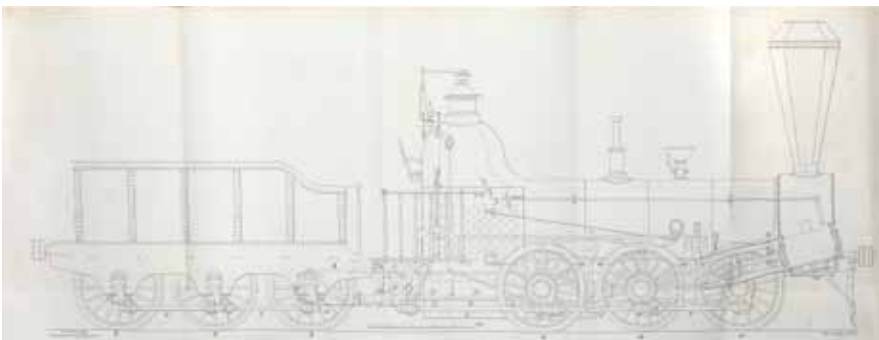
servations to diffraction resulting from a large number of slits, he constructed a grating with 260 parallel wires . . .

“Although David Rittenhouse and Thomas Young had previously noted some effects of crude diffraction gratings, Fraunhofer made the first quantitative study of the phenomena. The presence of the solar dark lines enabled him to note that the dispersion of the spectra was greater with his grating than with his prism. Hence, he examined the relationship between dispersion and the separation of wires in the grating. Utilizing the dark lines as bench marks in the spectrum for his dispersion determinations, he concluded that the dispersion was inversely related to the distance between successive slits in the grating. From the same study Fraunhofer was able to determine the wavelengths of specific colors of light.”—*D.S.B.*, V, p. 143.

A very fine and fresh copy, seemingly printed on thick paper, and in as-new condition. From the Wittelsbach library of the dukes and kings of Bavaria.

### The “Bavaria” Locomotive

- 30 **FREISAUFF VON NEUDEGG, FELIX.** *Das fortschreitende Bewegungsprincip für Dampf- und Eisenbahn-Wagen, auf ebenen und geneigten Bahnen, mittelst dessen Anwendung die Semmeringer-Preislocomotive “Bavaria” den von der k.k. österreichischen Regierung in Jahr 1850 ausgeschriebenen, ersten Preis, von 20.000 Stück Dukaten, erhielt. Nebst Andeutungen, die ausserordentlichen Vortheile einer militärischen Organisation des Baues, Betriebes und der Verwaltung der Land- und Wasser-Communicationen eines Landes überhaupt, und der Eisenbahnen insbesondere, betreffend, und einem Anhang, Aufsätze über Torfgewinnung durch Aktienvereine und Eisenbahngesellschaften, Tor-*



*fheizung überhaupt, und für Locomotiven insbesondere; und über Torfbau im Allgemeinen, dann die Correspondenz des Verfassers mit dem Constructeur der “Bavaria” enthaltend.* Two large folding lithographed plates. viii, 123, [1] pp. Large 4to, orig. red morocco, sides stamped in a large blind arabesque & a broad gilt ruled border, a.e.g. Vienna: J.B. Wallishausser, 1852. \$2250.00

First edition of this very rare work; OCLC locates one copy in the U.S. A description of the prize-winning locomotive “Bavaria,” designed by Joseph Hall, an engineer from Newcastle, and manufactured by Maffei, the greatest builder of locomotives in Bavaria in the 19th century. The two large plates depict the locomotive in great detail. The locomotive won the prize offered by the Austrian government for the engine providing the most satisfactory performance on the mountainous Semmering line between Gloggnitz and Murz-zuschlag.

The text provides much technical information regarding the locomotive.

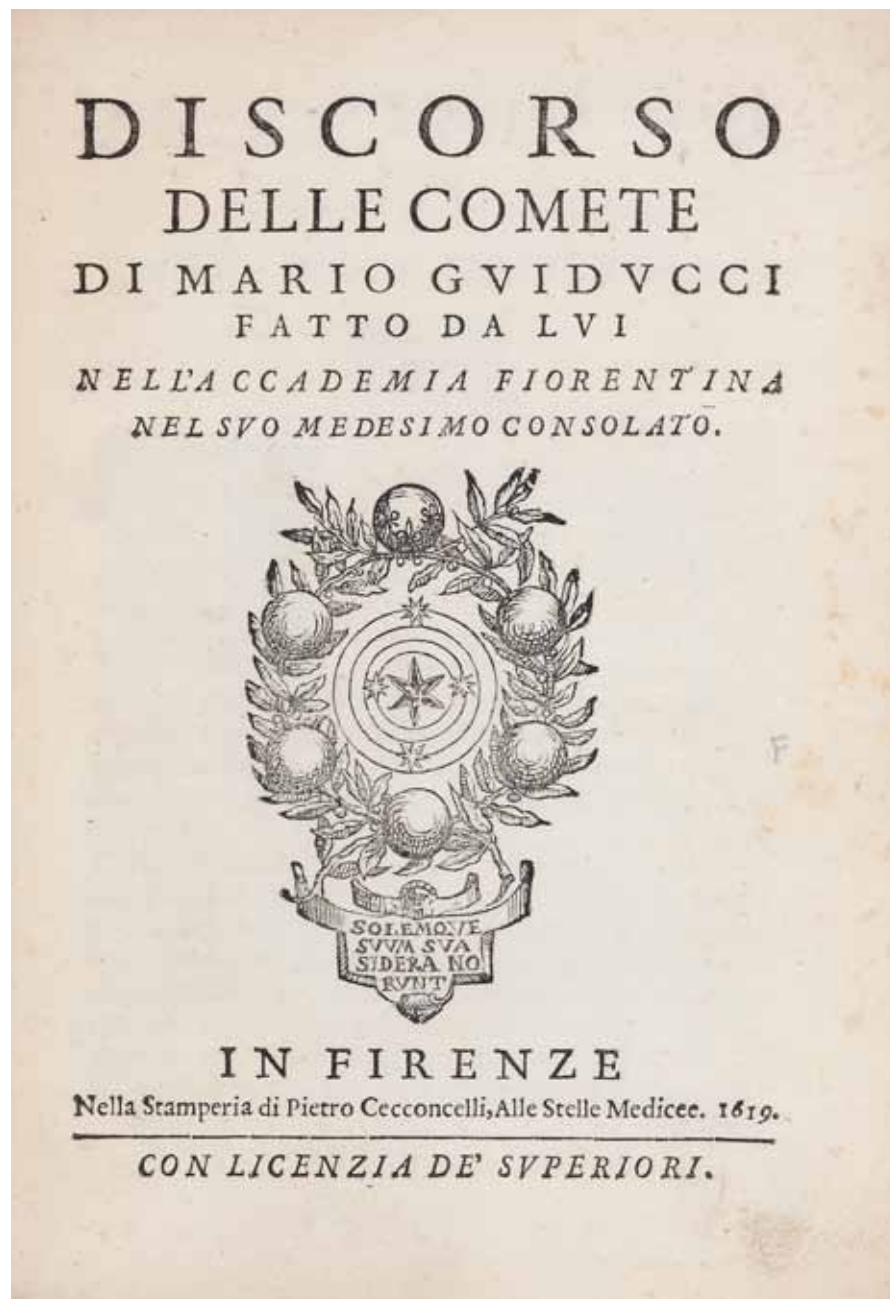
“Aus diesem interessanten Werke erhellet, dass das bei der ‘Bavaria’ angewendete Princip eine Erfindung Freisauffs ist. Dem Werk sind die ganze Correspondenz mit dem Erbauer der ‘Bavaria’ und in einem Anhang Aufsätze über Torfgewinnung, Torfheizung im Allgemeinen und für Locomotive u.d.m. beigefügt.”—Metzeltin 1410.

A lovely copy. The binding is quite elaborate and must have been produced for presentation purposes.

### Galileo’s First Reply in his Controversy with the Jesuits over the Comets of 1618

- 31 **[GALILEI, GALILEO].** *Discorso delle Comete di Mario Guiducci fatto da lui nell’Accademia Fiorentina nel suo medesimo consolato.* Woodcut device of the Medicean stars on title & two woodcut diagrams in the text. 2 p.l., 54 pp., one blank leaf. Small 4to, late 19th-cent. green diced morocco, arms of the House of Visconti in gilt within a richly decorated border, spine richly gilt, a.e.g. Florence: P. Cecconcelli, 1619. \$40,000.00

First edition and a very fine copy. Although published under the name of his pupil and assistant Mario Guiducci (1585-1646), the present book is actually the work of Galileo (the autograph manuscript survives). It is a concealed reply to the attack of the Jesuit Orazio Grassi’s *De Tribus Cometis*, published earlier



in the same year, and marks the beginning of Galileo's long controversy with Scheiner and the other Jesuit astronomers over the comet of 1618. The dispute continued for several years and resulted in Galileo's scientific manifesto *Il Saggiatore* (1623) which contains his most important ideas on the philosophy of scientific investigation.

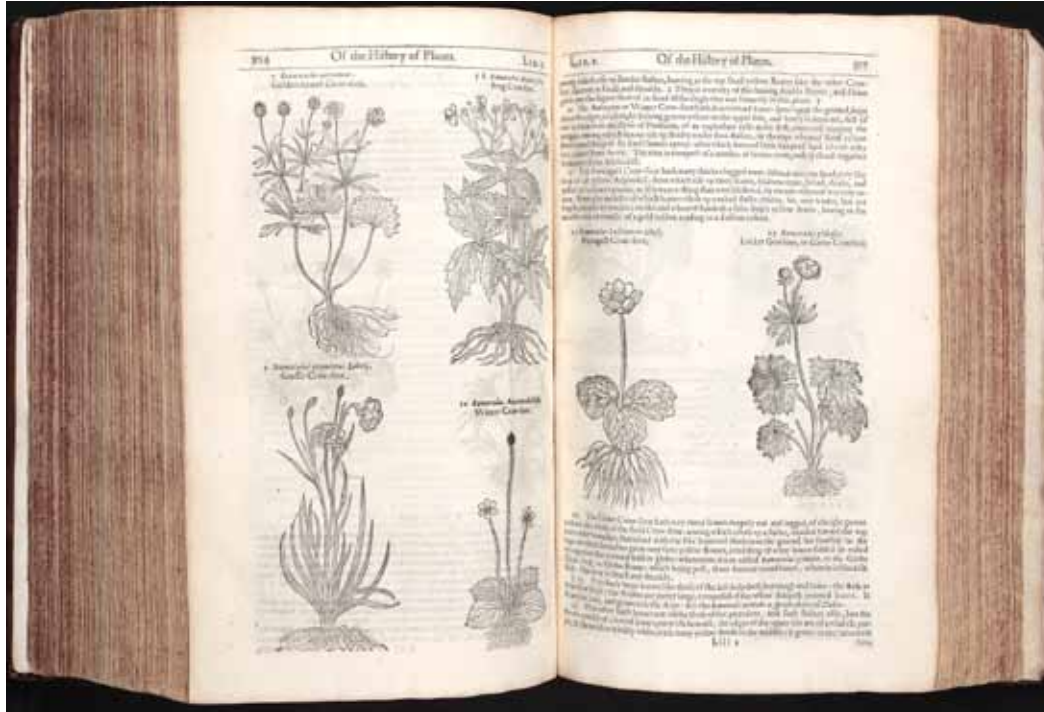
In addition to a description of the comets of 1618, Galileo discusses the satellites of Jupiter, the uses of the telescope, fixed stars not visible to the naked eye, etc.

✎ Carli & Favaro 80. Cinti 63.

*A Fine Copy of "Gerard Emaculatus" "A Valuable Contribution to Botany & to the Art of the Printed Book"*

- 32 **GERARD (OR GERARDE), JOHN.** *The Herball or Generall Historie of Plantes . . .* Very much Enlarged and Amended by Thomas Johnson. Finely engraved title, woodcut head- & tailpieces, & 2776 woodcuts in the text. 20 p.l. (incl. initial blank & engraved title), 1630, [48] pp., one blank leaf. Thick folio (350 x 210 mm.), cont. calf (well-rebacked by Trevor or Lloyd with the original spine laid-down, a few gouges carefully filled-





in, corners bruised), panelled in gilt & blind, large gilt device in center of each cover, with initials “W H” on either side. London: A. Islip for J. Norton & R. Whitakers, 1633. \$17,500.00

First edition of Thomas Johnson’s expanded and corrected version of Gerard’s *Herball* (1st ed.: 1597), the most famous of all English herbals. “Many errors made by Gerard in his text and in the identification of the illustrations were corrected by the apothecary and botanist Thomas Johnson (d. 1644), of London, who prepared an expanded edition of *The Herball* that first appeared in 1633 . . . Johnson’s painstaking revision of Gerard’s herbal constituted in itself a valuable contribution to botany and to the art of the printed book. He added the descriptions of many new plants with illustrations, some of them borrowed from the botanical texts published by Christophe Plantin in Antwerp, in this way bringing the total number of engravings to 2,776. Any new passages were carefully marked with special symbols so that the reader could distinguish them from the original text . . .





“The title-page of *The Herball* is particularly attractive. It was executed by John Payne (1607-1647), one of the most talented engravers of the period . . . In the upper part of Payne’s work we see a luxuriant garden with the goddesses Ceres and Pomona on either side. Below them are the fathers of botany, Theophrastus and Dioscorides, while in the lower section two imposing vases filled with flowers surround a portrait of Gerard, who is shown facing in the opposite direction to that of the portrait by Rogers. The vase on the left is crowned with a bunch of bananas as a tribute to Johnson . . .

“One of the most significant additions made by Johnson was his chapter on the ‘Maracot’ or ‘Grandilla’ as it was called at the time (actually the passion-flower). He includes a full page illustration (p. 1592) and refers the reader to Monardes for more information on this exotic species . . . In the long preface Johnson traces the history of the botanical sciences, analyzing the contributions of celebrated figures from the mythical King Solomon to William Turner . . . He closes with some critical remarks on John Gerard and the origins of his herbal.”—Tomasi & Willis, *An Oak Spring Herbaria*, p. 84.

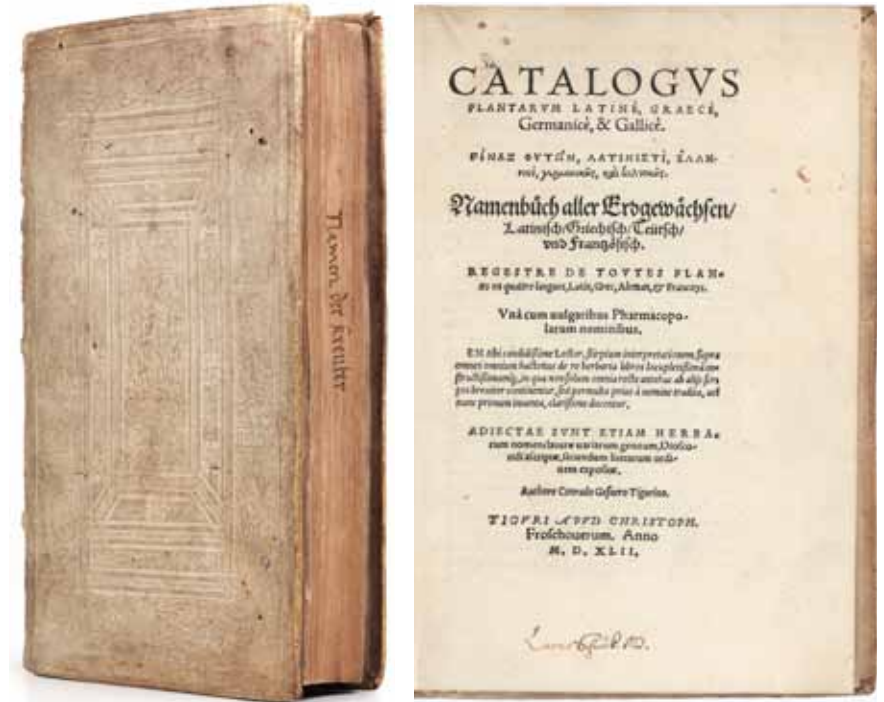
An uncommonly nice and crisp copy. Bookplates of John Charles Biggam, Viscount Mersey, Bignor Park and Oliver Howard.

☞ Garrison-Morton 1820—(1st ed. of 1597)—“The most important edition of his book is the second, published by T. Johnson in 1633.” Henrey, I, pp. 48-54—“Johnson produced an edition that was noteworthy for its many corrections, improvements, and additions” & no. 155. Hunt 223.

### *The First Alphabetically Arranged Catalogue of Plant Names*

- 33 **GESNER (OR GESSNER), CONRAD.** *Catalogus Plantarum Latinè, Graecè, Germanicè, & Gallicè . . . Namenbüch aller Erdegewächsen, Latinisch, Griechisch, Teütsch, und frantzösisch. Regestre de toutes Plantes en quatre langues, Latin, Grec, Aleman, & Francoys. Unà cum vulgaribus Pharmacopolarum nominibus . . . Adjectae sunt etiam Herbarum Nomenclaturae variarum gentium, Dioscoridi ascriptae, secundum literarum ordinem expositae.* 4 p.l., 162 leaves. Small 4to, cont. blindstamped panelled pigskin, remains of two deerskin ties. Zurich: C. Froschauer, 1542. \$32,500.00

First edition of a very rare book on the market; this is a lovely fresh copy in contemporary blind-stamped pigskin. This, Gesner’s second botanical work, is “an alphabetically arranged catalog of plant names in four languages, the first



of its kind, and an indication of the growing interest in botany beyond purely philological investigations into the writings of the classics. The Greek names are based on the works of Dioscorides. This early work is already characteristic of Gessner’s life-long endeavour to arrange scientific topics in alphabetical or systematic order; it also shows his proficiency in languages, and his interest in their comparative treatment.”—Wellisch 8.1.

A fine copy. Signature at foot of title of “Lucas Schröck, M.D.” Schröck (1646-1730), was a professor of medicine at Jena and president of the Deutschen Akademie der Naturforscher (see Hirsch, V, pp. 139-40). Early inscription on front free endpaper stating this is a duplicate from the Royal Library of Munich. Engraved armorial bookplate, dated 1744, of Franziskus Topsl (1711-96), prior of the Polling Abbey in Upper Bavaria. Modern booklabel of D. Henry. Some minor worming to upper inner corner of first seven leaves, touching a few letters of the first two leaves.

☞ Pritzel 3298.



*The First Illustrated Work on Fossils; A Fine Association Copy*

34 **GESNER, CONRAD.** *De Omni Rerum Fossilium Genere, Gemmis, Lapidibus, Metallis, et huiusmodi, libri aliquot, plerique nunc primum editi...* Woodcut illus. on title, two ports. of J. Kentmann, many woodcuts of fossils & stones in the text, & several printer's devices. 8 parts in one vol. 8vo, 18th-cent. mottled half-sheep & marbled boards, spine gilt, red leather lettering piece on spine. Zurich: J. Gesner, 1565. \$125,000.00

First edition of this famous collection of texts which forms one of the most important contributions to 16th-century geology and mineralogy. It consists of eight separate treatises by seven authors on the subjects of fossils, gems, and metals, all edited by Gesner and with his general introduction and extensive commentaries.



This is an important association copy, with the signature on the title of Caspar (Gaspard) Bauhin (1560-1624), the first professor of anatomy and botany at the University of Basel. He made a number of important contributions to both anatomy and botany (see *D.S.B.*, I, pp. 522-24). Like Gesner, Bauhin was greatly concerned with nomenclature; his great merit, again like Gesner, was his ability to treat his subjects in an orderly and methodical manner.

The treatises are:

**I. KENTMANN, JOHANN.** *Nomenclaturae Rerum fossilium*. 8 p.l., 95 leaves, one blank leaf. This contains an illustration of Kentmann's cabinet, and catalogues over 1600 specimens, with localities where known, and German equivalents of the Latin names. It is the first published catalogue of a geological collection.

**II. KENTMANN.** *Calculus qui in Corpore ac membris hominum innascuntur*. 2 p.l., 22 leaves. An illustrated account of stones formed in the human body.

**III. FABRICIUS, GEORG.** *De Metallicis rebus*. 3 p.l., 31 leaves. A treatise on noble and base metals.

**IV. GOEBEL, SEVERIN.** *De Succino libri duo*. 2 p.l., 30 (i.e. 31), [4] leaves, one blank leaf. A discussion of amber and other gems and minerals, with a separate treatise by Gesner on bitumen, amber, naphtha, etc.

**V. CORDUS, VALERIUS.** *De Halosantho seu Spermate Ceti liber*. 3 p.l., 37 leaves. A commentary on the "efflorescence of salt" sometimes found floating on water, which Dioscorides and Galen had recommended as a cure for skin diseases. Gesner in his commentary refutes the notion that this was the sperm of whales.

**VI. EPIPHANIUS.** *De XII Gemmi*. 4 p.l., 28 leaves. A discussion of the gemstones in Aron's shield.

**VII. RUE, FRANÇOIS.** *De Gemmis aliquot*. 2 p.l., 85 (i.e. 86) leaves. A treatise on gems mentioned in the Book of Revelation.

**VIII. GESNER, CONRAD.** *De Rerum Fossilium*... 7 p.l., 169 leaves. The earliest scientific attempt to classify the members of the mineral kingdom, based on the forms of the fossils. It is illustrated by numerous woodcuts after Gesner's own drawings, many of which are still preserved in the Basel University Library. According to Adams, this part contains the earliest illustration of a lead pencil. There is also an illustration of the mariner's Compass made from magnetic iron ore.

A fine copy. Old stamp on blank portion of title. Complete copies are of considerable rarity on the market today.

➤ Adams, *The Birth and Development of the Geological Sciences*, pp. 176-83—"Of special interest in that it presents a picture in miniature of the mineral kingdom as seen through the eyes of the greatest naturalist of his time." Hoover 347. Sinkankas 2366--(long note). Sparrow, *Milestones of Science*, p. 10 & plate 37. Wellisch A 63. Wilson, *The History of Mineral Collecting 1530-1799*, pp. 23-25.



The First "Modern" German Textbook of Chemistry

- 35 **GIRTANNER, CHRISTOPH.** *Anfangsgründe der antiphlogistischen Chemie*. Finely engraved frontis. port. of Girtanner. 2 p.l., [7]-16, 466 pp. 8vo, cont. half-sheep & speckled boards (minor rubbing), spine gilt, red morocco lettering piece on spine. Berlin: J.F. Unger, 1795. \$1750.00

Second edition, corrected and greatly enlarged, of the first German textbook of chemistry based on the antiphlogistic system.

Girtanner (1760-1800), a native of Switzerland, practiced medicine at Göttingen. He had lived in Paris for some time where he got acquainted with the



leaders of the new chemistry. In 1791, he published a German translation of the new chemical nomenclature and in 1792 he published the first edition of the present work which for the first time gave a detailed exposition of Lavoisier's system to the German public. In this edition, he frequently refers to objections made by J.B. Richter, who had been converted to Lavoisier's theory after reading Girtanner's book but had raised some pertinent questions. In the preface Girtanner eulogizes Lavoisier whose death had occurred after the publication of the first edition.

A fine, fresh, and tall copy. Girtanner's portrait appears in this edition for the first time.

☞ Cole 525. *D.S.B.*, V, p. 411. Neville, I, pp. 525-26. Partington, III, pp. 589-90.

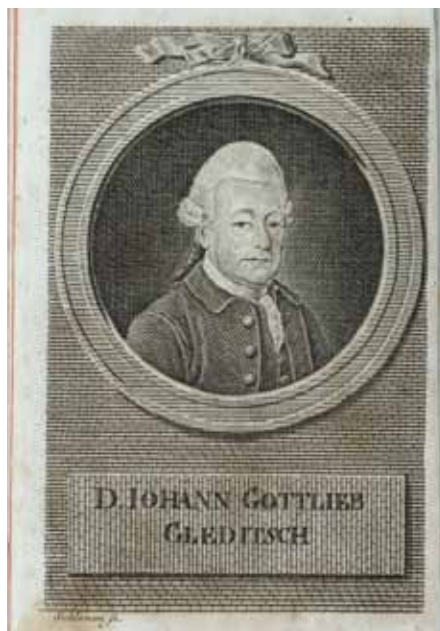
### *One of the Classic Early Works on Forest Management*

- 36 **GLEDITSCH, JOHANN GOTTLIEB.** *Systematische Einleitung in die neuere aus ihren eigenthümlichen physikalisch- ökonomischen Gründen hergeleitete Forstwissenschaft.* Finely engraved port. of the author serving as frontis. xxviii, [2], 544 pp.; xxxii, 677, [73] pp. Two vols. 8vo, cont. half-

sheep & paste-paper boards (foxing as usual due to the quality of the paper), contrasting vellum lettering pieces on spines. Berlin: A. Wever, 1775.

\$1650.00

First edition of one of the classic early works on forest management. Gleditsch (1714-86), a celebrated German botanist and sylviculturist and a close friend and supporter of Linnaeus, was director of the botanical garden at Berlin. He wrote many works on botany and sylviculture and gave the first public courses on scientific forest management in Germany.



Fine and handsome set. From the library of Graf von Seinsheim.

☞ Lowood, "The Calculating Forester: Quantification, Cameral Science, and the Emergence of Scientific Forestry Management in Germany" in *The Quantifying Spirit in the 18th Century* (ed. by Tore Frängsmyr, J.L. Heilbron, & R.E. Rider), p. 331. Mantel, I, 13. Pritzel 3361.

- 37 **GREN, FRIEDRICH ALBRECHT CARL.** *Systematisches Handbuch der gesammten Chemie . . . durchgesehen und umgearbeitet von Martin Heinrich Klaproth.* xviii, [10], 590 pp.; viii, 638 pp.; viii, 859, [1] pp. Three vols. 8vo, cont. boards, orange & blue leather lettering pieces on spines. Halle: im Verlage der Waisenhaus-Buchhandlung, 1806-06-07. \$1950.00

Third edition (1st ed.: 1787) of Gren's large systematic textbook of chemistry. This is the first edition to have been completely revised by Klaproth (1743-1817), professor of chemistry at the University of Berlin, who discovered or co-discovered zirconium, uranium, titanium, strontium, chromium, melleic acid, and cerium.

Gren (1760-98), founder of the *Journal der Physik*, Germany's most exciting scientific journal, slowly adopted Lavoisier's theories, which helped prepare the way for the ultimate acceptance of the Frenchman's ideas in Germany.

It is interesting to note that in 1793 Klaproth, along with Hermbstädt, discredited Gren and other phlogistonists who had denied the accuracy of Lavoisier's account of his famous experiment in which he reduced mercuric oxide. This did not prevent Klaproth from revising this, one of Gren's most important textbooks.

Nice set.

☞ *D.S.B.*, V, pp. 531-33. Partington, III, pp. 575-77—"Gren's text-books are clear and comprehensive and give extracts from original sources."

### *The First Great American Book on Naval Architecture*

- 38 **GRIFFITHS, JOHN WILLIS.** *Treatise on Marine and Naval Architecture, or, Theory and Practice blended in Ship Building.* Lithographed frontis., 45 black & white plates, and two printed tables. 420, ii pp. Large 4to, orig. cloth (extremities with very minor wear, some foxing due to the quality of the paper). New York: D. Appleton, 1852. \$2250.00

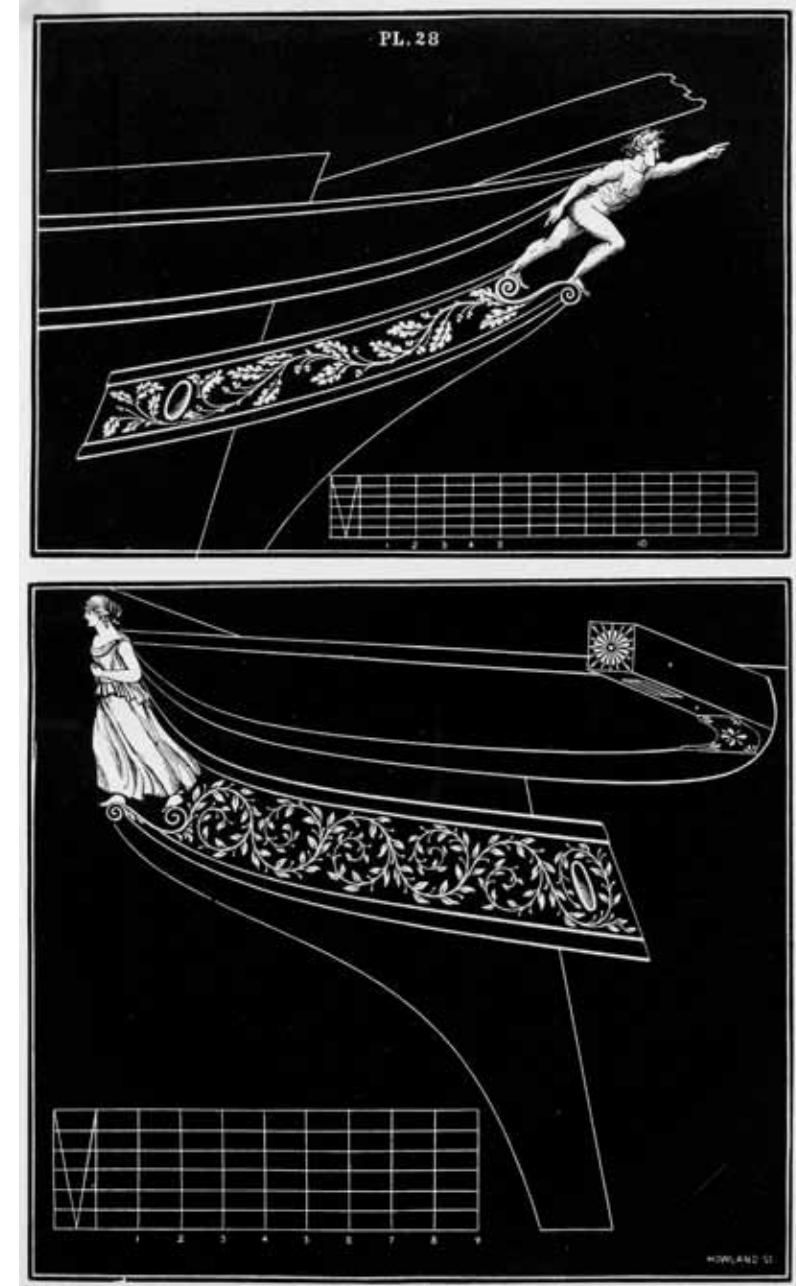
“Third edition” of the first great American book on naval architecture (1st ed.: 1849). Griffiths (1809-82), was one of the earliest outstanding naval architects in America and, during the early 1850s, his steamships were the fastest and finest in the world.

“Through his writings Griffiths did more than any one else to put shipbuilding in America on a scientific basis, in place of the ‘rule of thumb’ methods then in vogue. He was not only an influential theorist, however, but a practical designer of ships as well, and one of the first in the United States outside of naval constructors like Joshua Humphreys, to specialize in designing. Most of his contemporaries, like Donald McKay, Samuel Hall, and Jacob Bell, owned shipyards and actually built the ships they designed . . . Griffiths, however, with his particular inventive genius and bold originality, was content to draw the plans and let others execute them. He showed amazing versatility in that period of constant innovation, designing outstanding vessels of many sorts – sail and steam, wood and iron, war and commerce. Though the *Ann McKim*, built at Baltimore in 1832, is often called the pioneer clipper, Griffiths is credited with designing the first ‘extreme clipper ship,’ the *Rainbow*, 750 tons, launched in 1845 for the China trade . . . To secure increased speed by reducing resistance, he gave these ships slender bows and sterns rising high above the water, concave bow waterlines and ‘the greatest breadth at a point considerably further aft than had hitherto been considered practicable’ (Clark, post, p. 65). Conservative skeptics attacked these innovations, questioning the safety of such sharp, slender ships, but they proved to be the fastest afloat and strongly influenced the subsequent development of the American clipper. Griffiths then turned to steamships, where again his influence was important . . . His writings and the success of his ships brought him orders from all parts of the world.” –*D.A.B.*, IV, pp. 626-27.

This book is very attractively illustrated with forty-five striking black & white plates, depicting various parts of ships and matters of design.

A fresh copy of a book which does not survive well. Surprisingly rare. There is essentially no difference between the first, second, and third editions.

» Hindle, *Technology in Early America*, p. 55 – “Just after mid-century a remarkable work appeared which was filled with insights not obtainable elsewhere: John W. Griffiths’ *Treatise* . . . This large undertaking is based on the belief that European treatises did not help much in the United States, because of different terms in use, because they were not fundamentally intended for merchant shipbuilding, and because they were not sufficiently adapted to the knowledge and talents of the operative mechanics. The result is very helpful to the historian.”



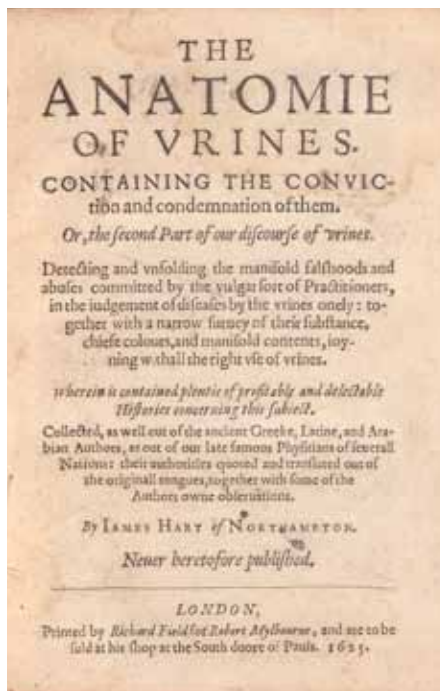
*The Fallacies of Diagnosis*

- 39 **HART, JAMES.** *The Anatomie of Urines. Containing the Conviction and Condemnation of them. Or, the second Part of our discourse of urines. Detecting and unfolding the manifold falshoods and abuses committed by the vulgar sort of Practitioners in the judgement of diseases by the urines onely: together with a narrow survey of their substance, chiefe colours, and manifold contents, joyning withall the right use of urines . . . Collected, as well out of the ancient Greeke, Latine, and Arabian authors, as out of our late famous Physitians of severall Nations: their authorities quoted and translated out of the originall tongues, together with some of the Authors owne observations . . . Never heretofore published.* 9 p.l., 127, [1] pp. Small 4to, 19th-cent. red half-morocco & marbled boards (minor staining here & there, A6 a bit chipped at head but not touching text), spine lettered in gilt. London: R. Field for R. Mylbourne, 1625. \$5000.00

First edition and quite uncommon. Hart (d. 1639), physician, studied in

Paris and took his medical degree at Basel in 1609. He then travelled to Germany and on to Prague. Upon returning to England, he settled in Northampton where he established a practice and lived for the rest of his life.

“Hart’s first published work was *The Arraignement of Urines* (1623), an abridged translation of *De incerto, fallaci, urinarum judicio* (1589) by Pieter van Foreest. This was followed in 1625 by [the present work]. Both works are dedicated to Charles I, then prince of Wales; they expose the fallacies of diagnosis by means of an examination of urine at the hands of ignorant persons, and attack three kinds of trespassers on the



medical domain — unlicensed quacks, meddlesome old women, and, above all, clergymen.”—ODNB. Each work was independently issued.

Very good copy.

“A Charming and Valuable Book”

- 40 **[HARTE, WALTER].** *Essays on Husbandry. Essay I. A General Introduction; shewing That Agriculture is the Basis and Support of all flourishing Communities . . . together with the Defects, Omissions, and possible Improvements in English Husbandry. Essay II. An Account of some Experiments tending to improve the Culture of Lucerne by Transplantation: Being the first Experiments of the Kind hitherto made and published in England.* Five engraved plates & numerous attractive woodcuts in the text. xviii, [4], 213, 232 pp. 8vo, cont. calf (upper joint with a short & unimportant crack at head), spine gilt, red morocco lettering piece on spine. London: J. Hinton et al., 1764. \$1750.00

First edition and a very fine copy from the Cullen House library. “A far more outstanding piece of work was written by the Rev. Walter Harte but issued without a signature . . . Lord Chesterfield wrote of him in the highest terms and Johnson admired his companionable talents . . . Much of the *Essays in Husbandry* is general discussion, and Harte displays a wide acquaintance with the extensive literature of his subject, both English and Foreign, contemporary and classical . . . Interest in lucerne had been of long standing even in Harte’s day, but it has still to become a plant that is generally grown in this country.”—Fussell, *More Old English Farming Books*, pp. 45-46.

↗ D.N.B., IX, pp. 65-66—“a charming and valuable work. Johnson confessed that ‘his [Harte’s] Husbandry is good.’”





- 41 **HERMBSTAEDT, SIGISMUND FRIEDRICH.** *Grundsätze der experimentellen Kammeral-Chemie für Kammeralisten, Agronomen, Forstbediente und Technologen.* xxviii, 686 pp., 1 leaf of errata. 8vo, cont. half-sheep & marbled boards, flat spine gilt, green morocco lettering piece on spine. Berlin: Realschulbuchhandlung, 1808. \$2000.00

First edition of a very uncommon book. Hermbstädt (1760-1833), the first chemist in Germany to adopt Lavoisier's views, was professor of technological chemistry at the University of Berlin. His numerous writings in this field proved to be very influential in the development of industry in Prussia.

There are interesting and extensive sections on the manufacturing of ceramics, glass, tobacco, porcelains, beer and wine, tiles, paper, textiles, dyeing, and steel, amongst much else.

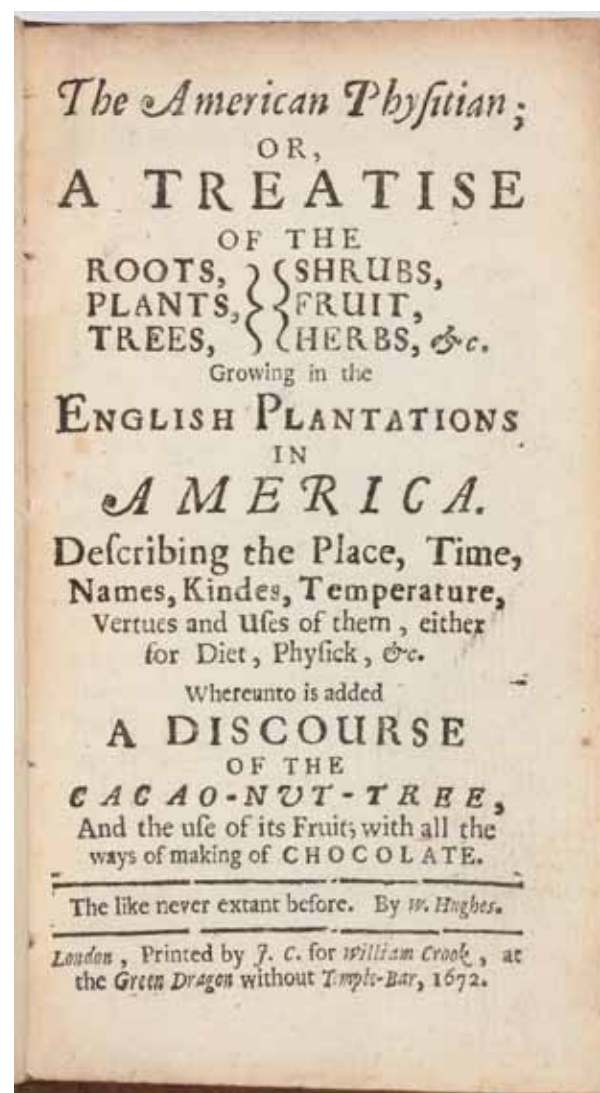
Fine copy.

↗ *D.S.B.*, XV, pp. 205-07. Partington, III, pp. 577-80. Poggendorff, I, 1082-83.

*"The Earliest Work in English on the Medicinal Virtues of North American Tropical Plants"*

- 42 **HUGHES, WILLIAM.** *The American Physitian; or, a Treatise of the Roots, Plants, Trees, Shrubs, Fruit, Herbs &c. growing in the English Plantations in America. Describing the Place, Time, Names, Kindes, Temperature, Vertues and Uses of them, either for Diet, Physick, &c. Whereunto is added a Discourse of the Cacao-Nut-Tree, and the use of its Fruit; with all the ways of making of Chocolate. The like never extant before.* 12 p.l. (the first a blank), 159, [9] pp. (final leaf blank). 12mo, cont. sheep (spine faded, a bit rubbed). London: J.C. for W. Crook, 1672. \$27,500.00

First edition of "the earliest work in English on the medicinal virtues of North American tropical plants. Based on first-hand observations made in the West Indies. Evidence suggests that Hughes began his career in 1651 with a privateering voyage to the West Indies, during which he traveled to Barbados, St Kitts, Cuba, Jamaica and mainland Florida. He appears to have spent a good deal of time visiting British plantations on Jamaica and Barbados, where he observed and made descriptions of a large number of New World tropical plants including potatoes, yams, maize ('the wheat of America'), bananas, avocados ('Spanish



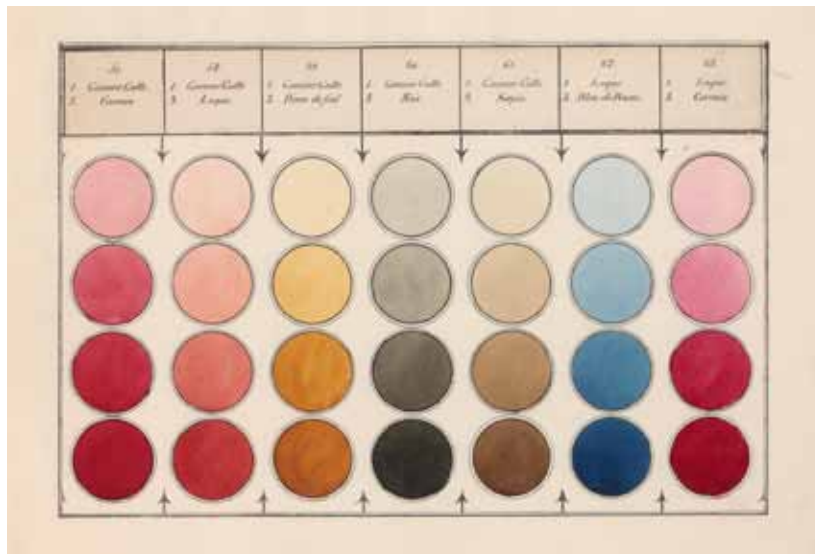
pears'), chili peppers, watermelons, sugarcane, guavas, prickly pears, coconuts and manioc. Hughes's work 'contributed greatly to the spread of the American indigenous use of plants either for Meat or Medicine.'—Wilson & Hurst, *Chocolate as Medicine* [2012] p. 55."—Garrison-Morton 7007 (on-line version, new addition).

While little is known about Hughes (active 1665-83), he did leave evidence in his books that he had worked at one time at Radley, in Warwickshire, and that he had travelled throughout England and to the vineyards in Europe. This book was written during his time in the West Indies.

The last third of Hughes's book is devoted to the medicinal properties of chocolate, which he called the "American nectar."

This is an extremely rare book on the market and our copy is very fine in its first binding.

☞ Henrey, I, p. 204 & no. 203 in the bibliography.



*Color Theory for Painters & Water Colorists*

- 43 **JARLE, —, PEINTRE.** *Barème des Couleurs. Ou les Teintes faites au Nombre des 616, comprenant presque toutes les Couleurs qui existent dans la Nature avec indication de les Composer sans Maitre. Ouvrage utile et presque indispensable a ceux qui colorient ou peignent à l'aquarelle.* Hand-colored lithographed title & 22 hand-colored lithographed plates with a total of 616

color specimens. Eight pages of text (rather foxed as is usual with this book). Oblong 8vo, orig. printed boards (spotted, upper cover with a stain in blank portion, some wear). Paris: P. Blanchard "et chez l'Auteur, rue neuve St. Etienne, Boulevard Poissonière," [ca. 1820s]. \$5000.00

First and only edition of this uncommon and unusual book on color theory for artists working in watercolors. The title-illustration consists of seven color specimens, each within a circle and each with a silver laurel crown within the circle. Each of the 22 lithographed plates has 28 finely colored circles, each of a different hue. The text provides instructions for mixing the different colors to achieve other colors. The author has signed the final page of text.

Very good copy and most uncommon; WorldCat lists four copies.

### *Richly Illustrated*

- 44 **JUNGENICKEL, ANDREAS.** *Schlüssel zur Mechanica, Das ist: Gründliche Beschreibung der Vier Haupt Instrumenten der Machination, als dess Hebels, Betriebs, Schrauben, Kloben.* Finely engraved frontis. & 137 woodcut diagrams in the text. Printed title within typographical border. 4 p.l. (incl. the frontis.), 368, [16] pp. Small 4to, cont. fine vellum over boards. Nuremberg: P. Fürsten, [1661]. \$7500.00

First edition and a lovely copy. "This work is structured as a dialogue between an engineer and a mechanic, in which they discuss the principal instruments of machinery including the level, gear, screw, and pulley. A section is devoted to a discussion of planetary movement with references to Sacro Bosco, Copernicus, and Apianus."—Roberts & Trent, *Bibliotheca Mechanica*, p. 180.

Apparently little is known about the author who is described on the title-page as a "Batterey-Meister."

Very fine copy.



- 45 **KECKERMANN, BARTHOLOMAEUS.** *Systema Ethicae, Tribus Libris adornatum & publicis praelectionibus traditum in Gymnasio Dantiscano.* Woodcut printer's device on title. 4 p.l., 400 pp. Small thick 8vo, content richly blindstamped pigskin over wooden boards, one of the stamps with "H M" with the date "160[?]", two catches & one (of two) clasps. Hanau: G. Antonius, 1607.

[BOUND WITH]:

**THEODORICUS, SEBASTIANUS.** *Novae Quaestiones Sphaericae, hoc est, de Circulis Coelestibus & primo mobili, in gratiam studiosae juventutis scriptae.* Woodcut on title, numerous astronomical woodcuts in the text, three folding printed tables, & one large woodcut plate. 8 p.l. (the last a blank), 320 pp. Small 8vo. Wittenberg: L. Seuberlich for S. Selfisch, 1605.

[BOUND WITH]:

**LEMNIUS, LEVINUS.** *De Astrologia Liber unus . . .* Woodcut printer's device on title. 5 p.l., 25 leaves, 2 blank leaves. Small 8vo (light browning). Jena: T. Steinmann, 1587. \$7500.00

A pleasant sammelband of three noteworthy textbooks in a most attractive contemporary binding.

I. First edition. Keckermann (1573-1609), was a German theologian and philosopher best known for his "analytical method." He studied at the universities of Wittenberg and Leipzig and became professor of Hebrew at Heidelberg. From 1602 until his death, he served as rector of the gymnasium of Danzig, his native town. This is one of many "systems" or textbooks which he wrote on all aspects of knowledge including logic, politics, economics, science, astronomy, geography, physics, etc.

"Keckermann was one of the earliest Western thinkers to use the term 'system' to describe academic treatises; his detailed discussion of the component parts of systematic textbooks appears to be the first of this kind and many have been without parallel during the entire seventeenth century."—Joseph S. Freedman, "The Career and Writings of Bartholomew Keckermann (d. 1609)" in *Proceedings of the American Philosophical Society*, Vol. 141, No. 3 (1997), pp. 305-64 & A.22 in his bibliography.

WorldCat locates no copy in the U.S.

II. A late edition (1st ed.: 1564) of a very popular textbook on astronomy which was the standard textbook on the subject at the University of Wittenberg for more than fifty years. Theodoricus (1501-78), a native of Windsheim, took his degrees in philosophy and medicine at Wittenberg and became professor of mathematics there. He surely knew Rheticus. "His own manual of 320 small pages in four parts is arranged in the form of questions and answers, with the former set off in heavy type and with considerable use of the syllogistic form of proof in the answers . . . He cites Copernicus as well as Ptolemy



for the relative magnitudes of earth and sun. He gives Copernicus's figures for the maximum and minimum declination of the sun, and his estimate that this movement of the ecliptic approaching and receding from the equator is completed in 1717 years . . . the textbook of Theodoricus . . . appears to have been inflicted on the students at Wittenberg for several decades, since further editions appeared in 1567, 1570, 1578 and 1605."—Thorndike, VI, pp. 34-35.

The large woodcut plate contains a number of figures designed to be cut up and used as movable parts on several of the text woodcuts. This is a rather wonderful survival.

WorldCat locates only one copy in the U.S.

III. Second edition (1st ed.: Antwerp: 1554) of the author's first book. Lemnius (1505-68), studied medicine at the University of Louvain under Vesalius, Dodoens, and Conrad Gesner. He returned to practice in his native city of Zierikzee and had a broad interest in medicine, hygiene, geography, botany, and astrology. He is most famous for his book on the occult miracles of nature.

❖ II. Thorndike, V, 154 & Zinner 4066. III. Lindeboom cols. 1169-70. Zinner 3260.

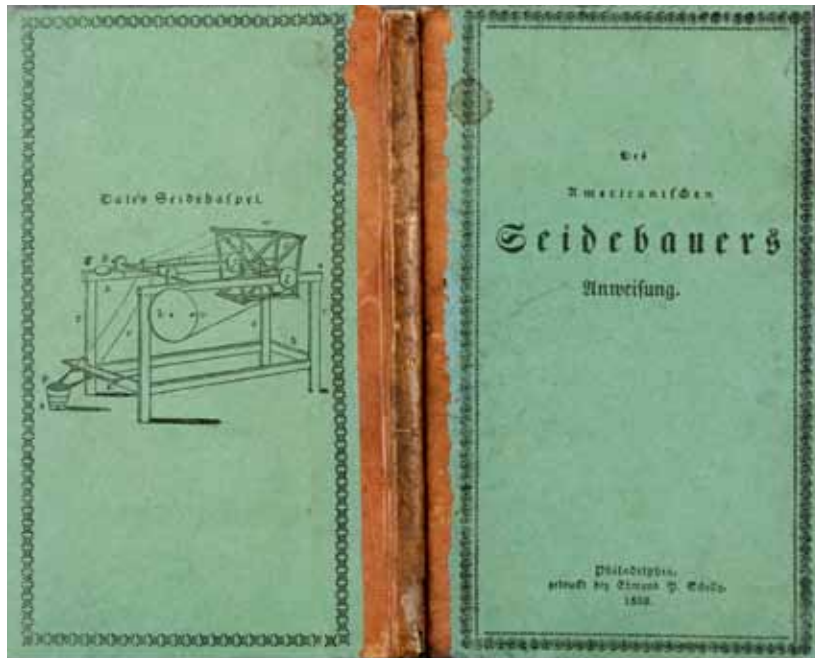


*American Silk Culture*

- 46 **KENRICK, WILLIAM.** *Das Americanischen Seidebauers Anweisung. Oder, die Kunst den Maulbeer-Baum und die Seide zu ziehen. Nach dem System von Mehreren aufeinander folgenden Ernten während einer jeden Jahreszeit. Aus dem Englischen in's Deutsche übersetzt mit hinzugefügten Bemerkungen. Und das Ganze mit einem interessanten Anhang versehen. Durch Joel Schelly.* One woodcut diagram in the text. viii, 103 pp. 8vo, orig. American binding of sheep-backed green printed boards (browning throughout due to the quality of the paper). Philadelphia: E.Y. Schelly, 1838. \$1650.00

First edition in German, enlarged with the additional text by Joel Schelly. Kendrick (1789-1872), was the son of one of the pioneer nurserymen in America, who had established a nursery in 1790 between Newton and Brighton, Massachusetts.

"By 1823, William had become associated with his father in the enterprise, and for a half a century he was one of a small group of nurserymen who laid the foundations of the fruit industry of the present day ... His interests were not



entirely centered in nursery and fruit enterprises. At one period he gave considerable attention to silk culture. In 1835 there appeared under his authorship *The American Silk Grower's Guide*, which included a discussion of the growing of the mulberry. A second edition was printed in 1839."—*D.A.B.*, V, pp. 341-42.

This German edition was printed for the large and growing German population in Pennsylvania.

A fine copy in the original American binding. Surprisingly rare.



*A Very Pretty Copy from the Library of the Dukes of Bavaria*

- 47 **KRAUSS, GEORG FRIEDRICH.** *Die Schutzpockenimpfung, in ihrer endlichen Entscheidung, als Angelegenheit des Staats, der Familien und des Einzelnen.* Four folding printed tables. xxii, 552, [2] pp. 8vo, cont. red morocco, single gilt fillet round sides, flat spine prettily gilt, a.e.g. Nuremberg: Riegel & Wiessner, 1820. \$1950.00

First edition of the author's most significant book which Hirsch describes as important for the introduction of vaccination in Germany. Krauss (1772-1856), took his medical degree at Erlangen, studied in Strasbourg and Paris,

and later became the chief public health doctor of Düsseldorf. He was one of the first physicians in Germany to actively vaccinate against cowpox.

The folding tables contain much valuable statistical information.

Fine and handsome copy from the library of the Kings of Bavaria.

☞ Hirsch, III, pp. 608-09.

### “The Don Quixote of Inoculation”

- 48 **LA CONDAMINE, CHARLES MARIE DE.** *Histoire de l'Inoculation de la Petite Vérole, ou Recueil de Mémoires, Lettres, Extraits et autres Écrits, sur la Petite Vérole artificielle . . . Tome Premier* [all published]. 2 p.l., viii, 282 pp.; 283-530 pp. Two parts in one vol. Small 8vo, cont. mottled calf (a few careful repairs to joints & head-caps), spine gilt, red morocco lettering piece on spine. Amsterdam: Société Typographique, 1773. \$1500.00



First edition of this influential work in support of inoculation. La Condamine (1701-74), known as the “Don Quixote of inoculation,” “unquestionably deserves the major credit for bringing about the adoption of the practice in France . . . No writer before, even in England, had assembled such a detailed array of facts drawn from a thorough review of the literature . . . he provided more solid and more comprehensive ground for discussion than any of his predecessors.”—Miller, *The Adoption of Inoculation for Smallpox in England and France*, pp. 209-10.

Very good copy. Upper cover with a small stain. Engraved armorial bookplate of Hyacinthe Théodore Baron, the younger (1707-87), dean of the medical faculty of Paris. He formed an important library which was sold in 1788 (this book was lot 3050).

☞ *D.S.B.*, XV, pp. 269-73.

### A Notable Book in Botanical Nomenclature

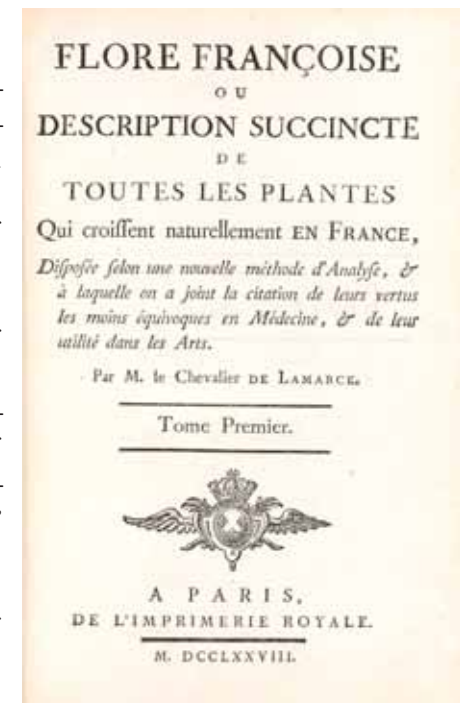
- 49 **LAMARCK, JEAN BAPTISTE.** *Flore Française ou Description succincte*

*de Toutes les Plantes qui croissent naturellement en France, disposée selon une nouvelle méthode d'Analyse, & à laquelle on a joint la citation de leurs vertus les moins équivoques en Médecine, & de leur utilité dans les Arts.* Eight folding engraved plates & one folding printed table. Three vols. 8vo, cont. mottled calf (careful repairs to joints, head-caps, & corners), triple gilt fillet round sides, spines nicely gilt, red & green morocco lettering pieces on spines. Paris: Imprimerie Royale, 1778. \$2250.00

First edition of the author's first important book; it was one of the first French works to include the Linnaean nomenclature as well as that of Tournefort. Lamarck's innovation in this book was “the establishment of dichotomous keys to aid in the identification of French plants; by eliminating large groups of plants at each stage through the use of mutually exclusive characteristics, the given name of any plant could be rapidly determined. This ‘method of analysis,’ as Lamarck called it, was much easier to use in identifying plants than Linnaeus' artificial system of classification, which was based on sexual differences among plants or the natural methods of classification then developing in France with the work of Adanson, Bernard de Jussieu, and Antoine Laurent de Jussieu. Lamarck's new approach and his criticisms of Linnaeus impressed Buffon, who arranged to have the *Flore* published by the government.”—*D.S.B.*, VII, p. 585.

Very good fresh set with errata leaf at end of Vol. III. The set, with gilt crowns at the head of each spine, is a rare binding of the Imprimerie Royale.

☞ Hunt 653. Pritzel 5002.





### Large & Fine-Paper Set

- 50 **LAPLACE, PIERRE SIMON, MARQUIS DE.** *Traité de Mécanique Céleste*. Folding engraved plate in Vol. IV. Five vols. Large 4to (281 x 200 mm.), cont. polished calf, sides panelled in blind & gilt, spines decorated in blind & gilt, a.e.g.. Paris: J.B.M. Duprat & others, An VII [1798]-1825-1827. \$85,000.00

First edition, a magnificent set on large and fine paper, complete set with all the supplements. This is the only large and fine paper set I have ever seen on the market.

In this monumental and fundamental astronomical work, Laplace — the “Newton of France” — codified and developed the theories and achievements of Newton, Euler, d’Alembert, and Lagrange. “Laplace maintained that while all planets revolve round the sun their eccentricities and the inclinations of their orbits to each other will always remain small. He also showed that all these irregularities in movements and positions in the heavens were self-correcting, so that the whole solar system appeared to be mechanically stable. He showed that the universe was really a great self-regulating machine and the whole solar system could continue on its existing plan for an immense period of time. This was a long step forward from the Newtonian uncertainties in this respect ... Laplace also offered a brilliant explanation of the secular inequalities of the mean motion of the moon about the earth — a problem which Euler and La-

grange had failed to solve ... He also investigated the theory of the tides and calculated from them the mass of the moon.”—*Printing & the Mind of Man* 252.

A magnificent set, preserved in two boxes. Our set has the first state of the titles of Vols. I and II and all the supplements (the supplement in Vol. V, issued in 1827, is on regular paper).

☞ Dibner, *Heralds of Science*, 14. *D.S.B.*, XV, pp. 273-403. *En Français dans le Texte* 201. Horblit 63. Roberts & Trent, *Bibliotheca Mechanica*, pp. 197-98. Sparrow, *Milestones of Science*, 125.

### His First Book

- 51 **LAUROP, CHRISTIAN PETER.** *Ueber Forstwirthschaft besonders über Erhaltung, Abtrieb und Wiederanbau der Wälder*. Finely engraved vignette on title & one finely hand-colored engraved map. xxiv, 470 pp., [2] pp. of ads. 8vo, cont. half-sheep & paste-paper boards, spine gilt, contrasting vellum lettering piece on spine. Leipzig: S.L. Crusius, 1796. \$1750.00

First edition of the author’s first book and very scarce. Laurop (1772-1858), “Forstmann, zumal ausgezeichnete Kenner der forstwissenschaftlichen Literatur” (*A.D.B.*), was professor of forestry and one of the leading writers in Germany on the subject. His books were known for their clarity and thorough understanding of the subject.

The present book is concerned with the maintenance, ecology, harvesting, and restocking of forests.

Fine and handsome copy with the engraved bookplate of the Graf von Seinsheim.

☞ *A.D.B.*, Vol. 18, pp. 68-71. Mantel, I, 19.

- 52 **LEONHARD, KARL CÄSAR VON.** *Naturgeschichte des Mineralreiches. Ein Lehrbuch für öffentliche Vorträge, besonders in Gymnasien und Realschulen, so wie zum Selbststudium*. Two engraved plates (one is finely handcolored). xiv, [2], 360 pp. 8vo, cont. grey paste-paper boards (corners a little bruised, minor foxing), printed paper label on spine. Heidelberg: J. Engelmann, 1825. \$1750.00

First edition. Leonhard (1779-1862), was professor of mineralogy at the University of Heidelberg. “As a founding editor of the *Taschenbuch für die gesa-*



*mmte Mineralogie*, Leonhard earned a place among the foremost mineralogists of his time. His prolific writings contributed to the rise of popular interest in geology during the nineteenth century.”-*D.S.B.*, VIII, p. 245-(describing this as one of his chief books).

This is Leonhard’s first introductory textbook to mineralogy and geology which was so influential in the popularization of these disciplines.

Very good copy. Contemporary signature of Th. Engelmann on free front-endpaper.

✂ Poggendorff, I, 1427. Schuh, *Mineralogy & Crystallography: A Bibliography, 1469 to 1920* (in progress), 3004-“Very scarce.”



### Lullism

- 53 **LULL (OR LLULL), RAMON.** *Mercuriorum Liber iam tandem subsidio Manuscripti exemplaris perfecte editus. Item eiusdem Apertorium, Repertorium, Artis intellectuae Theorica & Practica, Magia naturalis, opuscula plane aurea.* Woodcut printer’s device on title (repeated on verso of final leaf). 8 p.l., 381, [1] pp. Small 8vo, 18th-cent. polished calf (occasional faint damp-staining), sides decorated in gilt, flat spine gilt, red morocco lettering piece on spine. Cologne: J. Birckmann, 1567. \$4000.00

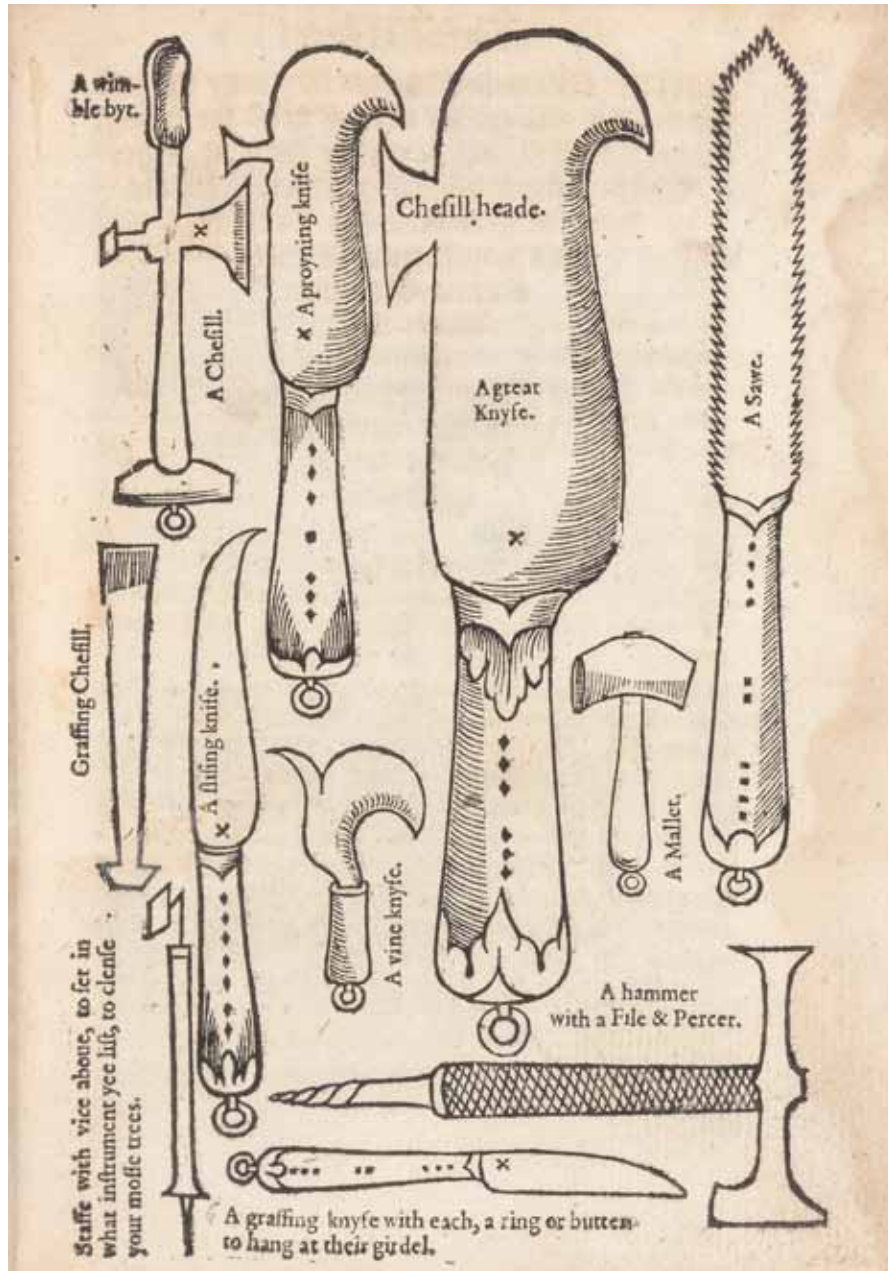
First edition of the *Mercuriorum Liber*, a rare text attributed to Lull but probably spurious. Lull (1232?-1316), opposed alchemy which he considered fraudulent. “However, there is no doubt that the ‘Lullian’ philosophy transmitted after Ramon’s death included alchemy. The ascription of so many alchemical writings to the master is sufficient proof of that.”-Sarton, Vol. II, Part II, p. 910.

“Accepted by Pico della Mirandola, Lullism was the natural accompaniment of the Hermetic-Cabalistic philosophy which underlies Renaissance Neoplatonism. In this atmosphere, Lullism took on the magical and occult flavour of that philosophy. The implicit connection of the Lullian emphasis on the elements with alchemy became explicit, and the pseudo-Lullian alchemy flourished.”-Yates, *Lull & Bruno*, p. 7.

Fine copy with some pencilling in the margins. With some contemporary annotations as well.

✂ Caillet 6855. Ferguson, II, p. 54.





*The First English Gardening Manual*

- 54 **MASCALL, LEONARD.** *A Booke of the Arte and maner how to Plant and Graffe all sorts of Trees, how to set Stones & sow Pepins, to make wyld trees to graffe on, as also remedies and medicines. With divers other newe practises, by one of the Abbey of Saint Vincent in Fraunce . . . wyth an addition in the ende of this book, of certayne Dutch practises, set forth and Englished by . . .* Woodcut vignette on title, one full-page woodcut, & several smaller woodcuts in the text. Black letter. 11 p.l., 88, [10] pp. Small 4to, late 18th cent. calf (upper joint cracked but strong, small paper flaw on blank outer margin of title, fore-edges faintly dampstained), spine lettered in gilt. London: J. Wight, 1575. \$15,000.00

The third edition of the first English gardening manual; the first edition appeared in 1569 and all 16th-century printings are rather rare on the market. Mascall took most of his text from David Brossard's *Art et Manière de Semer et Faire Pépinières de Sauvageaux* (Paris: 1552) with certain Dutch practices added. "Brossard, a Benedictine monk at the abbey of Saint-Vincent near Le Mans, who lived during the second half of the sixteenth century, was a skilful horticulturist . . . The English translation proved extremely popular and it appeared in many editions. Comparatively little is known of the translator, Leonard Mascall (d. 1589), who was the owner of a mansion called Plumpton Place, a few miles northwest of Lewes, in Sussex. He became clerk of the kitchen in the household of Matthew Park, Archbishop of Canterbury. It is said that in 1525 Mascall introduced pippin apples into England and established an orchard at his home in Sussex."—Henry, I, pp. 63-64 & p. 258 in the bibliography.

A very good copy. Head of spine a bit chipped and a few headlines just shaved.

*A Guide, in Shorthand, to the 1900 Paris World's Fair*

- 55 **NAVARRE, ALBERT.** *L'Exposition de 1900. Description des Monuments, Palais, Pavillons et des principales Merveilles exposées. Accompagnée de Plans détaillés . . .* Numerous text illus. 128 pp., xxxii. 8vo, original publisher's decorative red cloth (corners rubbed), gilt. Paris: L'Institut Sténographique de France, 1900. \$1250.00



First edition of this strange guide — bizarrely printed largely in a shorthand developed by the author — to the Exposition Universelle 1900 hosted in Paris. Navarre (b. 1874), not only founded the Institut Sténographique de France, he was also an important figure in the development of the typewriter at the turn of the 20th century (he belatedly devised a typewriter optimized for the French market but his audience had already adapted to the universal format). Additionally, Navarre authored a comprehensive history of shorthand, having traveled across the world to collect information about other stenographic practices.

The present guide contains a number of photos and diagrams of Parisian landmarks where exhibitions were held. The final 32 pages comprise a survey of stenography in France, a history of the typewriter, and an illustrated catalogue of typewriters from the United States, England, Germany and France. The final item is a typewriter for the blind employing the “Hall System” which was much more efficient than that of Braille.

Very good copy. WorldCat only locates one copy in the United States. Slight dampstaining on the outer edge of the upper cover and bottom of lower cover. Tiny hole on the upper joint.

- 56 **NEMNICH, PHILIPP ANDREAS.** *An Universal European Dictionary of Merchandise, in the English, German, Dutch, Danish, Swedish, French, Italian, Spanish, Portuguese, Russian, Polish & Latin Languages.* Finely engraved title. v, [1], [445] pp. Large 4to, fine cont. English speckled calf (boards a little warped), flat spine gilt, blue morocco lettering piece on spine. London: J. Johnson et al., 1799. \$3000.00

First edition, a re-working for the English market of the author’s *Waaren-Lexicon*, originally published in Hamburg in 1797. This is an invaluable dictionary of commerce and goods, providing translations in twelve languages.

Nemnich (1764-1822), was the author of a number of encyclopedic dictionaries and accounts of his travels in Europe and Great Britain in which he reported especially on industry and trade.

Divided into two main sections, the first part provides English words and terms which are translated in German, Dutch, Danish, Swedish, French, Italian, Spanish, Portuguese, Russian (in Roman transliteration), and Polish. The second part comprises short dictionaries in these languages, plus Latin, with





English translations. As an example of the incredible range and detail, we find translations for the these words: bungs, cane heads, emetic tartar, fulminating gold, groats, haberdashery wares, lip-glue, pistachio nuts, Prussian blue, sail cloth, smalt, thimbles, etc., etc. (along with thousands of more common words).

A very fine and handsome copy.

☞ Alston, II, 133.

*Wax, Metal, & Pulp Models of Natural History Specimens Museum Objects, Globes, Books, & Foods*

- 57 **NETTO, FRIEDRICH AUGUST WILHELM.** *Die Kunst der Stereoplastik oder dess Abformens, Giessens, Ausdrückens, Cachirens und Bildens der verschiedenartigsten Gegenstände des Unterrichts, des Luxus und der Mode; aus Gyps, Papiermasse, Harzmasse, Hausenblase, Alaun, leichtflüssigen Metallmischungen u. s. w. für Gewerbetreibende.* Nach Johann Friedrich Netto, vormals Zeichenmeister und Akademiker zu Leipzig, Verfasser vieler technischen Schriften von dessen ältestem Sohne Dr. F. A. W. Netto. One folding lithographed plate. 48 pp. 8vo, orig. printed wrappers (see below). Quedlinburg & Leipzig: G. Basse 1841. \$4500.00

First edition, and very rare with WorldCat locating no copy in North America. This is a detailed manual for the manufacture of wax, resin, thin metal, alum, and paper maché models for relief maps, globes and depictions of terrains; pomological collections; models of foods; models for bookbinders; and for a number of other professions and institutions including museums, schools, and military institutions. These include models of floral and botanical specimens for natural history museums.

The techniques described here are based on those developed by the author's father Johann Friedrich Netto (1756-1810), a Leipzig-based art teacher and author, who also wrote a series of rare and attractive works on embroidery and pattern books. F.A.W. Netto (1783-1845), was an instructor in pure and applied mathematics and physics in Berlin and the author of a number of books on mathematics and military surveying. In 1839, he published one of the earliest books on the production of the daguerreotype, the *Vollständige Anweisung zur Verfertigung daguerrescher Bilder*.

The upper wrapper has a different title: "Anweisung zur Anfertigung der Wachs- und Harzfrüchte, Papiermasse-Atrape und der Relief-Charten, Relief-Globen und Terrain-Modelle aus Papiermasse. Zu pomologischen Sammlungen für naturhistorische Museen, Tafelaufsätzen, Weihnachts-, Hochzeits-, Geburtstags-, Tauf- und anderen Geschenken und zum geographischen Unterrichte. Für Conditoren, Buchbinder, Galanteriearbeiter, Naturforscher, Geographen, Schullehrer, Officiere und alle die, welche diese Fabrikation als Gewerbe betreiben wollen ... Nach den praktischen Erfahrungen



seines Vaters Johann Friedrich Netto, Zeichenmeister and Akademiker zu Leipzig, und eigenen Forschungen bearbeitet und herausgegeben."

Fine copy of a fascinating book. Early stencilled private ownership stamp on verso of upper wrapper and title of H.F.C. Tann.

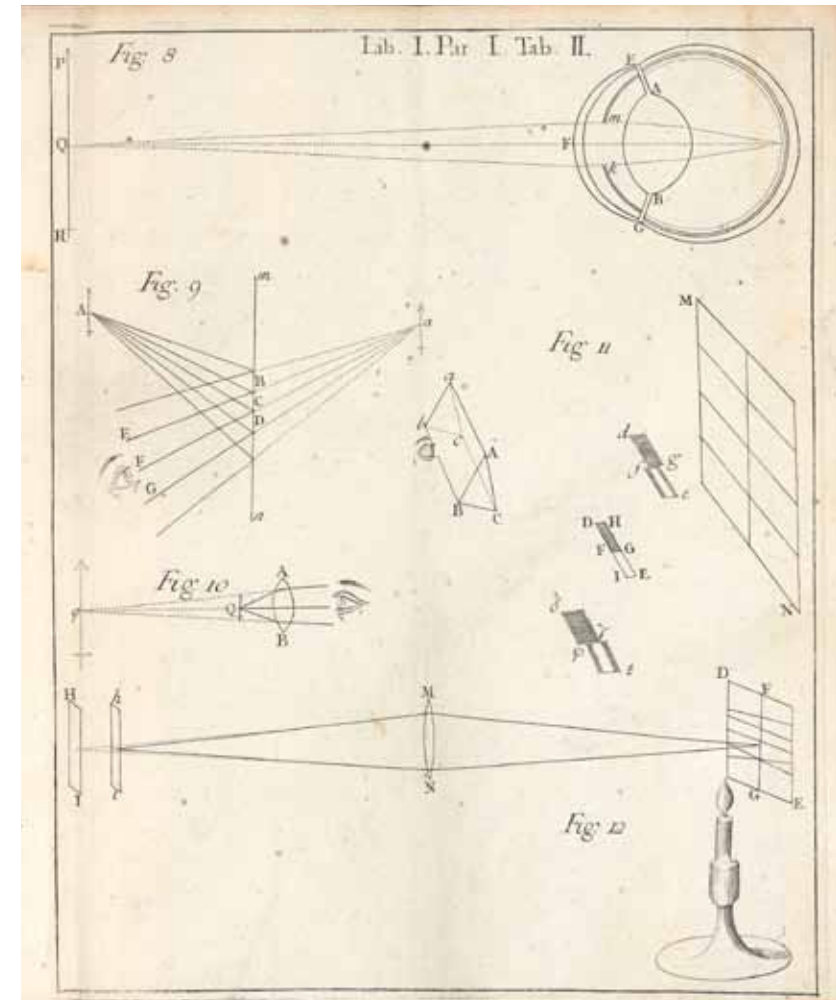
### Influential on the Continent

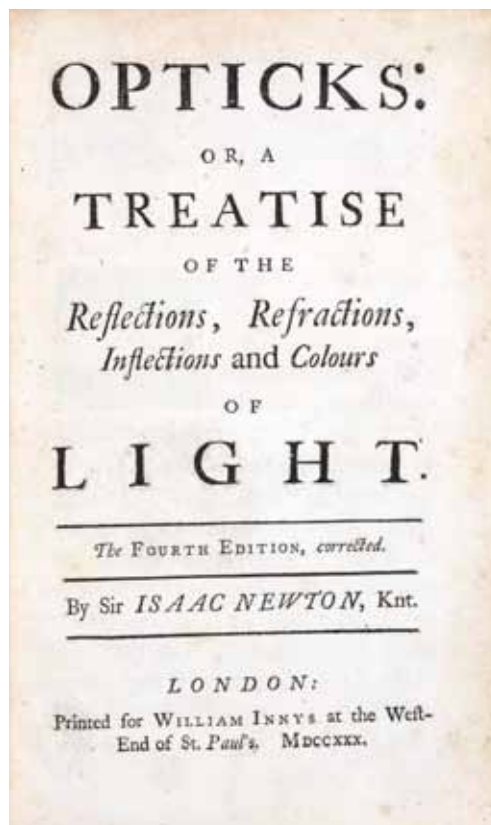
58 **NEWTON, ISAAC.** *Optice: sive de Reflexionibus, Refractionibus, Inflexionibus & Coloribus Lucis, Libri Tres...* Latine reddidit Samuel Clarke... Twelve folding engraved plates. [1] leaf of ads, 1 p.l., xi, [1], 415 pp., [1] p. of ads. 8vo, 18th-cent. speckled calf (carefully rebacked by Aquarius), double gilt fillet round sides, spine richly gilt, red morocco lettering piece on spine. London: G. & J. Innys, 1719. \$5750.00

Second edition in Latin and an influential book on the Continent. Newton published this edition in Latin to reach the Continental audience which had been little influenced by his optical experiments. The edition served its purpose and caused numerous demonstrations of his theory of colors to be performed in Paris. Newton's optical theories began to spread significantly outside Great Britain as a result of this book. See Westfall's *Never at Rest*, pp. 794-95.

A very good copy with the signature, dated 14 Mar. 1822, of Stephen Peter Rigaud (1774-1839), historian of science, astronomer, and Savilian professor of geometry at Oxford. Stamp of the Radcliffe Observatory on verso of title. With the bookplate of William A. Cole, the distinguished collector and bibliographer of chemistry.

✂ Babson 138.





### The Definitive Edition

- 59 **NEWTON, ISAAC.** *Opticks: or, a Treatise of the Reflections, Refractions, Inflections and Colours of Light.* Twelve folding engraved plates. 4 p.l., 382 pp., one leaf of ads. 8vo, cont. calf (small portions of ends of spine & one corner carefully repaired), spine gilt, red morocco lettering piece on spine. London: W. Innys, 1730. \$7500.00

Fourth edition, and the final edition to be revised by Newton, of this great classic. It contains the complete set of 31 Queries which reveal some of Newton's most influential and speculative writing.

Fine crisp copy. Contemporary armorial bookplate of Edward Powell.

☞ Babson 136.

### With Important Additions

- 60 **NEWTON, ISAAC.** *Arithmetica Universalis; sive de Compositione et Resolutione Arithmetica Liber.* Engraved vignette on title & 13 folding engraved plates. Title printed in red & black. 4 p.l., 344 pp. Large 4to, cont. Dutch vellum over boards (lower cover a little soiled, final ten leaves with faint marginal dampstain), panelled in blind, central panel of each cover with large arabesque stamped in blind. Leyden: J. & H. Verbeek, 1732. \$3500.00

The Leyden edition, the first to be edited by Gravesande, and with additional treatises by Halley, Colson, DeMoivre, Maclaurin, and Campbell. There is also an Appendix "De Solutione et Constructione Aequationum Scripta Varia," excerpted from the *Phil. Trans.*

Fine copy. Bookplate and signature of Karen Figala, the historian of science.

☞ Babson 204.

### Handsome Copy

- 61 **NICHOLSON, WILLIAM.** *The First Principles of Chemistry.* One folding engraved plate. xxxi, 546, [4] pp. 8vo, cont. polished half-sheep & speckled boards, spine richly gilt, red morocco lettering piece on spine. London: G.G.J. & J. Robinson, 1792. \$1750.00





“Second edition, with Improvements” (1st ed.: 1790); this is a wonderfully fresh copy in fine contemporary condition. Nicholson (1753-1815), translator of Fourcroy and Chaptal, and editor of the first general scientific periodical in England published independently of the academics, was one of the important British figures in the new chemical movement.

“The author produced a text in which he ‘attempted to keep clear of every system’ with regard to nomenclature and theory. Since he believed the ‘antiphlogistic hypothesis equally probable with the modified system of Stahl’ he explains both . . . The text is divided into two Books, I. General Chemistry includes heat, construction of thermometers, combustion, methods of making experiments with gases, an account of balances and elective attractions; II. includes general principles of bodies, acids, metals, mineral combustibles, vegetable and animal products. The useful treatment in I. of thermometers and balances is not found in many texts.”—Cole, p. 402—(describing the 1st ed.).

Very fine copy.

☞ Cole 977—“In the second edition the author has revised the work to some extent and inserted new discoveries.” Neville, II, p. 228. Partington, IV, p. 19-20.

### *A Rare & Most Peculiar Book*

#### 62 ORBIGNY, CHARLES DESSALINES D' & LÉGER, CHARLES.

*Coupe figurative de la Structure de l'Écorce terrestre et Classification des Terrains d'après la Méthode de M. Cordier . . . avec Indication et Figures des Principaux Fossiles caractéristiques des divers Étages.* Three lithographed plates measuring 175 x 1450 mm., 160 x 1100 mm., & 165 x 1465 mm. One leaf of title, 2 folding lithographed leaves describing the first two plates, & another

leaf of “divisional” title. Oblong 8vo, cont. green sheep-backed marbled boards. N.p.: [ca. 1857-63]. \$3500.00

First edition of a very rare and peculiar book. Orbigny (1806-76), the brother of Alcide (1802-57), was also a prominent botanist and geologist specializing in the Tertiary of France. He spent most of his career at the Paris Natural History Museum.

This book is strange in several ways. First, both the title and divisional title leaves consist of deliberately pasted-on strips of text, very much resembling a blackmail letter with words cut from a newspaper and pasted onto a leaf of paper.

The three copies in Paris located by WorldCat have only one plate; our copy has three. The plates are also most peculiar: each is very long and narrow (see above for dimensions). The first consists of seven lithographed panels joined together and entitled at head “Classification des Terrains.” It describes in great detail the geological periods, eras, and epochs from Precambrian times to modern times. The left-border of each panel has been hand-colored as a color key to denote each epoch.

The second lithographed plate, consisting of six finely hand-colored panels, depicts the crust of the earth in vivid detail. The final lithographed plate, which follows the divisional title (“Principaux Fossiles caractéristiques des divers Étages géologiques”), depicts the fossils of each epoch.

This work was based on the geological theories of Pierre Louis Antoine Cordier (1777-1861), professor of geology at the Muséum d'Histoire naturelle in Paris and a pioneer in the geological, technical, and economic analysis of French mines (see *D.S.B.*, III, pp. 411-12).

Fine copy. No copy located in North America, according to WorldCat.



- 63 **PARACELSUS**. . . . *Etliche Tractetlein zur Archidoxa gehörig*. 1. *Von dem Magneten, unnd seiner wunderbarlichen Tugend, in allerley Kranckheiten . . .* 2. *De occulta Philosophia . . .* 3. *Die recht weisz zu Administrirn die Medicin . . .* 4. *Von vilerley gifftigen Thiern*. Woodcut port. of Paracelsus on verso of title & two woodcuts in the text. 36 unnumbered leaves. 4to, cont. blind-stamped pigskin over boards (recased with new endpapers, final leaves with some mostly marginal dampstaining). Munich: A. Berg, 1570.

\$7500.00

First edition of these four tracts by Paracelsus which were also added to the new edition of his *Archidoxa*, published later in the same year. Of particular interest is the first tract which deals with the magnet and its use in the treatment of different diseases; the second tract, on occult philosophy (including a chapter on imagination and one on possessed people) is of interest for medical psychology; the third one deals with the administration of medicines, and the last one with snakes and other poisonous animals.

Edited by Johann Albert von Wimpfenaeus (fl. 1568-70).

Good copy. Rare.

☞ Sudhoff 128.

#### *In Original State*

- 64 **PASTEUR, LOUIS**. *Études sur la Maladie des Vers a Soie, Moyen Pratique assuré de la combattre et d'en prévenir le retour*. Frontis., 37 plates (several of which are beautifully colored), and illus. & tables in the text. xii, 322 pp.; 3 p.l., 327 pp. Two vols. 8vo, orig. printed wrappers, uncut. Paris: Gauthier-Villars, 1870.

\$1650.00

First edition and a fine set in original state of this important book. "This work saved the French silk industry, which had been crippled by the disease *pébrine*. After five years of research on the problem, Pasteur found the germs of this disease not only in the silkworms but also in the moths and ova. He demonstrated a successful method of overcoming the plague by a systematic microscopic examination of ova with elimination of all those found to be diseased."—Garrison-Morton 2481.

☞ Sparrow, *Milestones of Science*, 159.



#### *How Long, How Heavy, How Much Throughout the World & Throughout the Ages*

- 65 [**PAUCTON, ALEXIS JEAN PIERRE**]. *Métrologie ou Traité des Mesures, Poids et Monnoies des anciens Peuples & des Modernes*. Numerous tables in the text. xv, [1], 955, [1], 6 pp. Large thickish 4to, cont. polished calf (foot of upper joint with a short & unimportant crack), spine gilt, contrasting morocco lettering piece on spine. Paris: la Veuve Desaint, 1780. \$4000.00

First edition and an enormously useful book in which the author compares many of the weights, measures, and currencies of antiquity with modern counterparts throughout Europe, the Middle East, and Asia. Paucton (1736-98), professor of mathematics at Strasbourg, was later in the Paris bureau of surveys.

This is a classic book in the history of weights and measures; Gibbon described it as "useful and laborious." "At the era of its publication this very learned work was universally admitted to be the most complete and important that had appeared on the subjects of which it treats; and though materially affected by the changes which have taken place in the interval, especially the introduction of the metrical system into France, it continues to be held in high estimation. Exclusive of the subjects which properly belong to a treatise on Metrology, it embraces a great various of curious and profound discussions

upon collateral topics, which, though they have added considerably to its bulk, have greatly increased its interest and value.”—McCulloch, p. 137.

Chapter VIII examines, country by country, the physical size of the whole world and provides detailed demographic breakdowns for Europe in particular.

A very fine copy of a book full of the most wonderful information which is difficult to find anywhere else. If you want to know what French money was worth in Palermo or Beijing in 1665, this book will furnish the information.

☞ Poggendorff, II, 378.

### One of the First Scientific Books on Astrology

- 66 **PEGIUS (OR PEGIE), MARTIN.** *Geburts Stunden Buch darinen eines jetlichen Menschens Natur und Eigenschafft, sampt allerley zufählen, auss den gewissen Leuffen deren Gestirn, nach rechter . . . Ahrt der Gestirnkunst, mit geringer Müh aussgeritet . . . Auch darneben alles das jhenige, was zu der Grundtveste der loblichen Gestirnkunst in allen fählen gehörig ist . . . gefunden werden mag. Fürnemlich aber wie man die Himmels Figuren in Auffrichtung der zwölf Heusern, auff die Geburtsstunden . . . kunstlich stellen solle. Item Wie die Gleichlichen und Sichtigen Leuffe der sieben Planeten und stäten Sternen, in die Lenge und Breite . . . zu finden seyen . . .* Title with astrological diagrams and printed in red & black. Numerous woodcut diagrams in the text & woodcut printer’s device on verso of final leaf. [442] leaves including the three blanks (\*\*6, A8, & Y6). Thick folio, cont. blind-stamped panelled pigskin over wooden boards (minor foxing, see below for a further description of the binding), orig. clasps & catches. Basel: [S. Apiario] for S. Henricpetri, 1570. \$12,500.00

First edition and a wonderful copy in contemporary blind-stamped pigskin over wooden boards with the original clasps and catches of one of the first “scientific” books on astrology in which the author used his knowledge of mathematics and astronomy to make predictions. It spawned numerous successors, several of which were very influential in the German Rosicrucian movement. WorldCat locates no copy in the US.

Pegius (1523-92), a lawyer and astrologer, was counsel to the prince bishop of Salzburg and the author of a number of German-language treatises on various legal matters such as foreclosure auction law and hereditary building



rights. This is by far his most important book. In his preface, dedicated to Provoost Neuhauser of the monastery of Saint Zeno near Reichenhall in Upper Bavaria, Pegius explains at length his reasons for writing this book. He states that “Raitkunst,” (the art of reckoning using arithmetic), “Erdmesserey” (measuring the earth), and “Gestirnenkunst” (the art of the stars) shall be the foundation of learned instruction in astrology. “Pegius’ treatise begins with the [mathematical] Four Species before discussing astrology proper, with numerous astronomical interpolations, and ending with sections on chronology and calendar making.”—*A.D.B.*, Vol. 25, p. 318 (in trans.).

The later years of Pegius’ life were not happy. He and his wife began to have visions of the Queen of Sheba who told them local inhabitants of Untersberg near Salzburg had received a prophesy one thousand years ago, that a man named Martin, well-instructed in astronomy and law, would be resurrected and they themselves would be redeemed by his intercession. God sent an angel to Pegius and his wife in March 1581 announcing Pegius was the one



spoken of in the prophecy. Pegasus' wife was suspected of witchcraft and both husband and wife were incarcerated for life.

This has always been considered an important book in German culture; there were facsimile editions published in 1924 and 1977.

BINDING: Two of the roll stamps are signed: Christ on the Cross (Haebler, *Rollen- und Plattenstempel des 16. Jahrhunderts*, I, 150.2 and Kyriss in *Festschrift Haebler* (1937), p. 138.2), plus stamp "MG" (Haebler I, 150.6 and plate I, 25, and again Kyriss in *Festschrift Haebler*, p. 139.6).

Fine fresh copy. Free front endpaper with buyer's entry dated 1596, bought for 2 guilders and 4 kreutzers.

☞ Lalande, pp. 94-95. Zinner 2526.

*Super Complete with the Supplement & Ten Additional Samples;  
"In Every Way Excellent"*

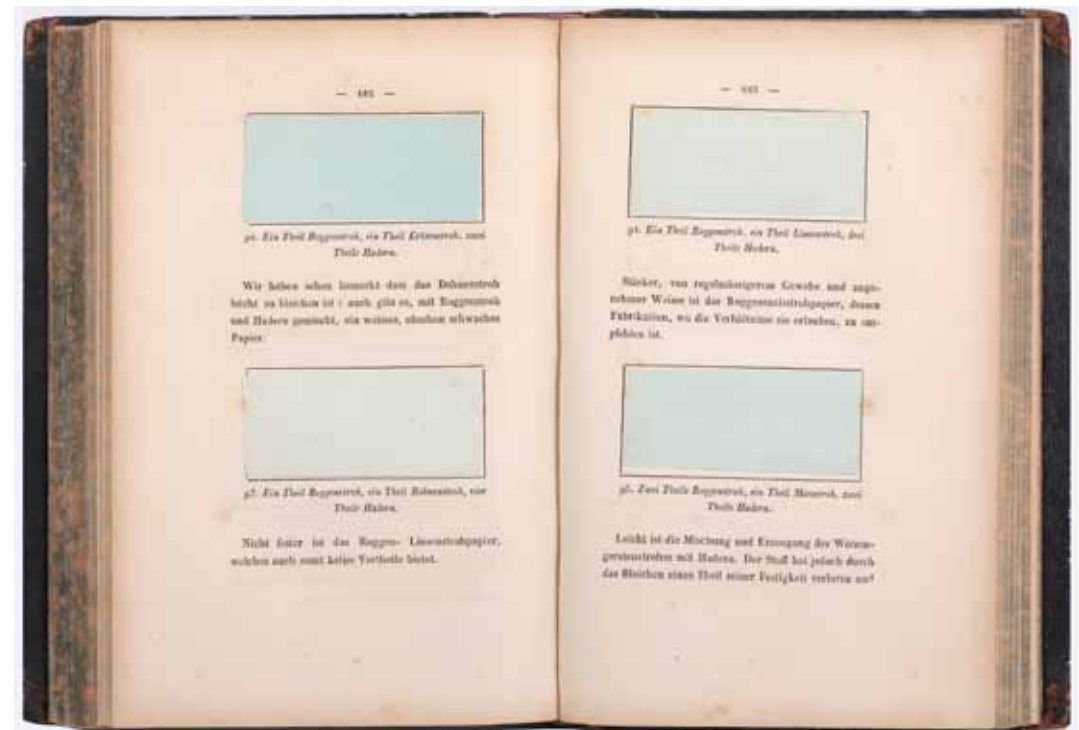
- 67 **PIETTE, LOUIS.** *Die Fabrication des Papieres aus Stroh, Heu, Holz, Brennesseln, Ginster, Baumblaettern, Quecke, Farrenkraut, Maulbeerblaettern, Aloe, Palmen, Spart, Leder, Torf und vielen anderen Substanzen im Grossen nach zahlreichen Versuchen beschrieben und mit 300 Mustern von verschiedenen Papierarten bewiesen, nebst einer Beschreibung der Papierfabrikation im Allgemeinen mit 24 Abbildungen für Fabrikanten und alle Freunde der Fortschritte in Cultur und Industrie.* Zweite sehr vermehrte und verbesserte Auflage. 308 numbered mounted paper samples (a very few slightly chipped, several a little creased) & 24 illus. on eight folding lithographed plates. 4 p.l., vii, xxxi, 229 pp.; 1 p.l., one leaf of errata, 253 pp., one blank leaf. 8vo, cont. half-sheep & cloth (minor browning, offsetting from the samples), flat spines gilt. Cologne: D. Schauberg; Dresden: A. Rudel, "General-Agent der Papierfabrikation in Deutschland"; Paris: "Bureau du Journal des Fabricants de Papier," 1861. \$22,500.00

Second edition, greatly enlarged and improved, of one of the most important and rarest of all papermaking books; I have been looking and waiting for a copy of this book for many years. This is apparently the sixth known copy. The first edition was published in 1838 in one volume with 160 samples only; it is also very rare. Our copy of the second edition also contains the very rare

supplement — pages [249]-253 and ten additional paper specimens — which is not present in the copy at the Deutsches Museum in Munich. Piette's work was the first papermaking manual to be concerned with the chemistry of paper.

As the printed industry outstripped the supply of rags, mills were forced to close down, and rag collecting became a fine art. The increasingly urgent search for new papermaking substances produced a literature all of its own.

In 1827, Piette (1803-62), a native of Belgium, took over the paper making factory started by his father in Dillingen and performed many experiments using different materials to produce various suitable kinds of paper. He operated the mill from 1819 to 1854. The present work is the result of his investigations: it contains 308 mounted samples of paper consisting chiefly of paper made from various kinds of straw (rye, wheat, barley, oats, peas, beans, lentils, and corn), singly or in combination. Some are mixed with hay and/or rags; some are bleached or colored. All the specimens are in fine and fresh condition.

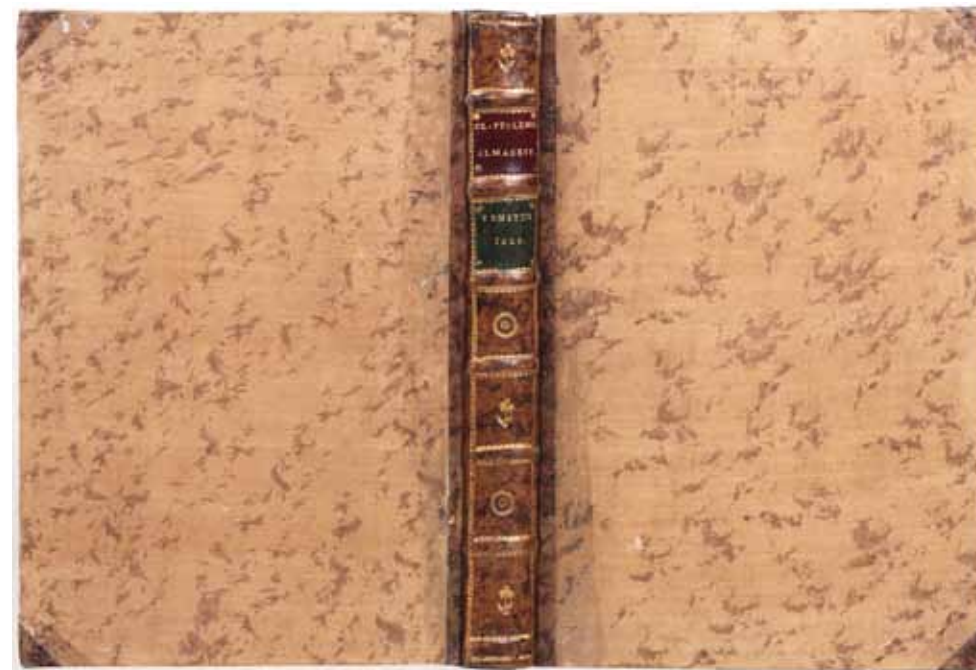


“This work is a natural outgrowth of the first similar one by this author [he is referring to the 1838 edition]. In it he describes the new processes, rotating boilers, etc.; he also introduces an account of new paper materials and correctly enlarges upon old one. This part of the work alone is in every way excellent. But the highest merit lies in its illustrations by specimens. Of these there are more than three hundred. And by leaving out different degrees of bleaching of the same material, and introducing a large number of new substances, the total value is greatly increased. Besides the large number of straw papers, there are a dozen specimens of wood paper. Pine cones, leaves of trees, etc., are represented. Among the new materials we find Jute, Yucca, Pisang, Palmetto, Aloe, and others. Finally, there are fourteen specimens of paper made from leather, either without addition or with various additions of different materials. It is needless to dwell upon the value of this book to the paper maker.”—Ringwalt, *American Encyclopaedia of Printing*, p. 351.

“Louis Piette followed in the footsteps of noted papermaking researchers of the 18th century . . . These early attempts, however, were not as successful as the finished papers made by Louis Piette. The significance of Piette’s investigations is very simple: his papers made from straw remain clean and almost as pliable as comparable papers made from rag . . . Piette’s papers, moreover, really are straw papers, without mixing in small amounts of flax fibers. Piette’s experiments showed a great understanding of papermaking from a production standpoint, and, with the increase use of the fourdrinier machine, his work led directly into the use of esparto grass prior to the discovery of chemical bleaching for soft- and hardwood paper manufacture . . . By the 1860’s, the age of modern machine papermaking was at hand, and Piette’s earlier papermaking experiment showed how well he understood the future of papermaking.”—*The Paper Trail. Quarterly Newsletter of the Robert C. Williams American Museum of Papermaking* (Vol. 2, Nos. 1 & 2, January- March & April-June 2004).

The folding lithographed plates depict papermaking machinery and the fibers of various plants.

Very good copy. According to WorldCat, the other copies are located at Dublin, the Deutsches Museum (lacking the supplement and additional specimens), the University of Pennsylvania, Melbourne, and Leipzig. I do not know if these other recorded copies have the supplement and additional specimens.



*The First Translation of the Almagest from the Original Greek; The Riccati Family Copy*

- 68 **PTOLEMAEUS, CLAUDIUS.** *Almagestum seu Magnae Constructionis Mathematicae opus plane divinum Latina donatum lingua ab Georgio Trapezuntio . . . per Luca Gauricum . . . recognitum . . .* Printer’s device in red on title & numerous woodcut diagrams in the text. Title printed in red & black. 6 p.l., 143 numbered leaves. Folio, most attractive early 18th-cent. mottled half-sheep & mottled boards (head of spine a bit worn, title a little browned), spine gilt, red & green morocco lettering pieces on spine. Venice: L. Giunta, 1528. \$50,000.00

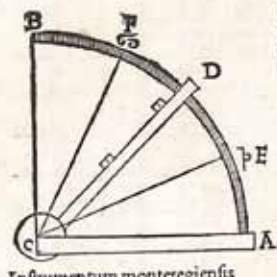
First edition of the first translation of the Almagest from the original Greek. Previously Ptolemy’s great astronomical text was available only in the 12th-century translation of Gherardo da Cremona from an Arabic translation (1st ed.: 1515). The present translation was made directly from the Greek in 1451 by George of Trebizond, using a manuscript in the Vatican; this transla-



Distansiam duorum tropicorum instrumenti artificis deprehendere



**I**CIGITVR quãtitate linearum circuli exposita. Primo demõstrandum est, ut diximus: quantum obliquus circulus qui per medium signorum intelligitur, ab æquinoctiali declinat, id est quia circulus (quod utroqueq; distans) circulos Polos maximus describit, pportione habet ad eum Arcu q est eius portio inter utroq; in tenacis. Cui æquali spatio æquinoctiale puctu ab utroq; solstitiali distare pspiciunt. Hoc autẽ nobis organice huiusmodi simplici fabricatiõne instrumenti cõprehendet. **C**irculũ enim Aereũ magnitudine mediocriter exquisitè tomari & superficie quadratã faciemus (quorũ mensura nuncur) Sed prius ipsum in .760. maximi circuli suppositas portiones diuidemus, singulas i quorũq; partes possibile sit. **C** Deinde alterẽ subliorẽ circumẽ, sub p̄dicto coaptabimus: ut eoni latera in una superficie maneat: circuloq; q; sine quodimẽto minor circulus sub maiore ad septentrionẽ atq; meridie in eadẽ superficie sit: Ad demũq; in duabus qbus suis diametraliter oppositis in minori circulo portionibus in altero laterũ æquales paruasq; regulas: quæ tũ ad seipsas tũ ad circulos eentriũ exquisitè declinent: apponemusq; in medio latitudinis ipsoq; tenuiorẽ las siue regulas quæ maioris distansq; circuli lanus attingat. **Q**uẽ turo ad simpliciũ coaptabimus: statũtesq; in sereno super medio crete substetaculũ in partibus æquali ad horizontis planitiẽ substetaculũ ba sim observabimus: ut circulosq; planities ad horizontis quẽ planitiẽ recta sit ad meridiani utroq; distans: quorum p̄mo p̄p̄diculo iueniẽt a pucto futuro in vertice susp̄sõlo observatoq; donec ex duabus suppositoq; ad oppositũ diametraliter puctũ faciat declinationẽ. **A**lterẽ meridie linea quæ sub planitie substetaculũ eẽ certo signo notata. Circulũq; obliquũ cõstitis donec planities eorũ eq distare lineæ pspiciat. Ita igit p̄posito ad septentrionẽ meridie solis accessũ observabimus: interiorẽ circulum i meridiebus transierit: usq; tota inferior regula a tota supiori fuerit inũbrata, quo factõ extremitates ipse nobis significabit quot portionibus solis cẽtri in meridiano a vertice in die illi bit. **C** Sed illa etiã cõmodiore observatiõne usi sumus. **C** Laterẽ, p circuli laterũ uel ligneũ quadratum & inuolubile i medio cõlatitudine atq; altitudine. Vt firmo maneat fabricati sumusq; alterẽ laterũ planũ exacte ac extẽsum habet. In quo tẽ ad unũ angulos capimus. **Q**uantiq; circuli partẽ signauimus cõsumimusq; inter oẽs a cẽtro ad descripũ arcũ quæ sub quarta circuli pte rectũ angulũ cõstitet, ipse arcum in .90. sibi gradus diuisimus. **P**ost hæc i una linea recta quæ ad ortũs p̄titiẽ recta futura erat: & situm ad meridiẽ habitũ duos rectos & æqles undique lindos puulos: similiterq; tomatos coaptauimus. **A**lterẽ in ipso cẽtro & in ipso: dio exq̄siti sumusq; alterẽ ad inferiorẽ lineæ terminũ. **E**nḡtesq; descripũ hoc laterũ terculi iuxta meridianã lineã in subiecta planitie ita p̄actũ, ut ipsam quoq; ad nitiẽ meridiani æq̄distatẽ habeat situm & p̄p̄diculo p̄ cylindros in declinatã: et i q; p̄p̄sõs ad ortũs planitiẽ lineam diligenter cõprehēdentes. **S**uppositũ e busdã subliabusq; bõs directio ut oportet febat factã a cylindulo q ad cẽtriũ est. **V**mbriã in meridiẽbus similiter observabamus. nõ nihil ad descripã circuliã ut certius locus ipsius tenere apponẽtes. **H**uius umbræ medio signato portio arcus in ipsa circuli parte capimus quæ portio solis progressum secũdũ latitudinẽ meridianõ signifiãuit: his observatiõibus ac maxime illis quas in multis nem̄ ipsũ solstitialibus diebus examinauimus. **C**ũ designatio semp a pucto uerticis incipiat æquales, eas deniq; meridiani circuli partes tã hiernalibus q in estiuũs huius cõprehendimus arcũ qui est a boreali extremo termino ad australẽ similiter mũ inter tropicos graduũ semp esse. **47**. & portiois maioris quidẽ duabus tertio Minonũ uero q̄ medietate simul & quarta unde eadẽ ferme portio nobis cõstitẽt ei quã Eratosthenes reperit quaq; Hyparcus et usus e. **N**ã circiferẽtia quæ huius solstitialia pucta est: u. p̄ximã talũ portionum sit qualium est meridianus. **S**ed hæc p̄posita obseruatione habitatiõnũ quoq; declinationes in qbuscũq; obseruatiões fiant facile inueniunt. **S**i capemus tum punctum quod inter duos terminos in ipso æquinoctiali necessario sitũ arcum qui inter hoc & puctum uerticis distans arcus æqualis scilicet est illi quo poli distans ab horizonte.



Instrumentum monteregienũ

C	m
47	41 40

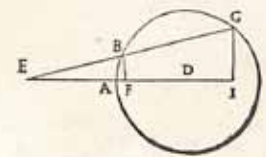
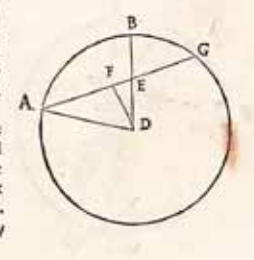
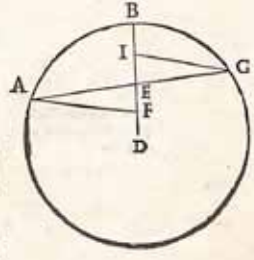
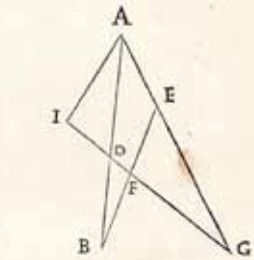
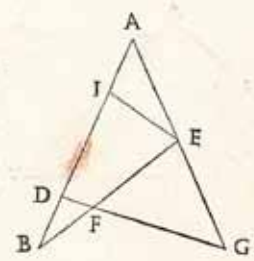
Eratosthenes Hyparcus

Theorema

Theorematũ quæ ad sphericã demonstratiõnes p̄mittuntur. Et ipsa figura sectõis sphericã. Cap. XII.



**V**NC CVM sequat ut p̄ticularẽ magnitudines eorũ arcũ demõstramus (qui inter æquinoctialẽ & circuli q p̄ mediũ signorũ est. **I**nteruent) circulos: illosq; maximi p polos æquinoctialis designantur. **P**auca breuiter: utiliaq; theorematã p̄ponemus. **Q**uibus plurimas parte demonstratiõnes eorũ quæ sphericẽ cõsideratiõnẽq; simplicissime atq; artificiosissime faciemus. **C** Protinãmus ergo duas lineas. **A. B. & A. C.** **D**uxq; lineas. **B. E. & C. D.** protinã alterã alterã in puncto. **F.** secet. **Dico q. C. A.** lineæ ad **A. E.** lineã pportio cõponit ex pportioibus. **C. D.** ad **D. F.** & **F. B.** ad **B. E.** **P**rotinã hæc eni a pucto. **E.** lineæ **E. I.** æq̄distans lineæ. **C. D.** Cũ ergo æq̄distans. **C. D.** & **E. I.** lineæ sint: pportio. **C. A.** lineæ ad **A. E.** lineã eadẽ est pportio. **C. D.** ad **E. I.** **D**efens autẽ. **F. D.** **P**roportio igitur. **C. D.** ad **E. I.** lineã composita est ex pportione. **C. D.** ad **D. F.** & **D. F.** ad **E. I.** **Q**uare pportio etiã lineæ. **C. A.** ad **A. E.** cõposita est ex pportioibus lineã. **C. D.** ad **D. F.** & **D. F.** ad **E. I.** **E**st autẽ etiã pportio lineæ. **D. F.** ad **E. I.** eadẽ pportio. **F. B.** ad **B. E.** cũ æq̄distans rursũ sint. **E. I.** & **F. D.** lineæ. **P**roportio ergo. **C. A.** lineæ ad **A. E.** cõposita est ex pportioibus lineã. **C. D.** ad **D. F.** & **F. B.** ad **B. E.** quod erat demonstrandum. **C** hoc dẽ modo demonstrabitur. **Q**uia etiã diuisõdo pportio. **C. E.** lineæ ad **E. A.** lineã componitur ex pportioibus. **C. F.** ad **F. D.** & **D. B.** ad **B. A.** ducta a pucto. **A.** æq̄distans ad lineã. **E. B.** p̄ductã ad ipsã lineã. **C. D. I.** **C** Rursũ eni qm̄. **A. I.** & **E. F.** æq̄distans sunt: eni sicut. **C. E.** ad **E. A.** sic. **C. F.** ad **F. I.** sed. **F. D.** assumpta deforis eni. **G. F.** lineæ pportio ad **F. I.** **C**õposita ex pportioibus lineã. **C. F.** ad **F. D.** & **D. F.** ad **F. I.** **E**st autẽ pportio. **D. F.** ad **F. I.** eadẽ pportio. **D. B.** ad **B. A.** qm̄ in. **A. I.** & **F. B.** æq̄distans lineæ. **B. A.** & **F. I.** lineæ incidentũ **Q**uare pportio lineæ. **C. F.** ad **F. I.** ex pportioibus lineã. **C. F.** ad **D. F.** & **D. B.** ad **B. A.** cõstitã est. **S**ed pportio. **C. F.** lineæ ad **F. I.** eadẽ est pportio lineæ. **C. E.** ad **E. A.** eni ergo pportio lineæ. **C. E.** ad **E. A.** **C**õposita ex pportioibus lineã. **C. F.** ad **F. D.** & **D. B.** ad **B. A.** quod erat demonstrandum. **C** Sit rursũ circulus. **A. B. C.** cuius cẽtri. **D.** & accipiãtur quæ uis tria pucta in circiferẽtia eius sint: ipsã. **A. B. C.** Ita tamẽ ut uterq; arcus. **A. B.** & **B. C.** minor semi-circulo sit. **Q**uod in accipiẽdis etiã deinceps arcibus similiter eni intelligẽdũ p̄t̄ hanturq;. **A. C.** & **D. E.** **B.** lineã dico q; sicut se habet quæ duplũ arcus. **A. B.** subten dit ad eã q; subdẽdit duplũ arcus. **A. B.** sic se habet. **A. E.** lineã ad **E. C.** lineã. **D**eductũ tũ eni. **A. F.** & **C. I.** ppendiculares a puctis. **A. & C.** ad **D. B.** lineã. **Q**uonia ergo. **A. F.** & **C. I.** æq̄distans sunt: & in ipsã. **A. E. C.** lineã incidit: sic est. **A. F.** ad **C. I.** sicut. **A. E.** ad **E. C.** **S**ed pportio. **A. F.** ad **C. I.** eadẽ est pportio lineæ q; est sub arcu duplo **A. B.** partis circiferẽtiæ ad eã q; est sub dupla. **B. C.** **D**imidia eni eũtaq; utriusq;. **Q**uare pportio etiã. **A. E.** lineæ ad **E. C.** eadẽ est pportio eius q; est sub duplo ipsius arcus. **A. B.** ad eadẽ quæ est sub duplo. **B. C.** quod erat demonstrandum. **C** Hinc sequitur si. **A. C.** **T**otus arcus & pportio chordæ quæ est sub duplo ipsius. **A. B.** ad eã quæ est sub duplo arcus. **B. C.** dabitur: uterq; arcus etiam. **A. B.** & **B. C.** dabitur. **E**adẽ eni descripiõne pposita cõiungat. **A. D.** & a pucto. **D.** ppendiculariã. **D. F.** ad **A. E.** **C.** lineã deductã: quod ergo. **A. B. C.** arcu dato angulus etiã. **A. D. F.** quo meridietas eius subdẽditur: & ipse totus triangulus. **A. D. F.** datus eni: & p̄spiciuntur est qm̄. **A. C.** tota linea data suppositũ est pportionem. **A. E.** ad **E. C.** eadẽ esse. **A. E.** data & reliqua. **F. E.** similiter: quia propter data etiam. **D. F.** angulus quoq;. **E. D. F.** orthogonũ trianguli. **E. D. F.** dabitur totus etiam angulus. **A. D. B.** similiter: quare. **A. B.** quoq; arcus dabitur: & reliquis. **B. C.** similiter. **C** Sit rursũ circulus. **A. B. C.** super cẽtrum. **D.** accipiãturq; in circiferẽtia eius pucta tria q; sint. **A. B. C.** ita ut uterq; arcus. **A. B.** & **A. C.** minor sit semi-circulo: quod similiter & de arcibus deinceps accipiẽdis intelligẽdũ est. **P**ostea. **D. A.** & **C. B.** ductæ p̄t̄rahãtur quousq; coincidunt in pucto. **E.** **Dico q;** sicut se habet chorda q; subdẽdit duplũ arcus. **C. A.** ad eã quæ est sub duplo arcus. **A. B.** sic se habet lineã. **G. E.** ad **E. B.** **N**ã si ut in p̄cedenti a punctis. **B. & C.** p̄p̄dicũ laterẽ. **B. F.** & **C. I.** ad lineã. **D. A.** de **b**





tion was edited for publication by Luca Gaurico. The original Greek text was not published until 1538. The *Almagest* was the foundation of ancient astronomy and a work as influential as the *Elements* of Euclid.

“Ptolemy’s chief work in astronomy, and the book on which his later reputation mainly rests, is the *Almagest* . . . It is a manual covering the whole of mathematical astronomy as the ancients conceived it . . . the *Almagest* is a masterpiece of clarity and method, superior to any ancient scientific textbook and with few peers from any period.”—*D.S.B.*, XI, pp. 187 & 196.

“Among the instruments mentioned or described in the *Almagest* are the equatorial armillary for determining the equinoxes at Alexandria; the plinth and the meridional armillary for determining the midday and meridian altitude of the sun; the triquetrum for measuring meridian transits of the moon or fixed stars; and the armillary astrolabon.”—Stillwell 97.

A very fine and crisp copy with the early 18th-century bookplate of “Co. Riccati.” This was the noble Riccati family which held land near Venice. The family produced two prominent scientists: Jacopo Francesco (1676-1754) and his second son Vincenzo (1707-75). They both made important contributions to mathematics (see *D.S.B.*, XI, pp. 399-402).

☞ Sparrow, *Milestones of Science*, 167.

### *A Lovely Copy in Richly Gilt Contemporary Red Morocco*

- 69 **RAY, JOHN.** *Miscellaneous Discourses concerning the Dissolution and Changes of the World. Wherein the Primitive Chaos and Creation, the General Deluge, Fountains, Formed Stones, Sea-Shells found in the Earth, Subterraneous Trees, Mountains, Earthquakes, Volcanoes, the Universal Conflagration and Future State, are largely Discussed and Examined.* Title within ruled border. 14 p.l., 259, [1] pp. 8vo, cont. red morocco (joints a trifle rubbed), covers gilt tooled in a panel design with roll-tooled flowers around the central panel, scroll-work tools outside outer panel, and the royal cipher of William and Mary stamped in the four corners, spine gilt with repeated royal cipher in compartments, a.e.g. London: S. Smith, 1692. \$15,000.00

First edition, and a splendid copy in richly gilt contemporary red morocco, of one of Ray’s most important paleontological and geological works, which displays his considerable knowledge of the subjects. “During much of

the 1690s Ray was engaged in correspondence with Edward Lhwyd and others about the nature of fossils. In general he was inclined to accept that they were the remains of once-living creatures, and he also suggested that their current distribution might owe something to observable changes in the nature of the surface of the earth. He qualified these opinions, however, by stressing that the fossils which had so far been discovered were not unlike known plants and animals, and that their burial might owe something to the action of the biblical flood, as well as to natural effects. He argued that those remains which seemed to be unfamiliar might represent species of which the surviving representatives had not yet been discovered. Although fossils were mentioned in the preface to his *Synopsis* (1690), his fullest treatment of them was in *Miscellaneous Discourses Concerning the Dissolution and Changes of the World* (1692).”—*ODNB*.

A very fine and fresh copy and just about the nicest copy you will ever see. Signature of August Maitland on front flyleaf dated 9 January 1795, and again on title. Signature on title of A.C. Stirling, dated 1855. Inscription on free front endpaper of Helen M. Everard, the gift of her mother in 1865.

☞ *D.S.B.*, XI, pp. 313-18.



### One of His Rarest Books

- 70 **RITTER, JOHANN WILHELM.** *Die Physik als Kunst. Ein Versuch, die Tendenz der Physik aus ihrer Geschichte zu deuten. Zur Stiftungsfeyer der Königlich-baierischen Akademie der Wissenschaften am 28sten März 1806.* 1 p.l., 62 pp. 8vo, modern decorated boards (minor foxing). Munich: J. Lindauer, 1806. \$3500.00

First edition; this is one of the author's rarest works. Ritter (1776-1810), who tragically died at a young age, discovered ultra-violet light, gave the earliest account of the decomposition of water by an electric current, and was the first to construct an electrical accumulator.

This is the first scientific work written by Ritter while under the influence of *Naturphilosophie* which had become prevalent in several German intellectual centers, including Munich.

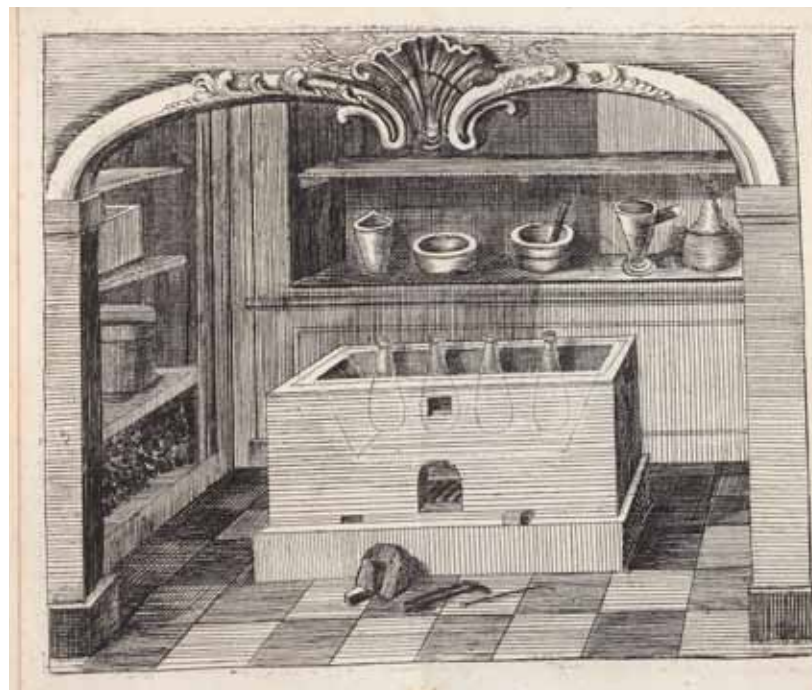
Fine copy.

☞ *D.S.B.*, XI, pp. 473-75. Poggendorff, II, 652-53.

### Cinnabar as a Pigment

- 71 **[ROST, CARL WILHELM FELIX, EDITOR & AUTHOR].** *Confirmirter und Concentrirter Chymischer Zinnober-Particular-Zeiger, das ist: Mit vieler Klarheit und Deutlichkeit beschriebene Grund-Vorthelle zu einer profitablen Kunst-Arbeit aus der höhern Gold- und Silber- Probier- Schmelz- und Scheidekunst; Wie nemlich mit und durch Zinnober, alle Metalla und fast alle Mineralia so zu bearbeiten, dass sie hernachmals eine reiche Gold- oder Silber-Scheidung geben, und allen geringen Verlag und Aufwand, mit reichlichen Interesse ersetzen . . .* Entworfen von C.W.F.R.M. & C.A. Double-page engraved frontis. 1 p.l., 144 pp. 8vo, cont. half-sheep & speckled boards, spine gilt, leather lettering piece on spine. Nuremberg: C. Riegel's Widow, 1760. \$3500.00

First edition of this very rare expansion of and commentary on the *Chymischer Alchymistischer Particular-Zeiger* (1726). While our text has its alchemical side, much of the work deals with the refining and uses of cinnabar as a red pigment and for decorating jewelry, Chinese lacquerware, and other ornaments. There are a number of highly detailed metallurgical recipes.



The attractive double-page frontispiece depicts a fully equipped chemical laboratory.

☞ See Ferguson, II, p. 129.

### “A Milestone Work on Metallurgical Chemistry”

- 72 **ROVENZON, JOHN.** *A Treatise of Metallica. But not that which was published by Mr. Simon Sturtevant vpon his Patent, which is now by order cancelled and made voyd, by reason of his standing out-lawed at the time of the grant, and so still continuing, and his neglect, and not performance of the workes. Whereupon Priviledge, by Patent, is granted by the Kings most excellent Maiesty, to Iohn Rovenzon, Esquire, for the making of Iron, and other Mettals and Materials with Sea-cole, Pit-cole, &c. for one and thirty yeares. According to which Patent and direction therein, this Treatise, composed by the same Iohn Rovenzon, is published in Print before the end of Easter Tearme, viz. the 15 of May. 1613.*



3

A  
TREATISE OF  
METALLICA.

BVT NOT THAT WHICH WAS  
published by Mr. SIMON STURTEVANT vpon  
his Patent, which is now by order cancelled and made  
voyd, by reason of his standing out-lawed at the  
time of the grant, and so still continuing,  
*and his neglect, and not performance  
of the workes.*

WHEREVON PRIVILEGE, BY  
Patent, is granted by the Kings most excellent Ma-  
iesty, to JOHN ROVENZON, Esquire, for the making  
of Iron, and other Mettals and Materials with Sea-  
cole, Pit-cole, &c. for one and thirty yeares. Accord-  
ing to which Patent and direction therein, this  
Treatise, composed by the same JOHN RO-  
VENZON, is published in Print before  
the end of Easter Tearme, viz. the  
15 of May. 1613.

*And containeth a briefe Explanation, Demonstration, or Dis-  
covery of the Inventions priviledged, and the meanes, Instru-  
ments, Engines, Furnaces, &c. with the materials, things, and  
workes to be made by the said Fewels.*

*The charge of an Iron-worke to worke with Sea-cole, is  
set downe in the latter end of this Booke.*

---

LONDON.  
Printed for THOMAS THORP. 1613.

*Cum Privilegio.*

*And containeth a briefe Explanation, Demonstration, or Discouery of the Inven-  
tions priviledged, and the meanes, Instruments, Engines, Furnaces, &c. with the  
materials, things, and workes to be made by the said Fewels. The charge of an  
Iron-worke to worke with Sea-cole, is set downe in the latter end of this Booke.*  
[15] leaves (lacking the first blank but with the final blank leaf). Small 4to,  
early 20th-cent. vellum over boards. London : Printed [by N. Okes] for  
Thomas Thorp, 1613. \$18,500.00

First edition and an extremely rare book. This text was reprinted along with  
Simon Sturtevant's *Metallica* (1612) and Dud Dudley's *Metallum Martis* (1665) in  
1854. This is "the earliest work to describe the successful smelting of iron and  
other metals with coal rather than with charcoal made from wood... Extremely  
rare. A milestone work on metallurgical chemistry."—Neville, II, p. 401.

"The problem of expanding the manufacture of iron in the British Isles  
after about 1600 came to be bound up with the replacement of wood by coal  
in the furnaces and the forges at which pig iron was converted into bar iron...  
How, then, did the conquest by coal of the smelting-processes in Great Brit-  
ain come about? Two men claimed to have solved the problem of substituting  
coals for charcoal as fuel in the blast-furnaces at which iron ore was smelted  
and run into moulds, at the very beginning of the seventeenth century. Simon  
Sturtevant, who was apparently of Dutch origin, and John Rovenzon pub-  
lished treatises on metallurgy in 1612 and 1613 advocating the adoption of  
coal-burning blast furnaces, which they suggest are feasible though they fail  
to describe the processes that they profess to have invented to bring it about."—  
Singer et al., eds., *A History of Technology*, Vol. III, pp. 78-79.

Sturtevant was issued a patent in 1611 for his proposal to use coal instead  
of wood or charcoals in smelting iron and other metals. But in a few months,  
the grant was withdrawn and another issued in its place to John Rovenzon, an  
assistant to Sturtevant. Rovenzon's *A Treatise of Metallica* "shows that he had  
a true conception of the method of manufacture."—Samuel Smiles, *Industrial  
Biography*, Chapter 3.

A fine copy. The Huth (with bookplate) — William Augustus White (his  
signature dated 23 Sept. 1918) — Harrison D. Horblit (with bookplate) copy.

✎ Duveen, p. 183—(1854 reprint only). Hoover 697—(1854 reprint only). Partington, II,  
p. 61.



*The Eye and Knowledge*

- 73 **SARTI, CRISTOFANO.** *L'Ottica della Natura e dell'Educazione indirizzata a risolvere il Famoso Problema di Molineux. . .* Engraved frontis. xvi, 227 pp.; 48 pp. 8vo, cont. half-vellum & decorated boards (light browning which is usual for this book).. Lucca: F. Bonsignori, 1792. \$2500.00

First edition and quite scarce. Sarti, a professor at the University of Pisa, discusses the concepts of William Cheselden, George Berkeley, Molyneux, Condillac, and d'Alembert regarding the anatomy and working of the eye, vision in general, the psychology and theory of knowledge, and the education of the blind. The famous problem of Molyneux referred to on the title is that of the power of a man born blind, having gained the ability to see, to distinguish objects by sight.

The charming frontispiece illustrates a blind man distinguishing different shapes by touch.

Fine copy, which contains the rare "Appendice" of 48 pages. This is not noted by Riccardi.



☞ Riccardi, II, Supp. V, 148. Becker Cat. 325.1—"An Italian scientist's answer to a famous question attributed first to William Molineux (*Dioptrica nova*, 1692), that is, whether or not a person born blind but suddenly having gained vision (e.g., by cataract operation) would be able to recognize different shapes of objects by sight without touching the objects. The

question was examined by many philosophers of the eighteenth century, but also practically by ophthalmologists who had gained personal experience in that field. A whole literature exists on this topic' (Hirschberg \$455)."

*A Collection of Books by Franz von Paula Schrank (1747-1835)*

Schrank, named after Saint Francis of Paola, was born at Vornbach am Inn, in Lower Bavaria. His father was a lawyer and his mother a lawyer's daughter. After initial instruction by his parents, Franz attended the Jesuit school at Passau, joining the order in 1762. He spent the next two years as a novice in Vienna and Hungary. While studying theology, philosophy and ancient philology, he also became fascinated by mathematics, physics, astronomy, and natural history. He had hoped to be sent to India or America as a missionary, but due to his ill health, the General of the Jesuit Order Laurentius Ricci refused to let him go, instead assigning Schrank to teach at the Jesuit school in Linz. When the Jesuit Order was suppressed in 1773, Schrank returned to Passau. The following year, he was appointed subdeacon at Passau before being ordained as a priest. He received his doctorate in 1776.

That same year Schrank was appointed professor of physics and mathematics at the Amberg lyceum; three years later, he was made professor of rhetoric at Burghausen. Transferred to the University of Ingolstadt as professor of agriculture in 1784, he taught forestry, mining, botany, and zoology. In 1785, together with Karl Ehrenbert von Moll, Schrank published the *Naturhistorische Briefe über Österreich, Salzburg, Passau und Berchtesgaden* in two volumes, his first book of travels with a scientific theme. The same year saw the appearance of his *Anfangsgründe der Botanik*, followed in 1786 by the *Baiersche Reise*, the result of a botanical field trip through Upper Bavaria taken in 1784.

Schrank's two-volume *Baiersche Flora* of 1789 is the first complete account of Bavaria's flora. In 1793, Schrank published his *Reise nach den südlichen Gebirgen von Bayern*, his account of a trip he had undertaken in 1788 at the behest of the Bavarian Academy of Sciences. After Ingolstadt university was relocated to Landshut in 1800, Schrank taught botany in that city — one of his pupils was Bavaria's future king, Ludwig I. Relocated to Munich in 1809, he was appointed director of the Botanical Gardens founded that year. Schrank gave scientific botany a firm foothold in Bavaria and garnered international acclaim through his writings which, including articles, number about 200. He may be considered one of Bavaria's premier natural historians, and his travel books provided valuable source material for Bavaria's local history. His excellent descriptions of flora were distinguished for the originality, clear presentation, and logical classification.

Acting several times as rector during the years of his professorship at Ingolstadt and Landshut, he was obliged on many occasions to defend the interests of the university during the French and Austrian occupations.

Criticized for choosing to plant a botanical garden in Munich of all places — at an altitude of over 500 meters, with a harsh climate and with not very fertile soil — Schrank remarked: “One would be well advised not to reason about things one knows nothing about.” As Stafleu & Cowan, in their *Taxonomic Literature*, Vol. 5, p. 325, point out: “The present glorious state of the garden bears out Schrank’s early and wise judgment.” Under his administration, the garden became one of the richest in Germany.

Franz von Paula Schrank, who took Linnaeus’ travels for the study of natural history as his model, was highly esteemed during his lifetime and received many public marks of honor and distinction. He corresponded extensively with naturalists worldwide, and administered the specimen collections entrusted to him by fellow botanists like Carl Friedrich Philipp von Martius, the renowned explorer of Brazil. Schrank died in Munich on 22 December 1835.



of the area, the monasteries, local customs, etc. The twelfth letter contains a learned account of Bavarian incunabula (with a series of woodcut reproductions of watermarks) and a description of the library of Kloster Steingaden. He also describes the library, natural history, and medal collections present in Munich.

Good copy of a very scarce book.

☞ Stafleu & Cowan 11106.

- 74 **SCHRANK, FRANZ VON PAULA.** *Enumeratio Insectorum Austriae indigenorum.* Four folding engraved plates (somewhat dampstained). 12 p.l., 548 pp., one leaf of errata & one leaf of publishers’ ads. 8vo, cont. boards (rubbed), black leather lettering piece on spine. Vienna: E. Klett & Franck, 1781. \$1950.00

First edition of one of Schrank’s earliest books and what I believe is the first general survey of the indigenous insects of Austria.

Fine copy.

- 74A **SCHRANK.** *Baierische Reise.* Engraved frontis. port. of the author, two folding engraved plates (numbered “I” and “III”), & two folding printed tables. 7 p.l., 276 pp., one leaf of errata. 8vo, cont. speckled boards (spine worn). Munich: J.B. Strobl, 1786. \$2250.00

First edition of this rare epistolary account of Schrank’s scientific field trip throughout Bavaria in 1784 and 1785. While Schrank devotes a good portion of the text to botanical observations, he also provides descriptions of the towns and cities visited, the geology and most remarkable natural features

- 75 **SCHRANK.** *Baierische Flora.* Engraved allegorical frontis. & engraved vignettes on titles. 2 p.l. (incl. frontis.), 753 pp.; 670, [34] pp. Two vols. 8vo, cont. half-sheep & speckled boards (some occasional foxing). Munich: J.B. Strobl, 1789. \$2750.00

First edition of the first definitive account of the flora of Bavaria; it is one of the most important works by the author. His excellent descriptions of the flora are distinguished by their originality, clear presentation, and logical classification.

Very fine set.

☞ Pritzel 8384. Stafleu & Cowan 11107.



- 76 **SCHRANK, ED.** *Abhandlungen einer Privatgesellschaft von Naturforschern und Oekonomen in Oberdeutschland ... Erster Band* [all published]. Engraved folding frontis. & five folding engraved plates. xv, [1], 339 pp. 8vo, orig. grey boards, red leather lettering piece on spine. Munich: J. Lindauer, 1792. \$2500.00

First edition of this collection of sixteen monographs of scientific, natural historical, and practical articles written by the members of a private scientific society established at Ingolstadt, of which Schrank was the informal leader. The authors include Schrank (six essays on ornithology, botany, and geology); Joseph Bernhard Haim, a mining official at Salzburg (chemical and mineralogical observations); Johann Evangelist Helfenzrieder, professor of mathematics at Ingolstadt (on aeronautics and lightning rods); Matthias Brunswiser, physician at Burghausen (on city cemeteries); Kaspar Melchior Balthasar Schroll, professor of mining at Salzburg (on a new kind of oven); and Franz Seraphim Zallinger zum Thurn, professor of physics at Innsbruck (on advancements in cartography).

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. Scarce.

*The Flora Surrounding Salzburg; with an Interesting Letter Laid-in*

- 77 **SCHRANK.** *Primitiae Florae Salisburgensis cum Dissertatione Praevia De Discrimine Plantarum ab Animalibus.* Engraved frontis. silhouette port. of Baron von Moll & two folding engraved plates. xvi, 240 pp. 8vo, cont. grey paste-paper boards (a little rubbed). Frankfurt am Main: Varrent-rapp & Wenner, 1792. \$2950.00

First edition of this scarce book in which Schrank describes the flora found in the area surrounding Salzburg.

Laid-in is an A.L.s from Schrank to the Duke of Bavaria, two pages, Ingolstadt, 12 November 1792. We have furnished a partial translation of this fascinating text which refers to another work by Schrank:

“The fact that I prohibited the publication of my own work may be without precedent, but the end quickly justified the means: the vignette is now placed on the original title sheets printed under my surveillance, the new title sheets have been withdrawn, and the copper plate has been added. I am thus now able to humbly present Your Serene Highness with the enclosed copy, but please bear in mind that the book is still incomplete, and will remain so: the engraver has omitted a number of images which he was unable to place, having etched the plate in octavo that I had drawn in quarto. As these images, in spite of being called for in the text, are of no great consequence, I shall refrain from causing my publisher any further grief. He wishes to have the book appear as soon as possible, and thus, everything remains as it is, including this mistake, which I hope to correct at some future date. My treatise on the kinship of languages found in this book could now be enhanced with a remarkable suffix, for I have received from our current dean, Professor Semer, a little book published at the beginning of this century at Regensburg, whose author very thoroughly expounds how most German words derive from the Hebrew, or from that tongue’s closest relatives; namely, the idiom of the common man in Bavaria is supposedly based on the Syrian. In fact, we have a village with a purely Hebrew name — Mindrachim, the name of which we Germanize only at the end. It literally means: away from, far from the roads, and the lullaby that is sung to all of us has a purely Hebrew beginning: Heji bobajo (be comforted, be of good cheer), only the vowels having been somewhat altered by the nursemaids, which however is of no great consequence in the oriental languages.”

Schrank is quite wrong here. The village is called Mintraching, the suffix





indicating a permanent settlement of Germanic tribes. The title of the German lullaby “Heidschi Bumbeidschi” probably derives from the name of an Ottoman general during the Turkish Wars of the 16th and 17th centuries, who was reputed to abduct Christian children and sell them into slavery back home.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. Scarce.

☞ Pritzel 8385. Stafleu & Cowan 11108.

- 78 **SCHRANK**. *Vom Pflanzenschlafe und von anverwandten Erscheinungen bey Pflanzen*. 55 pp. 8vo, orig. grey boards. Ingolstadt: J.W. Krüll, 1792. \$1350.00

First edition of this uncommon book on plant irritability and movement, phenomena which so interested Linnaeus, Erasmus Darwin, and his grandson Charles Darwin.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria.

☞ Stafleu & Cowan 11109.

- 78A **SCHRANK**. *Reise nach den südlichen Gebirgen von Baiern, in Hinsicht auf botanische, mineralogische, und ökonomische Gegenstände, nebst Nachrichten von den Sitten, der Kleidung, und andern Merkwürdigkeiten der Bewohner dieser Gegenden etc. etc. auf Befehl der kurfürste Akademie der Ulissenschaften unternommen im Jahre 1788*. Engraved vignette on title & one engraved plate. 9 p.l., 418, [10] pp. 8vo, early 19th-cent. boards, blue leather label on spine. Munich: J. Lindauer, 1793. \$1750.00

First edition of Schrank’s account of a trip through the Bavarian Alps undertaken in 1788 at the behest of the Bavarian Academy of Sciences. He describes the botany and mineralogy of the region, economic activities (agriculture and mining), the customs of the residents, their costumes, the most notable topographic features, monasteries and their libraries, dialects, etc.

The engraved vignette on the title depicts two inhabitants of the region in local costumes.

Some foxing but a very good copy. Scarce.

- 79 **SCHRANK**. *Anfangsgründe der Bergwerkskunde*. 4 p.l., 392 pp. 8vo, orig. grey boards. Ingolstadt: J.W. Krüll, 1793. \$2500.00

First edition of an extremely rare book. This is a complete introduction to the industry of mining. There are long sections on the structure of the earth and patterns of ore deposits, mineralogy, methods of tunnelling and extraction of ores, smelting, and industrial relations.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. Scarce. Laid-in is a one-page A.L.s dated 1 September 1793 from Schrank to the Duke of Bavaria presenting this copy.

☞ Poggendorff, II, 841.

- 80 **SCHRANK**. *Von den Nebengefäßen der Pflanzen und ihrem Nutzen*. Three folding engraved plates. 1 p.l., 94 pp. 8vo, orig. grey boards, red leather lettering piece on spine. Ingolstadt: J.J. Gebauer, 1794. \$1500.00

First edition. In this work, Schrank attributes to the hairs of plants the function of absorbing moisture.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria.

☞ Stafleu & Cowan 11112.

- 81 **SCHRANK**. *Naturhistorische und ökonomische Briefe über das Donaumoos*. One folding engraved plate. 4 p.l., 211, [4] pp. 4to, cont. sheep (rather rubbed), spine gilt, contrasting leather lettering piece on spine. Mannheim: Schwan & Götz, 1795. \$1950.00

First edition and very rare. This is Schrank's careful description of the natural history of the Donaumoos (or Donaumoos), a large marsh on the southern side of the Danube, between Ingolstadt and Neuburg. In some places it was covered with low brush wood, in others with moss, but mostly it was overgrown with sour-marsh plants. The Donaumoos was particularly rich in every kind of wildlife. Schrank describes the useful resources of the marsh: peat, certain kinds of plants which could be used to make dyes, timber, etc.

Starting in 1790, the Donaumoos was drained by order of Charles Theodore, Elector of Bavaria (with catastrophic ecological damage which continues to the present day).

Very good copy from the Wittelsbach library of the dukes and kings of Bavaria. Scarce with no copy in the U.S.

☞ Stafleu & Cowan 11113.

- 82 **SCHRANK, ED.** *Sammlung naturhistorischer und physikalischer Aufsätze*. Finely engraved vignette on title & seven folding engraved plates. xvi, 456 pp. 8vo, orig. grey boards. Nuremberg: Raspe, 1796. \$2500.00

First edition of this collection of ten monographs of scientific and natural historical subjects written by several members of a private scientific society established at Ingolstadt, of which Schrank was the informal leader.

Schrank has contributed seven of the articles: an extended critique of Linnaeus' use of color nomenclature, a complete description of the worm *linguatula* (tongue worm), the first publication of four letters by Johann Kepler, a mineralogical description of the area surrounding Kehlheim, and botanical observations.

The other articles are by Joseph Weber, professor at Ingolstadt, on rain, and two articles by Franz Seraphim Zallinger zum Thurn, professor of physics at Innsbruck, on an improved water wheel and other mechanical devices.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. Scarce with no copy in the U.S.

☞ Poggendorff, II, 841. Stafleu & Cowan 11114.





83 **SCHRANK.** *Nachrichten von den Begebenheiten und Schriften berühmter Gelehrten ... Erster Band* [all published]. Engraved vignette on title. xvi, 416 pp. 8vo, orig. grey boards, red leather lettering piece on spine. Nuremberg: Raspe, 1797. \$2950.00

First edition of an extremely rare book; WorldCat locates no copy in the U.S. The present work contains a series of biographical accounts of twenty-one authors including Jacques Barrellier, Linnaeus, Nathanael Gottfried Leske, Fredrik Hasselquist, Simon Pelloutier, and other notable natural historians, scientists, and scholars. Schrank has also provided detailed bibliographies of the writings of each author.

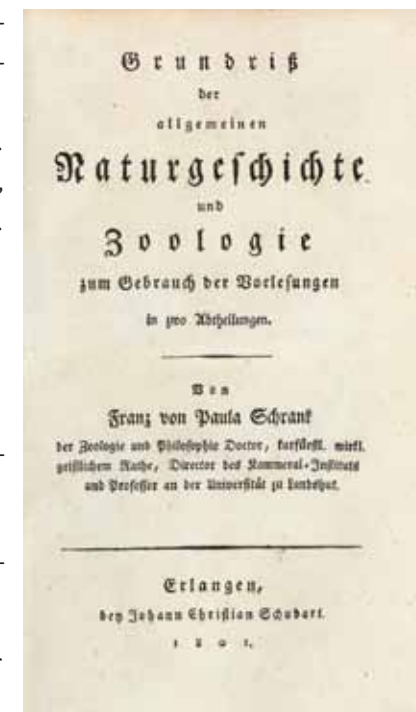
Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. With a one-page A.L.s dated 2 May 1797 from Schrank presenting this copy to the Duke of Bavaria.

☞ Poggendorff, II, 841.

84 **SCHRANK.** *Grundriss der allgemeinen Naturgeschichte und Zoologie zum Gebrauch der Vorlesungen in zwei Abtheilungen.* 412 pp., [4] pp. of publisher's ads & errata. 8vo, orig. grey boards. Erlangen: J.C. Schubart, 1801. \$3000.00

First edition of an uncommon book; WorldCat locates no copy in the U.S. Devoted to natural history and zoology, this is one of Schrank's textbooks written for university students.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. With a long three-page A.L.s dated 25 April 1801 from Schrank presenting this copy to the Duke of Bavaria.







- 85 **SCHRANK**. *Briefe naturhistorischen, physikalischen und ökonomischen Inhaltes an Herrn Bernhard Sebastian Naus ... Nebst drey vorausgeschichten naturhistorischen Abhandlungen*. Four folding engraved plates. 2 p.l., 384 pp. 8vo, orig. grey boards. Erlangen: J.C. Schubart, 1802. \$3000.00

First edition and very scarce; WorldCat locates no copy in the U.S. Nau (1766-1845), a close friend and colleague of Schrank, was professor of natural history and statistics at the University of Mainz and, later, a high government official. He was also conservator of the mineralogical collection at Munich.

In this work, Schrank has collected his letters written to Nau on a great many scientific subjects which range from botany to electricity to mineralogy to geology.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria.

☞ Poggendorff, II, 841. Stafleu & Cowan 11115.

- 86 **SCHRANK**. *Grundriss einer Naturgeschichte der Pflanzen*. 8 p.l., 452, [16] pp. 8vo, orig. semi-stiff blue wrappers, uncut. Erlangen: J.C. Schubart, 1803.

\$3000.00

First edition. This uncommon textbook is Schrank's introduction to plant physiology and botanical anatomy.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria. With a one-page A.L.s dated 24 May 1803 from Schrank presenting this copy to the Duke of Bavaria.

☞ Pritzel 8390. Stafleu & Cowan 11116.

- 87 **SCHRANK**. A collection of twelve offprints. 12 vols. in 11. Many with engraved plates. Large 4to, each self-bound with cont. paste-paper spines, uncut. N.p. (but Munich & Bonn): 1808-23. \$2950.00

A fine collection of offprints, mostly on botanical subjects. The offprints are:

1. "Zwey neue Pflanzengattungen." Pp. 91-98.
2. "Grimaldia, eine neue Pflanzengattung." Three engraved plates. Pp. 99-124.
3. "Ueber die Weise, wie sich Aufgußtierchen bey ihren Bewegungen benehmen." One engraved plate. Pp. 1-40.
4. "Ueber die Sparsamkeit der Formen im Pflanzenreiche." Pp. 51-80.
5. "Ueber die Lebhaftigkeit einiger Pflanzen." Pp. 81-102.
6. "Ueber die Priestleysche Grüne Materie." Pp. 1-30.
7. "Omphalodes." Pp. 217-22.
8. "Ueber die blauen Schatten." Pp. 293-312.
9. "Ueber die Priestleysche Grüne Materie. Zweyte Abhandlung." One engraved plate. Pp. 1-24.
10. "Ueber die wattewebenden Elsenraupen." One folding engraved plate. Pp. 69-88.
11. "Commentatio de rarioribus quibusdam, maximam partem Arabicis, plantis in amplissima Schreberi collectione repertis." Pp. 161-196.
12. "Über die Oscillatorien." 1 p.l., 525-40.

Fine and fresh copies. Rare.

☞ *Catholic Encyclopedia* (on-line). Poggendorff, II, 841.



*Early Botanical Lithography*

88 **SCHRANK**. *Plantae Rariores Horti Academici Monacensis, descriptae et observationibus illustratae* ... 100 lithographed plates, all finely colored by hand, each with an accompanying leaf of explanatory printed text. Ten parts. Folio (530 x 434 mm.), orig. lithographed blue wrappers (upper wrapper of the first part a little foxed), uncut. Munich: "Venditur in Instituto lithographico Scholae festivalis," 1817 [each wrapper so dated]–1819 [from the title-pages present in parts 5 & 6]–[1821]. \$25,000.00

First edition of this magnificent botanical work depicting the new and rare species at the Munich botanical garden. They include a number of Brazilian exotics which had been collected by Carl Friedrich Philipp von Martius during his three year tour of Brazil (1817-20) and sent to his friend Schrank, the first director of the botanical garden at Munich. Thanks to the contributions made by Martius and the efforts of Schrank, the Munich garden, established in 1809, quickly became one of the most important collections of botanical specimens in Germany.

This is certainly one of the most ambitious botanical works to employ the new technology of lithography. The one hundred large plates are very beautifully lithographed and delicately hand-colored.

Very fine set in original condition from the Wittelsbach library of the dukes and kings of Bavaria. Like the de Belder set, this copy has title-pages for parts five and six only. I suspect that only these two were issued. Preserved in a box.

➤ Nissen 1804. Pritzel 8392. Stafleu & Cowan 11,120–(giving the dates as 1817–21).



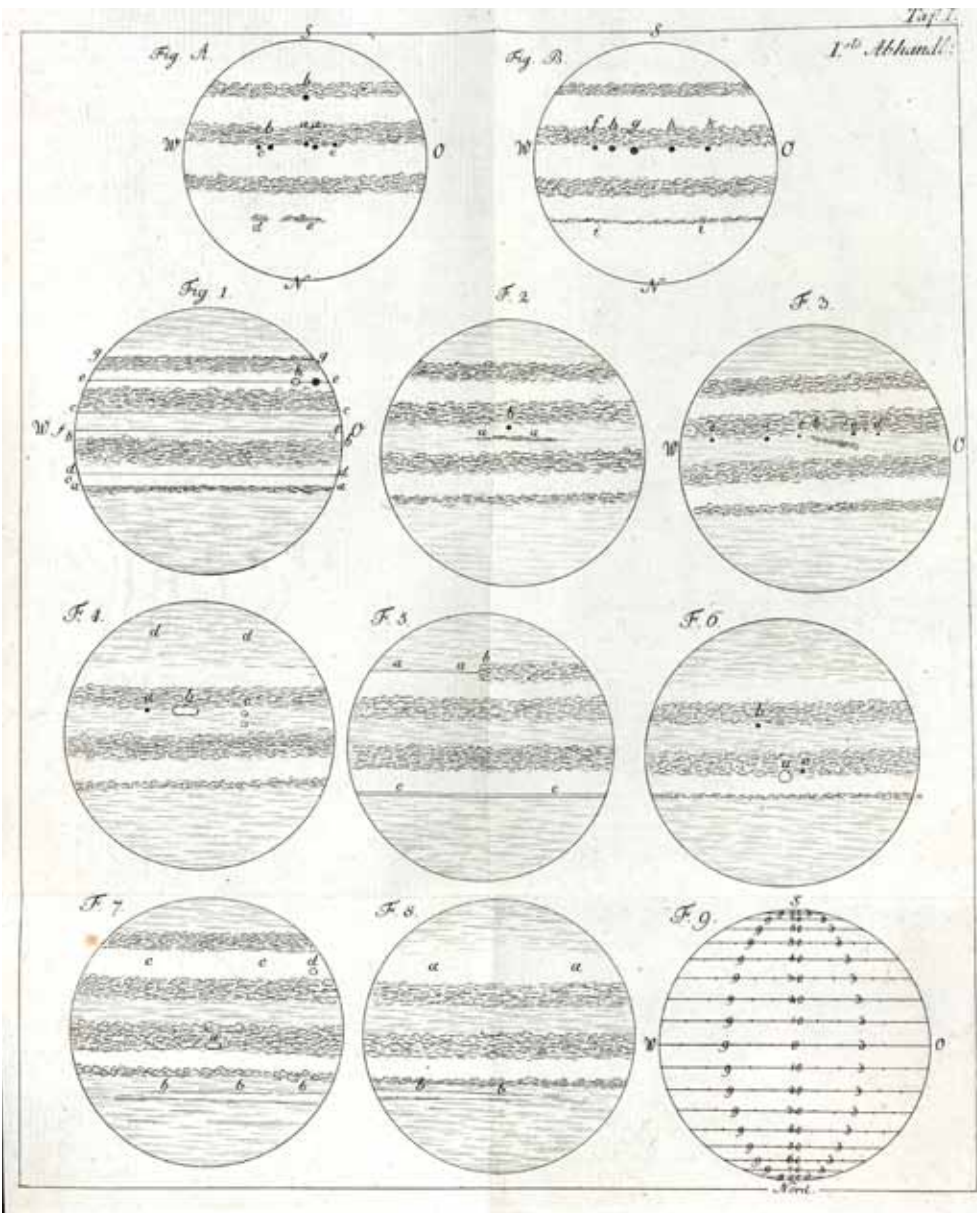
89 **SCHRANK**. *Hexameron* [in Greek]. *Eine physikalisch-theologische Erklärung der Sechs Schöpfungs-Tage*. Engraved allegorical frontis. xii, 239, [1] pp., two leaves of publisher's ads. 8vo, orig. grey printed wrappers, uncut. Augsburg: M. Veith & M. Rieger, 1829. \$1500.00

First edition of Schrank's physico-theological explanation of the six days of creation. Each day's developments are fully described.

Fine copy from the Wittelsbach library of the dukes and kings of Bavaria.







*His First Book*

- 90 **SCHROETER, JOHANN HIERONYMUS.** *Beiträge zu den neuesten astronomischen Entdeckungen.* Edited by Johann Elert Bode. Eight folding engraved plates. xiv, 288, [1] pp. 8vo, cont. calf-backed yellow boards (head of spine very slightly chipped), spine gilt, red morocco lettering piece on spine. Berlin: A.G. Lange, 1788. \$4500.00

First edition of the first book of the great astronomer Schröter (1745-1816); it is in this work that he first outlined his plans for preparing a topography of the moon.

Schröter established in Lilienthal one of the finest observatories in Europe, equipping it with the best instruments, all of which were paid for by George III. "For thirty years the observatory at Lilienthal was a center of astronomical research and was visited by foreign astronomers . . . Schröter was the first to observe the surface of the moon and the planets systematically over a long period. He made hundreds of drawings of lunar mountains and other features, and discovered and named the lunar rills."—*D.S.B.*, XII, p. 226.

This work consists of several treatises, the most important of which are Schröter's observations and conclusions on the rotation and atmosphere of Jupiter (pp. 1-137), his description of Herschel's 7-foot telescope (pp. 154-209), and his plan for a topography of the moon (pp. 221-47).

A very fine and pretty copy from the library of the Dukes and Electors of Bavaria.

☞ King, *History of the Telescope*, p. 135. Lalande, p. 606. Poggendorff, II, 846-47.

- 91 **SEUTTER VON LOETZEN, JOHANN GEORG VON.** *Versuch einer Darstellung der allgemeinen Grundsätze der Forstwirthschaft nach ihren Verhältnissen zu der Staats- Cameral- und Landwirthschaft nebst einigen Bemerkungen über die Folgen der Veräusserung der Staats- und Vertheilung der Gemeindswaldungen.* One folding printed table. xxiv, 570 pp. 8vo, cont. mottled half-sheep & paste-paper boards, contrasting vellum lettering piece on spine. Ulm: Becker, 1804. \$1250.00

First edition. Seutter (1769-1833), forester and financier, served a chief of forests in various parts of Germany where he was well-known for initiating

numerous organizational changes and reforms. This is an important contribution by Seutter to forest management.

Fine copy from the library of the Graf von Seinsheim.

☞ Mantel, I, 22.

- 92 **SEUTTER VON LOETZEN, JOHANN GEORG VON.** *Vollständiges Handbuch der Forstwirthschaft. Erster Theil. Allgemeine Ansicht der Forstwirthschaft und Regeln der Holzzucht und Holzverwerthung. [Erster Theil. Zweyter Band. Forstbotanik oder Beschreibung aller im Freyen des deutschen Klimas vegetirenden Holzpflanzen. Nach einem neuen, auf allgemein sich darstellende äussere Unterscheidungszeichen begründetem Systeme der Zusammenstellung verwandter Geschlechter und Arten].* One large folding printed table. 9 p.l., 764 pp.; 20 p.l., 552 pp. Two vols. 8vo, cont. half-sheep & paste-paper boards, contrasting vellum lettering pieces on spines. Ulm: Stettin, 1808-10. \$1350.00

First edition and very rare; OCLC locates no copy in the U.S. This is his most comprehensive work on forest management. Vol. I provides very detailed instructions on regulating and valuing forests. The second part is devoted to a discussion of the species of wood and their uses.

Fine and handsome set. Bookplate of Graf von Seinsheim.

☞ *A.D.B.*, Vol. 34, pp. 68-70. Mantel, I, 25.

“A Famous Book” –Garrison-Morton; *The Fifth Known Copy*

- 93 **STEINHÖWEL, HEINRICH.** *Büchlein der Ordnung [Pest Regiment].* Full-page woodcut on verso of first leaf & woodcut initials throughout. Rubricated throughout in red. Gothic type, 27 lines. [33] leaves, lacking the final blank. Small 4to (195 x 131 mm.), cont. pigskin-backed wooden boards (some relatively minor staining & soiling), one orig. metal catch (one catch & two clasps missing). [Ulm: J. Zainer, about 1482]. \$65,000.00

Third edition of one of the two earliest printed books on public health and the plague, along with Valescus de Taranta's *Tractatus de Epidemia et Peste* (ca. 1474). This is a very nice copy in a contemporary binding. The first edition of Steinhöwel's text was printed in Ulm, by Zainer in 1473; the second





printing appeared in Esslingen in 1474. Like the earlier editions, ours is of great rarity; ISTC locates only four complete copies (three in Bavaria and the Huntington copy).

Steinhöwel (1412-79), was a Swabian humanist, physician, and translator, much inspired by the Italian Renaissance. He was at the center of a circle of German humanists and his translations of Aesop, Petrarch, and Boccaccio and his medical writings were important contributions to early Renaissance humanism in Germany. Steinhöwel took his Bachelor and Master's degrees at Vienna and moved to Padua in 1438 where he devoted himself to medicine. He took his medical degree there in 1443. In 1449 he became a doctor in Esslingen and a year later in Ulm, where he served as town physician. While there he became fascinated by the new art of printing, which he learned from Zainer. Sometime after 1460 he became the personal physician of Eberhard I, Duke of Württemberg.

Steinhöwel wrote this text about 1444 in response to a recent epidemic; it remains the model for all early accounts of plagues and the recommended cures. He begins by describing the spread of the plague, how it spreads through the air, and its symptoms. The author then makes a series of recommendations regarding which foods to eat or avoid: meats, milk, fish, fruits, wines, etc. This is followed by recommendations that ill people should remain in bed and be washed with vinegar, a series of sanitary precautions in the house and throughout the towns, quarantines, medicines, etc.

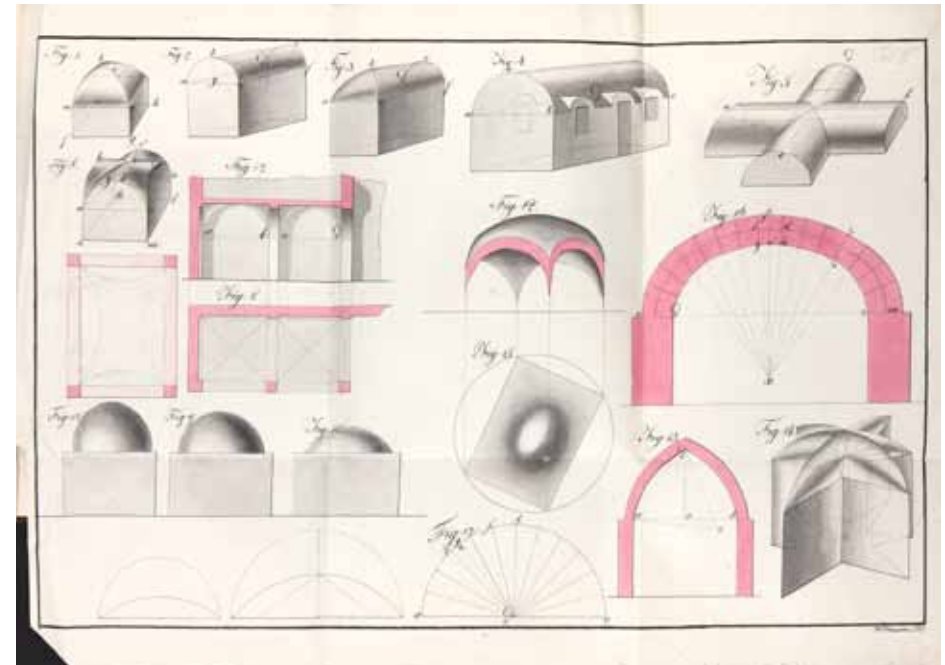
The fine full-page woodcut depicts Saints Sebastian and Roch, the two patron saints of the plague.

A very nice example of an important book; the fifth known copy. Some dampstaining at head of many leaves.

☞ Garrison-Morton 5114- "This is a famous book." Goff S-763. ISTC is00763000. Klebs 933.3.

### *A Bomb-Proof Bunker*

- 94 **TILL, FRANZ, "BAUMEISTER."** Manuscript on paper entitled "Grundsätze zur Verfassung einer richtigen Baukunst." 1 p.l., 96 pp., written in a neat & legible German hand. Bound-in are eight large & fine plates with water-color washes over pen-&-ink drawings. 4to (237 x 180 mm.), cont. marbled boards. [Münich: ca. 1840]. \$4000.00



A most handsomely illustrated manual on building techniques and materials. The author, about whom we know nothing, describes brick-making, masonry, and carpentry techniques. He also discusses the materials used in building such as stone, timber, bricks, etc. Perhaps the most fascinating section is his account of the construction of a bomb-proof bunker ("Über die Herstellung Bombenfreyer Räume").

The large and beautifully executed plates (305 x 420 mm.), on thick paper, depict brickwork, vaulted structures, arches, wooden joints, three roof constructions, etc.

The book served as a textbook for engineering students, with a manuscript ownership note of the Bavarian engineering student, officer, and landowner Alexander Guiot du Ponteil (1824-79), with his purchase note on front paste-down. With the contemporary ownership inscription of "Johann Huschke, Ober-sapper."

Fine condition.



*Odessa Printed*

- 95 **VANZETTI, TITUS.** *Excursion en Crimée faite dans l'Automne de l'Année 1835.* 62 pp. Large 4to, orig. pale blue silk over boards, covers stamped in gilt (largely gone), slick blue endpapers. Odessa: "a l'Imprimerie de la Ville," 1836. \$2950.00

First edition and very rare; WorldCat locates only one copy. Vanzetti, physician at the main hospital of Vienna and later professor of clinical surgery at the University of Padua, travelled throughout the Crimea, describing his tour as an "excursion médico-chirurgicale." During his time there, he performed 91 surgical procedures (amputations, eye surgeries of various sorts, removal of tumors, etc.) in the towns and villages which he visited (the coast of the Black Sea, Simferopol, Baghtche Sarai, Belogorsk, Feodosia, Kertche, and others). He describes the countryside, the diseases common amongst the population, and makes observations on the medical facilities available, etc.

This copy has been bound in a lovely blue silk binding and printed on fine paper. An earlier owner left some leaves of a plant between pages 50 and 51 and, as a result, there is some offsetting (but the text is absolutely legible and, in fact, the effect is rather attractive!).

Fine copy of a most unusual book. Stamp of a dissolved library of the former Czechoslovakia on verso of title (supporting documents laid-in).

*An Important Edition*

- 96 **WALLERIUS, JOHANN GOTTSCHALK.** *Mineralogie, oder Mineralreich, von Ihm eingeteilt und beschrieben.* Ins Deutsche übersezt von Johann Daniel Denso. One folding engraved plate. 24 p.l., 600, [32] pp. Thick 8vo, cont. half-sheep & speckled boards (boards rubbed), contrasting leather lettering piece on spine. Berlin: C.G. Nicolai, 1763. \$1850.00

Second edition in German, "improved and enlarged." This edition is important: Wallerius himself stated that the German translations were superior to the original Swedish edition. Wallerius collaborated with Denso in the translation, making many additions and changes to the text.

This is Wallerius' "first great work, which was received as an outstanding handbook of contemporary knowledge; never before had such a wealth

of minerals been presented so systematically. Wallerius' clear and precise descriptions, which gave more weight to essential chemical properties than to exterior appearance, opened a new epoch in mineralogy. The book became widely known in Europe through translations into German, French, Russian, and (later) Latin, and served as a model for later works."—*D.S.B.*, XIV, p. 144. First published in 1747 in Stockholm in Swedish.

Wallerius (1709-85), predecessor of Tobern Bergman in the chair of chemistry at Uppsala, applied chemistry with great success to agriculture and made numerous investigations into the composition of mineral, vegetable, and animal substances.

A fine copy.

☞ Partington, III, pp. 169-72.



*Wallis Posthumously Settles a Squabble*

- 97 **WALLIS, JOHN.** *A Treatise concerning St. Matthias Day, Misplaced in the Oxford Almanack for the Year 1684 (being Leap-Year) at Feb. 24. In a Letter from Dr. Wallis to Dr. John Fell late Lord Bishop of Oxford. Published from the Original Manuscript in the Savilian Study.* 3 p.l., 28 pp. 8vo, cont. calf (well-rebacked), spine gilt, red morocco lettering piece on spine. Oxford: 1719. \$2950.00

First edition of this very scarce posthumously published work. We learn from the Preface that there was considerable debate within the Oxford community regarding keeping St. Matthias's Day on the 24th or 25th of February in leap years. Wallis's text, from a manuscript written in 1684, was published to add support for the 24th as the preferable day.

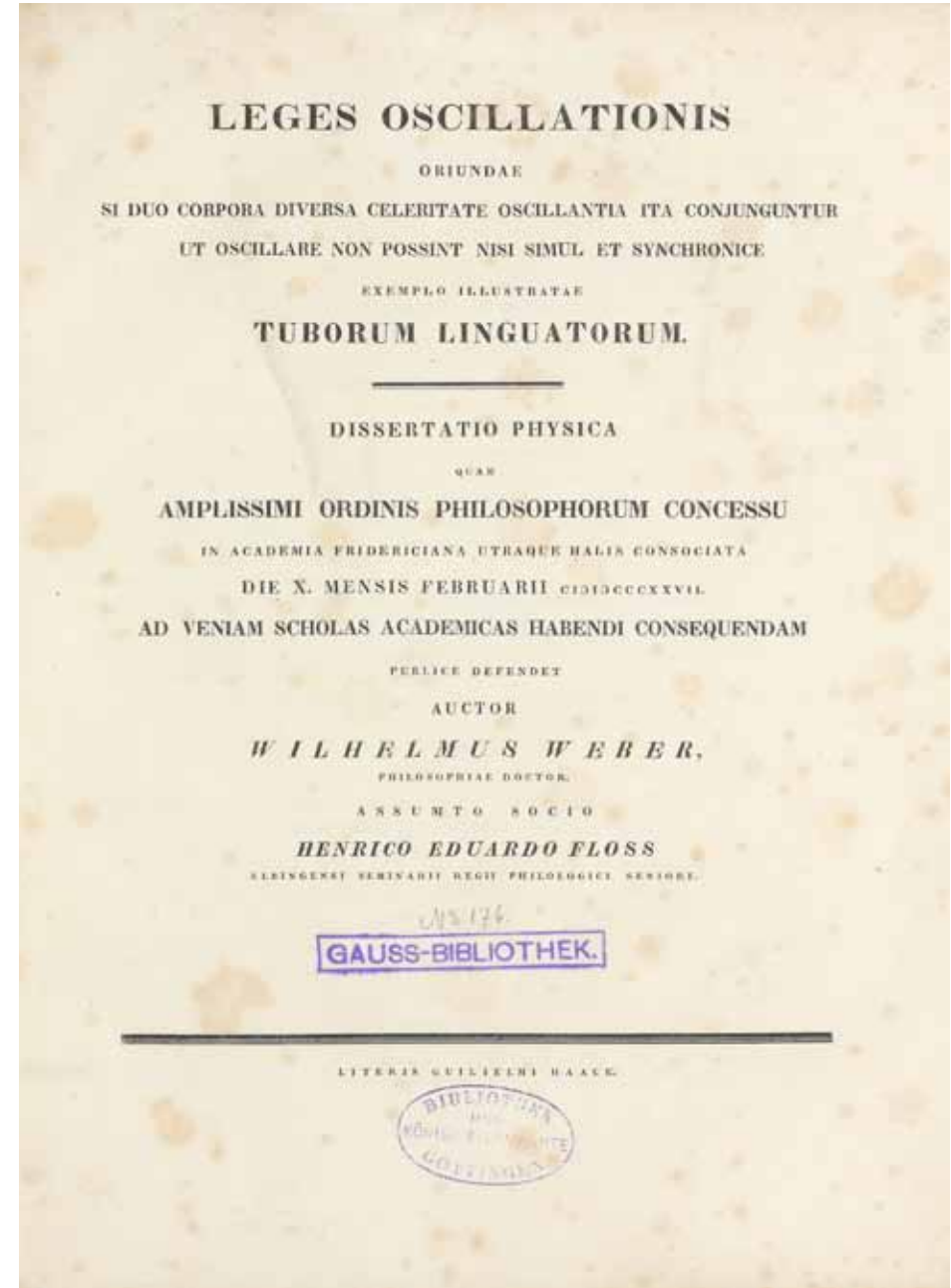
Fine copy.

*Gauss's Copy; the Earliest Gramophone Record*

- 98 **WEBER, WILHELM.** *Leges Oscillationis oriundae si duo Corpora diversa celeritate oscillantia ita conjunguntur ut oscillare non possint nisi simul et synchronice exemplo illustratae Tuborum linguatorum. Dissertatio Physica . . .* One folding engraved plate (some foxing) & seven printed tables (five in the text & two on a separate folding sheet). 2 p.l., 40 pp. Large 4to, orig. green patterned boards (some foxing). [Halle]: G. Haack, [1827]. \$9500.00

First edition, and a very evocative association copy, of the rare *Habilitationsschrift* by Wilhelm Weber (1804-91) on acoustics, specifically on the acoustic coupling of tongue and air cavity in reed organ pipes; his work in this area led, in a slightly roundabout way, to his close and enormously fruitful association with Gauss, which began in September of 1831. This copy belonged to Gauss — with the “Gauss-Bibliothek” stamp — on title. It is hard to imagine a more appropriate association as it led, in part, to their intimate collaboration and friendship.

Weber met Gauss at a scientific conference organized by Alexander von Humboldt in Berlin in 1828 (this was the only scientific convention Gauss ever attended). Weber delivered a lecture in which he summed up his work on the acoustical qualities of organ pipes. It attracted the attention of both Humboldt and Gauss, both of whom attended the lecture. Gauss immediately



recognized the young physicist as a worthy colleague in his new-found interest in geomagnetism. Weber moved to Göttingen in 1831 and in the following six years, the two scientists invented the telegraph, developed a magnetometer, and performed much important research in electricity and magnetism.

Weber here describes for the first time a process in which sound is engraved on a metal plate with a scraper, and reproduced in differing frequencies by passing the scraper across the grooves — the basic principle of the gramophone record. Had this process been known to scientists during the heyday of recording-apparatus research in the 19th century, our present-day phonographs would very likely have been developed at a much earlier date; at least, Edison and Berliner would have been spared some of their abortive experiments.

The plate depicts various reed organ pipes.

Fine copy. With the stamp of the Royal Observatory at Göttingen on free front endpaper (with release stamp facing on the front paste-down endpaper) and title.

☞ Gauss: *D.S.B.*, V, pp. 304-06. Weber: *D.S.B.*, XIV, pp. 203-09.

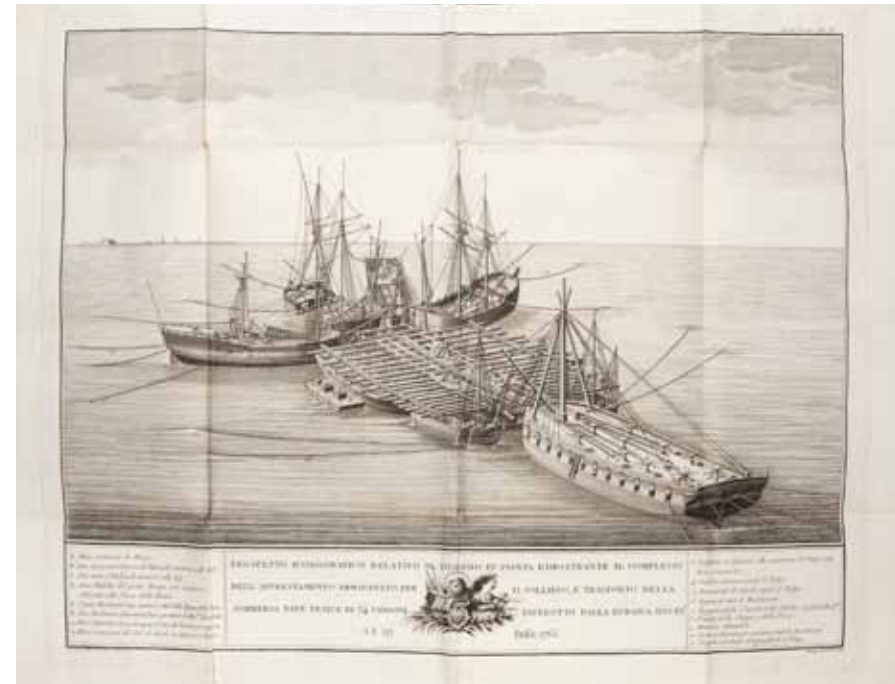
- 99 **WESTRUMB, JOHANN FRIEDRICH.** *Bemerkungen über Arzneypreise und deren Veränderungen veranlasst durch die neuesten über diesen Gegenstand erschienenen Schriften insbesondere durch die Preisschrift von Herrn Burgermeister und Doctor Krügelstein.* viii, 118 pp., one leaf of errata. 8vo, cont. speckled boards (extremities a bit worn), uncut. Göttingen: P.G. Schröder, 1797. \$1500.00

First edition of a very rare book (WorldCat locates no copy in North America). Westrumb (1751-1819), administrator of Hannover's Hof-Apothek, was later appointed commissioner of mines and Senator at Hameln. This is part of a controversy regarding taxes on medicine and the management of state-supervised pharmacies.

The first supplement ("Beilage II") is entitled "Bemerkungen . . . von Verminderung der Arzneypreise und der zu diesem Behuf erforderlichen Einrichtung der Dispensatorien und Taxen." The second supplement ("Beilage III") is "Formular eines pharmaceutischen Tagebuches."

A few leaves at front and back with mostly marginal dampstaining, but a very nice interleaved copy. Stamp of "GH Westrumb" on title.

☞ Partington, III, pp. 571-73.



### Marine Engineering

- 100 **ZUSTO, GIOVANNI.** *Descrizione Istorica dell'Estrazione della Pubblica Nave La Fenice dal Canale Spignon. In cui giacque circa tre anni totalmente sommersa.* Engraved allegorical frontispiece by Giuseppe Daniotto and seven fine & large folding plates by Daniotto. xxxii, 90, [2] pp. Large 4to, cont. marbled boards. [Venice]: Sons of A. Pinelli, 1789. \$3750.00

First edition of this notable engineering work which describes the raising of the sunken man-of-war *Fenice* in the Spignon channel, just inside the Porto di Malamocco, and the central access to the Venice lagoon. The ship sank in April of 1783 and rendered the channel so narrow that it caused great difficulties for large ships to pass. Work began in 1785 to remove the ship and was complete early in the following year.

The very fine plates, here in rich and dark impressions, depict the raising and clearance of the ship, employing a combination of hydraulics and an elaborate system of pulleys. This was a remarkable engineering feat. It required





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